Nelson City Council
te kaunihera o whakatū

Transport Asset Management Plan 2015/16 – 2024/25

November 2014

Part 1

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CONTENTS PAGE

Part 1

EXECUTIVE SUMMARY **1**

1. INTRODUCTION **12**
1.1. Purpose 12
1.2. Plan structure 12
1.3. The transport activity 12
1.4. The stakeholders 13
1.5. The end users 14
1.6. The legislative context 14
1.7. Strategic context 15

2. WHAT ARE THE FUTURE DEMAND ISSUES TO CONSIDER? **19**
2.1. Arterial Traffic 21
2.2. Accessibility 22
2.3. Sustainability 23
2.4. Environmental risks 24
2.5. Regional considerations 24
2.6. Funding 25
2.7. Funding Risk 26
2.8. Transport network resilience 26
2.9. Consultation 27
2.10. Procurement strategy 27
2.11. Prioritisation process for projects 28

3. WHAT'S THE DIRECTION? **29**
3.1. Context 29
3.2. What are the impacts of moving people and goods? 29
3.3. A brief history of street design and improvements programme 29
3.4. What are the options? 31
3.5. A balanced approach 32

4. THE DELIVERY OF A BALANCED APPROACH **33**
4.1. Defining the Targets and the Delivery 33
4.2. Local roads, walking, cycling and schools 33
4.3. Arterial traffic 45
4.4. Safety 47
4.5. Public transport 52
4.6. Parking 53
4.7. Value for Money principles 55
4.8. Systems to Measure, Monitor and Report on Performance Indicators 57

Part 2

5. TECHNICAL PERFORMANCE MEASURES/ASSET MANAGEMENT SYSTEMS/LIFECYCLE 60
5.1. Asset lifecycle 60
5.2. Asset failure modes 61
5.3. Roads 61
5.4. Road structures 64
5.5. Pedestrian network 67
5.6. Cycle network 70
5.7. Public Transport 73
5.8. Traffic control and equipment, street lighting, signs and markings 75
5.9. Safety 77
5.10. Parking 80
6. VALUATION 83
7. FINANCIAL FORECASTS AND DEVELOPMENT CONTRIBUTIONS 84
8. RISK MANAGEMENT 86
9. PERFORMANCE MONITORING AND IMPROVEMENT PLAN 95

List of Appendices

Appendix A Relevant transport legislation 98
Appendix B Nelson's Strategies and Policies 99
Appendix C Strategic documents, studies and models providing demand data 103
Appendix D Growth indicators 105
Appendix E How the focus areas link with the government's, NZ Transport Agency's and Council' s strategic documents 137
Appendix F Definition of Levels of Service 139
Appendix G Streets Without Footpaths 142
Appendix H Annual Peak travel time delays on Rocks Road and Waimea Road 143
Appendix I Previous level of service and why they have changed 146
Appendix J Summary activity descriptions 147
Appendix K Regional Land Transport Programme (2009) 154
APPENDIX l 10 Year Long Term Plan - Programme 157
Appendix M Minor improvement and footpaths Priority List 162
Appendix N Footpath Rehabilitation Sites 166

List of Tables

Table 1.1 Te Tau Ihu Settlement Bill Proposed Redress 14
Table 1.2 Council Community Outcomes 17
Table 2.1 NZ Transport Agency Financial Assistance Rates 25
Table 4.1 Level of Service Relating to Walking and Cycling 34
Table 4.2 Level of Service Relating to Maintenance of Footpaths 34
Table 4.3 Footpath Rating Descriptions and Summary 36
Table 4.4 Level of Service Relating to Local Road Maintenance and Renewals 38
Table 4.5 Practical seal lives in Nelson 40
Table 4.6 Proportion of Road Surface in Nelson by Type and Traffic Volume 41
Table 4.7 Level of Service Relating to Efficient Transport System 46
Table 4.8 Level of Service relating to Road Network and Its Services 46
Table 4.9 Level of Service Relating to Road Safety 48
Table 4.10 Level of Service Relating to Road Safety at Intersections 48
Table 4.11 Level of Service Relating to Road Safety and Cyclists 49
Table 4.12 Level of Service Relating to Road Safety and Pedestrians 50
Table 4.13 Level of Service Relating to Public Transport Services 52
Table 4.14 Level of Service Relating to Short Stay Parking 54
Table 4.15 Level of Service Relating to Parking 54
Table 4.16 Level of Service Relating to Long Stay Parking 54
Table 4.17 Level of Service Relating to Public Satisfaction 56
Table 5.1 Key Stages in the Asset Lifecycle 60
Table 5.2 Range of Asset Failure Modes 61
Table 5.3 Road Surface Valuation 61
Table 5.4 Road Basecourse Valuation 61
Table 5.5 Road Surface Data Reliability Analysis 63
Table 5.6 Road Base Data Reliability Analysis 63
Table 5.7 Bridges Valuation 64
Table 5.8 Retaining Wall Valuation 64
Table 5.9 Road Structure Data Reliability Analysis 66
Table 5.10 Footpaths Valuation 67
Table 5.11 Walkways Valuation 67
Table 5.12 Footway Data Reliability Analysis 68
Table 5.13 Cycleways Valuation 70
Table 5.14 Cycle Infrastructure Data Reliability Analysis 72
Table 5.15 Fares as at July 2014 74
Table 5.16 Street Signs Valuation 75
Table 5.17 Line Marking Valuation 76
Table 5.18 Streetlights Valuation 76
Table 5.19 Traffic Signals Valuation 76
Table 5.20 Car Parking Valuation 80

Table 5.21 Car Parking Spaces in Nelson and Stoke 80
Table 5.22 Car Parking Data Reliability Analysis 81
Table 7.1 Forecasted Subsidised Annual Expenditure 84
Table 8.1 Likelihood Ratings (Semi Qualitative Measure) 86
Table 8.2 Semi-Quantitative Measures of Consequence and Areas of Impact 86
Table 8.3 Risk Priority Rating (Semi Quantitative) 87
Table 8.4 Business Risk Schedule 88
Table 8.5 Asset Risk Schedule 92
Table D.1 Peak Hour Volumes 105
Table D.2 Population projections, 2015-2045 135
Tabel F.1 Definition of Levels of Service 139
Table F.2 Nelson Arterial Traffic Study Network Performance Summary Statistics 141
Table F.3 Nelson Arterial Traffic Study Network Performance Summary Statistics 141

List of Figures

Figure 1.1	Relationship between Statutes and Policy Documents	18
Figure 2.1	Projected Population and Households Growth	21
Figure 3.1	2013 Residents Survey – Activities Which Residents Would Like Council To Put More Effort Into	31
Figure 4.2	Main Means of Travel to Work	36
Figure 4.3	Average Road Roughness Standards (National Association of Australian State Roading Authorities) by Road Classification	39
Figure 4.4	Expected Future Resurfacing Costs/Liability	42
Figure 4.5	Road Network Surface Condition	43
Figure 4.6	Number of Fatal and Serious Injuries on Local Roads in Nelson	48
Figure 4.8	Number of Cyclist Crashes in Nelson City	50
Figure 4.9	Number of crashes involving pedestrians in Nelson City	51
Figure 4.10	Percentage of Public Dissatisfied with the Transport Activity	56
Figure 5.1	Remaining Asset Life of Retaining Walls	65
Figure 5.2	Existing and Proposed Cycle Network	71
Figure 5.3	Zone Structure and Bus Routes	73
Figure D.1	Nelson Arterial Traffic Volumes	106
Figure D.2	Waimea-AM Peak Hour Ending 0900	107
Figure D.3	Waimea – Peak Hour Ending 1700	108
Figure D.4	Waimea – Midday Peak Hour Ending 1300	109
Figure D.5	Waimea – Weekday AM Peak Hour Ending 0900	110
Figure D.6	Waimea – Weekday PM Peak Hour Ending 1700	111
Figure D.7	Waimea – Weekday Midday Peak Hour Ending 1300	112
Figure D.8	Rocks Road -AM Peak Hour Ending 0900	113
Figure D.9	Rocks Road– PM Peak Hour Ending 1700	114
Figure D.10	Rocks Road– Midday Peak Hour Ending 1300	115
Figure D.11	Rocks Road – Weekday AM Peak Hour Ending 0900	116
Figure D.12	Rocks Road– Weekday PM Peak Hour Ending 1700	117
Figure D.13	Rocks Road – Weekday Midday Peak Hour Ending 1300	118
Figure D.14	Main Road Stoke –AM Peak Hour Ending 0900	119
Figure D.15	Main Road Stoke – PM Peak Hour Ending 1700	120
Figure D.16	Main Road Stoke – Midday Peak Hour Ending 1300	121
Figure D.17	Main Road Stoke – Weekday AM Peak Hour Ending 0900	122
Figure D.18	Main Road Stoke – Weekday PM Peak Hour Ending 1700	123
Figure D.19	Main Road Stoke– Weekday Midday Peak Hour Ending 1300	124
Figure D.20	Waimea – Rocks Road - AM Peak Hour Ending 0900 - Screenline	125
Figure D.21	Waimea – Rocks Road - PM Peak Hour Ending 1700 - Screenline	126
Figure D.22	Waimea – Rocks Road - Midday Peak Hour Ending 1300 - Screenline	127
Figure D.23	Waimea – Rocks Road – Weekday AM Peak Hour Ending 0900 - Screenline	128
Figure D.24	Waimea – Rocks Road – Weekday PM Peak Hour Ending 1700 - Screenline	129

Figure D.25 Waimea – Rocks Road – Weekday Midday Peak Hour Ending 1300 - Screenline 130
Figure D.26 Pedestrian Counts 131
Figure D.27 Pedestrian – 7 hr Count Total 131
Figure D.28 2010 Comprehensive Cyclist and Pedestrian Count 132
Figure D.29 Cyclists – 24 hrs Estimates..... 133
Figure D.30 Cyclists – 24 hrs Estimates (All Routes Above)..... 133
Figure D.31 2010 Comprehensive Cyclist and Pedestrian Count 134
Figure D.32 Nelson - Projected population, 2015-2045..... 135
Figure F.1 Nelson-Tasman Transportation Model Link LoS Criteria 140
Figure H.1 Annual Average Morning Peak Travel Times – Waimea Road..... 143
Figure H.2 Annual Average Evening Peak Travel Times – Waimea Road 143
Figure H.3 Annual Average Morning Peak Travel Times – Rocks Road..... 144
Figure H.4 Annual Average Evening Peak Travel Times – Rocks Road 144

EXECUTIVE SUMMARY

THE TRANSPORT ACTIVITY

The Transport services and assets associated with this activity are primarily focussed on the safe, efficient and effective transport of people and goods around the Nelson region. This includes the provision, operation and maintenance of physical infrastructure on the road reserve such as for driving, parking, cycling and walking as well as the provision of safety, traffic control and public transport services.

The replacement cost of these assets is approximately $700 million, and the depreciated value is $570 million. This represents nearly 43% of Council assets.

This Asset Management Plan provides evidence based information on how transport activity in Nelson is performing, based on measurable levels of service and performance indicators. It is based on a sustainable whole of system approach that supports the type of City we want Nelson to be; safe, accessible and affordable to all.

NATIONAL AND LOCAL POLICY ON TRANSPORT

This Transport Asset Management Plan (TAMP) provides Council with the year to year financial guidance on the allocation of transport funds. It is a tactical, locally focussed document; developed around national and regional transport funding guidelines as indicated by the requirements of the New Zealand Transport Agency (NZTA) and the Government Policy Statement (GPS) on Land Transport Funding. It will guide the transport spending for the years 2015-2018, as updated each year by the annual plan. The project programme in this TAMP will inform the transport spending in the Long Term Infrastructure Plan, both for the subsidised and unsubsidised sectors.

Previously this document has been developed within the broad guidelines set by the 2009 Regional Land Transport Strategy (RLTS) which supported a safe, efficient, integrated, sustainable land transport system. These guidelines have influenced the management of transport, specifically the subsidised policy, in Nelson over the last 6 years.

The Draft Government Policy Statement 2015 (GPS) on Land Transport Funding is issued by the Minister of Transport every three years. It has set out the below 3 government's priorities for expenditure from the National Land Transport Fund over the next 10 years, broadly continuing the overall direction set by the Government Policy Statement in 2012 & 2009.

- **A strong and continuing focus on economic growth and productivity** – The government's investment in land transport should support increased economic growth and productivity in New Zealand.
- **Value-for-money** – Land transport services should be delivered better and smarter. Asset management will be improved to boost performance of roading infrastructure. The Government Policy Statement 2015 makes it clear that getting more out of what is spent is expected.
- **Road safety** – Road safety is a transport priority for the government. Safer Journeys, the Government's road safety strategy, will be supported through the next National Land Transport Programme.

The Draft Regional Land Transport Plan 2015 – 2021 (RLTP) (due for public consultation in November 2014) sets out the subsidised transport prioritised programme for the six three years in accordance with the NZ Transport Agency's Investment and Revenue Strategy and in accordance with the GPS and this TAMP.

This approach in Nelson will continue to influence the management of private vehicle use by encouraging transport behavioural change, providing an integrated transport network that encourages all forms of transport, providing and improving modal choice and reducing the demand for travel.

The available means of achieving this are complex and inter-related. It is clear that no single measure in isolation will be successful in meeting the high level objectives and an integrated package of measures is required.

KEY ISSUES

SUSTAINABILITY

Council has taken a "sustainable" approach to its transport network since the development of the 2009 Regional Land Transport Strategy. That strategy supported maintaining our existing transport infrastructure, increasing walking, cycling and passenger transport travel choices, and a targeted focus on growth areas. The direction started in the Regional Land Transport Strategy has been extended in this Asset Management Plan by rebalancing spending to projects of need, that increase mode choice and safety, rather than pursuing uneconomic low value for money projects. This direction is supported by the draft 2015 GPS objectives 'providing appropriate transport choices', 'appropriately mitigates the effects of land transport on the environment' and 'addresses current and future demand' by targeting growth areas. It also recognises the need for economic growth and the importance of efficient and effective freight transport to the Nelson region.

ARTERIAL TRAFFIC

The Arterial Traffic Study, in agreement with NZ Transport Agency in 2010 determined that:

- There is not a significant traffic problem in Nelson, nor is one forecast to develop over the modelled time period of the study – the next 25 years.

Council's resolution differed from the NZ Transport Agency approved study's recommendations insofar as:

- Council retain protection of the Southern Arterial Corridor only.

Ongoing traffic monitoring of the arterial routes shows that the traffic volumes are flat to declining in line with national and global observed trends. The decline is likely to be a result of many influences such as, technology developments reducing need to travel, an increase in walking, cycling and bus patronage, increases in car occupancy rates, reduction in teen drivers, ageing population travelling less and outside of peak times and increased cost of fuel.

MAINTENANCE OPERATIONS AND RENEWALS

Maintaining the transport infrastructure is key to ensuring we provide the desired level of service in the most cost effective manner. One of the key high cost components of the transport asset is the seal surface that waterproofs the pavement structure. Council currently has a backlog of surfaces that are overdue for resealing and treating this backlog is important to ensure that the life of our pavement structure is maximised.

Street lighting also has a backlog of aged fittings. Of greatest priority is the replacement of the inefficient and polluting mercury vapour lights on the network with LED fittings.

Condition assessments of the key transport assets are undertaken to ensure that they are maintained and renewed at the most cost effective time, however our knowledge of the remaining life of the assets and thus their depreciation needs improving in order better manage the maintenance and renewal future liability. This is a key component of the improvement plan.

PARKING

A parking study was undertaken in 2014 that informed the development of the draft 'Parking Strategy 2014-2024'.

Survey data collected in 2005, 2008 and 2012 shows there is an appropriate supply of parking. Forecasting indicates there is unlikely to be any significant increase in demand over the next ten years.

The engagement undertaken has indicated that the Nelson public consider the key parking issues to broadly include enforcement, cost and payment options and all day CBD parking.

Subsequent to the draft parking strategy being prepared, Council, in response to the concerns of inner city retailers, resolved to remove the charge for parking for a winter trial period. As a result, finalisation of the strategy has been delayed until after this AMP has been completed. This AMP allows for the implementation of the actions detailed in the draft parking strategy but recognises that the direction and content of the parking strategy may change and some actions may not be necessary or other options may be trialled to ascertain their impact before the future direction is set.

NELSON AND STOKE CBD ENHANCEMENT

A number of projects identified in the Heart of Nelson – Central City Strategy have been completed to date. As part of the Long Term Plan 2015-25 (LTP) development Council will need to prioritise the remaining projects, determining which are still relevant, and considering if there are any new projects that should be added. To inform this work data is being collected on the retail, employment and economic dynamics in the city. In conjunction with reporting back on the free parking trial period this will provide guidance on future projects within the Central City.

It is also clear residents feel Stoke CBD has been neglected over recent years and projects to revitalise the area, continue to provide for growth and facilities are overdue for funding. This TAMP includes CBD traffic and parking projects.

FREIGHT

Port Nelson as the maritime gateway to the region is extremely important to the economic development of Nelson and the wider region as it provides the ability for primary production to be exported. In the year ending June 2013 2.6M revenue tonnes were exported or imported via Port Nelson over the road network. With the greatest reliance on the primary industries of any region in the country it is critically important that the local road network is resilient and efficient for freight especially the routes to and from the port.

NZTA are predicting an increasing freight task of approximately 2% per annum with a key component of that a peak log harvest for the Nelson Marlborough Tasman area in the 2020 – 2025 period of double the current tonnage.

The 50 MAX vehicles have recently been introduced to allow more freight to be carried on fewer trucks on the local road network. 50 MAX High Productivity Motor Vehicles (HPMV) are trucks that are slightly longer than the standard 44 tonne vehicles. The modified design means that these trucks can carry more, but they perform on the road in the same way as a standard 44 tonne truck. The 50 MAX vehicles have an

improved safety record and should not increase wear and tear on the road network. This TAMP proposes improvements to the bridges in the Maitai Valley to allow 50Max vehicles to access the adjacent forestry blocks.

FUNDING

The NZ Transport Agency, like Council, works on a three year funding cycle. The Transport Agency allocates funding to local authorities through the National Land Transport Plan which it adopts in September 2015, after considering each Regional Land Transport Plan.

The Funding Assistance Rate (FAR) is the co-investment rate for transport activities that Council receives from the NZ Transport Agency In 2013 and 2014 the NZ Transport Agency reviewed the principals and methods used in setting the FAR. The NZTA have recently advised that there will be a single FAR for all activities and that Nelson's FAR will increase. Nelson's current effective FAR for all activities was 46%. For the 2015/16 year the NZ Transport Agency has indicated that the FAR will be 47% and will rise by 1% per annum to 51% over five years.

This Asset Management Plan proposes a significant increase in expenditure for renewing the existing network.

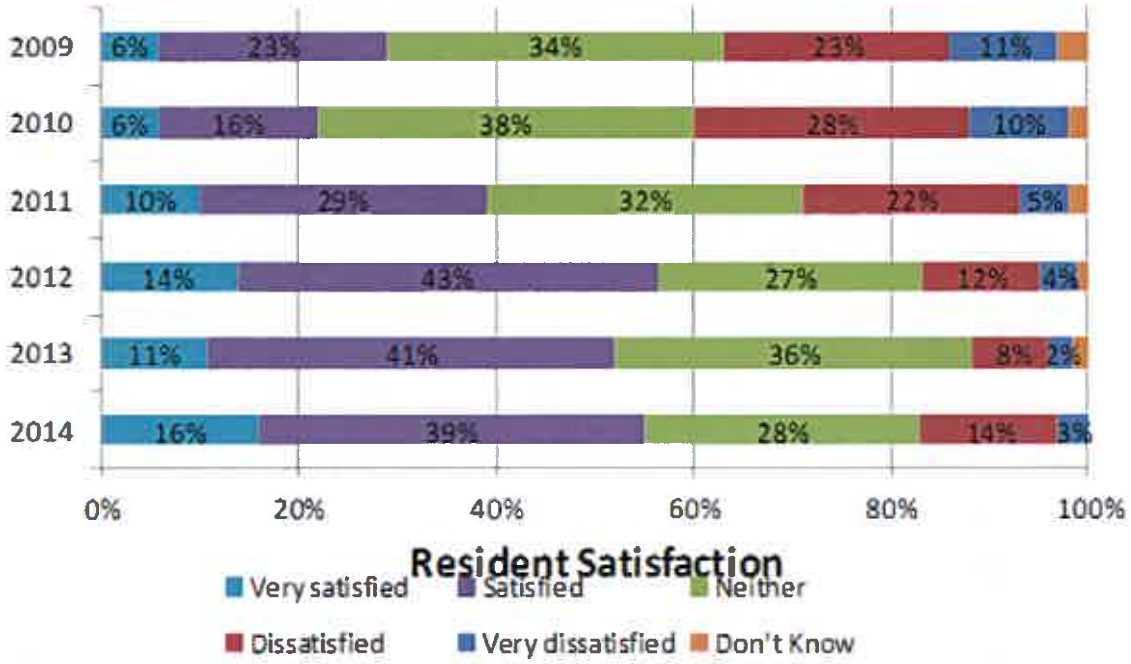
There are several transport activities that Council already funds from rates without any co-investment. As investment rules tighten, Council always has the option of continuing with the activity or improving the level of service for an activity by increasing the activity's funding from rates over the three year TAMP time frame.

The NZ Transport Agency introduced the One Network Road Classification (ONRC) at the end of 2013. It is proposed that this replaces Councils' Road Hierarchy over time. This classification is to be implemented nationwide in order to provide more consistency in levels of service and the corresponding funding levels between regions. The effects of the ONRC on NZTA's investment levels in Nelson City are uncertain at this stage.

PUBLIC SATISFACTION WITH THE TRANSPORT ACTIVITY

The 2014 Residents survey also showed that levels of satisfaction with the transport activity have remained relatively static over the last three years as can be seen in the figure below.

2014 Public Satisfaction With The Transport Activity



Residents who were dissatisfied with transport gave this rating because they felt public transport was limited (35%), or that cycleways need improvement (33%). Twenty nine per cent identified the roads need improvement.

A BALANCED APPROACH TO TRANSPORT STRATEGY

The 2012 Transport Asset Management Plan adopted a "balanced approach" towards transport in Nelson and that approach has been continued through to this Plan.

Nationally and internationally, current transport planning has supported the encouragement of sustainable and alternative forms of transport for many years now, and Nelson has been at the forefront of actively supporting these forms of transport for over 15 years. Nelson has adopted a strategic momentum towards providing greater quality transport choices through the Asset Management Plans, the Regional Land Transport Strategy, Plan Changes and Council's strategic sustainability policies. This has been effective in improving the walking and cycling networks in Nelson, and has supported the development of improved reliable public transport that offer viable options to residents. Nelson has developed a distinct travel choice culture.

This approach is fundamental to this TAMP and to the continued integrated delivery of projects by NCC over coming years. This will result in lower cost local road upgrades which are fit for purpose, provide opportunities for travel choices optimised whenever any project permits, and the travel needs of all road users recognised and catered for as feasible. In doing so Council:

- Recognises the importance of well located, strong transport corridors that offer the potential for the efficient and safe flow of people and freight to assist the economic vitality of our region, and;
- Acknowledges that more integrated approaches to traffic flow (the importance of slower speeds and placing a greater emphasis on walking, cycling and a sense of place) are necessary on our local roads and residential streets to promote social and community networks, supportive neighbourhoods, urban centres and safe streets.

LEVEL OF SERVICE SUMMARY TABLE

It must be recognised that Council has varying ability to influence some of these levels of service.

Level of Service	Performance Indicator	Current Performance	AMP Section Reference	Performance Target
MAINTENANCE				
The Network, and its services in good condition and are "fit for purpose"	Smooth Travel Exposure*	87%	4.2.3, 4.2.4, 5.3	87% based on NZ Transport Agency standard roughness limits in ONRC
The Network, and its services in good condition and are "fit for purpose"	Average road roughness standard (National Association of Australian State Roading Authorities) by road classification.	Arterial/Principal, 69/90 Collector/Sub C, 97/117	4.3, 5.3	The following maximum average road roughness are not exceeded: Arterial/Principal, 100 Collector/Sub C, 110
The Network, and its services in good condition and are "fit for purpose"	Average road roughness standard (National Association of Australian State Roading Authorities) by road classification.	Local, 106 Rural Sealed, 97	4.2.3, 4.2.4, 5.3	The following maximum average road roughness are not exceeded: Local,120 Rural sealed, 120
The Network, and its services in good condition and are "fit for purpose"	The percentage of the local road (non State Highway) that is resurfaced annually*	4.8%	4.2.3, 4.2.4, 5.3	6.4% - 7.4%
The Network, and its services in good condition and are "fit for purpose"	The percentage of footpaths that meet or exceed the maximum acceptable roughness*	95%	4.2.1, 5.5	95% of the footpath network by length has a condition rating of ≤ 3
LOCAL ROADS, WALKING, CYCLING AND SCHOOLS				
Walking and cycling are easy and attractive alternative transport choices.	Percentage of the community that travel to work by walking or cycling (based on Nelson City Council Annual Residents Survey and/or national census).	16% walked or cycled from the 2014 survey of residents. 2013 census data shows that 18.3% walked or cycled to work.	4.2.1, 4.8.1, 5.5, 5.6	25% of all journeys to work trips are by walking or cycling by 2018.
ARTERIAL TRAFFIC				
An efficient transport system that enables people and freight to move	Average AM and PM peak hour travel times on Waimea Road and	Rocks Road PM peak delay =	4.3, 4.8.2	Average peak hour travel time delays are no greater than 5

Level of Service	Performance Indicator	Current Performance	AMP Section Reference	Performance Target
efficiently.	the State Highway between Annesbrook and Haven Road roundabout	3min Waimea Road AM peak delay = 2min		minutes above uncongested travel times.
ROAD SAFETY				
Road Safety	Number of fatalities and serious injury crashes on the local road network*	The target of a maximum of 12 fatalities and serious injuries in 2013 was met with 12 recorded for that year.	4.4, 4.8.3, 5.9	The number of fatalities and serious injuries on local roads reduces by 4% per year from a base of 2007
Road safety	Number of injury crashes per kilometre of road.	2012 Calendar year rate is below maximum. Complete data for 2013 not available yet	4.4, 4.8.3, 5.9	The collective risk for each year reduces by at least 4% per year from a base of 2007
Road safety	Annual social cost of crashes (injury and non-injury) at intersections.	Target not met for 2012 after good performance in 2010 and 2011. The social cost of crashes was marginally above the target	4.4, 4.8.3, 5.9	The social cost for each year reduces by at least 4% per year from a base of 2007
Road safety	Number of crashes involving cyclists.	Target met for 2013. The number of cycle crashes (23) was the same as the target 2007 number.	4.4, 4.8.3, 5.9	Nelson City cycle crash numbers do not increase from those in the base year of 2007
Road safety	Number of crashes involving pedestrians	Target not met for 2013. The number of crashes involving pedestrians was 12, 100% more than the target number of 6.	4.4, 4.8.3, 5.9	Number of crashes involving pedestrians each year reduces by at least 4% per year from a 2007 base.
PUBLIC TRANSPORT				
Public transport services that meet the transport needs of the community with an equitable sharing of costs.	The farebox recovery ratio	Approximately 60% in 2012/13 and 62% in 2013/14	4.5, 4.8.4, 5.7	50%

Level of Service	Performance Indicator	Current Performance	AMP Section Reference	Performance Target
PARKING				
The supply and pricing of short stay parking is managed to encourage commercial activity in the Central Business District.	Percentage of short stay parking spaces occupied in midweek peak in December	December 2012 - 81%	4.6, 4.8.5, 5.10	85%
The supply and pricing of long stay parking is managed to incentivise greater use of travel options other than cars.	Occupancy of long-stay parking spaces between peak travel times measured at 5 locations within the CBD fringe.	Not currently measured but will be in the future.	4.6, 4.8.5, 5.10	A reducing trend.
VALUE FOR MONEY PRINCIPLES				
Public satisfaction.	Percentage of public satisfied and dissatisfied with the transport activity (based on Nelson City Council Annual Residents Survey).	Target not met 55% of respondents are either very satisfied or satisfied 17% of respondents are either dissatisfied or very dissatisfied	4.7, 4.8.6	More than 50% of respondents are either very satisfied or satisfied, and less than 10% are either dissatisfied or very dissatisfied.
Customer Responsiveness	Response to service requests*	TBA	4.7, 4.8.6	80% of service requests responded to within 5 working days.

* Level of Service measure required by Local Government Act 2002.

STRATEGIES, STUDIES, REPORTS AND SURVEYS

The following are planned for the next three years to enable and inform Council on future decisions. These are identified in the table below:

Study/strategy	AMP Section Reference	2015/16	2016/17	2017/18
Parking surveys	2.81, 4.6, 4.12, 5.10 App J	$50,000	25,000	25,000
Traffic counting and monitoring	2.81, App J	$50,000	$50,000	$50,000
Stoke Foothills Traffic Needs Study	2.8.1, App J	$100,000		
Atawhai Foothills Traffic Needs Study	2.8.1, App J	$100,000		
CBD West Traffic Study	2.8.1, App J		$100,000	

MAJOR NEW OPERATION AND MAINTENANCE ACTIVITIES (2015/16 TO 2017/18)

- $50,000 pa for the operation and maintenance of the Stock Effluent facility;
- $200,000 pa for emergency works, response and recovery;
- An additional $200,000 pa for public transport. Options include a potential increase the arterial route frequency and extending the Stoke network coverage.

MAJOR NEW RENEWAL AND CAPITAL ACTIVITIES (2015/16 TO 2017/18)

- Reseals budget of $1.33M/year due to the significant number of sites where the seal has reached the end of its useful life;
- Increase the streetlight renewal budget to convert aged fittings to LED's;
- Earthquake strengthening of road bridges;
- New footpaths budget to close missing links and provide footpaths on existing roads that have none;
- Increase structural replacement programme for the road pavement;
- Todd Bush Road upgrade in 2015/16;
- CBD Nelson and Stoke Enhancement initiatives;
- Give effect to the outcomes of the Draft Parking Strategy;
- Road upgrades with walking and cycling network benefits in the Wigzell Park area;
- Projects included in the Regional Land Transport Plan, including:
    - Implement walking, cycling and schools package (includes Rocks Rd, Tahunanui Network and the bridge across Saltwater creek on the Maitai Path);
    - Minor Improvements Budget of $650,000 pa.

SIGNIFICANT PROJECTS, (GREATER THAN $500,000) PROPOSED FOR THE FOLLOWING SEVEN YEARS

- Implement the outcomes of the Stoke and Atawhai Foothills studies;
- Complete the street upgrades in The Wood area;
- CBD Nelson and Stoke Enhancement initiatives;
- Give effect to the outcomes of Draft Parking Strategy;
- Marsden Valley Road / The Ridgeway intersection upgrade – subject to investigation;
- Marsden Road / Main Road Stoke intersection upgrade – subject to investigation;
- Marsden Valley Road Upgrade
- Rocks Road Plant and Food to Maitai Path - Walk Cycle link

DEFERRED CAPITAL ACTIVITIES

Council, in the 2012 AMP, refocused its capital expenditure priorities away from upgrading local low traffic, low pedestrian and cycle volume roads that require a high cost to upgrade (e.g. hillside road upgrades). It targeted investment to maintaining the existing road infrastructure and contributing its local share to the regionally funded projects identified in the Regional Land Transport Plan. The remaining unsubsidised capital was prioritised on projects with significant traffic volumes and / or safety issues.

Several less urgent road upgrades identified in previous LTP's have been either deferred or removed.

This AMP proposes to fund street and intersection upgrades that provide walking and cycling network improvements such as the Wigzell Park area north of the Hospital.

KEY ASSET MANAGEMENT ISSUES

- Outcomes from the One Network Road Classification (ONRC) framework that will drive national level of service consistency through the NZ Transport Agency funding mechanisms;
- Outcomes from the Central region freight analysis/study;
- Outcomes from the NBus review which include funding and service levels;
- Deterioration of footpath surfacing due to increased costs to meet desired level of service, resulting in less renewal length being achieved;
- Outcomes from the Parking Strategy 2014;
- The updating of key transport policy documents;
    - Structures on Road Reserve;
    - Licence to occupy Road Reserve;
    - Road Occupation Policy.

KEY ASSUMPTIONS AND UNCERTAINTIES

As well as the general assumptions that apply across Council's work, assumptions specific to transport include:

- The National and Regional funding identified in the Draft Regional Land Transport Plan will be supported in the National Land Transport Programme.
- The NZ Transport Agency financial assistance rates will increase from the current 46% to 47% in 2015/16 and rise by 1% per annum to 51% over five years.
- The NZ Transport Agency will co-fund the regions passenger transport at an increased level from 2012-15 RLTP.

- Tasman District Council will contribute $30,000 per year to the Nelson / Richmond passenger transport service.
- Public transport patronage will be at a level that continues to support the public transport level of service.
- Energy prices will not increase/decrease significantly over the next three years with a consequent effect on vehicle use or shifts to other modes of transport.
- The number of vehicles and vehicle movements per household will continue at no greater than 2013 levels over the period covered by this Asset Management Plan.
- Parking meter revenue is collected at a level of $460,000 pa.
- That paid parking in the CBD is applied other than during the winter months.
- Tasman District Council will continue to promote free parking within Richmond.

1. INTRODUCTION

1.1. Purpose

Council manages activities and assets on behalf of the ratepayers of Nelson to a value in excess of $1 billion. The assets are part of the city's physical infrastructure and are important because many public services rely upon them and because they represent a significant investment by the community, built up over the last 100 years and more. The activities are equally important, and represent the way in which services are delivered to ratepayers.

The Local Government Act 2002 and the Land Transport Management Act 2003 places a legal obligation on Council to manage its assets to provide a specified standard of service in a cost effective manner. Council has committed to undertake this obligation in accordance with the Asset/Activity Management Policy using Asset and Activity Management Plans.

1.2. Plan Structure

The Plan is divided into two parts. Part 1 has four sections:

- Introduction;
- What are the future demand issues to consider?;
- What's the direction?;
- The delivery of a balanced approach.

Optimised delivery requires consideration of the transport network to enable the financial forecasts to be developed. The second part contains a more detailed analysis of the transport assets and activities, set out as follows:

- Asset Management Systems;
- Valuation;
- Financial Forecasts and Development Contributions;
- Risk Management;
- Performance Monitoring and Improvement Plan.

1.3. The Transport Activity

The Transport services and assets associated with this activity are primarily focussed on the safe, efficient and effective transport of people and goods around the region. This includes the provision of physical infrastructure on the road reserve such as for driving, parking, cycling and walking as well as the provision of safety, traffic control and public transport services.

The transport assets owned by Council include:

- The vehicle network (road pavements, bridges, retaining walls);
- The cycle network (cycle lanes, shared paths, cycle paths);
- The pedestrian network (footpaths, walkways, bridges);
- Infrastructure on road reserve (kerbs and channels, sumps, storm water control, street furniture;
- Network control and management (traffic lights, signs, line markings);
- Safety (streetlights, fences, guardrails);
- Parking (on and off street car parks, parking meters and parking enforcement);
- Passenger Transport (bus services/stops, total mobility services);
- The replacement cost of these assets is approximately $700 million, and the depreciated value is $570 million.

1.4. The Stakeholders

Council does not consult on its Asset Management Plans but does consult via the LTP, Regional Land Transport Plan and individually on transport planning and engineering projects and activities depending on the significance and location. Below is a list of key stakeholders, key user groups and area specific user groups that may be consulted to enable the implementation of this Plan.

1.4.1. Key Stakeholders

Key stakeholders identified in this plan are:

- The community of Nelson, including Tangata Whenua comprising six Iwi;
- New Zealand taxpayers who fund the co-investment provided by the NZ Transport Agency;
- Other asset and activity user such as visitors and tourists;
- The Ministry of Transport and the NZ Transport Agency;
- Tasman and Marlborough District Councils;
- New Zealand Police, fire and ambulance services;
- The Nelson Marlborough District Health Board;
- The Accident Compensation Corporation.
- The installers of ultra-fast broadband cables, power and telecom lines.
- Other key users groups that may be identified on a project by project basis.

1.4.2. Te Tau Ihu Treaty Settlements

The Te Tau Ihu Treaty of Waitangi Settlement Acts 2014l (the Acts) for the eight iwi of Te Tau Ihu:

- Ngati Kuia,
- Rangitane o Wairau,
- Ngati Toa Rangatira,
- Ngati Koata,
- Ngati Rarua,
- Ngati Tama ki Te Tau Ihu,
- Te Atiawa o Te Waka a – Maui,
- Ngati Apa ki te Ra To

provide statutory obligations for Council in respect to general decision making processes, and specifically in RMA process and decision making. The Acts passed into legislation on the 1st of August 2014. Each Act provides each of the eight iwi with redress for past grievances dating back to 1840 in the Top of the South with an apology from the Crown. There are three types of redress provided for in the settlements as identified in Table 1.1 below. The redress that is shaded indicates that which are relevant to Asset Management Plans and the LTP. Council will be working with the eight iwi of Te Tau Ihu on relationships establishment and implementation of the settlements in relation to Councils governance and decision making processes through the 2014/15 year. For asset management planning undertaken in 2014 Council has held a workshop with iwi beginning a process of partnership and establishment of good working relationships for managing areas of significance such as the coastal marine area, freshwater bodies and catchments, reserves management and heritage.

Table 1.1 Te Tau Ihu Settlement Bill Proposed Redress

Note: Items relevant to asset management planning are shaded.	
Cultural Redress	Statutory kaitiaki over a number of Department of Conservation administered Crown lands and the Coastal Marine Area
	Vesting of sites in iwi ownership
	Overlay classifications which require the Crown to acknowledge iwi values in that area
	Statutory acknowledgments and deeds of recognition which are recognised under the RMA 1991 and Historic Places Act 1993
	Statements of association, place names changes, crown payment, pouwhenua and mineral fossicking rights
Relationship Redress	Promotion of the relationship between iwi and local authorities of Te Tau Ihu
	Protocols which encourage good working relationships on matters of cultural importance to iwi
	Letters of introduction to museums and film archives
	River and freshwater advisory committee to be set up and provide input into local authority decision making in relation to the management of rivers and freshwater under the RMA 1991
	Memorandum of Understanding between iwi and the Department of Conservation
Financial Redress	Financial settlement
	Commercial redress which involves properties being purchased by iwi and then leased back to the Crown, and first right of refusal over a number of properties

1.5. The End Users

The end users of this plan are the Council staff in the transport asset management and operations departments. They will use this plan to manage the city's assets and activities on the road reserve in a cost effective, sustainable, well planned and coordinated manner to provide agreed levels of service.

This document is also part of the business case to support the RLTP for the local road component and assists in informing the LTP.

1.6. The Legislative Context

The overall legislative framework for planning, funding and managing the land transport system includes Acts, Regulations and Rules, a list of these fundamental to transport are provided in Appendix A.

1.7. Strategic Context

1.7.1. Government Outcomes

Forward Plan for Transport

The government's policy direction for transport over the next decade is outlined in "Connecting New Zealand", published August 2011. This publication is still very relevant as government policy has not changed significantly since 2011 but it does still refer to the previous Government Policy Statement. The publication identifies the big issues for transport systems as being:

- Population growth;
- Ageing population;
- Global freight growth;
- Fuel prices and volatility;
- Transport emissions;
- Transport security; and
- New technology.

The publication clearly identifies that central government is responsible for responding to issues that are beyond its direct control, such as oil prices, ageing population and the effects of climate change, and that local government is responsible for regional and local transport planning and delivery.

A fundamental policy evident from the publication is that the government wants the costs associated with transport choices to be as clear as possible, and for the price of using each mode to match actual cost as much as possible. This will enable businesses and individuals to make the transport decisions that best meet their needs.

The publication provides a reality statement in regard to travel demand management initiatives and their effectiveness in relieving congestion. It states "We need to make sure that the arteries of our cities do not become clogged and that access to our key rail hubs, air and sea ports remain free moving, and that the corridors along our key supply chains also remain protected from congestion. In some cases, the government is taking a lead infrastructure approach to land transport investments, leading improvements in capacity ahead of them being required to encourage economic growth. In doing so, the government is being careful to respond to predicted incremental changes in transport demand and trends, rather than seeking wholesale mode shift for non-economic reasons. The latter would lead to a deadweight economic loss by encouraging inefficient transport choices."

The publication also reiterates the governments focus on delivering value for money, it states "Improving performance and productivity right across the public service is a high priority for the government, including the transport sector. The government needs to be confident that the transport sector (central and local government in particular) is delivering the right infrastructure and services to the right level and for the best possible price."

Government Policy Statement 2015/16 to 2024/25

The Government Policy Statement on Land Transport Funding is issued by the Minister of Transport every three years. It sets out the government's priorities for expenditure from the National Land Transport Fund over the next 10 years.

The Government Policy Statement influences decisions on how money from the National Land Transport Fund will be invested in activity classes, such as state highways and public transport. It also guides the NZ Transport Agency and local government on the type of activities that should be included in regional land transport plans and the National Land Transport Programme. Regional Land Transport strategies must take account of the Government Policy Statement and Regional Land Transport plans must be consistent with the Government Policy Statement.

The Draft Government Policy Statement 2015 broadly continues the overall direction set by the Government Policy Statement in 2012 & 2009 and contains three priorities:

- **A strong and continuing focus on economic growth and productivity** – The government's investment in land transport should support increased economic growth and productivity in New Zealand.
- **Value-for-money** – Land transport services should be delivered better and smarter. Asset management will be improved to boost performance of roading infrastructure. The Government Policy Statement 2015 makes it clear that getting more out of what is spent is expected.
- **Road safety** – Road safety is a transport priority for the government. Safer Journeys, the Government's road safety strategy, will be supported through the next National Land Transport Programme.

1.7.2. NZ Transport Agency Outcomes

The NZ Transport Agency has identified the impacts it wishes to deliver through the implementation of its investment and revenue strategy. These are:

- better use of existing transport capacity;
- more efficient freight supply chains;
- a resilient and secure network;
- easing of severe urban congestion;
- more efficient vehicles;
- reductions in deaths and serious injuries;
- more transport mode choice; and
- reduction in adverse environmental effects from land transport.

1.7.3. Council's Strategies, Plans and Policies

Nelson City has a well-developed set of strategies and policies relating to the city's environment, its land use and transport systems, and its community. A summary of these is provided in Appendix B. The present suite of relevant documents has been developed over the past two decades, in line with statutory and associated requirements. Some of the separate strategies are not binding in a statutory sense, but help to elucidate the Council's intended directions or approaches.

The strategies and policies have been developed with significant community input, and can be said to reflect the directions which the community wishes to follow to achieve the City we want Nelson to be.

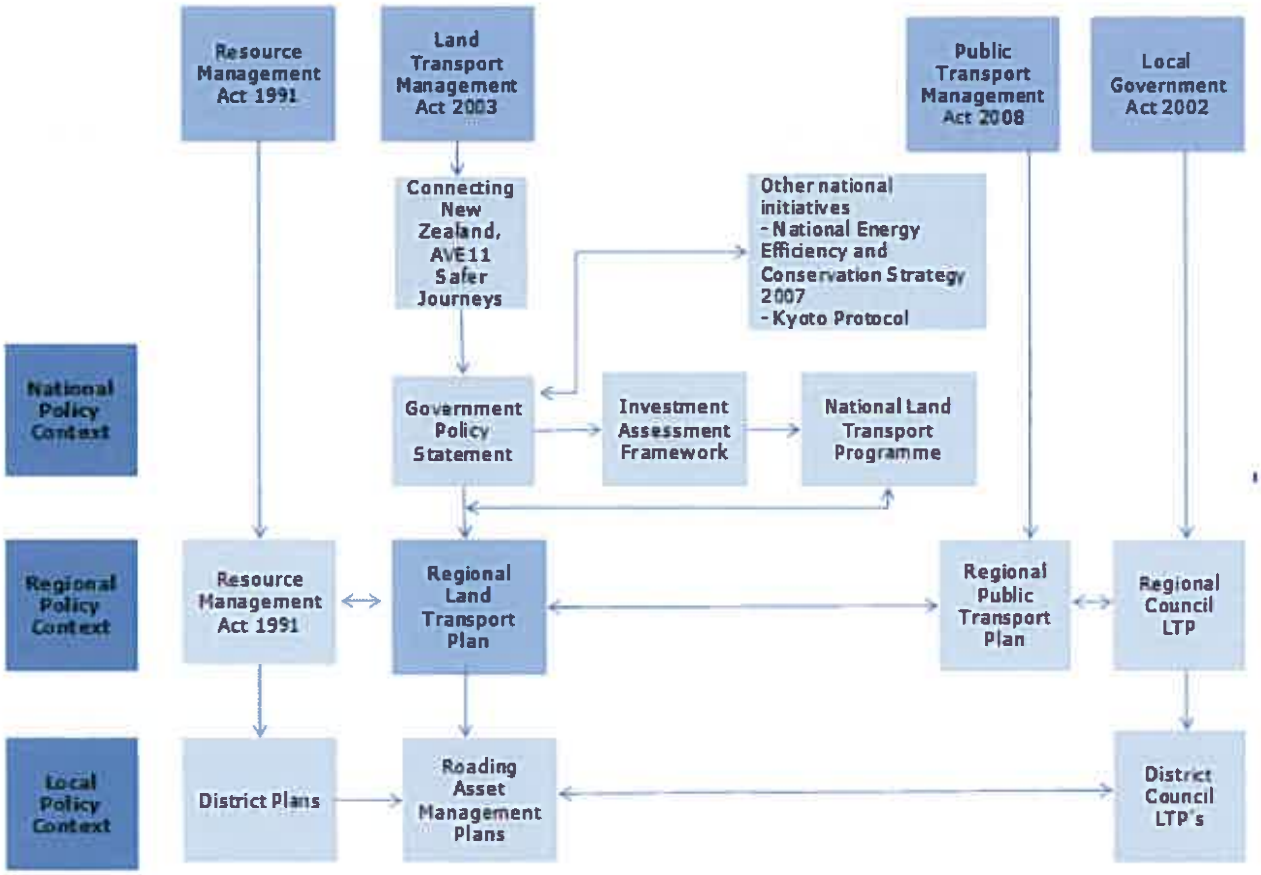
Council-supplied transport infrastructure and transport planning contributes to achieving the following Council Community Outcomes:

Table 1.2 Council Community Outcomes

Outcomes/Goals	How transport contributes to achieving these goals
Healthy land, sea, air and water We protect the natural environment.	Through providing a range of transport systems that minimise the impact on the environment.
People-friendly places We build healthy accessible and attractive places and live in a sustainable region.	Through taking into account the impact on public spaces when providing transport infrastructure.
A strong economy We all benefit from a sustainable, innovative and diversified economy.	Through providing an effective and efficient transport system that meets the needs of residents and businesses.
Kind, healthy people We are part of a welcoming, safe, inclusive and healthy community.	Through providing a safe transport network that provides for traffic, cyclists and pedestrians.

1.7.4. Linkage Diagram to Planning Documents

Figure 1.1 Relationship between Statutes and Policy Documents



2. WHAT ARE THE FUTURE DEMAND ISSUES TO CONSIDER?

There are several demand drivers that need to be taken into account when considering the future delivery of transport assets and activities. The development of a number of strategic documents, studies and models has enabled access to a vast amount of knowledge on several of the key demand drivers in Nelson and it is not intended to repeat the data contained within those documents in this plan. The demand drivers, document names, source reference and relevant notes are provided in Appendix C. Within these documents data on population, traffic, heavy commercial vehicles, port cargo, airport use, walking, cycling, passenger transport, travel demand management, fuel price rises, sea level rise and funding are provided.

The Arterial Traffic Study, which is the most comprehensive transport study undertaken in Nelson in recent years, provides a definitive assessment of the demand issues for the region and a comprehensive analysis for each mode, given expected population growth and the region's demographics.

An overview of the documents in Appendix C indicates the following key trends, although it needs to be emphasised that future environmental, economic and social shocks have the potential to significantly alter these trends:

Population

Nelsons population is expected to grow as shown in Figure 2.1 below. At the time of writing, Statistics New Zealand have yet to update detailed population projections based on 2013 Census demographics. The 2013 Census results and recent population estimates indicate Nelson's population has grown faster than projected by the 2006-based projections. Therefore, based on advice from Statistics New Zealand, Council have calculated revised projections for Nelson.

Nelson's population is expected to grow by 5,000 over the next ten years, to almost 55,000 residents in 2025. Continuing the present trend, over half of the growth will be driven by increasing population in Stoke, and about a quarter is from Nelson Central.

- An ageing population with an increasing median age and an increasing proportion of older people
- The number of children is likely to keep increasing until around 2025
- Smaller households with an increase in one-person households

Population growth is expected to slow down after 2025, resulting in an increase of 4,700 residents over the 20 years between 2025 and 2045, to almost 60,000 in 2045. Most of the growth in these later years is again driven by an increasing population in Stoke but the rest of Nelson (Nelson North, Nelson Central and Tahuna) are also projected to have increasing populations.

Congestion

The Arterial Traffic Study determined that overall there is likely to be a 26-28% increase in peak hour trips in the next 30 years, a reduction in average trip length and an increase in interpeak and off-peak directions along the current arterial routes and little or no increase in peak direction traffic.

Traffic count data collected since late 2009 provides detail as to the distribution of trips throughout the day and by direction on the key arterial routes. This data shows that in general, traffic volumes on Rocks Road and Waimea Road in the busiest direction (northbound in the AM peak and southbound in the PM peak) have remained flat or slightly decreasing. In the opposing direction traffic volumes during these times traffic volumes have increased. During the midday peak the traffic volumes travelling into Nelson have remained static and reduced in the Richmond direction.

The data collected for Main Road Stoke is at a location south of Saxton Road. That data shows the traffic volume on this arterial route is generally trending downwards in the southbound direction and is static to slightly decreasing in the northbound direction.

Refer to Appendix D for traffic flow data on the main arterials.

Car trips

- Overall car trips per capita have remained flat or decreased over the last three years. This has resulted in a corresponding reduction in arterial traffic volumes, refer Appendix D for traffic flow data on the main arterials.

Freight

The National Freight Demand Study 2014 predicts growth in freight movements from 18.6 million tonnes in 2012 to 28.04 million tonnes in 2042 for the Nelson/Marlborough/Tasman region. This corresponds to an average annual growth rate of around 2%. That Freight Demand Study also highlighted a peak log harvest for the Nelson Marlborough Tasman area in the 2020 – 2025 period of double the current tonnage.

Passenger Transport

- Modelling undertaken for the arterial traffic study indicates low patronage uptake unless there is a significant increase in vehicle use costs (i.e. fuel prices and/or parking charges). There has been strong growth in demand for public transport over the last three years but this is expected to plateau in the medium term without further increases in the route frequency or coverage.

Walking

- The results of the 2014 Residents Survey show that around 8% of residents walk to work. This percentage has dropped over the last four years from 10%, refer Appendix D for historic pedestrian counts.

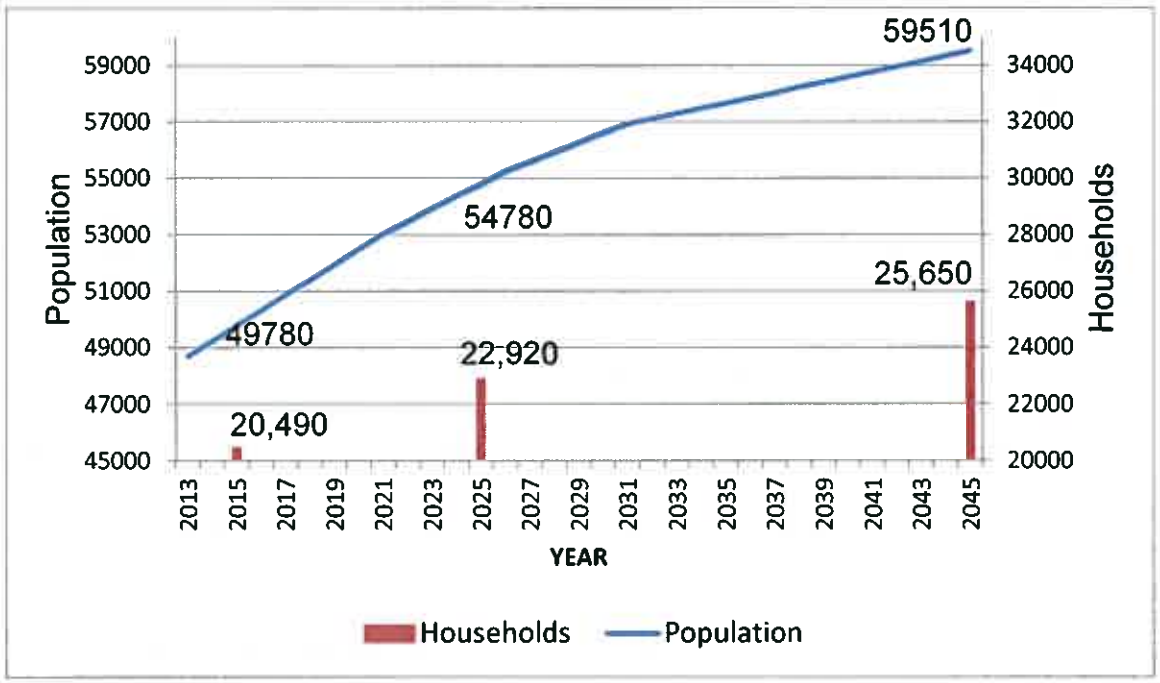
Cycling

- Records show an 8-9% growth per year over the last three years, although it is uncertain whether this growth can be sustained. Refer Appendix D for historic pedestrian counts.

Demographic Change

- Census data indicates that generally the region's population is ageing, over half of Nelsons population growth was in Stoke and the local demographic profile includes a "gap" in the 15 to 40 year cohorts (such trends are found nationwide with the gap being typical of provincial cities). This is likely to contribute to more off-peak journeys and slightly reduced traffic growth over time, due to the travel patterns of the growing number of older people and an increasing demand for services for the over 65 years age group, i.e. improved total mobility services and footpaths and shared paths designed for the sight impaired and those who use mobility scooters.

Figure 2.1 Projected Population and Households Growth



Forecasting Assumptions

The Council produces a LTP every three years to set the strategic direction for the city over the following ten years. It enables integrated decision-making, land use planning, infrastructure and facilities development, environmental protection. It outlines how Council will provide services as the population increases and summarises Council's financial allocation and prioritisation process.

Forecasting assumptions are crucial to gaining the right direction and use of public funds. Forecasting for growth considers three key components being population growth, growth in property and growth in economic activity. For transport the Council records the relevant assumptions within the transport activity in the LTP.

2.1. Arterial Traffic

The development of the city's State Highway and arterial network has been a fraught process over recent years. A 1967 study originally mooted a highway between Nelson city and Richmond to relieve forecast traffic growth along Main Road Stoke, Annesbrook, Tahunanui, Rocks Road and Waimea Road, bypassing Stoke on the seaward side and heading over the Bishopdale hill down the railway reserve where the railway lines were lifted in 1955.

In 2001 the first half of this highway, bypassing Stoke, was completed by Transit New Zealand and named Whakatu Drive. The second part, known most notably as the Southern Link, was rejected by the Environment Court in 2004 and led to the commissioning of the joint NZ Transport Agency, Nelson City Council and Tasman District Council study of the wider Nelson – Richmond transport issues, known as the North Nelson to Brightwater Strategic Study in 2008.

This culminated in a long term vision to 2026, including a combination of public transport, cycling, traffic management and travel demand management measures to support road improvements. No final decision was made on this strategy; consequently in 2009 the Nelson Regional Transport Committee completed the draft Regional Land Transport Strategy which acknowledged a need for additional road capacity as well as a significant improvement in public transport services in the region.

The railway reserve was acknowledged as a logical potential transport corridor if ever required.

In 2009 - 2010 NCC undertook the Arterial Traffic Study to determine the best transport option between Annesbrook and QE11/Haven Rd roundabouts that would improve the City as a whole.

The Arterial Traffic Study was a significant piece of work completed in 2011 to enable a better understanding of short to medium term demand issues as they relate directly to Nelson. The outcome has a fundamental bearing on how network growth is addressed in the region. Essentially the Arterial Traffic Study, in agreement with the NZ Transport Agency, determined that:

- There is not a significant traffic problem in Nelson, nor is one forecast to develop over the modelled time period of the study – the next 25 years.
- Of the four options that were assessed in the study Option A - Peak Hour Clearways and Option B – Southern Arterial both offered positives but also had negatives.
- Elements of Option A can be done in stages to provide additional capacity when needed, for example – the study recommended progressing the walk/cycleway around the waterfront in the short term.
- Option B – the Southern Arterial route should be protected as a long-term future dedicated transport corridor should things change.

The Council considered the Arterial Traffic Study and preferred the Southern Arterial Corridor as the best long term transport option route. NCC officers were directed to prepare an issues definition report assessing the options available for protecting the Southern Arterial Corridor. The Corridor Management Plan was completed in late 2013.

Following the National Election in 2014 the Government announced that they would investigate the Southern Arterial Corridor using the Future Investment Fund.

2.2. Accessibility

Accessibility can be viewed as the "ability to access" and often focuses on people with disabilities or special needs and their right of access, although it is universal and impacts on us all whether we are young, old, rural, urban, able-bodied or have a disability.

The needs of all sectors of the community should be considered when designers maintain and build Council's infrastructure.

Typical issues that have been raised by the accessibility sector for which demand for action by Council is growing include:

- Quality of some footpaths and crossing points which cause barriers for pushchairs, mobility scooters and wheelchairs;
- Lack of appropriately located parking spaces for mobility impaired
- Lack of footpaths on some roads;
- Poor pedestrian crossing facilities on the following main transport corridors - Rocks Road, Annesbrook Drive, Waimea Road, Nayland Road;
- Council has recently formally joined the regional A4A (Accessibility for All) forum where regional accessibility issues can be raised and improvements considered. Council has also recently made a significant improvement in the routes and frequency of public transport which will improve accessibility for many Nelson residents.

2.3. Sustainability

2.3.1. Overview of Sustainability

The Local Government Act 2002 sets out principles that local authorities must act in accordance with. The legislation requires local authorities to ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region; and in taking a sustainable development approach, take into account:

- The social, economic, and cultural interests of people and communities; and
- The need to maintain and enhance the quality of the environment; and
- The reasonably foreseeable needs of future generations

In 2011 Council began work on a 50 year vision of what Nelson could become, using sustainability principles. The vision statement was adopted in the LTP 2012-22 and the full Strategy in 2013. It identified ten goals that the Nelson community said were priorities for action and Council is now working to ensure that these goals and sustainability principles are integrated into all the decisions made about its activities.

Sustainable development actions and approaches are embedded throughout this asset management plan. These include the following:

Goal 3

Our natural environment – air, land, rivers and sea – is protected and healthy

- The Balanced Approach to managing the transport assets moves the emphasis away from purely providing increasing road capacity. The emphasis is instead on providing for an appropriate mix of transport modes while maximising the efficient operation of the road assets we already have. The continued funding and resulting growth in NBus use contributes to a reduction in vehicle emissions, especially in the slower moving air sheds around Stoke, Victory, Hospital and Bishopdale areas.
- The focus on providing improved safety for pedestrians and cyclists has the effect of encouraging use of these transport modes further and in turn also contributing to a reduction in vehicle emissions.

Goal 5

We are able to rapidly adapt to change

- Programmed for year two of this AMP, the Atawhai Hills transport study is at least partially focussed on increasing the resilience of the road network between the northern suburbs and the Nelson CBD.
- Constant monitoring of the traffic conditions and the split of mode choice will enable us to monitor trends in key performance indicators and allow us to respond early to any emerging issues. As detailed in the Improvement Plan improvements to how this data is collected and analysed are planned in the next three years.

Goal 6

We move from using fossil fuels to renewable energy sources

- As with Goal three, the investment in the alternative transport modes of cycling, walking and public transport encourages their use. In turn any growth in use of these modes reduces use of fossil fuels.

Goal 9

Everyone in our community has their essential needs met

- There are three main groups within the Nelson community that are transport disadvantaged; the youth, elderly and those at the lower end of the socio-economic spectrum. The ongoing provision of the NBus is targeted at meeting this essential need for this group of the community.

Councils approach to its transport network has taken a "sustainable" approach since the development of the 2009 Regional Land Transport Strategy. That strategy supported increasing walking, cycling and passenger transport travel choices, and placed a reduced emphasis on providing for future traffic growth. The direction started in the Regional Land Transport Strategy has been continued in this Asset Management Plan by rebalancing spending to projects of need, which maintains the existing transport infrastructure and increase mode choice and safety, rather than pursuing uneconomic low value for money projects. It has also included whole of life assessment of the transport assets and the development of long term management strategies to protect the life of the asset to maximise value for money and investment.

2.4. Environmental Risks

Environmental risks include earthquakes, heavy rainfall, slips and storm surges. Council does not specifically fund environmental risks for roading but has acknowledged that it will be required to increase loan funding to pay for around half of the cost to repair the roading infrastructure should a large scale event occur. The NZ Transport Agency funds the other half through the National Land Transport Fund.

An assessment of the roading bridges has been undertaken and those on lifeline routes up the Maitai and Brook valleys are prioritised for seismic strengthening subject to NZ Transport Agency funding approval to secure access to the city water supply infrastructure.

2.5. Regional Considerations

There are several differences in the way Nelson manages its Transport Network compared to Tasman. It is important to recognise those differences to enable an understanding of the extent to which they affect the Nelson network and community.

Nelson views the provision of improved passenger transport services as essential in providing greater mode choice but also as a means of reducing peak hour congestion between Nelson and Richmond. The cooperation and support of passenger transport by Richmond's residents and governing bodies is important if Nelson is to achieve efficient and resilient connectivity with its nearest regional centre. Recently the two councils have been working together to achieve this. Tasman District Council have included a $30,000 pa allowance in their 2015-2025 Asset Management Plan to assist in funding the bus service.

There are differences between Nelson and Richmond parking policies which implies a more fundamental philosophical difference in transport policy between the two regions. The funding of passenger transport and the charging and restricting of parking are essential tools in managing the transport network to influence mode choice.

Another regional consideration is the allocation of Nelson's "R" funding. Currently the NZ Transport Agency has confirmed that it is to be spent within the "region", and will be spent on the highest ranking projects in terms of NZ Transport Agency's investment and revenue strategy. This effectively means that Nelson projects are competing for priority with NZ Transport Agency's state highway projects.

There are likely to be differences in the way Nelson manages its transport assets compared to Tasman as, being a city, it has to deal with different issues. This is probably reflected most in the Land Development Manual, footpath resealing policy, capital works prioritisation method, cycling and walking policies, Regional Passenger Transport Plan, Regional Land Transport Plan, minor safety polices, street lighting, and growth management strategies.

2.6. Funding

Financial Assistance Rates are used to determine what portion of a project or programme could be funded from the National Land Transport Fund, which is administered by the NZ Transport Agency through the National Land Transport Programme.

In 2013 and 2014 the NZ Transport Agency reviewed the principals and methods used in setting the FAR. Recently the NZ Transport Agency advised there will be one rate for all activities and that Nelson's FAR will increase. Nelson's current effective FAR for all activities was 46%. For the 2015/16 year the NZ Transport Agency has indicated that the FAR will be 47% and will rise by 1% per annum to 51% over five years. The table below details the FAR that Nelson will receive for each year from 2015/16:

Table 2.1 NZ Transport Agency Financial Assistance Rates

Financial Year	Financial Assistance Rate
2014/15	46%
2015/16	47%
2016/17	48%
2017/18	49%
2018/19	50%
2019/20	51%

Council have a risk sharing arrangement with the NZ Transport Agency whereby elevated funding assistance rate for emergency works of subsidised assets. Recent preliminary advice indicates that the subsidy would available only for out of ordinary short duration natural events that are greater than 10% of the approved road maintenance, operations and renewals programme for the relevant year.

NZ Transport Agency have yet to announce the FAR for emergency works. Their preliminary advice is that it may be 10% above the standard FAR.

In 2012 The NZ Transport Agency advised that due to national financial constraints the 'R' funding can be spent up to 2018 rather than 2015.

There are several other sources of funding to support the Transport network along with NZ Transport Agency co-investment and rates. These are Development Contributions, private / public partnerships, utilisation and expansion of parking revenue, and a change in the utilisation of Nelson's fuel tax revenue (which has been contributing towards cost of democracy for last 20 years).

Council's Development Contributions Policy does not permit contributions from growth on roads classified as local although many of Council's projects are designed to cater for future growth, through providing walking and cycling infrastructure on local roads. Previous roading policy determined that 20% of network usage was attributable to growth when a new road is built or upgraded. It is suggested that this proportion of growth could be applied to all new roads and roading improvements, not excluding local roads as these are more likely to service growth areas. It is also proposed that

development contributions should also be taken, at the same proportions for walking, cycling and passenger transport infrastructure. These proposals are now being considered in the Development Contributions Policy review.

2.7. Funding Risk

There are already several transport activities that Council funds from rates without any co-investment. As investment rules tighten, Council always has the option of continuing with the activity or improving the level of service for an activity by increasing the activities funding from rates. If Council chooses to increase rates funding then The NZ Transport Agency will view the activity as affordable by Council and will be unlikely to ever fund that activity to a greater extent again.

The NZ Transport Agency, like Council, works on a three year funding cycle. The NZ Transport Agency allocates funding through the National Land Transport Programme which it adopts in September 2015, after considering each regional land transport plan. There is a risk that activities which may be eligible for funding, and budgeted to receive funding in the LTP, are declined funding after the Council has adopted its LTP. This will mean that some activities will have to be reconsidered by Council to decide if additional funding is provided, or the projects are postponed.

This risk has been a key component on some local projects in recent years where there has been uncertainty over a project receiving co-investment due to delays in approvals, leading to confusion, especially when community engagement is required early on in the design of a project.

2.8. Transport Network Resilience

The Regional Land Transport Plan aims to maximise the efficiency of the transport system with minimal expenditure through encouraging the community to shift to more sustainable ways of moving around the City. This concept is developed further in the next section, resulting in a proposed balanced approach (Section 3.5) to managing the transport network.

Other aspects of a communities resilience relies on Council's other strategic documents such as sustainability strategy, social wellbeing policy and, of critical importance, it's long term growth strategy implemented through the resource management plan.

2.8.1. Planning for Growth

Growth is planned for in a number of ways. The most formalised process is through Resource Management Plan Changes.

Investigation has been recently completed on a number of transport issues that are related to future growth, these are:

- Nelson City Council / NZ Transport Agency / Tasman District Council 3 roundabouts project;
- Parking Strategy;
- Southern Transport Corridor - Issues Definition Report;
- Rocks Road walk and cycle investigation;
- Waimea Road Enhancement Study and intersection improvements;
- Tahunanui Cycle Network.

Investigation is planned for the following:

- Stoke Foothills Transportation Study – investigation into intersection and surrounding network to accommodate growth in the Stoke foothills;

- Atawhai Hills Transportation Study - investigation into intersection and surrounding network to accommodate growth in the hills to the north of the City;
- Annesbrook / Parkers and Quarantine Road modelling [Discuss status with NZ Transport Agency]
- CBD West intersection modelling update - scheduled for Year 3.

2.8.2. Building for Growth

Council is concentrating on providing services to areas that are zoned for development (Residential, Rural Zone High Density Small Holdings, Suburban Commercial and Industrial) but are covered by the Services Overlay because one or more servicing constraints have been identified as needing to be addressed prior to the development of that property / area. The projects to facilitate future growth identified in this AMP therefore only consist of works required to eliminate servicing constraints on sites zoned for development and these have been prioritised in accordance with Council's strategic planning process.

The projects identified in the Asset Management Plan which have a substantial growth component (>50%) are identified below, along with the years they are programmed:

- 2023/24, Marsden Valley Road / The Ridgeway intersection – subject to investigation;
- 2023/24, Marsden Road / Main Road Stoke intersection – subject to investigation;
- 2022/25, Marsden Valley Road Upgrade;
- 2015/16, Todd Bush Road;
- 2021/22, Lucas Terrace Upgrade.

2.9. Consultation

The Council recognises that it has obligations to seek the views of the local community on issues, plans and strategies that may directly or indirectly affect them. It also wants to encourage best practice by engaging public involvement for transport schemes in order to create a sense of ownership by local residents and to ensure that residents, businesses and stakeholders have the opportunity to provide valuable input.

Additional budgets have been included in all transport schemes to provide public engagement. This is to ensure the Council makes informed decisions and that Stakeholders are getting value for money. Views will be considered and responded as is appropriate. We will provide information regarding the outcome of the decision making process and the reasons for the decision.

Key principles of public engagement that the Council wish to improve on, are building consultation into the planning process from the start, and providing access to information by various means to cater to the needs of all people.

2.10. Procurement Strategy

This Strategy documents Nelson City Council's approach to procurement of activities funded through the National Land Transport Programme.

The Strategy aims to achieve desired outcomes and quality at the lowest overall whole of life cost and sustain a pool of suppliers in the region of varying sizes and capabilities to meet the needs of the Council.

The objectives of this Procurement Strategy are:

- To attain value for money;
- To encourage competitive and efficient markets;
- To enable fair competition;
- To operate an efficient procurement process.

Maintenance contracts have been reviewed and grouped to provide a good balance between price and quality, and use either prequalification or price/quality supplier selection methods. The methods used to procure capital projects will differ depending on the size of the project, but will be either lowest price or price/quality.

Council maintains an in-house professional services capability balanced with external consultants as required to achieve best value for money. Additional professional services are sometimes required and will be procured following the guidelines of the NZ Transport Agency Procurement Manual whereby a supplier will be directly appointed for contracts under $100,000, and a closed contest will be used for work between $100,000 and $200,000. The supplier selection method will be determined depending on the services being procured, but will commonly be price/quality.

2.11. Prioritisation Process for Projects

The Council recognises that it has obligations to seek the views of the local community on issues, plans and strategies that may directly or indirectly affect residents. It also wants to encourage best practice by engaging public involvement for transport schemes in order to create a sense of ownership by local residents and to ensure that residents, businesses and stakeholders have the opportunity to provide valuable input.

Projects identified for funding in the Regional Land Transport Plan are subject to prioritisation through the Regional Land Transport Plan development process. This relies on the NZ Transport Agency investment and revenue framework.

3. WHAT'S THE DIRECTION?

3.1. Context

The Transport Asset Management Plan has to take long term higher level direction from the GPS and short term direction from the Regional Land Transport Strategy. The long term vision and mission underpinning the Regional Land Transport Strategy is:

> *"A sustainable transport future for Nelson"*
>
> *and*
>
> *"To have a land transport system that is safe, efficient, integrated and responsive and that meets the needs of the region in ways that are environmentally, socially and economically sustainable".*

The Draft Regional Land Transport Plan 2015 – 2021 (under development) sets out the subsidised transport priorities for the next three years that contribute to the vision for the region in accordance with the GPS on Land Transport.

3.2. What Are The Impacts of Moving People and Goods?

While the transport services and assets associated with this activity are primarily focussed on the safe, efficient and effective transport of people and goods around the region it is important for Council to recognise the potential negative effects on the community. Briefly these are summarised as:

Economic

- The economic cost resulting from road congestion;
- The economic cost resulting from operating, maintenance, renewal and investing in transport assets and services;

Environmental

- Air, water and particle pollution from motor vehicles;
- Disturbance of the natural environment from road construction;
- Contribution to climate change.

Social

- Noise and community severance from busy roads;
- Social cost of road congestion, accidents and injuries;
- Health effects from transport infrastructure which either inhibits, or does not promote, physical activity.

3.3. A Brief History of Street Design and Improvements Programme

Historically transport development in Nelson has pursued infrastructure improvements that have primarily focussed on catering for predicted future traffic volumes. The greatest contributor to the city's roading network has been through residential and industrial growth. The progressive standardisation of street design in new subdivisions and industrial estates, determined by varying versions of the Engineering Standards, can be seen throughout the city.

With expansion into the hillsides as flat land is becoming scarce; the impact of the standards on development costs and the environment has led to a demand for less onerous standards which reduce the impact on the environment. At the same time the costs of Council's own roading improvements, fundamentally based on providing footpaths in the older subdivisions where they were not built at the time of the original development, has increased dramatically as the flatter streets are completed and the costlier hillside streets are prioritised. Indications also showed that the public were particularly concerned about vehicle speeds in residential streets. Questions started to be asked about the necessity for footpaths in every street (however narrow or hilly) as being the key driver for a large proportion of transport expenditure.

The Land Development Manual 2010 addressed many of these issues and was welcomed by the local construction industry and key stakeholders. It provided a more holistic approach to the transport network and set down the fundamental importance of sustainable road design, road hierarchy and accessibility. This change was reflected by Council planners by prioritising the following plan changes:

- Plan Change 21 – Parking and related changes;
- Plan Change 18 – Nelson South;
- Plan Change 17 – Enner Glynn and Brook Valley structure plan;
- Plan Change 14 – Residential subdivision, Land Development Manual and Comprehensive housing;
- Plan Change 13 – Marsden Valley.

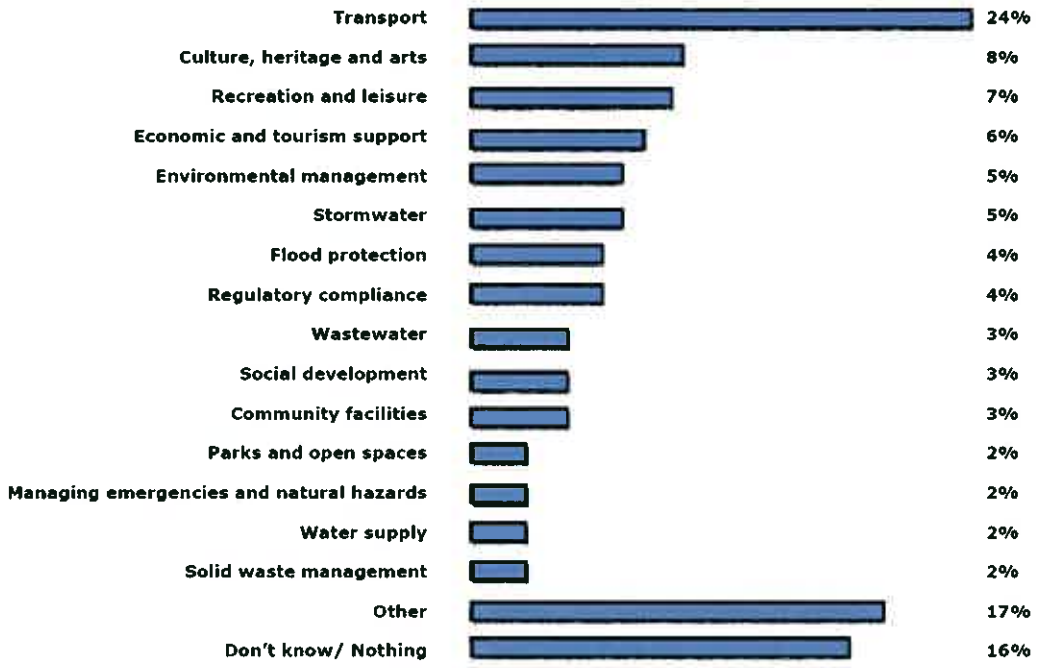
The new direction signalled by the Land Development Manual and the Plan changes is now incorporated into all Council's transport actions.

So historically, street upgrades that have been driven by a footpath prioritisation programme have been using most of Council's capital expenditure programme, including renewals and reseals funding which could have been spent on maintaining the existing transport infrastructure.

The 2009 and 2012 Asset Management Plans recognised that there was an increasing level of deferred maintenance resulting from this funding strategy and diverted the renewals and reseals funding to maintaining the existing transport infrastructure.

The 2013 Residents survey shows that the Transport activity remains the one Council activity the public are most dissatisfied with. Figure 3.2 shows that Transport is the one activity that ratepayers would like to see Council putting more effort into based on the 2013 resident survey. This data was not collected in the 2014 survey.

Figure 3.1 2013 Residents Survey – Activities Which Residents Would Like Council To Put More Effort Into



In Council's 2011 Annual Plan further changes were made with the deferment of several hillside street upgrades and an increase in street lighting and minor improvements funding.

In 2011 Council recognised that the Community has a high demand for Passenger Transport improvements and initiated increasing service frequency by increasing parking charges to fund improvements.

3.4. What Are The Options?

Transport choices made today will determine the competitiveness, quality of life and resilience of Nelson for decades to come.

If we do nothing but maintain the existing network, public dissatisfaction with transport can be expected to increase.

The Draft Government Policy Statement clearly expects regions to focus investment on projects and services that offer increased economic growth and productivity, while also providing value for money through good asset management to improve the performance of the local networks and road safety. It is important to recognise the following impacts which the Draft Government Policy Statement expects and which relate more to the local transport networks:

- A secure and resilient transport network;
- More transport choices, particularly for those with limited access to a car;
- Improvements in the provision of infrastructure and services that enhance transport efficiency and lower the cost of transportation through better use of existing transport networks;
- Reductions in adverse environmental effects from land transport;
- Reductions in road deaths and serious injuries as a result of road crashes.

The advantage of following the Draft Government Policy Statement path is the opportunity to build future resilience into the network and at the same time contribute towards the direction identified in the Council's 2060 (Sustainability) Strategy. Optimisation of our existing network combined with a lesser reliance on private vehicles and a greater encouragement of other modes can lead to:

- lower energy costs;
- increased quality of life;
- greater value for money;
- fast, safe, affordable transportation;
- vibrant streets and green areas;
- clean and healthy environment;
- cities for people.

3.5. A Balanced Approach

The 2012 Transport Asset Management Plan adopted a "balanced approach" towards transport in Nelson and that approach has been continued through to this Plan.

Nationally and internationally, current transport planning has supported the encouragement of sustainable and alternative forms of transport for many years now, and Nelson has been at the forefront of actively supporting these forms of transport for over 15 years. Nelson has adopted a strategic momentum towards providing greater quality transport choices through the Asset Management Plans, the Regional Land Transport Strategy, Plan Changes and Council's strategic sustainability policies. This has been effective in improving the walking and cycling networks in Nelson, and has supported the development of improved reliable public transport that offer viable options to residents. Nelson has developed a distinct travel choice culture.

This approach is fundamental to this TAMP and to the continued integrated delivery of projects by NCC over coming years. This will result in lower cost local road upgrades which are fit for purpose, provide opportunities for travel choices optimised whenever any project permits, and the travel needs of all road users recognised and catered for as feasible. In doing so Council:

- Recognises the importance of well located, strong transport corridors that offer the potential for the efficient and safe flow of people and freight to assist the economic vitality of our region; and
- Acknowledges that more integrated approaches to traffic flow (the importance of slower speeds and placing a greater emphasis on walking, cycling and a sense of place) are necessary on our local roads and residential streets to promote social and community networks, supportive neighbourhoods, urban centres and safe streets.

4. THE DELIVERY OF A BALANCED APPROACH

This Asset Management Plan sets out how this balanced approach, initially implemented in the 2012 AMP, is to be delivered in a cost effective manner. It aligns Council's expenditure to its strategic planning direction while at the same time positions itself to qualify for national funding by aligning with Government direction wherever possible.

The following six focus areas are proposed:

- Local roads including walking, cycling and schools;
- Arterial traffic, including freight;
- Safety;
- Public transport;
- Parking;
- Value for money principles.

Appendix E identifies how these focus areas link to Councils strategic plans and the Government's desired impacts.

This section identifies levels of service, performance indicators, three year performance targets, the current performance level and preliminary details of the projects, activities and plans proposed to deliver the performance targets.

Funding has been allocated to these focus areas at a higher level than the total transport expenditure in recent years in recognition of the improvement that is necessary in the transport activity to bring its public satisfaction rating into line with Councils other assets and activities.

4.1. Defining the Targets and the Delivery

This section identifies the levels of service, performance indicators, three year performance targets, the current performance level and preliminary details of the projects, activities and plans proposed to deliver the performance targets.

Performance targets identified below are for three years because the Asset Management Plan is reviewed every three years. Council has ten year targets in the Regional Land Transport Plan which are reported on annually to the Regional Transport Committee.

The performance targets don't always directly relate to the implementation package as in most cases it is difficult to measure the impacts of the packages over the short term and targets have to be SMART[1].

Section 261B of the Local Government Act 2002 (Amendment Act 2010) specifies that the Secretary for Local Government must make rules specifying performance measures in relation to the provision of roads and footpaths. This rule was published in February 2014 and is now operative.

4.2. Local Roads, Walking, Cycling and Schools

These services provide the essential services that contribute to the community outcome of People-friendly places – *"We build healthy, accessible and attractive places and live in a sustainable region"*. The service levels are fundamental in delivering softer approaches to traffic management (the importance of slower speeds and placing

1 Specific, Measurable, Achievable, Realistic, Time bound

a greater emphasis on walking, cycling and a sense of place) to promote social and community networks, supportive neighbourhoods and safe streets.

A service level statement for the road network identifying the basic transport needs follows:

- Roads are safe to use and provide a comfortable and reliable means of travel.
- The footpath and cycle network is considered to be suitable, accessible, safe and well maintained.
- Road markings are maintained to provide clear delineation and direction for roads, parking, and cycle lanes at all times.
- Bridges and related structures are designed and maintained to provide safe access across the network.
- Traffic signals are designed and maintained to improve traffic flow in the roading network.
- Appropriate signage is maintained to enable safe and efficient way finding across the transport network.
- Adequate street lighting is maintained to enable safe neighbourhoods and easy night driving on all urban streets.
- Stormwater is removed efficiently from road surfaces.

4.2.1. Walking and Cycling

The guiding level of service relating to walking and cycling is:

Table 4.1 Level of Service Relating to Walking and Cycling

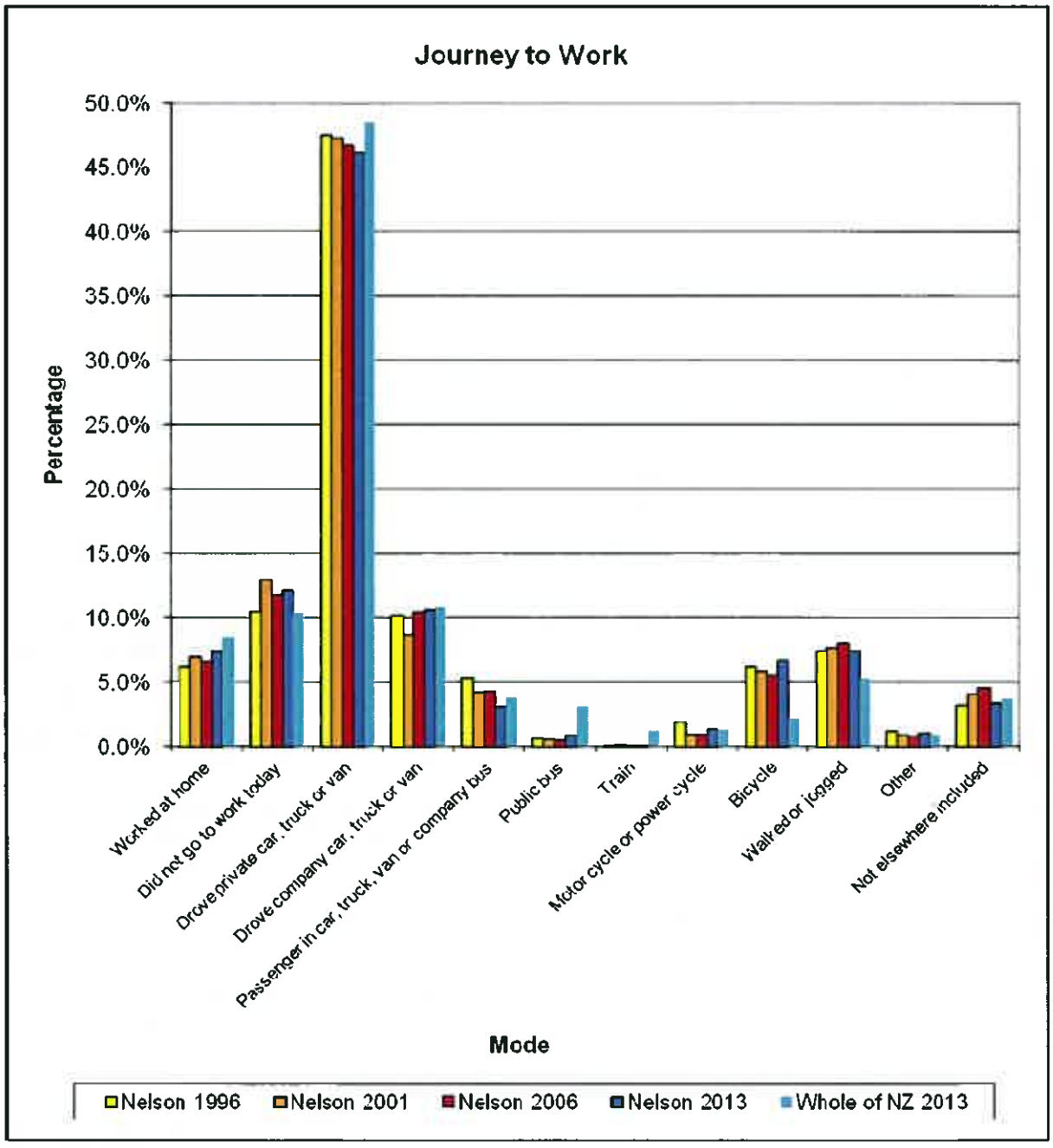
Level of Service	Performance Indicator	Performance Target
Walking and cycling are easy and attractive alternative transport choices.	Percentage of the community that travel to work by walking or cycling (based on Nelson City Council Annual Residents Survey and/or national census).	25% of all journeys to work trips are by walking or cycling by 2018.

Table 4.2 Level of Service Relating to Maintenance of Footpaths

Level of Service	Performance Indicator	Current Performance	Performance Target
MAINTENANCE			
The Network, and its services in good condition and are "fit for purpose"	The percentage of footpaths that meet or exceed the maximum acceptable roughness*	95%	95% of the footpath network by length has a condition rating of ≤ 3

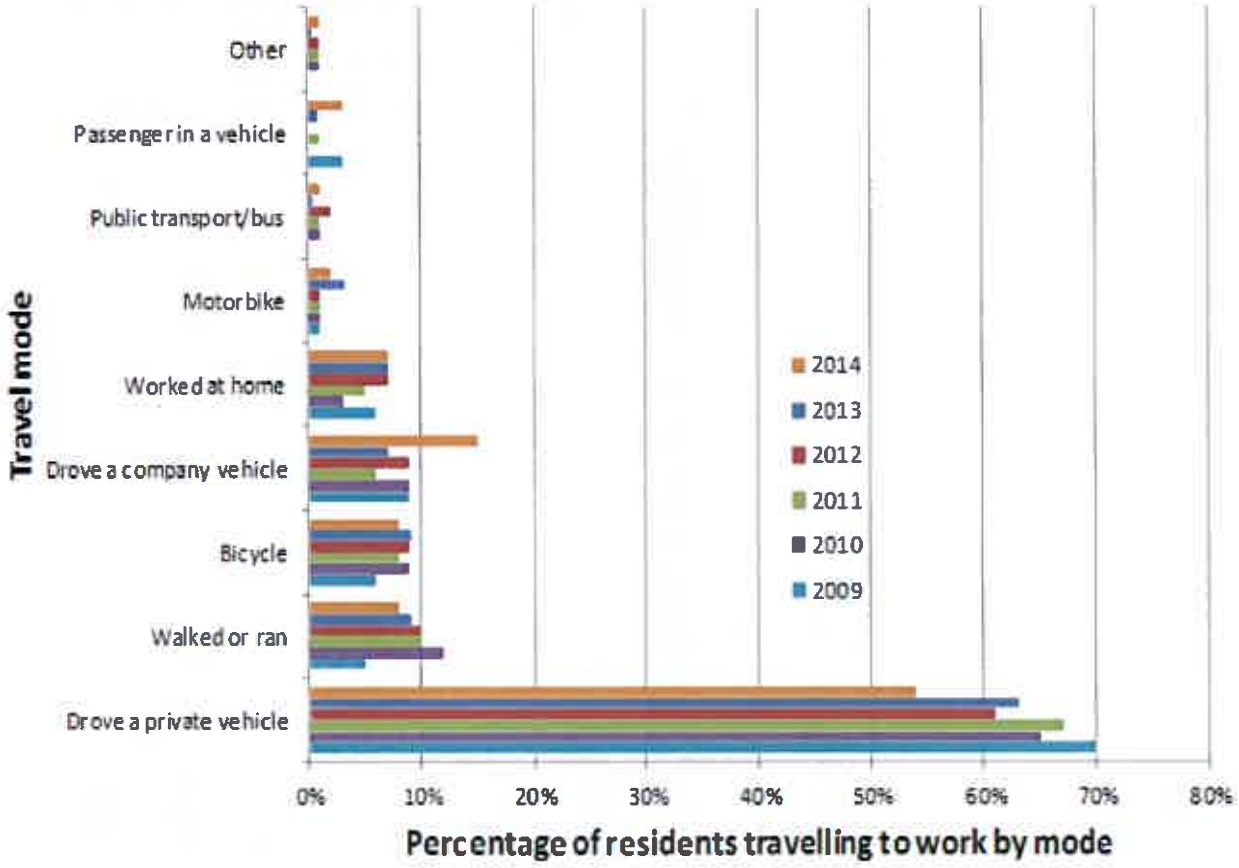
The measure Council uses to monitor walking and cycling is the journey to work data as it is a Census question as well as a question in Council's annual residents' survey. Figure 4.1 below shows the journey to work data from 1996 to 2013 from the census and Figure 4.2 shows similar data from the annual residents' survey.

Figure 4.1 Journey to Work Data



The graph above shows that over half of the population travel to work by car, truck or van, although a higher proportion walk or cycle in Nelson than the rest of the country, averaging around 17% of all journeys to work.

Figure 4.2 Main Means of Travel to Work



In the 2014 residents' survey 16% of journey to work trips were by walking and cycling. This was slightly less than previous years although it is worth noting that the absolute numbers of residents travelling by these modes increased.

The condition of the footpaths is of particular interest to the community, especially relating to the surface condition and how this relates to safe use by the increasing number of elderly and disabled residents. Council has developed a new condition rating for use locally. Table 4.3 shows the descriptions of each rating as well as the percentage, by length, of the footpath network that meets the criteria.

Table 4.3 Footpath Rating Descriptions and Summary

Rating	Description	Percentage length with rating (2014)
1	As new, no significant cracking, even surface.	15%
2	Good condition, safe to use, some minor cracking and/or scabbing/ravelling.	48%
3	Average condition, could be some cracking, scabbing/ravelling and/or untidy but safe to use, no significant hazards.	32%
4	Poor condition, will need maintenance in near future, cracking more significant, may be some settlement or sections may be lifting, surface may be uneven, small bumps or ruts forming, broken edges, lichen, service covers may be raised or low.	4%
5	Very poor condition, needs to be fixed now, not safe to use, significant tripping hazards, holes, humps and bumps, ruts and/or very uneven surface, service covers and/or tree roots hazardous.	1%

Table 4.3 shows that around 48% of the footpath network is in good condition with a further 32% in average but still safe condition.

4.2.2. The Walk/Cycle/Schools Package

A Walk/Cycle/Schools Package of Capital Works was adopted by Council through the Regional Land Transport Programme in 2012-15 focussing on walking, cycling and infrastructure around schools. The objectives are:

- To increase peak hour walking and cycling throughout the City (acknowledging that journey to school mode is critical to reducing congestion and achieving the other Regional Land Transport Strategy 2009 objectives).
- Increasing walking and cycling at all other times.

This package is more than just the resolution of an issue. It is a strategic direction for a community with limited funds that has identified its direction through many strategic and policy documents (identified above). It aligns with many outcomes of the Government Policy Statement and allocates a share of the available regional funds to some local roading projects. A key driver for the support for this Package is the outcome of the Arterial Traffic Study which did not support the immediate progression of the southern arterial.

A range of projects and measures across all activities were selected to extract maximum value from previous investment, to complete significant network connections and to encourage a further step forward in opportunities to walk and cycle within Nelson. The package when completed will result in a well integrated network with overall greater network safety.

There were two State Highway network infrastructure projects critical to making walking and cycling an easy choice for Nelson. These are aimed at providing increased walking and cycling opportunities on or alongside state highways and providing connection to the local network facilities.

The proposed local infrastructure projects went towards completing separated cycle facilities across the city (including linkages to Richmond), allowing the full benefit of previous investment to be realised. New off road facilities from the Central Business District to the Port along the banks of the Maitai River will provide excellent connections for pedestrians, children, and less confident cyclists. On-road facilities will fill the missing links in the key routes from Tahunanui to Stoke. These key projects will be supported by a number of smaller projects which will provide linkages within parks and reserves, better lighting of roads and cycleways, and improved cycle parking.

The following projects are programmed for the 2015-2018 period covered by this Asset Management Plan under the walk/cycle/schools package:

- Rocks Road shared path;
- Tahunanui to Stoke cycle link;
- Maitai path bridge across Saltwater Creek.

Targets for the package are:

- Extend and further develop existing key walking and cycling networks.
- Target schools to make walking and cycling for schools children easier and safer, thereby reducing peak hour vehicle congestion.
- Reductions in deaths and serious injuries as a result of road crashes.
- More transport choices, particularly for those with limited access to a car.
- Reductions in adverse environmental effects from land transport.
- Contributions to positive health outcomes.

4.2.3. Local Road Maintenance and Renewals

The guiding level of service relating to local road maintenance and renewals is:

Table 4.4 Level of Service Relating to Local Road Maintenance and Renewals

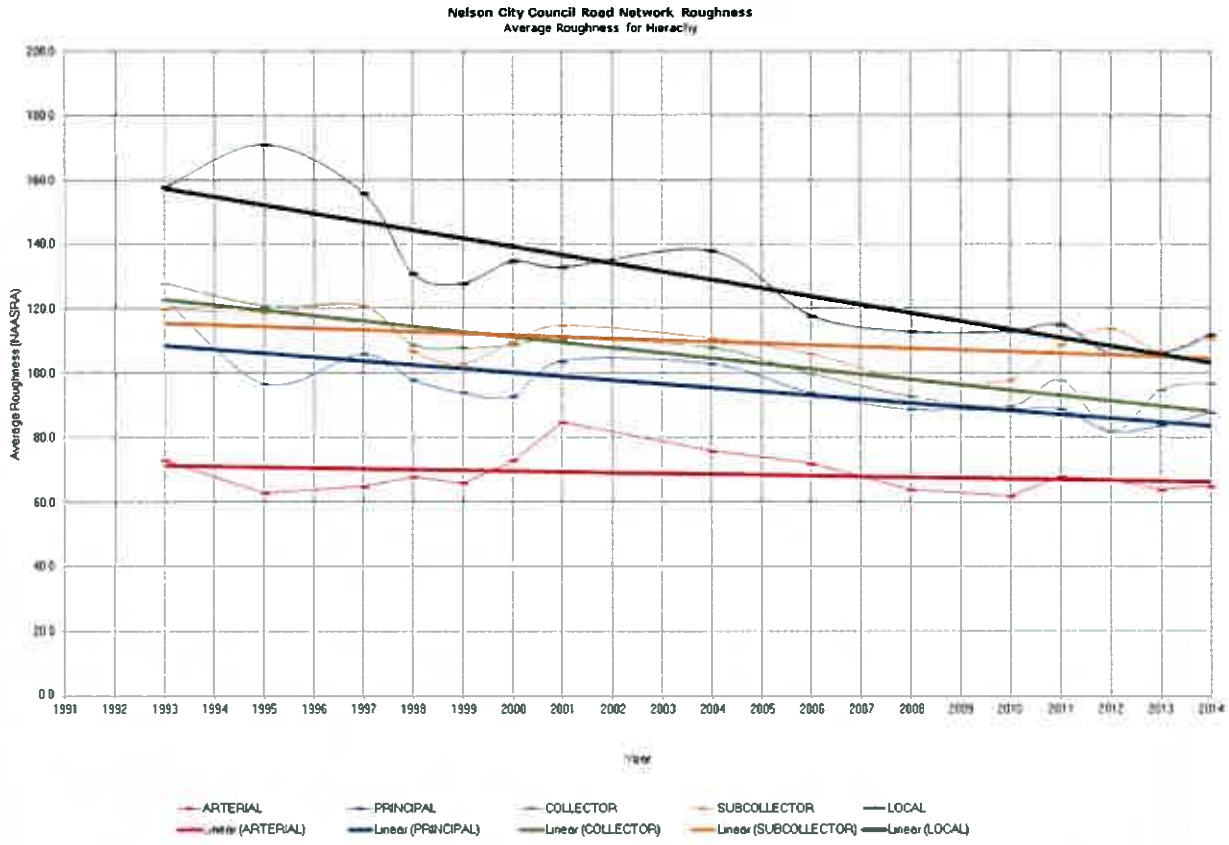
Level of Service	Performance Indicator	Current Performance	Performance Target
MAINTENANCE			
The Network, and its services in good condition and are "fit for purpose"	Smooth Travel Exposure*	87%	87% based on NZ Transport Agency standard roughness limits in ONRC
The Network, and its services in good condition and are "fit for purpose"	Average road roughness standard (National Association of Australian State Roading Authorities) by road classification.	Local, 106 Rural Sealed, 97	The following maximum average road roughness are not exceeded: Local,120 Rural sealed, 120
The Network, and its services in good condition and are "fit for purpose"	The percentage of the local road (non State Highway) that is resurfaced*	4.8%	7.4%

Every formed Council owned road is recorded in the Road Asset Maintenance Management database. This database records pavement and surfacing, streetlights, footpaths, construction and maintenance history, inspection data and traffic volumes.

NZ Transport Agency uses the National Association of Australian State Roading Authorities[2] reading to determine the average road roughness. Nelson City Council has used National Association of Australian State Roading Authorities ratings to determine if additional funding is necessary to maintain the roads to an adequate roughness level. Figure 4.5 below shows the current average road roughness standard (National Association of Australian State Roading Authorities) by road classification. This shows a long-term decline (improvement) in roughness linearly, but an increase (worsening) in roughness during the last year for principal, sub collector and local roads.

2 Road roughness is measured by a system developed by the former National Association of Australian State Roading Authorities. Values are obtained by a special-purpose vehicle travelling down both outside lanes of the length of a road. The rougher the road, the higher the National Association of Australian State Roading Authorities counts per lane kilometre. A National Association of Australian State Roading Authorities count of greater than 150 typically indicates a road which is becoming a concern in terms of its roughness and the number of complaints likely to be generated.

Figure 4.3 Average Road Roughness Standards (National Association of Australian State Roading Authorities) by Road Classification



Smooth Travel Exposure (STE) provides a measure of the proportion of vehicle travel that occurs on roads that meet the roughness limits. Due to the complications in assessing the financial implications of committing to a higher target than already being achieved further analysis will be undertaken once the ONRC is operative. The current level of STE is expected to be maintained for the next three years due to the resurfacing of a large section of Waimea Road and has been used as the performance target in this AMP. A new limit will be set for the next Transport Asset Management Plan once the new ONRC results can be interrogated.

The upper limit of the performance target of 7.4% of the network to be resurfaced annually has been set based on the area estimated as able to be resurfaced with the budgets detailed above. The lower limit of 5.4% of the target allows for some level of uncertainty associated with the cost fluctuations in raw materials increases in contract labour costs and poor ground conditions. The range also allows for the programme to be changed should opportunities for further optimisation be identified.

4.2.4. Road Surfaces

Up until the last six years, NZTA supported the use of theoretical seal lives that had been previously published by their predecessor, Transit NZ in 2005. Since then, Councils have been required to extend the life of all of the pavement surfaces that they maintain until all of their practical life has been utilised. In order to provide some assessment of the likely future costs associated with maintaining Nelsons roads, a revised seal life table has been developed that more accurately reflects the practical life of the sealed surfaces in Nelson. These seal lives have been based on the following factors:

- The current age of the existing surfaces
- The age of the surfaces programmed for reseal after visual inspection
- The experience of Council's road maintenance staff

The practical seal lives are shown in Table 4.5 with each entry colour coded according to the confidence that Council officers have for each particular entry. Green represents areas of very high confidence, orange represents moderate to high confidence and red represents low confidence.

Table 4.5 Practical seal lives in Nelson

Surfacing type		Traffic volume						
		<100vpd	100-500vpd	500-2000vpd	2000-4000vpd	4000-10000vpd	10000-20000vpd	>20000vpd
VFILL	6	8	7	6	5	4	3	3
	5	11	10	9	8	7	6	5
	4	15	13	11	10	9	8	7
	3	17	15	13	12	11	10	9
1	5	1	1	1	1	1	1	1
	4	4	4	2	2	1	1	1
	3	4	4	2	1	1	1	1
	4/6	7	7	7	5	4	3	1
	3/5	8	8	8	6	5	4	2
	2/4	Not used						
R	5	20	20	12	10	8	6	4
	4	18	18	18	15	10	5	4
	3	16	16	16	12	8	7	6
	2	Not used						
	4/6	16	16	16	14	10	6	4
	3/5	16	16	16	16	13	10	8
	2/4	18	16	14	13	12	10	9
AC	10	30	30	29	28	26	21	10
	16	25	25	24	24	23	20	15
OGEM		Not used						
OGPA		No longer considered						

While the table above seems to illustrate a high level of uncertainty overall, the areas shown in red do not represent a very high proportion of the sealed area in the Nelson road network. The proportion of each surface type and corresponding traffic volume range is shown in Table 4.6.

Table 4.6 Proportion of Road Surface in Nelson by Type and Traffic Volume

Surfacing type		Traffic volume						
		<100vpd	100-500vpd	500-2000vpd	2000-4000vpd	4000-10000vpd	10000-20000vpd	>20000vpd
VFILL	6			0.4%				
	5	0.0%	0.1%	0.1%	0.0%			
	4							
	3							
1	5	0.0%						
	4	0.1%	0.1%	0.1%				
	3		0.1%	0.0%				
	4/6	0.1%	0.8%	0.4%	0.4%	0.2%		
	3/5	0.6%	2.9%	1.6%	0.0%	0.3%		
	2/4							
R	5	0.3%	0.4%	0.3%	0.1%			
	4	0.5%	4.2%	5.1%	1.8%	1.2%	0.4%	
	3	1.2%	3.7%	1.0%	0.1%	0.4%		
	2							
	4/6	0.7%	7.2%	7.1%	2.9%	1.6%	1.2%	
	3/5	1.4%	3.2%	5.9%	2.3%	1.8%		0.1%
	2/4		1.0%	0.6%	0.2%			
AC	10	1.9%	7.4%	6.6%	4.6%	5.7%	1.7%	0.1%
	16	0.0%	0.0%	0.1%	0.1%	1.9%	2.1%	1.4%
OGEM								
OGPA								

Table 4.6 shows that almost all of the road network (approximately 93%), by area, is of a type that there is high confidence in the practical surface life. The revised surface life table is therefore considered to be fit for purpose in assessing the likely forward renewal cost of the sealed surface.

It is noted that the practical surface life table above details lives for each surface type in a location that is appropriate. For example, AC16 will almost always last a lot longer if used in the same location as AC10. In practice though, AC16 is never used in the same location and is instead reserved for use in much higher stress situations.

Currently there is a change in seal technology towards more environmentally sound and safer to use products. Further effect on the seal lives are driven by the changes in the New Zealand vehicles fleet to front wheel power steering cars in particular. These newer vehicles put the road surface under additional stress.

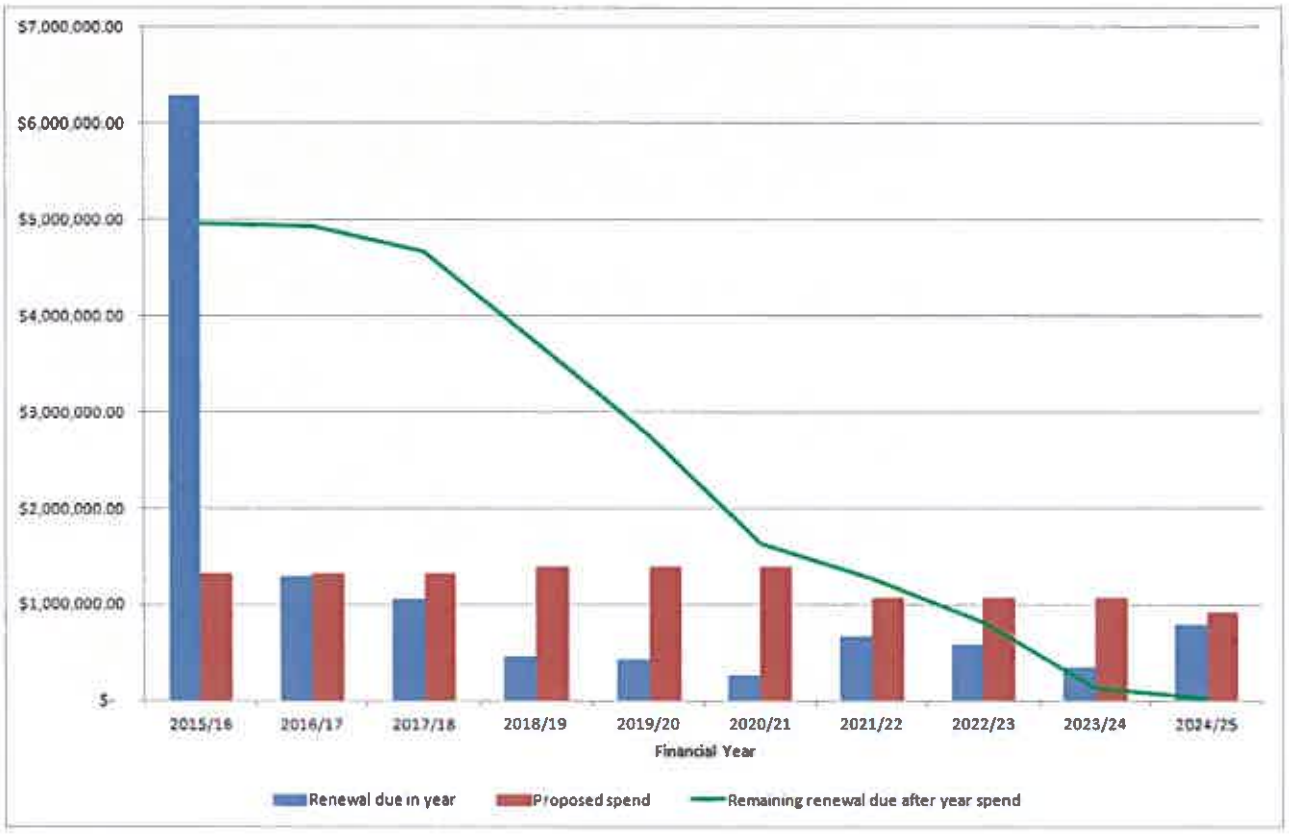
With these changes comes uncertainly around the life of the surfaces. As a result the surface life table will need to remain a live document that is revised regularly to reflect the latest information that Council has about its road surfaces. The table will be updated at least every three years after the major inspection and programming of critical surfaces for resurfacing that takes place in order to inform both the next Transport AMP and RLTP.

The practical seal life table allows an assessment of the whole network how much of it is due for reseal in each year. To follow this, a likely cost can be calculated. The following assumptions were made in undertaking this assessment.

- All asphalted surfaces will be replaced with asphalt at an average cost of $30/m2
- All non-asphalt surfaces will be replaced with a two coat grade 3/5 chipseal or similar at an average cost of $6.80/m2
- Council staff time programming and managing the reseals is 4% of the total cost
- Lifting services and remarking is 5% of the total cost

Figure 4.4 shows the projected resealing maintenance (or backlog) liability, proposed spend and remaining liability after spend for each of the ten years beginning in the 2015/16 financial year.

Figure 4.4 Expected Future Resurfacing Costs/Liability



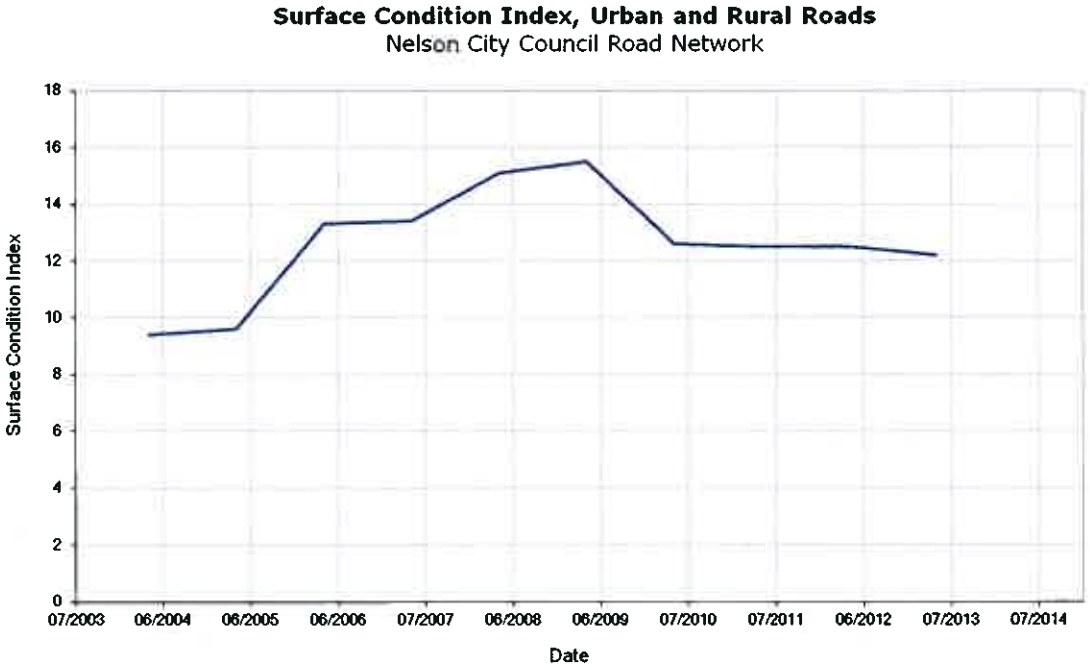
In summary Figure 4.4 shows the following:

- There is a very large backlog of surfaces that have exceeded their practical lives and need to be replaced urgently. This is supported by Council staff observations that have shown that they have been unable to reseal all of the critical surfaces in the 2014/15 financial year and as a result will need to undertake more repair work.
- If Council was to catch up and keep up with the reseals that are needed, when they are needed then around $6.3M would need to be spent in the 2015/16 financial year followed by $1.3M and $1.1M for the two years following.
- It is proposed to spread the backlog over the next 8 years as shown by the red bars. This results in a spend of $1.33M each year for the 2015/16, 16/17 and 17/18 financial years followed by $1.4M each year for the following three years. The spend then drops to around $1.1M from 2021/22. The spend in each year includes a proportion of the backlog plus the area due for replacement in that particular year with the backlog likely to be prioritised first.
- Even though the backlog has been spread over eight years the discharging of the overall maintenance liability associated with the reseals essentially takes a full 10 years from 2015/16.

Of note is the fact that the presence of this backlog will result in a future 'hump' that will occur approximately every 15-16 years requiring an annual investment of around $2.8M at peak. This does not show in the ten year period covered by this Transport AMP but first begins to appear again in around 2030/31.

Figure 4.5 shows the Surface Condition Index, which is a measure of various survey faults (cracking, flushing, potholes, rutting, scabbing, shoving, patches) and surface age. (The lower the surface condition index the better the pavement is). The figure shows an improvement in the Surface Condition Index since 2008 after a significant increase (worsening) between 2004 and 2008.

Figure 4.5 Road Network Surface Condition



The results in Figure 4.7 above show that we are effectively managing the aged surfaces by targeting those in worst condition. More high volume roads in the network have been asphalted which has further contributed to the improvement in the Surface Condition Index. This data is a snap-shot in time only and does not provide any assessment of future maintenance needs in time to allow effective response to any issues.

4.2.5. Pavement Renewals

For pavement renewals Council utilises field measurements, maintenance history and engineering judgement to programme works. The quality of renewals undertaken may be affected by the requirement to justify planned works with NZ Transport Agency prior to funding approval. Works which cannot be justified from a whole of life maintenance analysis will not receive a subsidy and as a result may be deferred. Funding applications are yet to be completed for the renewals work identified in section 5.3.3 so at this stage the extent of deferred renewals, if any, is unknown.

4.2.6. Implementation Package for Local Roads, Walking and Cycling and Schools

4.2.7. Walking, Cycling and Schools

There is a clear correlation in Nelson between arterial congestion in the peak hours and school term times. Around 56% of New Zealand children are driven to school each day, increasing from 45% in 1998.

Driving to school instead of walking reduces children's physical activity and increases traffic congestion and air pollution. Nearly every part of the city is within 500m from a school, which is considered an acceptable walking distance for most children. Clearly improving the walking and cycling facilities around schools has the potential to change

the way students travel to school and alleviate peak hour congestion at the same time.

Some of the projects, activities and plans proposed that relate to schools are:

- Encourage Walking School Buses, Feet First & Walk to School promotions, Bike Wise, and other events and activities designed to promote and encourage using active transport as a mode of travel to and from school, with liaison with the schools.
- Improvement of School Entrances and frontages to encourage active modes.
- Increased parking enforcement around schools.
- Delivery of cycle skills education courses in both schools (and the wider community) as part of the regional RIDE ON cycle strategy. This strategy includes working alongside recreational providers to run activities that encourages cycling in general and in particular safe cycling practice.
- Ongoing encouragement of active modes delivered through council publications and media such as Live Nelson.

4.2.8. Local Roads

Local roading investment requires expanding if overall service levels are to be maintained. In 2012 the reseal budget was increased although the roading maintenance budgets were frozen and have not kept pace with the expansion of the network though subdivision development, or inflation. This has led to deterioration in the performance of the network.

Additional local roading maintenance and renewal projects proposed to maintain the existing level of service are:

- Increase sealed pavement maintenance budgets from $469,000 to $500,000.
- Resurfacing budget from $1.33 million/year for the first three years before increasing to $1.4 million for years 4-6 and then reducing to $1.1million/year for year 6-9 to ensure the sealed surfaces keep the high value base course layers dry.
- Increase structural replacement programme for bridges and retaining walls via the structures component replacement budget of approximately $330,000 pa.
- Increase for streetlight renewals costing approximately $270,000/year to allow the replacement of poor performing lights with LED luminaries.
- Provide a pavement renewal budget in the order of $350 pa.

Other local roading capital projects proposed to improve the Levels of Service are:

- Continue to implement street lighting upgrade programme to enable safe and easy night time driving, and expansion of lighting to shared walk/cycleways such as the Railway reserve.
- Safety upgrades at the intersection of Toi Toi Street and St Vincent Street.
- Upgrade only those roads where traffic volumes, safety issues or utilities upgrades justify a full upgrade.
- Increase in the Minor Improvement Programme to $650,000 pa.
- Finish implementation of the walking/cycling and schools package identified in the Regional Land Transport Programme 2012-15. Note that it is not intended to update the Council's Pedestrian Strategy (2005) or Cycling Strategy (2006). Nelson is far enough advanced in its walking and cycling implementation that it would not add any benefit to its Walk / Cycle funding package, rather walking and cycling is included in this AMP and in the RLTP.

- Continue to enhance the Central Business District through works identified in Heart of Nelson and other new priorities. $100,000 has been allowed for in year 1 and $500,000/year for years 2-10.
- Provide a footpath improvement budget of $50,000 for the first year for design and the $200,000/year for years 2-10 to provide missing footpath links.

POLICY NOTE: - With the installation of the ultra fast broadband cabling in many streets and footpaths there is an opportunity to provide a small proportion of funding to resurface the total width of the footpaths when the trenches are being reinstated. This is excellent value for money although the opportunity to upgrade these footpaths to the 2010 Land Development Manual standards is limited. It is proposed that the footpath renewals budget be utilised to facilitate this and similar future opportunities.

Other local roading capital projects proposed to cater for growth are:

- Rural Road seal extensions - It is proposed to use recycled asphalt millings to seal rural roads. These will not be reconstructed to full Land Development Manual standard but surfaced to minimise the ongoing maintenance required, reduce dust issues and improve safety.
- Todd Bush Road.
- Marsden / Ridgeway intersection.

Council has an ownership responsibility to manage the road reserve in a cost effective, sustainable, well planned and coordinated manner to agreed levels of service. Council has a number of individual policy and procedures, many of which require updating. It is proposed that an overarching Road Management Policy is developed to include:

- Road Reserve Management Policy and Procedures;
- Road Reserve Operations and Maintenance Policy;
- Road Occupation Policy (Structures on Road Reserve);
- Parking Policy;
- Road Stopping, Sale and Acquisitions Policy;
- Speed complaints procedure;
- Signage Policy;
- Power and Telecom Undergrounding Policy;
- Roading Improvement Policy.

4.3. Arterial Traffic

These service levels provide the other half of a balanced network approach by recognising the importance of well located, strong transport corridors that offer the potential for the efficient and safe flow of people and goods to assist the economic vitality of our region. The service levels contribute to the government outcomes providing "an efficient transport system that supports high levels of economic productivity, provides strong international connections for freight, business and tourism, and meets international obligations" and the community outcome of people friendly places - "We build healthy, accessible and attractive places and live in a sustainable region".

Council's main arterial corridor is from the Queen Elizabeth II / Haven Road roundabout, along Haven Road, Halifax Street, Rutherford Street, Waimea Road and Main Road Stoke and the link from the State Highway / Annesbrook roundabout to Main Road Stoke along Annesbrook Drive. The other corridor routes, between Annesbrook roundabout and the Beatson Road roundabout, and along the state highways are owned and managed by NZ Transport Agency.

Delays in arterial traffic travel times and a widening of the peak travel periods are an indication of inefficient use of transport routes and have a negative impact on

economic productivity. By monitoring travel times and peak spread on key routes we can see whether these routes are efficient. Appendix H shows graphically the peak spread and delays on the Rocks Road and Waimea Road corridors.

The current average delays have been measured to be 3 minute on Rocks Road and 2 minutes on Waimea Road. It is noted that the dataset for this measurement is very small due to the complexities associated with collecting the data. Nelson City Council has partnering with NZTA and installed a wireless detection system to measure travel times. This improvement in technology will allow a much larger sample to be collected and improve the effectiveness of this measure.

Table 4.7 Level of Service Relating to Efficient Transport System

Level of Service	Performance Indicator	Performance Target
An efficient transport system that enables people and freight to move efficiently.	Average AM and PM peak hour travel times on Waimea Road and the State Highway between Annesbrook and Haven Road roundabout.	Average peak hour travel time delays are no greater than 5 minutes above uncongested travel times.

The Nelson to Brightwater Corridor Study model provides levels of service for the transport corridors. Generally a level of service of C or above is considered appropriate for local arterial transport roads. The definition of the level of service along with classification of the key corridors is provided in Appendix F.

The 2009 modelling predicts that current levels of service are below C around the three roundabouts which connect the State Highway 6 to Main Road Stoke and Salisbury Road, close to the Nelson/Tasman boundary and along parts of Waimea Road. Observations of these intersections confirm that they continue to operate at a level of service worse than C and are likely to continue to in the foreseeable future.

The 5 minute delay defined as the performance target represents an average delay of around 1 minute per kilometre over the measured distance. Based on the Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis, Sections 5.2.2 and 5.2.3, this level of delay is expected to result in a level of service of C for the route as a whole. The descriptions of the level of service flow characteristics contained in the Austroads guide are similar to those contained in Appendix F.

Nelson City Council has used National Association of Australian State Roading Authorities ratings to determine if additional funding is necessary to maintain the roads to an adequate roughness level. Figure 4.3 shows the current average road roughness standard (National Association of Australian State Roading Authorities) by road classification, along with proposed target levels.

Table 4.8 Level of Service relating to Road Network and Its Services

Level of Service	Performance Indicator	Performance Target
The network, and its services in good condition and are "fit for purpose".	Average road roughness standard (National Association of Australian State Roading Authorities) by road classification.	The following maximum average road roughness are not exceeded: Arterial/Principal, 100 Collector/Sub C, 110.

4.3.1. Implementation Package for Arterial Traffic

Many of the local roading maintenance and renewal initiatives identified in 4.2 above also include, and prioritise the arterial roads. These budgets are not split between local and arterial roads and it is not considered necessary to do so, but the budgets allocated include all local roads and arterial roads.

The 2012 AMP included an action to update the transportation modelling, undertaken as part of the Arterial Traffic Study, once the 2013 census data became available. Closer examination of the traffic data on the main arterial routes has shown that, while all of the growth in population and households assumed in the model has been realised, the arterial traffic volumes have been reducing to a level well below those predicted in the model. As a result an update of the model will not change any of the Arterial Traffic Study recommendations other than to push the need for any works further into the future than previously recommended. It is proposed instead to monitor traffic volumes closely and look to update the model after the next census unless it is carried out sooner by the NZTA for the purposes of investigating eth Southern Arterial.

Council has investigated some of the transport issues that relate to the poor peak hour travel time performance of the arterials, such as the arterial traffic study, the NZ Transport Agency / Nelson City Council / Tasman District Council three roundabouts study and the Waimea Road intersections.

Capital projects to improve the level of service and provide for future arterial traffic growth include:

- Annesbrook Drive crossing facilities;
- Update and review the transport model following the 2018 Census (in partnership with NZ Transport Agency and Tasman District Council as the model ownership is equally shared);
- Provide off-street car parking in Tahunanui near the Bisley Avenue intersection to allow reinstatement of the two southbound through lanes;
- Complete the cycle link on SH6 between the Crop and Food building and the recently completed Maitai walkway;
- Rocks Road walking and cycling facilities;
- Projects identified in the Regional Land Transport Plan;
- Increase frequency of NBus on the arterial routes.

A number of intersection improvements proposed by the Arterial Traffic Study have been found to delay through traffic on the arterial roads to a level that any major improvements to the intersections cannot be progressed on economic grounds. Instead it is proposed to undertake more modest work in order to improve safety in particular.

4.4. Safety

This service level is an essential part of managing the transport network and has been chosen to align with "Safer Journeys" which is the government's strategy to guide improvements in road safety over the period 2010 to 2020. The strategy's vision is "a safe road system increasingly free of death and serious injury".

The safe system approach to road safety recognises that drivers make mistakes but should not die or be seriously injured as a result. As a local road controlling authority, Nelson City Council has a part to play in providing safe roads and roadsides along with safe speeds on the roads that it administers.

The road safety service level statement is:

"To work towards a safe road system increasingly free of death and serious injury".

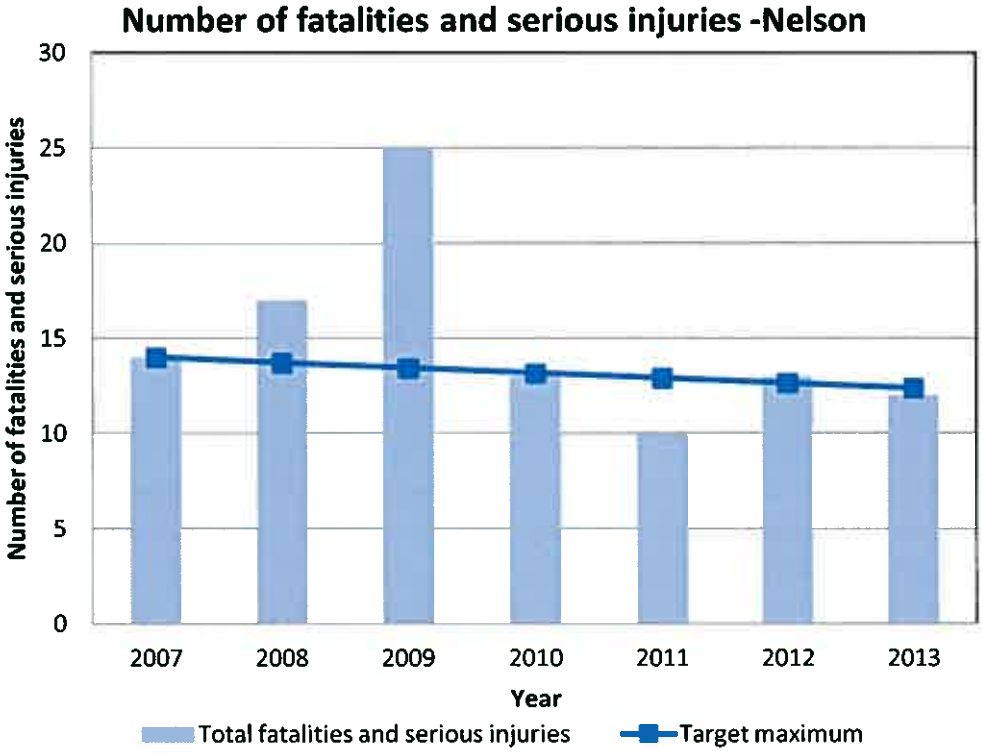
The Local Government Act 2002 requires all road controlling authorities to have a level of service relating to the number of fatalities and serious injuries and report on these annually.

Table 4.9 Level of Service Relating to Road Safety

Level of Service	Performance Indicator	Performance Target
Road safety.	Number of deaths and serious injuries in road crashes	Reducing at 4% per year from a base of 2007

Figure 4.6 below shows that since 2007 the number of fatalities and serious injuries on Nelsons Roads has fluctuated at or above the target maximum.

Figure 4.6 Number of Fatal and Serious Injuries on Local Roads in Nelson



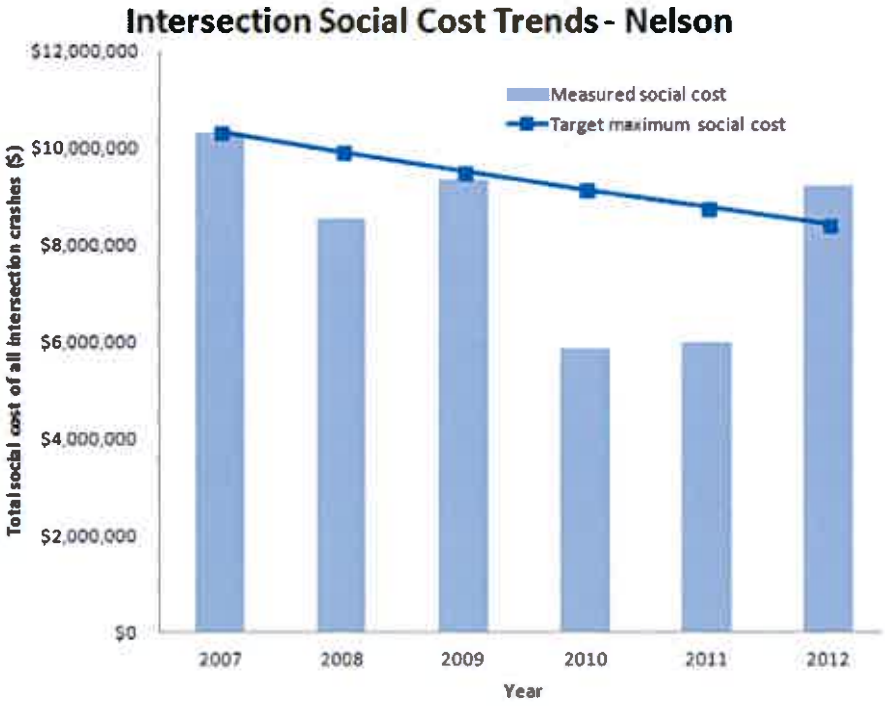
Around half of all urban crashes on the network are at intersections, and of these intersection crashes, the worst intersections account for a significant proportion of the overall social cost.

Table 4.10 Level of Service Relating to Road Safety at Intersections

Level of Service	Performance Indicator	Performance Target
Road safety.	Annual social cost of crashes (injury and non-injury) at intersections.	The social cost for each year reduces by at least 4% per year from a base of 2007.

Figure 4.7 below compares the social costs of all intersection crashes since 2007.

Figure 4.7 Total Social Cost of Urban Intersection Crashes (Injury and Non-injury)



It is important that the focus on road safety is driven by robust criteria for selecting intersections for improvement works. As with anything associated with road safety it is critical that specialist road safety engineers assess any intersections identified to confirm the need for their inclusion in any forward work program.

In general, crash rates at intersections between local (non state highway) roads are lower than the thresholds that can justify standalone safety improvement works. Instead, the intersections with higher crash rates in the Nelson context will be treated via use of the minor improvements budget.

Nelson cyclists initially appear to be over represented in casualty data compared to other peer group locations. This measure of over representation has traditionally been the number of cycle crashes as a proportion of total crashes. This does not provide a reliable measure of performance when compared to the rest of peer group B (Palmerston North, Napier and Invercargill) as the number of people cycling on the network is not taken into account. Instead it is important that Nelson City strives to provide continued improvement to its cycle network to reduce the vulnerability of cyclists regardless of what other regions in New Zealand are achieving.

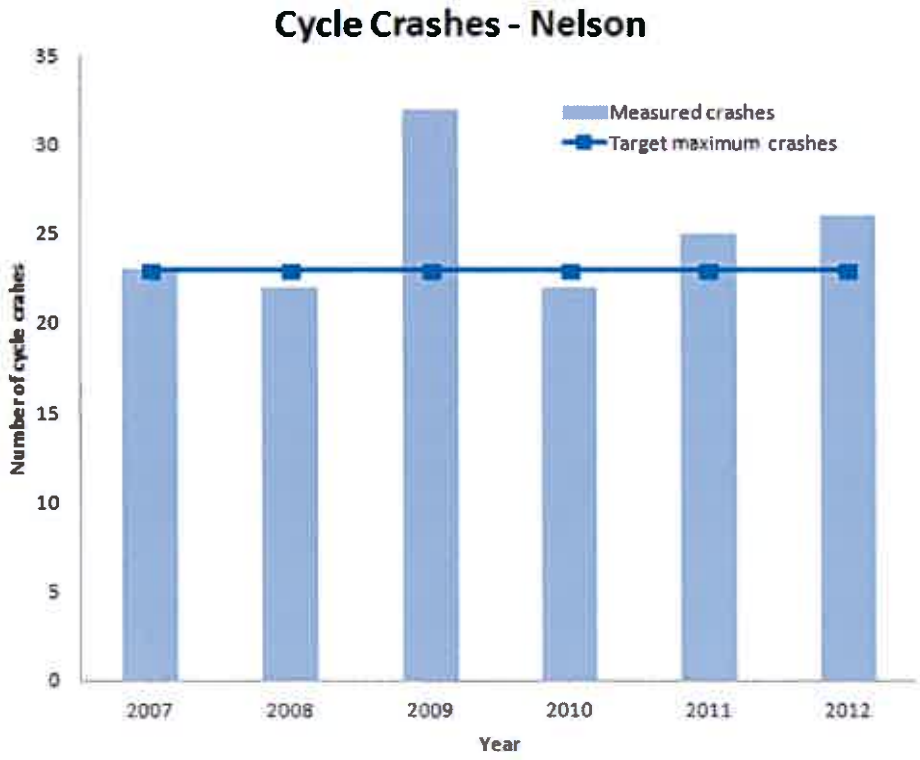
With the intention to continue to provide infrastructure and promote cycling in Nelson City it is important that any development of cycling infrastructure be done in a sustainable safe manner. As a result the indicator for cycle crashes recognises the likelihood of increased cycle use.

Table 4.11 Level of Service Relating to Road Safety and Cyclists

Level of Service	Performance Indicator	Three Year Performance Target
Road safety.	Number of crashes involving cyclists.	Nelson City cycle crash numbers do not increase from those in the base year of 2007.

Figure 4.8 shows that the number of crashes in the last three years has gradually increased to be above the target maximum of 23 crashes in any one year.

Figure 4.8 Number of Cyclist Crashes in Nelson City



The total social cost for cycle crashes measures the overall cost of the crashes in terms of medical, economic, productivity and physical cost associated with causalities in particular. In 2012 the total social cost of all cycle crashes in Nelson was $8.8M, a high for the last complete five year period. This reduced to around $5.7M in 2013. This measure provides some context in relating the cost of safety improvements for cyclists and the potential savings.

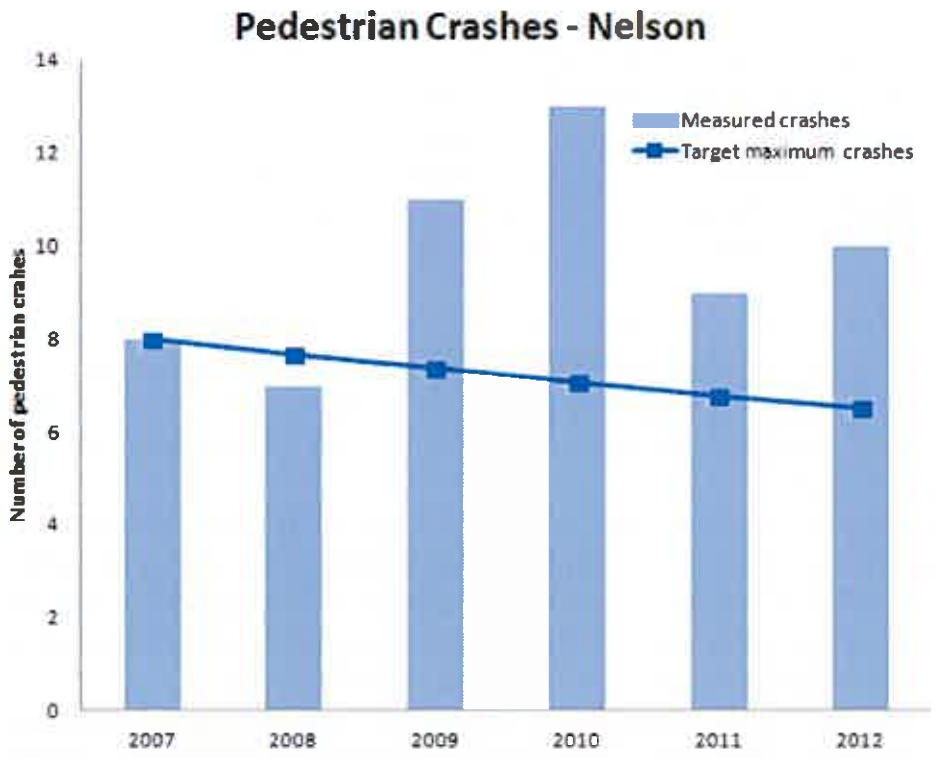
Pedestrian crashes in Nelson are typically clustered around the three main business districts in Nelson, Tahunanui and Stoke as well as around each of the schools in the area. In particular, any crash that involves a pedestrian has a much higher chance of resulting in serious injury or death. This results in relatively focused areas where safety related spending for pedestrians can be concentrated. With this in mind a falling cap of pedestrian related crashes is appropriate as follows.

Table 4.12 Level of Service Relating to Road Safety and Pedestrians

Level of Service	Performance Indicator	Three Year Performance Target
Road safety.	Number of crashes involving pedestrians.	The number of crashes involving pedestrians each year reduces by at least 4% per year from a base of 2007.

Figure 4.9 shows that the number of crashes involving pedestrians has increased above the number in 2007 and are not reducing in line with the target maximum. This indicates that further effort and spending in this area of road safety is needed.

Figure 4.9 Number of crashes involving pedestrians in Nelson City



4.4.1. Implementation Package for Safety

The Safer Journeys: New Zealand's Road Safety Strategy 2010-2020 published by the Ministry of Transport proposes a Safe System approach which focuses on creating safer roads, safe speeds, safe vehicles and safe road use. Clearly local authorities are tasked with three of these four focus areas, and delivering in these areas will also contribute to the levels of service identified above.

The Safe System approach is implemented in a coordinated way with other sectors of the Nelson Community (Tasman District Council, New Zealand Police, Accident Compensation Corporation, Nelson Marlborough District Health Board, NZ Transport Agency) through the Nelson Tasman Road Safety Action Plan.

Some of the projects, activities and plans proposed for safer roads are:

- Intersection improvements, targeting high risk intersections.
- Capital works providing improved walking and cycling facilities.
- Targeted minor improvements programme focussing on schools, walking and central business district minor safety projects.
- Improved line marking and street lighting.

Some of the projects, activities and plans proposed for safe speeds are:

- Targeted minor improvements programme focussing on speed issues.
- Speed limit reviews that consider changes over local roading areas i.e. around hospital and Waimea Road.
- Local road treatments to reduce the speed environment such as through intersection changes, line marking upgrades, the installation of flush medians, installation of street trees etc, where appropriate.
- Lobbying government to make changes to the Road User Rules to allow greater speed enforcement to be used to reduce speeds rather than rely on expensive road treatments.

- Implementation of the speed reduction methods in the Land Development Manual and Shared space ideals when considering roading capital improvement projects.
- Implementation of an urban speed reduction programme delivering stopping distance demonstrations, including emphasis on speed around schools, a "Wipe off 5" multimedia campaign (similar to that run in Victoria, Australia), and a community development and neighbourhood ownership programme calling for safer speeds and increased acceptance of traffic calming on local roads.
- Install arterial pedestrian and cycle crossings.

Some of the projects, activities and plans proposed for safe road use are:

- Campaigns that promote to motorists the "share the road" message will be run along with ongoing support for data collection through 0800CYCLECRASH.
- Youth Education and information initiatives to this high risk sector will continue to be delivered.
- Continuation of the RYDA programme which co-ordinates the efforts of local road safety experts, driving instructors, the Police, recovering victims of road crashes, drug and alcohol educators and insurance and financial services personnel in such a way that 1500 year 11 students are made aware of the privilege, cost and responsibilities of owning and driving a motor vehicle.
- Six motorcycle training courses using qualified instructors with at least two of these courses aimed at the younger scooter riders, publications on license requirements and a print based publication aimed at riders and other motorists.

4.5. Public Transport

In early 2012 Council commenced an improved passenger transport service funded from increased parking charges. Council's strategic direction on Passenger Transport is outlined in the Draft Regional Public Transport Plan [under development in 2014 in parallel with the Regional Land Transport Plan].

The public transport service level statement is:

"The road network is convenient and offers choices for travel".

This service level is targeted towards providing the user with transport choices and as a means of reducing traffic congestion.

A review of the new service was undertaken in 2013. This review report can be found at A1119385. The review found that the service is operating well on the arterial routes. However the collector routes are less successful.

In 2014 some early and late services on the collector routes were cancelled to fund a weekend service on the Waimea Main Road Stoke Arterial Route.

Table 4.13 Level of Service Relating to Public Transport Services

Level of Service	Performance Indicator	Performance Target
Public transport services that meet the transport needs of the community with an equitable sharing of costs.	The farebox recovery ratio.	50%

Since the introduction of the NBus public transport system the fare recovery ratio has increase from around 60% in the 2012/13 year to 62% in 2013/14. Prior to this period the bus system was privately run and the fare recovery ratio is unknown.

4.5.1. Implementation Package for Public Transport

- Update and implement the Regional Public Transport Plan for 2015-18 including:
- Increase network coverage in Stoke
- Continue with public transport promotion to encourage an increase in patronage.
- Continue with the bus shelter installations and upgrades.
- Conduct user and non user surveys every 2 years and use feedback to improve services.
- Construct additional infrastructure on hail and ride routes to increase visibility of service.
- Continue to work with Tasman District Council with a view to improve the network coverage in Richmond
- Implement real time bus tracking

4.6. Parking

Parking revenue, sundry rents such as street dining and street stalls are used to fund the Inner City Enhancement account. Inner city expenditure covers many activities such as maintenance of the meters and brickwork, rental charges for private land occupied by the public, rates, grants for inner city co-ordinator, hanging baskets, Central Business District litter collection and depreciation, operations and maintenance, renewals and enhancement works. Council also recognised in the 2011 Annual Plan that increasing parking charges was a useful travel demand management tool to encourage sustainability and to optimise the networks resilience by using the additional income to subsidise the passenger transport improvements. Recently however, Council has indicated that the contribution to passenger transport will cease to come from the Inner City Parking account at the end of the 2014/15 financial year and come from general rates.

Currently, any surplus or deficit in the Inner City Parking account, once the contribution to passenger transport is made is transferred to or from the Parking Reserve and if there are not sufficient funds, the shortfall is borrowed. The Parking Reserve also acts as the balancing account for Parking Enforcement and the Millers Acre property account.

As most vehicular journeys involve parking at both the start and end of each trip, the availability and cost of car parking can influence decisions on transport mode used, the time of travel and, potentially, the choice of destination. The provision of parking facilities also impacts on the urban environment and may take up valuable space, thereby increasing property development costs.

A balance must be struck between the provision of an adequate supply of parking to meet the needs of a dynamic, competitive economy, optimising valuable city centre land and encouraging the use of good alternatives to single occupancy vehicles.

Essentially short stay parking should be of sufficient capacity, carefully costed, well located and accessible. Long stay parking should not compete with short stay capacity, and should align with the wider transport policy.

The Parking service level statement is:

"Parking is easy to use, and is rationed fairly and equitably".

There are approximately 1,440 short stay parking spaces in the central core area; these had a peak midweek and Saturday occupancy in December 2012 of around 90%. This equates to around 140 free spaces in the central area at peak times. These peak times tend to be in the middle of the weekdays, between 11am and 4pm and between 11am and 12.30pm on Saturdays.

Table 4.14 Level of Service Relating to Short Stay Parking

Level of Service	Performance Indicator	Performance Target
The supply and pricing of short stay parking managed to encourage commercial activity in the city centre.	Percentage of short stay parking spaces occupied in midweek peak in December.	85%

Table 4.15 Level of Service Relating to Parking

Level of Service	Performance Indicator	Current Performance	Performance Target
PARKING			
The supply and pricing of long stay parking is managed to incentivise greater use of travel options other than cars.	Occupancy of long-stay parking spaces between peak travel times measured at 5 locations within the CBD fringe.	Not currently measured but will be in the future.	A reducing trend.

Should occupancy rates drop constantly below the performance target then Council should consider relaxing the short stay time restrictions. Should occupancy rates be constantly above the performance target then Council should consider increasing parking fees or making more short stay spaces available within the CBD.

The distance recognised in the New Zealand Pedestrian Planning Guide as being the optimum maximum distance commuters should be expected to walk from their car to their work is 1.6 kilometres, which is a 20 minute walk at 5 kilometres/hour for a fit healthy adult (ie 450m takes 5 minutes and 900m takes 10 minutes). This distance puts much of the fringe area of the Central Business District within parking distance of the core of the Central Business District. Uncontrolled all day commuter parking currently occurs in many residential, commercial and light industrial areas of the Central Business District fringe area. It is important that as pressure on parking grows in the future this uncontrolled parking should be rationalised to minimise its impact on the viability and value of the fringe areas and more use of multiple occupant vehicles and public transport encouraged.

An acceptable walking distance is a relatively fluid concept. Some people happily walk many kilometres, while even short walks are difficult for the elderly, disabled or children. By far the majority of city centres are about 1km across. This means a walk of a kilometre or less will bring pedestrians around most of the functions of the city.

Table 4.16 Level of Service Relating to Long Stay Parking

Level of Service	Performance Indicator	Performance Target
The supply and pricing of long stay parking managed to incentivise greater use of transport options other than cars.	Occupancy of long-stay parking spaces between peak travel times measured at five locations within the CBD fringe.	A reducing trend.

A parking study was undertaken in 2014 that informed the development of the draft 'Parking Strategy 2014-2024'.

Survey data collected in 2005, 2008 and 2012 shows there is an appropriate supply of parking. Forecasting indicates there is unlikely to be any significant increase in demand over the next ten years.

The engagement undertaken has indicated that the Nelson public consider the key parking issues to broadly be:

- Enforcement – Since September 2013 parking enforcement has been undertaken by EIL. This has returned the level of enforcement to those prior to 2011. There is a perception this level of enforcement is too stringent and that enforcement should be more flexible.
- Cost and payment options – Users of the parking in the CBD want payment options that provide more choice and flexibility.
- There is a desire for more all day parking within the CBD together with an overall increase or redistribution of parking.

Subsequent to the draft parking strategy being prepared, Council, in response to the concerns of inner city retailers, resolved to remove the charge for parking for a winter trial period. As a result, finalisation of the strategy has been delayed until after this AMP has been completed. This AMP allows for the implementation of the actions detailed in the draft parking strategy but recognises that the direction and content of the parking strategy may change and some actions may not be necessary or other options may be trialled to ascertain their impact before the future direction is set.

4.6.1. Implementation Package for Parking

- Provide more payment choices at parking meters;
- Manage the current parking supply to ensure the most sought-after parking spaces are available to be used by visitors to support the economic viability of the central CBD and Stoke;
- Trial the allocation of car pool spaces in high demand, high visibility locations in the city centre. Promote the trial with existing and potential users;
- Work with a CBD focus group to implement schemes to encourage visitors in the quiet winter months and focus on alternative transport modes to the private motor vehicle;
- Improve the layout and access to Strawbridge Square carpark;
- Secure a pedestrian corridor between Beach Road and Tahunanui Drive to enable better use of the Beach Road carparks;
- Provide better information for drivers to find parking areas such as improved signage from the CBD ring route to the parking squares.

4.7. Value for Money Principles

Value for money means a culture of continually seeking better and smarter services and ways of operating the transport activity. This is a concept that is high on the agenda in the Draft Government Policy Statement on land transport funding which seeks to make better use of the land transport network. Improved network management and selective development is needed to lift the performance and capacity of the existing network and minimise the need for major investment in new infrastructure.

The following implementation package will ensure value for money:

- Road maintenance procedures will be used in a way that will optimise the amount of benefit gained from the money spent.
- Investigation of collaboration and shared services with Marlborough District Council and Tasman District Council.
- Improved asset management to ensure renewals are optimised.

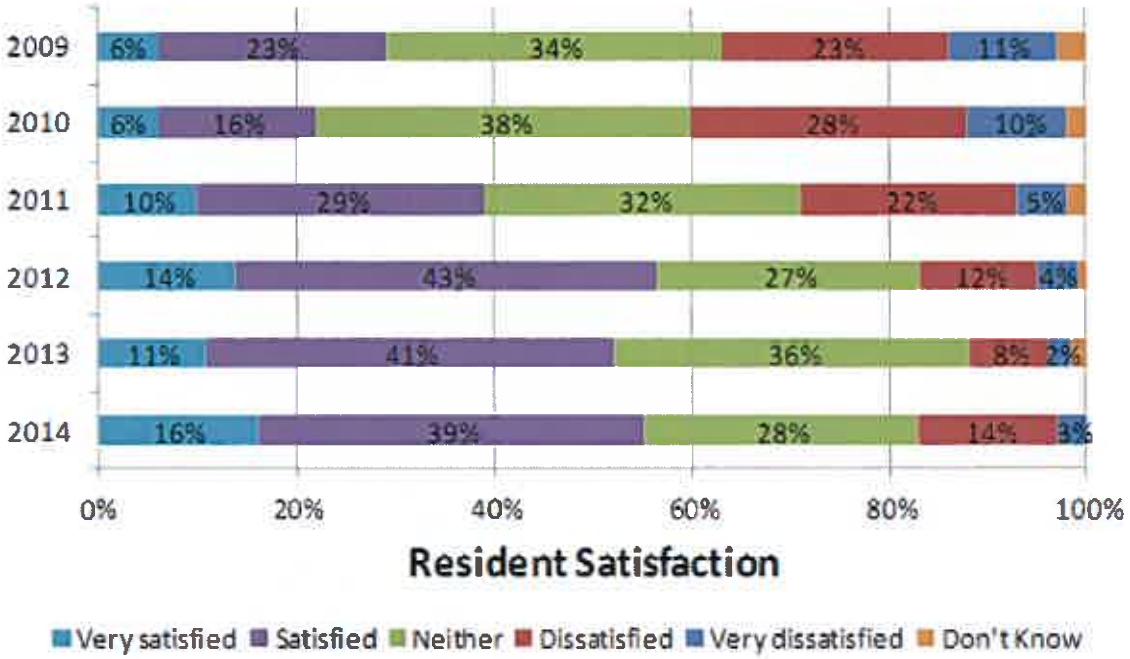
The public will base much of the perception of value for money on how the Council delivers road improvements. The Council operates a road improvement policy which is aligned with value for money principles. This means improvements shall provide a high level of public amenity within the road that reinforces the importance and value

of roads as public places. Upgraded roads would enhance personal security, facilitate slow vehicle speeds in residential areas and accommodate people that are less able or vulnerable, such as those with mobility and visual disabilities. The minimum standards in the Land Development Manual 2010 will reinforce the quality and therefore perceived value of the works.

Table 4.17 Level of Service Relating to Public Satisfaction

Level of Service	Performance Indicator	Performance Target
Public Satisfaction.	Percentage of public satisfied and dissatisfied with the transport activity (based on Nelson City Council Annual Residents Survey).	More than 50% of respondents are either very satisfied or satisfied, and less than 10% are either dissatisfied or very dissatisfied.

Figure 4.10 Percentage of Public Dissatisfied with the Transport Activity



A key driver for public satisfaction in terms of value for money is provision of good communication to explain issues to public. Key issues that the Council convey or intend to convey to the public include:

- Importance of the arterials.
- Parking policy and no-stopping lines.
- Issues around local road speeds.
- The success public transport improvements.
- Council's strategic direction.
- Key safety issues for Nelson.
- Congestion explanations.
- Conflict on shared paths.
- Structures on road reserve.
- Resurfacing policy.
- Traffic calming measures and techniques.
- Explaining how council develops its minor improvements and footpath and road upgrade programme.

Much of this information is provided within the policies on the Council Website and is included in Live Nelson when the topic is in focus. It is important for the public to understand the rationale of the Council's decisions and processes. It is hoped that with increased public understanding the value of Council transport activities and projects will be perceived to be positive.

Recent projects and studies have used the consultation section of the Nelson City Council website to communicate with residents. The Council's transport staff also participate in as many forums as practical to answer questions raised by the public and providing explanations on transport issues. Talking this approach supports the value for money principles by engaging with the public and making sure the opinion of the public is heard.

It is important that the community knows the Council is listening and addressing their concerns, which the Council is committed to doing.

The Council also responds to requests from the public in a timely manner which is managed by the service request system which will help to elevate the satisfaction levels of the public.

4.8. Systems to Measure, Monitor and Report on Performance Indicators

4.8.1. Local Roads, Walking, Cycling and Schools

Much of the performance of the local roads is contained within the Council Road Asset Maintenance Management database. The road roughness and rating is gathered through surveys over the entire network every two years and reported on in the Infrastructure Annual Reports. The latest computer software running the Road Asset Maintenance Management database allows any Road Asset Maintenance Management information to display spatially on maps so any areas that may fall below the performance indicator levels can be identified.

The footpath network undergoes an audit every three years for the quality and safety of the network. This not only enables the performance to be measured but also maintenance work to be programmed. The results of the audits can be found in the Footway Audit Report.

The rate of walking and cycling can be measured in two ways. Firstly the census results which are freely available from Statistics New Zealand contain information on the mode of travel people chose to get to work; including by cycle or by foot. This information is gathered every five years. The second method is through the Annual Residents Survey as it contains questions in relation to the surveyed persons choice a travel mode. These results are published in the Council Survey of Residents report.

The regular cycle counts at key screen lines in the cycle network reveal the trends in cycling and provide some insight into whether the targets for increased cycle use are heading in the right direction.

4.8.2. Arterial Traffic

The Council owns a TRACKS strategic transport model that was built in 2006 for the Nelson to Brightwater Study and updated in 2009 for the Arterial Traffic Study using 2006 census data. The validated model shows the Level of Service in terms of congestion and intersection delay. The Council intended to update the model in 2014 with the latest census data. However there was not enough change from the 2009 update to justify the expense. The Level of Service for the Waimea Road and SH6 Arterial routes can be checked and compared to the performance indicators and reported in the model reports.

The Waimea Road arterial route is of significant importance to the Council because it is not a state highway and therefore the sole responsibility of the Council. The Council

assesses this route more frequently through monitoring travel times every quarter and volumes monthly.

From 2015 travel time surveys will be undertaken using wireless detection methods. This will provide a much larger sample than the current car following method.

4.8.3. Safety

The statistics for accidents involving motorists, cyclists and pedestrians are a good indicator on how safely the transport network is operating. These statistics are gathered by the New Zealand Police and processed by the NZ Transport Agency using their Crash Accident Database. The accidents within the City of Nelson are extracted yearly so that the accident rates can be compared with the peer group average from around New Zealand. This also enables the progress of road safety to be monitored.

Additional cycle crash data is collected via the 0800 Cycle Crash hotline. This hotline is a joint initiative with TDC, NZ Transport Agency and ACC and designed to capture all of the crashes and near misses involving cyclists that do not typically make it into the NZ Transport Agency database.

The data is reported with internal annual road safety reports.

4.8.4. Public Transport

Each quarter the key metrics of patronage and fare revenue by route, by zone and by ticket type are collated and reviewed to monitor the performance of the Public Transport system. At the end of each financial year the Council undertakes a financial analysis of the public transport service. This enables the revenue from the farebox to be compared to the operating cost of the public transport network.

These values are reported in the annual plan and therefore the performance of the public transport network can be monitored over time.

4.8.5. Parking

The Council undertakes a midweek parking survey each year in December which measures the occupancy of the short stay parking spaces within the central core area. A survey of five sample areas in the fringe area is also surveyed in order to measure commuter parking demands. The peak occupancy is recorded and this can be compared to the performance target occupancy rate. The results are reported within the annual plan.

Every 4-5 years more comprehensive data is collected for the CBD and the fringe areas bordering the CBD. The surveys collect occupancy data for the whole area and duration of stay data for sample areas around the CBD. These surveys are undertaken on a Thursday and Saturday in the first week of December. The report summarising the last data collected can be found in A789874.

4.8.6. Value for Money Principles

Every year the Council commissions a residents survey to seek feedback on their services and facilities as well as other information to assist them with planning, management and accountability.

The survey contains a specific section on the residents view on whether the Nelson City Council services and facilities are good value for money.

The results of the survey are published in the Council Survey of Residents report.

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Transport Asset Management Plan 2015/16 – 2024/25

November 2014

Part 2

5. TECHNICAL PERFORMANCE MEASURES/ASSET MANAGEMENT SYSTEMS/LIFECYCLE

This section details the broad strategies and work programmes required to achieve the goals and standards outlined within section 4 of the Asset Management Plan.

It presents the lifecycle management plan for the transport assets, and includes:

- A brief description of the assets;
- Expenditure trends;
- Key issues and strategies for managing these issues;
- Operations, maintenance, and renewal and development strategies;
- Financial forecasts.

The transport assets are split as follows:

- Roads;
- Road structures;
- Pedestrian network;
- Cycle network;
- Passenger Transport Network;
- Traffic control and equipment, street lighting, signs and markings;
- Safety;
- Parking;
- Central Business District.

An overview of asset lifecycles is provided below which details the key stages in the asset lifecycle and asset failure. A brief description for the activities and projects outlined in the Level of Service section and this section is provided in Appendix K.

5.1. Asset Lifecycle

Assets have a lifecycle as they move from initial concept to final disposal. Depending on the type of asset, its lifecycle varies from 1 year to over 100 years. Key stages in the asset lifecycle are described in Table 5.1.

Table 5.1 Key Stages in the Asset Lifecycle

Asset planning	The new asset is designed - decisions made at this time influence the cost of operating the asset and the lifespan of the asset. Other, non-asset solutions, must also be considered
Asset creation or acquisition	The asset is purchased - constructed or vested to Council. Capital cost, design and construction standards, commissioning the asset, and guarantees by suppliers influence the cost of operating the asset and the lifespan of the asset
Asset operations and maintenance	The asset is operated and maintained - operation relates to a number of elements including efficiency, power costs and throughput. Maintenance relates to preventative maintenance where minor work is carried out to prevent more expensive work in the future and reactive maintenance where a failure is fixed
Asset condition and performance monitoring	The asset is examined and checked to ascertain the remaining life of the asset - what corrective action is required including maintenance, rehabilitation or renewal and within what timescale
Asset rehabilitation and renewal	The asset is restored or replaced to ensure that the required level of service can continue to be delivered
Asset disposal and rationalisation	A failed or redundant asset is sold off, put to another use, or abandoned

5.2. Asset Failure Modes

Generally it is assumed that physical failure is the critical failure mode for many assets. However the asset management process recognises that other modes are relevant and are often critical to effective delivery of services.

Table 5.2 Range of Asset Failure Modes

Structural	The physical condition of the asset is the measure of deterioration, service potential and remaining life
Capacity	The level of under or over capacity of the asset is measured against the required level of service to establish the remaining life
Level of Service Failure	Reliability of the asset or performance targets are not achieved
Obsolescence	Technical change or lack of replacement parts can render assets uneconomic to operate or maintain
Cost of Economic Impact	The cost to maintain or operate an asset is greater than the economic return
Operator Error	The available skill level to operate an asset could impact on asset performance and service delivery

5.3. Roads

The service level statement for roads is "Roads are safe to use and provide a comfortable and reliable means of travel."

The last valuation of the roading network was undertaken in June 2014.

Table 5.3 Road Surface Valuation

	June 2012	June 2014
Quantity	2,089,091 m^2	2,140,850 m^2
Replacement value	$ 24,992,982	26,649,423
Depreciated replacement value	$ 14,545,019	14,612,127
Annual depreciation	$ 1,051,059	1,113,452

Table 5.4 Road Basecourse Valuation

	June 2012	June 2014
Quantity	2,295,969 m^2	2,274,622 m^2
Replacement value	$ 33,519,591	$ 33,429,410
Depreciated replacement value	$ 18,766,406	$ 15,777,764
Annual depreciation	$ 313,380	$ 364,686

The road network is managed in two ways. Firstly an ongoing maintenance programme addresses road defects through either planned or responsive maintenance and secondly roads are renewed or resealed based on a prioritised forward work programme (repairing those in the worst condition).

Expenditure Level (from 2012 to 2015)

- Sealed pavement maintenance costs, approx $469,000/annum. (Reduction from 2009-12 of $94,000/annum.)
- Sealed road resurfacing $1,600,000/annum. (Increase from 2009-12 of $650,000/annum.)
- Sealed road pavement rehabilitation $0/annum. (Decrease from 2009-12 by $236,000/annum.)
- Unsealed pavement maintenance costs, approx $34,000/annum.
- Unsealed road metaling approx $65,000/annum.
- Costs for general management and control of the road network and management of road asset, approx $481,000/annum.
- Costs for other associated improvements and maintenance and renewals of drainage, approx $157,000/annum.
- Depreciation approx $1,426,000/annum.

The Key Issues for Roads

- The major focus of road maintenance is to prevent water getting into the road base.
- Moisture will soften road base material. We must ensure use of correct surfacing materials in each road section to optimise the surface life.
- The quality of road reinstatement work by utility operators.
- Historically resurfacing has occurred without major dig outs to fix road base issues.
- Increasing frequency of emergency events with the potential reduction in NZ Transport Agency co-investment for the recovery and re-instatement costs.

Strategies for Managing These Issues

- Ensure both timely resurfacing and good drainage of the road surface so that it provides an adequate wearing and waterproofing course to prevent water getting into the road base.
- Develop and adopt a surfacing selection guideline; regarding placement of asphalt or chipseal, including bus and cycle lanes with robust site validation processes through visual and experienced based road asset maintenance assessments.
- An allowance of $200,000 per annum for the recovery of small scale emergency events has been allowed for under the environmental maintenance category.

5.3.1. Asset Condition and Performance

Every formed Council owned road is recorded in the Road Asset Maintenance Management database. This database records pavement and surfacing construction, and maintenance history, inspection data and traffic volumes.

Road Asset Maintenance Management surveys are done every second year to assess the condition of the road pavement and surfacing. Assessments are carried out over a 50m stretch of every road. Long roads are split into sections. The pavement condition rating assesses rutting, cracking, potholes and shoving. The surfacing assessment considers flushing, bleeding, scabbing, ravelling and delaminating of chipseals, asphaltic concrete and slurry surfaces.

The road asset condition has been well documented in Section 4.2, 4.3 and 4.4. The average road roughness across the road hierarchy is below the level of service

standard. The Surface Condition Index shows that the surface condition of roads has been improving since 2008.

There is a large section of road network that will exceed the expected life of the pavement over the next three years. There is also a significant length of the network that is older than the expected life which might be contributing to a higher Surface Condition Index than previously experienced.

Table 5.5 Road Surface Data Reliability Analysis

Data Attribute	Very Uncertain	Uncertain	Reliable	Highly reliable
Asset quantity				
Asset age				
Condition				
Performance				

Table 5.6 Road Base Data Reliability Analysis

Data Attribute	Very Uncertain	Uncertain	Reliable	Highly reliable
Asset quantity				
Asset age				
Condition				
Performance				

The Council regularly records traffic counts across the city. The counts are recorded monthly or annually depending on their location. The monthly counts consist of five sites on the arterial network. Count data is entered into the Road Asset Maintenance Management database to provide an overall picture of the network's traffic use.

5.3.2. Maintenance Strategy

The operation and maintenance of Council's Transport infrastructure is managed by the Infrastructure Group. The roading maintenance contract was awarded to Downer EDI Works Ltd in 2010. The contract runs for 3 plus 1 + 1 + 1 years thus is due for renewal in 2016. The contract allows for the provision of all road maintenance and includes street and car park cleaning, road markings and signage.

All maintenance costs and traffic count data is recorded and inputted into the Road Asset Maintenance Management database monthly.

A three year forward works programme has been formulated, based on identified works contained within the Road Asset Maintenance Management, "all faults register" and is in the order of $500,000/year for pavement repairs, present repairs and maintenance. The budget is to cover these works and unidentified future failures. (Note: Any unidentified future failures will be prioritised against identified works contained within the all faults register, meaning not all identified works will be completed within the 3 year funding programme.) This is an increase of $31,000 over the 2012-15 level to make allowance for the likely increase in costs from the tender of a new maintenance contract.

The Council will formulate a resealing policy for urban roads. This policy will provide guidance on the type of seal to be used whether it is asphalt or road chip weighing up the whole of life costs of each type of seal.

5.3.3. Pavement Rehabilitation

Where Road Asset Maintenance Management data and local observation indicates that poor pavement structure is critical then generally this is renewed as a standalone project. A review in 2014 (A1192250) highlighted the following priorities for the 2015-18 period:

- Quarantine Road (SH6 to Nayland Road);
- Maitai Valley Road (4500-4900);
- Wildman Avenue Turning Head;
- Cable Bay Road (1950-2900).

5.3.4. New Roads

It is unlikely that any new roads will be built by the Council. New roads in Nelson will come from new subdivisions and the Council will adopt these roads after the subdivision developer has installed them.

5.3.5. Reseals

Refer section 4.2.4.

5.4. Road Structures

The service level statement for road structures including bridges and retaining walls is "road structures are considered to be designed and maintained to provide safe access across the network".

The last valuation of the roading network was undertaken in June 2014.

Table 5.7 Bridges Valuation

	June 2012	June 2014
Quantity	44	44
Replacement value	$ 26,414,919	$27,199,741
Depreciated replacement value	$ 17,241,787	$ 17,649,524
Annual depreciation	$ 280,607	$ 288,947

Table 5.8 Retaining Wall Valuation

	June 2012	June 2014
Quantity	28,111 m^2	30,852 m^2
Replacement value	$ 44,850,330	$ 51,422,169
Depreciated replacement value	$ 29,735,112	$ 37,426,908
Annual depreciation	$ 658,467	$616,972

Structures on the road network are generally managed by undertaking regular inspections to identify a forward maintenance programme to address defects. New structures are also built to cater for growth. These are generally built by developers as part of new subdivisions.

Structures are classified as a roading asset where they provide support for roads.

Expenditure Trends (from 2012-2015)

- Preventative retaining wall maintenance costs, approx $64,000.
- Maintenance on structures approx $72,000/annum.
- Depreciation approx $770,000/annum.

The Key Issues for Structures

- Ownership of retaining walls.
- Structures approaching the end of useful life.
- Premature failure.
- Seismic capacity for all but lifeline routes not well understood.

Strategies for Managing These Issues

- Develop ownership guidelines and investigate as part of retaining wall condition survey (found assets).
- Continually keep track of structure condition and maintain as required. Replacing or retrofitting structures as useful life diminishes.

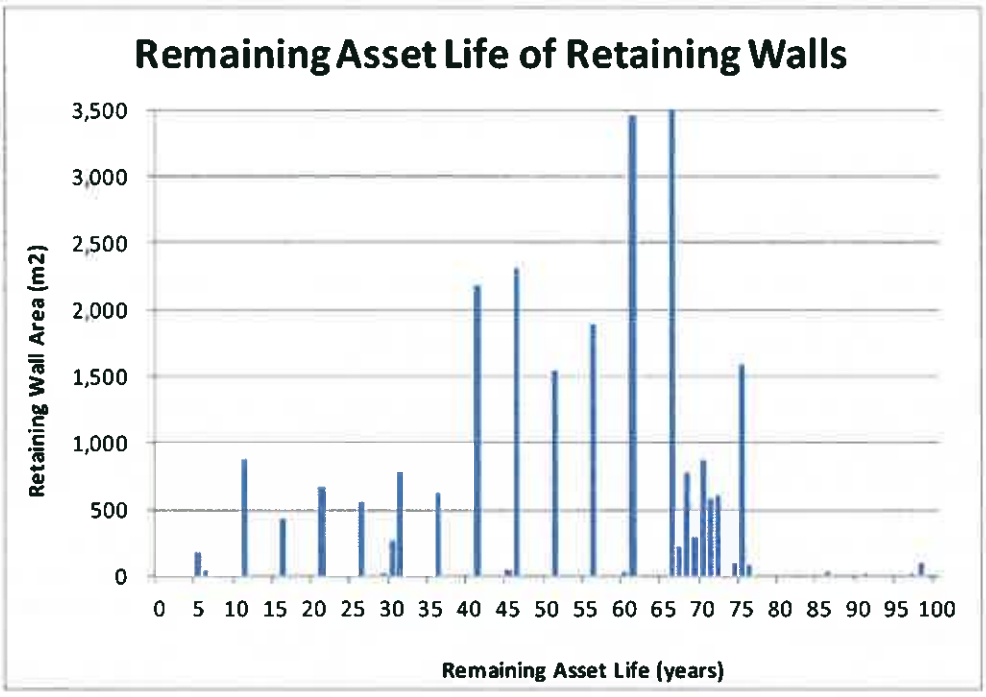
5.4.1. Asset Condition and Performance

The condition of both bridges and retaining walls is recorded in detailed inspection surveys every six years. Every two years those structures that are in poor condition or at risk then put on a two year inspection cycle.

The surveys were last surveyed in 2007 by Tonkin and Taylor. The survey rates each wall- and bridges general condition on a scale from 1-5 with 1 being of good general condition and 5 being of poor general condition. A risk assessment of the likelihood of failure and the expected life expectancy are also estimated. The last survey was undertaken by Tonkin and Taylor in 2007.

The average assessed remaining total asset life of the roading retaining walls is 39 years and those walls on cycleways/walkways is 34 years. Eight walls were identified in the survey as requiring replacement. The spread of remaining asset life for walls is shown in Figure 5.1.

Figure 5.1 Remaining Asset Life of Retaining Walls



The detailed survey of bridges are undertaken approximately every 6 years and was last undertaken over the 2010/2011 summer period by Aurecon. The survey report details specific defects found during the survey. It also provides a recommendation for maintenance work and a forward work priority programme. A seismic review was undertaken on six key structures which were identified in the previous report as likely to suffer significant damage in the event of a magnitude 7.5 earthquake. The details of the conditions recorded in the survey are contained in a Road Asset Maintenance Management database held with the Council.

The key structures have a remaining design life of between 25 and 61 years and four of the seven bridges were identified as requiring earthquake strengthening. It was found that 22 bridge structures required maintenance work valued at greater than $5,000.

Table 5.9 Road Structure Data Reliability Analysis

Data Attribute	Very Uncertain	Uncertain	Reliable	Highly reliable
Asset quantity				
Asset age				
Condition				
Performance				

5.4.2. Maintenance Strategy

Repairs and maintenance of structures are identified through the survey inspection reports as detailed in Section 5.4.1 or routine inspections undertaken by the Contractor or Councils contract supervisors. Maintenance is therefore mostly reactionary to defects identified in surveys rather than preventative maintenance.

The current road maintenance contract (to September 2013, with an optional extension for a further 3 years) specifies the response times for different repair types, the roles of the Engineer and Contractor, performance requirements and the basis of payment.

5.4.3. Renewal Strategy

Renewal of road structure assets will be implemented to maintain a level of service of an asset by intervening prior to either the end of the useful life of the asset, or the condition of the asset falling below an agreed level.

The renewals programme is developed using the recommendations of the bridge and retaining wall survey reports.

5.4.4. New Structures/Capital Works

It is proposed that seismic strengthening of bridges on lifeline transport routes be funded to provide greater resilience in the event of emergencies. The high risk bridges proposed to be addressed in the next three years are:

Gibbs and Poleford Bridge - seismic strengthening, Security of these lifeline bridges to ensure access to city water supply pipeline up the Maitai Valley in case of earthquake, design and construction in one year under the Minor Improvement work category.

New structures will only be undertaken where new roads are required. New roads are most likely to be associated with new development so it will be expected that any structures required will be installed by the developer prior to the council adopting the roads and structures.

5.4.5. Emergency Works

Structures are susceptible to damage during natural disasters, in particular flooding and earthquakes. The recent storm events in the Nelson region highlighted the risk that exists for the area. Failure of or damage to a bridge or retaining wall during one of these events would result in emergency works to initially make the asset useable and also to secure the long term future for the asset.

The Council can obtain emergency works funding and insurance for events. The Financial Assistance Rate rates for funding of emergency works has not been announced yet but Council will still need to provide partial emergency works funding. The Financial Assistance Rate funding is not always covered for replacement of damaged retaining walls, even if they are a Council asset. Only if the walls are supporting the road is there an opportunity to seek funding.

5.5. Pedestrian Network

The service level statement for footpaths is "the footpaths network is considered to be suitable, accessible, safe and well maintained".

The last valuation of the roading network was undertaken in June 2014.

Table 5.10 Footpaths Valuation

	June 2012	June 2014
Quantity	494,845 m^2	481,443 m^2
Replacement value	$ 28,324,783	$ 30,043,243
Depreciated replacement value	$ 8,742,590	$ 9,406,454
Annual depreciation	$ 273,298	$ 337,466

Table 5.11 Walkways Valuation

	June 2012	June 2014
Quantity	23,067 m^2	23,067 m^2
Replacement value	$ 3,669,888	$ 3,806,273
Depreciated replacement value	$ 2,619,867	$ 2,627,768
Annual depreciation	$ 38,129	$ 40,104

The footpath network is managed in three ways. Firstly an ongoing maintenance programme addresses footpath defects through either planned or responsive maintenance. Secondly footpaths are renewed based on a prioritised forward work programme (repairing those in the worst condition), and thirdly, new footpaths are built because of health and safety issues, accessibility requirements, or in response to public requests meeting certain engineering, environmental and community criteria. These new footpaths are service level improvements and not growth related. New footpaths are also built to cater for growth. These are generally built by developers as part of new subdivisions.

Walkways are classified as a roading asset where they connect roads, are on legal road and serve for the purpose of providing a route for pedestrians/cyclists with limited recreational value. There is a register of these which has been agreed with Parks and Community Facilities.

Expenditure Level (from 2012 to 2015)

- Maintenance costs, approx $206,000/annum.
- Renewals budget $550,000/annum.
- Capital costs for new footpaths to improve the level of service vary from $150,000 to $1,000,000/annum depending on scheduled roading projects.
- New/upgrade walkways $100,000/annum.
- Capital cost for new walkways to improve the level of service $100,000/annum
- Depreciation approx $280,000/annum.

The Key Issues for Footpaths

- Demand for footpaths and walkways where previous development has occurred below the current standards.
- Conflict at crossings between providing a smooth level surface for mobility scooters and a suitable vehicular access.
- Demand for new and improved footpaths and walkways due to ageing population.
- Demand for improved lighting of footpaths and walkways.
- Demand for improved connectivity between footpaths, and safer road crossings, especially around schools and across the busy arterials.
- The high cost of providing new footpaths on hillside and rural streets, and the compromises that are made should a lower standard be proposed (usually at the detriment of on-street parking, slower vehicle speeds and the perception of pedestrian safety.
- Improvement in quality of footpath between the Central Business District and Tahunanui Beach.

5.5.1. Asset Condition and Performance

Road Asset Maintenance Management records footpath and walkway condition assessments. The Council undertakes regular footpath condition assessments which inform the footpath renewal forward work programme. The most recent footpath condition assessment has been undertaken by L&M Price for the entire city in 2014. A summary of the data collected in this assessment is contained in Table 4.3 in section 4.2.1.

Table 5.12 Footway Data Reliability Analysis

Data Attribute	Very Certain	Uncertain	Reliable	Highly reliable
Asset quantity				
Asset age				
Condition				
Performance				

Pedestrian counts are undertaken every 6 months in 5 locations throughout the city and comparisons can be made with the 5 year comprehensive survey undertaken in 2010. Reporting of the pedestrian surveys is provided in the Regional Land Transport Programme and Regional Land Transport Strategy Annual report.

5.5.2. Maintenance Strategy

Footpath and walkway repairs are identified through customer notification or routine inspections undertaken by the Contractor or Councils contract supervisors.

The current road maintenance contract (to September 2013, with an optional extension for a further 2 years) specifies the response times for different repair types, the roles of the Engineer and Contractor, performance requirements and the basis of payment.

Considerations which drive the maintenance works include:

- Planned and unplanned work depending upon the urgency of the response required.
- Footpath and kerb replacement required as a result of street tree roots.

5.5.3. Renewal Strategy

The function of the renewal budget is to maintain a level of service of an asset by intervening prior to either the end of the useful life of the asset, or the condition of the asset falling below an agreed level.

The main driver for a renewals programme is Council's responsibility, as the custodian of the footpath network to effectively maintain and manage the lifecycle of the network, on behalf of the ratepayers who own it, for the least cost over the useful life of that network. The renewals programme shown in Appendix N has been developed by network services staff using the criteria outlined below:

- Road Asset Maintenance Management and area wide survey condition ratings - including an assessment of safety and risk-of-failure, in other words, a footpath condition-rating scale.
- Use and location - Areas of high pedestrian use (for example main bus routes, commercial centres), and those with a high public profile will be one criterion for priority upgrade. Areas that fall into this category comprise commercial centres (including the Central Business District); areas around schools; major walkways and cycleways for example.
- Under-grounding or other utility works - The ability to coordinate footpath upgrade works with under-grounding or other utility projects offers significant advantages. Mapping of forward programmes may result in advantages for cost and programming e.g. these include main street programmes, road renewals, large events such as Central Business District upgrades and other utilities work programmes.
- Optimisation – alignment with other roading works to minimise inconvenience to the public (whole of street approach).

All renewal works aim to comply with the Land Development Manual 2010 footpath standards, although in some instances, such as hill side streets, or where crossings are steep, this is not always possible. Staff endeavour at all times to implement the objectives of the Land Development Manual when renewing footpaths.

The footpath renewals contract is included in the road maintenance contract.

5.5.4. New Footpaths and Walkways

Since 2012, Council has taken a new direction on the planning of future new footpaths and signs and changing the focus to slowing traffic speeds and making the local roads safer for all users especially in the hillside areas where it is very costly to provide footpaths.

New footpaths and walkways will be constructed from a priority list of missing footpaths with an annual budget of $200,000. The new footpath schedule can be found in Appendix M with the live priority matrix in document A777631.

5.6. Cycle Network

The service level statement for the cycle network is "the cycle network is considered to be suitable, accessible, safe and well maintained".

There are approximately 20 kilometre of off-road cycleways and 34 kilometres of on-road cycleways. Part of this network is integrated with footpaths and carriageways.

'Cycle lanes' is the term used to describe dedicated routes on roads. Shared walk/cycleways describe off road routes separated from road traffic by either a kerb or verge, either on road reserve or other Council or NZ Transport Agency owned land that is identified as a shared utility in the Parking and Vehicle Control Bylaw schedules. Generally shared walk/cycle paths are 3 metres wide. Off-road cycleways are generally defined as those outside of the road reserve and are addressed in the Parks and Reserves Asset Management Plan.

The last valuation of the roading network was undertaken in June 2014.

Table 5.13 Cycleways Valuation

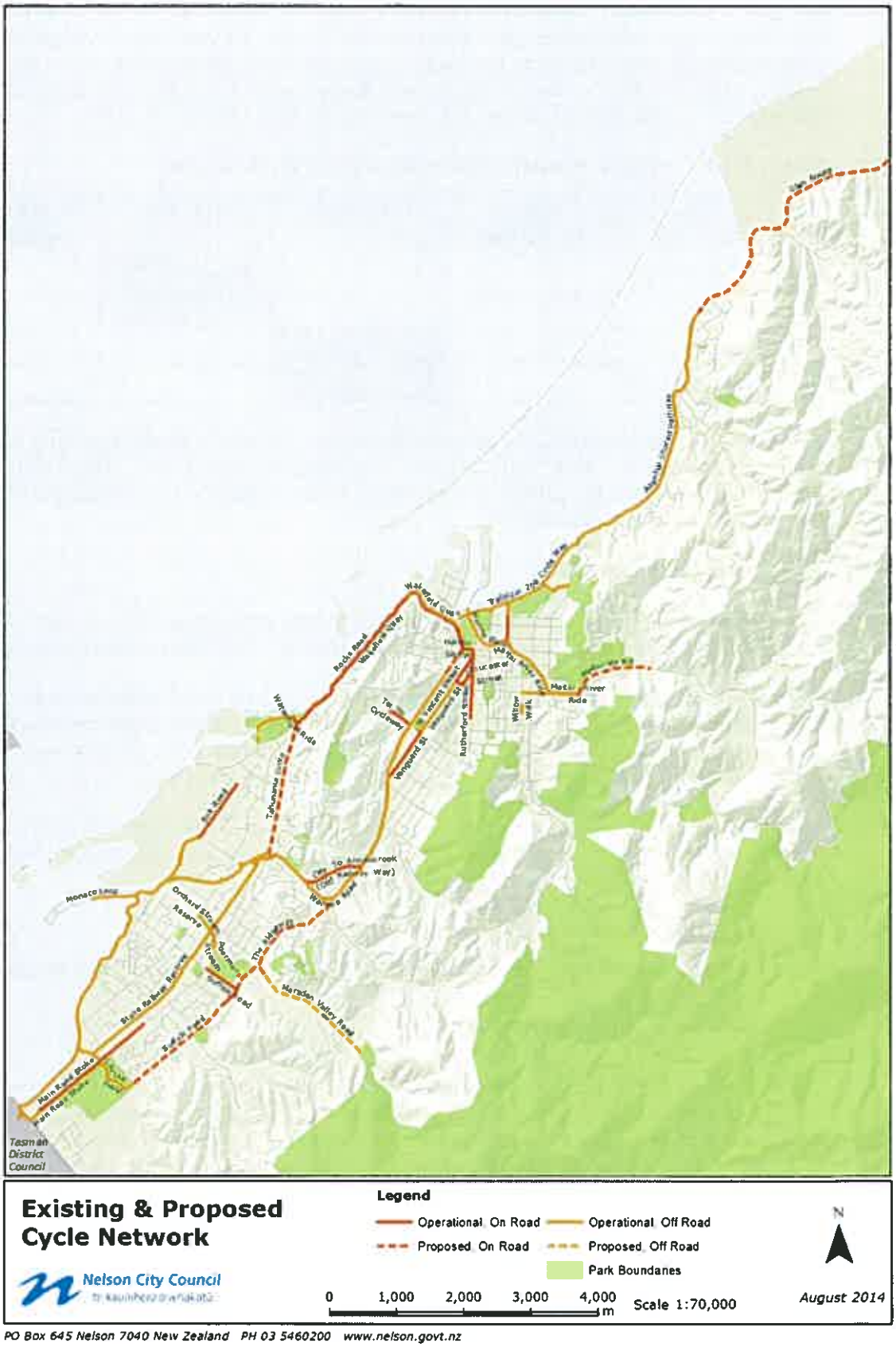
	June 2012	June 2014
Quantity	65,707 m2	71,192 m^2
Replacement value	$ 3,735,966	$ 4,682,764
Depreciated replacement value	$ 3,371,443	$ 4,000,467
Annual depreciation	$ 46,296	$ 71,973

The cycleway network is managed in a similar way as the pedestrian network, identified in 5.5 above.

Expenditure Level (from 2012 to 2015)

- Maintenance costs approx $65,000/annum since the completion of the Atawhai cycleway.
- Budgeted capital costs for new cycleways to improve the level of service vary with significant expenditure over the last three years implementing the walk cycle schools package of works. This package has received NZ Transport Agency co-investment from Regional Funds.
- The key issues for shared walk/cycle paths and on road cycle lanes are:
- Demand to extend and improve cycle linkages (the current network with planned improvements is shown in Figure 5.2 below.
- Conflict at crossings between cyclists and vehicles and on shared paths between cyclists, pedestrians and dogs.
- Demand for new and wider shared paths and cycleways.
- Demand for improved lighting and markings on shared paths and cycleways.
- Broken glass on the shared paths and cycle lanes.
- Removal of cycle facilities during roadworks.

Figure 5.2 Existing and Proposed Cycle Network



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5.6.1. Asset Condition and Performance

Road Asset Maintenance Management records shared walk cycleways, although as all the paths are relatively young (less than 13 years) there has been no condition assessments carried out to date. Over the last couple of years it is evident that some older cycleways require some renewal, specifically the coastal route and the airport bridge. The condition of the on road cycle lanes is managed with the carriageway infrastructure and line markings and are considered in section 4.2.3.

Table 5.14 Cycle Infrastructure Data Reliability Analysis

Data Attribute	Very Uncertain	Uncertain	Reliable	Highly reliable
Asset quantity				
Asset age				
Condition				
Performance				

Cycle counts are undertaken every 6 months in 5 locations throughout the city and comparisons can be made with the 5 year comprehensive survey undertaken in 2010. Reporting on the cycle surveys are provided in the Regional Land Transport Plan (RLTP) and RLTP Annual Report.

5.6.2. Maintenance Strategy

Cycle path repairs and glass removal are identified through customer notification or routine inspections undertaken by the Contractor or Councils contract supervisors.

Cycleways routine maintenance provides for the normal care and attention of the asset to maintain its integrity and to be fit for purpose. It is a combination of planned maintenance such as sweeping and reactive maintenance such as patching and repairing cycleways when complaints by the public are received.

The current road maintenance contract (to September 2013, with an optional extension for a further three years) specifies the response times for different repair types.

Considerations which drive the maintenance works include:

- Planned and unplanned work depending upon the urgency of the response required.
- Scheduled improvements planned works.

Cycle network maintenance costs have historically been $65,000/annum (maintenance - $35k, sweeping - $15k and Atawhai shared path $15k). However the network has just been extended significantly by the R funding walk, cycle schoolpackage (6.1km shared path) in the 2012-15 period with a corresponding increase in maintenance required. Cycle network maintenance of $80,000 is now necessary to maintain the level of service.

5.6.3. Renewal Strategy

Renewal expenditure is major work, which does not increase the assets' design capacity but restores, rehabilitates, replaces or renews an existing asset to its original capacity. Cycleways renewal is undertaken when all or part of a cycleway has reached the end of its economic life. The required level of replacement/rehabilitation will depend on age, condition, the level of ongoing maintenance and useful lives of the materials used.

Renewals of the following are programmed in the next three years:

- Airport Bridge;
- 1.65km of the coastal path.

5.6.4. New Shared Walk / Cycleways and Cycle Lanes

A package of walking and cycling projects 'R' is included. An overview of these projects is identified in the Regional Land Transport Plan and further detail is provided in Appendix K under the walk/cycle package.

5.7. Public Transport

Nelson currently operates two public transport services. They include;

The NBus including The Late Late Bus[3] (subsidised by Council and NZ Transport Agency);

The Total Mobility scheme – door to door passenger service for the mobility impaired (subsidised by Council and NZ Transport Agency).

The Council also offers a Super Gold Card scheme for pensioners where they get to travel for free during off peak periods on the NBus. This scheme is fully funded by central government.

Figure 5.3 Zone Structure and Bus Routes

Contract Structure

The contract for the NBus and the Late Late Bus services was awarded in March 2012 to SBL Limited. The contract was for 6 years with two two-year extensions if performance indicators are met. In May 2013, the contract changed from a gross contract price to a net contract with all fare revenue retained by the operator. The net contract sum is $535,000 in 2013/14 and is adjusted for inflation each year. The current contract also allows for the contract price to be renegotiated if changes in service levels are required.

3 Tasman District Council contribute $10,000 a year towards the Late Late Bus.

Key Issues for Public Transport

- Accessibility to local services / facilities / places of employment;
- Frequency of bus services, particularly between Nelson and Richmond;
- Equitable funding from various sources (fares, rates parking revenue, NZ Transport Agency, Tasman District Council).
- Ageing population resulting in increasing demand for the total mobility service.

Financial

In addition to funding from ratepayers and the NZ Transport Agency, a proportion of the costs are contributed by the user through fares. In 2012/13 63% of the cost of the NBus and Late Late Bus services was recovered through fares. The usual funding arrangement for public transport in New Zealand is that the net cost is funded in equal proportions by the local council(s) and the NZ Transport Agency. However when the improved NBus service was introduced in 2012, the NZ Transport Agency indicated that it would not be able to increase its co investment and the funding gap was met using a portion of Council's parking revenue. Now that the service has proven itself, the NZ Transport Agency has indicated that Nelson is in a strong position to get matched co investment in the 2015-18 NLTP. The NZ Transport Agencies preference would be for this increase to fund a significant improvement to the service, so that Council's contribution remains the same. This 2015-25 AMP has no contribution from the parking account to public transport with the local share now being fully funded from rates.

Table 5.15 Fares as at July 2014

	Zones travelled through			
	1	2	3	4
Adult cash	$2.50	$3.00	$3.50	$4.00
Adult 10 trip (20% discount)	$20.00	$24.00	$28.00	$32.00
Child cash	$1.50	$2.00	$2.50	$3.00
Child 10 trip (10% discount)	$13.50	$18.00	$22.50	$27.00
Student/Community Services Card holder cash	$2.00	$2.50	$3.00	$3.50
Student/Community Services Card holder 10 trip (10% discount)	$18.00	$22.50	$27.00	$31.50
30 trip ticket (30% discount off adult fare)	$52.50	$63.00	$73.50	$84.00
Late Late Bus (flat fare)	$4.00	$4.00	$4.00	$4.00

5.7.1. Improvement Strategy

The following priorities for public transport have been identified in the 2013 review of the NBus service[4] in order to increase patronage:

- Lower fares to increase patronage and then review fare structure every two years.
- Increase the frequency of the bus service on arterial routes between Nelson and Richmond and to encourage an increase in patronage.
- Continue marketing and promotion of new, improved, or altered services.
- Review the provision of bus stops and shelters and prioritise infrastructure improvements.

4 Refer A1119385

- Conduct user and non-user surveys every 2 years and use feedback to improve services.
- Construct additional infrastructure on hail and ride rates to increase visibility of service.
- Improve coverage of bus service in Stoke.

In 2014 Council carried out a business case assessment in order to obtain additional funding from NZ Transport Agency to implement the improved coverage in Stoke and to inform the Regional Public Transport Plan. The outcomes of the business case will be determined by NZTA during the RLTP moderation process.

The following priorities for total mobility have been identified:

- Increase funding at 6% per annum for the 2015-2025 period to meet the demand caused by the ageing population for the service.

5.7.2. Future Public Transport Study

A public transport review is planned to occur every five years with the next review scheduled in 2019/20.

The full scope of the review is yet to be established but it is likely this will entail assessing the suitability of the public transport network and whether changes should be made to bus routes and if new routes are required.

5.8. Traffic Control and Equipment, Street Lighting, Signs and Markings

The service level statement for the transport assets in this section are:

- Traffic signals are designed and maintained to optimise traffic flow in the roading network.
- Street lighting is provided and maintained to enable safe and easy night driving on all urban streets and to outdoor public spaces were night time pedestrians movements dominate e.g. Central Business District areas.
- Appropriate signage is maintained to enable safe and efficient way finding across the transport network.
- Road markings are maintained to provide clear delineation and direction for roads, parking, and cycle and bus lanes at all times.

The last valuation of the roading network was undertaken in June 2014.

Table 5.16 Street Signs Valuation

	June 2012	June 2014
Quantity	2,882	2,882
Replacement value	$ 1,590,864	$ 1,809,896
Depreciated replacement value	$ 795,432	$ 904,948
Annual depreciation	$ 106,058	$ 120,660

Table 5.17 Line Marking Valuation

	June 2012	June 2014
Quantity		
Replacement value	$ 120,000	$ 120,000
Depreciated replacement value	$ 120,000	$ 120,000
Annual depreciation	$120,000	$120,000

Table 5.18 Streetlights Valuation

	June 2012	June 2014
Quantity	4,291	4,433
Replacement value	$ 20,237,614	$ 34,648,552
Depreciated replacement value	$ 10,685,803	$ 17,226,538
Annual depreciation	$ 556,932	$ 796,011

Table 5.19 Traffic Signals Valuation

	June 2012	June 2014
Quantity	12	13
Replacement value	$ 1,858,069	$ 3,513,748
Depreciated replacement value	$ 821,884	$ 1,959,584
Annual depreciation	$91,115	$ 139,368

These roading assets are an important activity for the Council to manage as they provide important information and direction to all road users. The Council seeks to ensure that this is done so that the transport network is safe, legible and efficient.

Expenditure Trends (from 2012 to 2015)

- Maintenance costs of signs, markings and street lighting and furniture, approx $930,000/annum.
- Renewal costs of signs, markings, street lighting and furniture and traffic signals, approx $130,000/annum.
- Operation and maintenance of traffic signals, approx $78,000/annum.
- Depreciation approx $930,000/annum.

The Key Issues

- Lack of road sign asset knowledge.
- Street lighting poles that are in a poor condition and luminaries that have reached the end of their serviceable life.

Strategies for Managing These Issues

- Develop inventory for street signs.
- Use pole testing results to target replacement of at risk poles.
- Replace poor performing luminaries with LED's.

5.8.1. Asset Condition and Performance

The Council requires a sign inventory to be undertaken so that the location and condition of all signs and supports are recorded into Road Asset Maintenance Management. It is estimated that this will cost $50,000.

The traffic signal asset is in a very good condition with recent controller and LED upgrades.

Sign condition is monitored by the road maintenance contractor and signs that fall below standard are programmed to be replaced.

There are still a considerable number of Mercury Vapour/Fluorescent lights all over the city. These should be replaced wherever possible with LED technology to improve light output and reduce energy consumption. Lighting poles are in the process of being inspected for structural integrity. Refer to document A1224555

5.8.2. Renewal Strategy

There are no planned renewals for the traffic signal asset in the first three years.

The streetlight renewal budget of $200,000/annum will be used to improve street lighting, focussing on:

- Safety of all users;
- Renewal of aged mercury vapour and fluorescent luminaries;
- Improving the energy efficiency of the streetlight network by installing LED's;
- Replacing rusty pole bases;
- Reducing light pollution with the Dark Sky policy.

The Council has a "Dark Sky" policy when it comes to new or improved street lighting. This policy has been adopted to limit the amount of light pollution emitted directly up from street lights.

5.8.3. New Assets

There are no new traffic signals planned in the next five years.

Along with street lighting renewal to improve lighting levels there will be new street lighting also incorporated into the following upgrade projects.

- Rocks Road walking and cycling;
- Milton, and Halifax upgrades.

5.9. Safety

The service level statement for safety is:

"To work towards a safe road system increasingly free of death and serious injury."

The following objectives relate to the NZ Transport Agency work category (432) on road safety in particular promotion, education and advertising. This work category provides for the development and implementation of activities that address the safe use of the land transport network.

Objectives

- Advancing the priorities and initiatives identified in the Safer Journeys Strategy and its action plan (www.saferjourneys.govt.nz).
- Achieving safer outcomes by working with communities to identify and deliver local land transport safety issues.
- Developing and motivating national, regional and local land transport safety partnerships to ensure an integrated approach to safety outcomes.

Strategic Fit To the Nelson Region

The 2014 NZ Transport Agency Communities at Risk Register;

- shows Nelson City to have low individual risk for cyclists;
- shows older drivers in Nelson are at below average individual risk for a crash;
- shows Nelson to have medium individual risk for pedestrians;
- shows young drivers to be at low individual risk in Nelson City but are a high priority nationally;
- Safer Speeds is also identified as a high priority in the Safer Journeys strategy.

Current Road Safety Performance

The analysis in Section 4.4 indicates that road safety has improved markedly from the period covered by the previous AMP. The target for road safety performance has been changed to move away from statistics that compare Nelson with the peer group average and instead towards a fixed baseline. This will allow a direct measure of the improvement in Nelson alone without a particularly good or bad year in the other centres influencing whether the targets have been met locally.

In order to achieve the gains in road safety that have been realised in the last three to five years the Council has run a variety of initiatives and campaigns that are summarised by transport mode below. In the 2012-2015 period $147,000 per annum was budgeted.

Cycling

The initiatives for improving cycle safety are Nelson's RIDE ON Strategy, 0800 CYCLECRASH and Be Bright on a Bike. Key outcomes are to improve community cycle skills, encourage more cycle use, drawing attention to cycle presence on the road and a reduction in crashes involving cyclists.

Motorcycling

The initiative for improving motorcycle safety is the "Top of the South Motorcycle Safety Programme. Key parts to the strategy are motorcycle training courses together with information publicised on licence requirements and safety gear as two closest neighbours Tasman and Marlborough District Council have medium casualty risk rating for motorcycles.

Older Drivers

The initiatives for improving safety with Nelson's older drivers are the Staying Safe, Car Fit and Mobility Scooter Training schemes. Key parts to achieve this are classroom based learning on staying safe and one to one mobility scooter training and support. A Car Fit package helps older drivers recognise what their vehicle's safety features are and assists in correctly adjusting them to their personal needs.

Speeds and Driving to the Conditions

The initiatives for reducing driver speeds will focus on driver education and awareness in particular to driving within residential streets. It is hoped that a greater ownership of streets and public space by residents can be achieved by investigation and implementation of a community development model to reduce speeds in residential streets.

Walking

The initiatives for improving safety while walking focuses on young pedestrians and parents of child pedestrians. The work will involve walking school buses and Feet First and Walk to School promotions. Other events and activities designed to promote and encourage using active transport as a mode of travel to and from school will be utilised.

Younger Drivers

The initiatives for improving safety amongst young drivers are Rotary Young Driver Awareness (RYDA), Students Against Dangerous Driving (SADD) and the training of teachers in delivering road safety across the school curriculum. Key outcomes are to provide increased awareness in the target group of young drivers and their parents about elevated risk levels and steps that can be taken to reduce that risk.

Road Safety Action Plan

The Council has a joint road safety action plan with the Tasman District Council. This plan is a critical component in the delivery of a Road Safety programme across the Nelson/Tasman district. The two councils through resolution have agreed to a cluster arrangement for the purpose of delivering a road safety programme across their respective districts. For management purposes a Joint Road Safety Action Plan Committee has been appointed with representatives from key stakeholder groups.

The Road Safety Action Plan Committee is tasked with the management of all road safety activities. To enable this, a supporting structure has been developed which includes:

- Three times a year council led and chaired Road Safety Action meetings, which include formal agendas and stakeholder reporting lines and minutes.
- Operational meetings for professional key staff as and when required with meeting recordings made.
- Planning processes and operational calendars and works schedules as attached.

The goal of the plan is to contribute to the Governments Safer Journey initiatives which aim to reduce road user crash risks and consequences. The plan acknowledges the Governments Safer Journeys initiatives and that even a responsible driver may make mistakes on our local roads. It is the goal of this plan to better manage our road networks, our vehicles, our users and crash forces to deliver a safe system across the Nelson/Tasman sub region.

To achieve the goals of the plan the Road Safety Action Plan aims to:

- Fully understand crash risk on our road networks.
- Redesign our high risk road infrastructures to be predictable, forgiving of mistakes and self explaining.
- Manage our local roads to ensure that the travel speeds suit the function and safety level for the road environment and conditions.
- Manage local vehicles to ensure they are safe and road worthy.

- Ensure that all road users are skilled, competent, alert, unimpaired, comply with the road rules and take steps to improve their safety.

The improvements in road safety that have resulted in all of Nelson previously medium to high risk user groups dropping to low risk on the High Risk Communities Register have been as a result, in part to the programmes and initiatives detailed above. In order to maintain this safety improvement and make further gains Council needs to continue to be proactive with road safety campaigns and initiatives that include speed reduction measures.

5.10. Parking

The service level statement for parking is "Parking is easy to use, and is rationed fairly and equitably".

The last valuation of the roading network was undertaken in June 2014.

Table 5.20 Car Parking Valuation

	June 2012	June 2014
Quantity	36,207m^2	33,892 m^2
Replacement value	$ 2,600,849	$ 2,777,088
Depreciated replacement value	$ 831,756	$ 660,919
Annual depreciation	$ 32,985	$ 32,280

Council has eight car parks, two in Stoke (237 parks) and six in the Central Business District (871 parks). The number of spaces in each park is identified in Table 5.25.

Table 5.21 Car Parking Spaces in Nelson and Stoke

ID	Location	Number of spaces	Parking Type
1	Strawbridge Square (Stoke)	180	time restricted
2	Putaitai Street/Fire Station Car Park (Stoke)	57	time restricted
3	Tahaki Street (Nelson Library)	59	time restricted
4	Millers Acre	92	metered
5	Wakatu Square	173	metered
6	Buxton Square	229	metered
7	Montgomery Square	268	metered
8	Betts Car Park	52	leased to individual users
9	Bridge Street Car Park		leased to individual users
	Total	1108	

Table 5.22 Car Parking Data Reliability Analysis

Data Attribute	Very Uncertain	Uncertain	Reliable	Highly reliable
Asset quantity				
Asset age				
Condition				
Performance				

Parking and public transport are intrinsically linked. Changes to the parking charge may affect the use of public transport. Free parking would discourage use of public transport, requiring increased enforcement or increases in the commercial rate to ensure funds were available to operate, maintain and improve the Central Business District.

In Nelson there is a lack of long term parking spaces within the Central Business District and the Council does not plan to add any more long term parking capacity. Along with parking charge rates the Council wish to maintain a central city parking regime that is incentivised for people to use public transport and active modes.

Expenditure Trends (from 2012 to 2015)

- Carpark maintenance costs approx $266,000/annum;
- Carpark lease costs $167,600/annum;
- Carpark rate costs $324,000/annum.

The Key Issues for Car Parking

- Maximum Parking occupancy exceeding the desired level of service at 85% in the surveyed first week of December in the Central Business District core.
- Perception of heavy handed enforcement.
- Long-stay commuters occupy a significant proportion of the short stay inner city parking.
- Condition monitoring and rating, maintenance and replacement of signage and marking affect the effectiveness of parking restriction enforcement.
- Frequent requests for no-stopping lines.
- Payment methods out of date with current technologies.

Strategies for Managing These Issues

- Optimise time limits to reflect car parking demand.
- Replace parking meters in 2017/18 with a more flexible payment facility.
- Trial different parking regimes in order to determine best fit for the Nelson CBD users.

5.10.1. Asset Condition and Performance

Off-street car parks have been incorporated and included into the Road Asset Maintenance Management database.

Car parking meters were renewed in 2006 to ensure compliance with the new currency and will be coming to their end of life in 2017/18. The maintenance costs for the meters have not increased significantly as their end of life has approached however the need to introduce more convenient ways to pay such using credit and debit cards including Pay Wave will drive the replacement date.

Summary of 2008 and 2012 Car Parking Data Collection Reports

- 815 parks are available in the four Central Business District squares – approximately 25% used by all day commuters;
- There is enough short-stay capacity if the long-stayers stopped using the short stay spaces;
- Short stay parking should be of sufficient capacity, carefully costed, well-located and accessible;
- Long Stay parking should not compete with short stay capacity, and should align with the wider transport policy.

Potential Methods to Manage Parking Square Enforcement

- Continue existing pay and display system (note: tickets can only be issued if money is paid);
- Install barrier arms and new meters (cost estimate $300,000 per square) for a "pay as you exit system";
- Change bylaw to more clearly limit the length of time allowed in a parking square per day.

Parking Revenue

- In 2012/13 $428k was received from on-street meters and $712k from off-street meters. It ahs been estimated that under the current one hour free then $1.50/hr that the total revenue from the meters will be in the order of $460K pa.
- Infringement recoveries ($838k received in 2012/13) fund parking regulation enforcement.

Implementation Plan for Parking

- Renew pay and display meters with units that enable payment by credit card and integration with smart phone apps to extend the stay, $470,000 in 2017/18 and $470,000 in 2018/19.
- Install signage directing users to the parking squares from the CBD ring route, $200,000 in 2015/16 and $100,000 in 2016/17.
- Reconfigure the traffic signals on Main Road Stoke at the Putaitai intersection to allow the right turn out to prevent unnecessary movements through Strawbridge Square carpark, $40,000 in 2015/16.
- Modify the tree planters in Strawbridge Square carpark to minimse damage, $30,000 in 2015/16.
- Allocate a small number of campervan and motor home spaces within the CBD, $20,000 in 2016/17.

6. VALUATION

Roading Asset Valuation

Asset Category	June 2014				
	Quantity	Units	RV ($)	DRV ($)	Depr ($)
Pavement Layers					
Formation	2,943,138	m3	105,952,978	105,952,978	
Sub-base	385,000	m3	40,810,048	40,810,048	
Basecourse	2,274,622	m2	33,429,410	15,777,764	364,686
Surfacing	2,140,850	m2	26,649,423	14,612,127	1,113,452
Drainage					
Intakes	57	units	287,215	213,791	3,590
Outfalls	37	units	141,229	91,719	2,026
Sumps	6,185	units	14,445,169	9,548,638	160,449
Stormwater pipes	74,456	m	31,254,587	18,344,137	365,090
Culverts	3,578	m	3,070,782	1,492,914	34,714
Kerb and Channel	339,426	m	21,527,541	10,991,856	282,476
Kerb Only	13,480	m	899,166	569,484	12,920
Dished Channels	26,751	m	2,360,180	334,096	40,377
Regulatory					
Signs	2,882	units	1,809,896	904,948	120,660
Electronic Signs	30	units	262,920	237,018	21,910
Posts	1,758	units	153,913	76,956	10,261
Handrails/Sight Rails	6,443	m	836,134	418,067	27,871
Guardrails	1,219	m	915,311	457,655	18,306
Edge Marker Posts	441	units	9,993	4,997	1,999
Speed Tables	36	units	936,000	633,100	23,400
Road Humps	20	units	29,640	14,820	1,186
Raised Pavement Markers	1,531	units	26,808	13,404	2,234
Road Markings			120,000	120,000	
Traffic Signals			3,513,748	1,959,584	139,368
Streetlights					
Streetlights	4,433	units	34,648,552	17,226,538	796,011
Structures					
Bridges	44	units	27,199,741	17,649,524	288,947
Retaining Walls	30,852	m2	51,422,169	37,426,908	616,972
Fords	3	units	84,781	57,798	848
Footbridges	28	units	1,250,597	862,480	12,506
Other					
Land for Legal Road			256,096,995	256,096,995	
Footpaths	481,443	m2	30,043,243	9,406,454	337,466
Walkways	23,067	m2	3,806,273	2,627,768	40,104
Cycleways	71,192	m2	4,682,764	4,000,467	71,973
Carparks	33,892	m2	2,777,088	660,919	32,280
CCTV	18	units	101,250	67,693	20,250
Misc Street Furniture	635		1,508,363	657,563	53,682
TOTAL			703,063,905	570,321,205	5,018,012

7. FINANCIAL FORECASTS AND DEVELOPMENT CONTRIBUTIONS

Expenditure on assets can be categorised into the following main areas which are discussed below.

Operations and Maintenance

Operation and Maintenance expenditure is required for the day-to-day operation of the network whilst maintaining the current level of service.

Maintenance costs are generally subdivided into:

- Routine – ongoing day to day maintenance;
- Planned – Non day to day maintenance that is planned in advance;
- Reactive – Maintenance that is unexpected.

Renewals

Renewal expenditure includes rehabilitation and replacement of assets to restore an asset to its original level of service.

Capital

Capital works involves the creation of new assets, or works, which upgrade or improve an existing asset beyond its current capacity or performance.

The forecasted subsidised annual expenditure for the next three years is shown in Table 7.1.

Asset Management Assumptions

- The forecast are based on current NZ Transport Agency funding thresholds and co-investment levels.
- Maintenance and operations allocations are largely based on maintaining current level of service.
- Do not allow for fuel prices or inflation escalation.
- Staff resources will be available to commission all the actions required.

Table 7.1 Forecasted Subsidised Annual Expenditure

Activity Class	2015/16	2016/17	2017/18
Transport planning	$45,000	$70,000	$105,000
Road safety promotion	$90,000	$90,000	$90,000
Walking and cycling facilities	$280,000	$605,100	$570,000
Public transport services	$1,293,300	$1,281,800	$1,332,200
Public transport infrastructure	$69,300	$131,900	$36,000
Maintenance and operation of local roads	$3,135,900	$3,148,600	$3,161,500
Renewal of local roads	$2,691,800	$2,394,800	$2,538,100
New & improved infrastructure for local roads	$650,000	$650,000	$700,000
Total Forecasted Expenditure	$8,255,300	$8,372,200	$8,532,800

Other Significant Sources of Council Funding

- Rates – in addition to funding from rate payers the Council receives a special rate from inner city and Stoke businesses to cover provision of special services.
- Parking charges and enforcement.
- Property rents and land leases.
- Development Contributions – see below.
- Borrowing – the Council raises loans to fund capital works only.
- Depreciation – the Council depreciates its assets according to the replacement value method in order to fund renewal projects and repay Council debt.

Development Contribution

In addressing actual and potential adverse effects from Developments, the Council may seek financial contributions.

This will go towards the necessary land and works to construct, widen or upgrade any new or existing road, where:

- roads are not available; or
- existing roads are of inadequate width or construction to cater for increase usage caused by the subdivision or development; or
- alterations or works to existing roads are required for traffic safety or efficiency as a consequence of the subdivision or development.

Furthermore, a financial contribution may be sought when the full number of on-site parking spaces is not provided as per the Resource Management Plan.

The LTP shows a programme of expected works for the ten years to 2025. This includes yearly financial forecasts of income and expenditure on transport activity operations and renewals and new capital expenditure. The LTP is included in Appendix L. Please note that these figures in this AMP are based on 2015 estimates and do not include inflation. The LTP figures differ beyond year 1 as they do include an allowance for inflation.

8. RISK MANAGEMENT

Background

Risk management is the systematic application of management policies and procedures to identify, analysis, evaluate, treat and monitor risk so that injury to people, damage to the environment, financial loss, disruption to infrastructural assets and services and legal obligation failures are controlled and mitigated as far as practicable.

Analysis of Risks

Council's risk management framework is consistent with the joint Australian New Zealand Standard (AS/NZ IS4360:2004), to ensure that risks are managed on a consistent basis.

Risk, likelihood and consequence are defined as:

- Risk is a function of the likelihood and consequence of an event occurring;
- Likelihood is the probability or frequency of an event occurring;
- Consequence is the outcome of an event including a loss, injury, disadvantage or gain.

For each event the likelihood score (Table 8.1) is multiplied by the consequence score (Table 8.2) for each area of impact. These multiples are then totalled to produce the risk priority rating for the event (Table 8.3), which provides an assessment of the level of risk associated with the event.

Table 8.1 Likelihood Ratings (Semi Qualitative Measure)

Rating		Description	Score
A	Almost Certain	Likely to occur frequently, i.e. several times a year.	0.9
B	Likely	Likely to occur more than once during the life of the project.	0.7
C	Moderate	Likely to occur during the life of the project.	0.4
D	Unlikely	Might occur once in 100 years.	0.2
E	Rare	Might occur once in 100+ years.	0.01

Table 8.2 Semi-Quantitative Measures of Consequence and Areas of Impact

Areas of Impact	Consequence				
	Negligible (10)	Minor (30)	Moderate (50)	Major (70)	Catastrophic (100)
Health and Safety	Minor injury possible.	Serious injury to one person.	Serious injury to multiple members of staff, contractors or public.	Single fatality of staff, contractor or public.	Multiple fatalities of staff, contractors or public.
Public Health	Temporary but non-serious health impacts.	Localised serious health impact on one person.	Localised serious health impact on more than 20 people.	Localised or widespread serious health impact on more than 100 people.	Localised or widespread serious health impact on more than 1,000 people.

Areas of Impact	Consequence				
	Negligible (10)	Minor (30)	Moderate (50)	Major (70)	Catastrophic (100)
Asset Performance	Asset failure impacting on one or more persons.	Asset failure impacting on more than four people	Asset failure impacting on more than 40 people	Asset failure impacting on more than 400 people	Asset failure impacting on more than 4000 people
Environment and Legal Compliance	Short term and Temporary impact requiring no remedial action.	Medium term environmental impact with negligible effects on environment or community.	Measurable environmental harm to an internationally or nationally significant site. Loss of public access or conservation value of the site.	Major environmental damage requiring long-term recovery investment. High profile legal challenge. Loss of public access or conservation value of a significant environment.	Permanent environmental damage to an internationally or nationally significant site. Large scale class action.
Historical or Cultural	Loss of important records about a site. Work required restoring them.	Unsympathetic development compromising the integrity of a registered historical, cultural or archaeological site.	Damage to a registered historical, cultural or archaeological site, but capable of restoration.	Loss or permanent damage to a registered historical, cultural or archaeological site.	Permanent loss of national icon.
Financial	Capital cost/ loss <$100k.	Capital cost/loss $100k - $500k.	Capital cost/loss $500k - $1million.	Capital cost/loss $1million-$5million.	Capital cost/loss > $5 million.
Customer Perception	Service Request.	Minor complaint.	Justifiable complaint / information request.	Ministerial questions /third party investigations.	Public or ministerial enquiry.

Table 8.3 Risk Priority Rating (Semi Quantitative)

Rating	Level of Risk	Score
> 200	Extreme	Awareness of the event to be highlighted to Council.
150 - 200	High	Risk treatment required. Risk to be eliminated or mitigated by 30 June 2009 to comply with Infrastructural Assets Business Plan.
100 - 150	Moderate	Risk treatment required.
0 - 100	Low	Manage by routine procedures.

The potential risks to Transport assets and services include:

- Legislative;
- Operational;
- Organisational;
- Public health and safety.

A simplified summary with proposed mitigation actions has been provided in Table 8.4 and Table 8.5.

Table 8.4 Business Risk Schedule

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
1.	High level policies, procedures and controls					
1.1	Resource Consent Conditions on road reserve not in accordance with Councils planning	Infrastructure developed through Resource Consent not in accordance with Land Development Manual, Policy or in alignment with councils future transport planning	All staff to ensure future RC conditions are non-binding on road reserve.	High	None	High
1.2	Inaccurate growth information	Inappropriate decision made about future infrastructure and services	Growth monitoring to be frequent and trends related to national/international data where possible	Mod	Monitoring regime now established	Low
1.3	Increasing standards	Public expectations of Transport safety, quality and environmental standards are increasing		Mod	The implications of increased levels of service, resulting in increased expenditure are fully recognised by Councillors	Low
2.	Financials					
2.1	Poor financial forecasting	Reflects on Council as poor planning	Ensure assumption to project cost estimates are fully understood and refine estimates before each Annual Plan is developed	Mod	Ensure robust project management practices are followed	Mod
2.2	Desired NZ Transport Agency funding not obtained	Additional costs to Council or implementation of projects delayed, or maintenance deferred	Monitor NZ Transport Agency funding procedures and manuals and submit application in a timely manner	Mod	Ensure politicians are fully informed	Mod
2.3	Non-compliance with NZ Transport Agency funding agreement	Reduction or refund of NZ Transport Agency contributions	Annually report on compliance requirements	Mod	Implement measures to address any non-compliance	Low
3.0	Organisation Management					

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
3.1	Failure to act on identified risk	Potential legal action against Council		Mod	Identified risk improvements implemented	Low
3.2	Lifelines plan not completed, updated or implemented	Lifeline asset failure reducing effectiveness of Nelson Tasman Emergency Management Group Plan 2005. Failure to comply with Civil Defence Emergency Management Act		High	Complete and update Lifelines implementation plan	Low
3.3	Asset Management Plan improvement plan not undertaken	Future forecasting not accurate. Decision making not optimised.	Annually report on improvement plan	Low		Low
4.0	Health and Safety					
4.1	Safety Management Strategy and System for roads not implemented	Safety levels of service perceived not to have been achieved (although in reality works being undertaken but without the overarching structure)		Mod	Continue to monitor crash rates and set interventions via the TAMP	Mod
4.2	No agreed procedure with Police for road closure or traffic light failure event	Reduced safety leading to increased accident risk	Establish a Police traffic emergency procedures process as identified in OFI 6 of SMS	High	Establish a Police traffic emergency procedures process as identified in OFI 6 of SMS	Low
5.0	Transport Asset Management					
5.1	Asset Management Plan not fully implemented	LTP, RLTP and Annual Plan not fully implemented resulting in recognition of poor Council performance and public dissatisfaction	Ensure robust project management practices are followed	High	Ensure robust project management practices are followed	High
5.2	Performance monitoring of levels of service not completed	Levels of service not met resulting in public dissatisfaction	Establish and implement monitoring programme	Low	Review every three years	Low

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
5.3	Non compliance with Land Development Manual for constructed/adopted assets	Substandard works requiring greater maintenance or earlier renewals	Project Scope and plan and site check procedures to be sufficiently resourced and implemented	High	Project Scope and plan and site check procedures to be sufficiently resourced and implemented	Mod
5.4	Unauthorised construction on road reserve	Public liability risk to Council. Risk of underground service damage		High	Establish and implement monitoring programme to ensure all approvals (including street opening notices and Traffic Management Plans) are obtained	Mod
5.5	Network modelling and condition assessments not applied	Capital and renewals works programme not optimised. Future forecasting not accurate	Road Asset Maintenance Management database and traffic models regularly updated and assessed	High	Road Asset Maintenance Management database and traffic models are regularly updated and assessed	Low
5.6	Lack of funding available to cover recovery cost triggered by a natural event	Additional rates burden	Increase insurance	High	Budget an increased internal contingency fund and investigate insurance costs to cover the unsubsidised portion of any emergency events	Low

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
5.7	Significant Natural Event	Resources reapportioned as necessary which might compromise Asset Management Plan implementation. Potential public claims from a lack of understanding of the risks	Delay implementation of this plan and reviewed modify as necessary when resources re-established	High	Preliminary risk maps of areas particular susceptible to flooding, liquefaction, tsunami, slips and fault lines to be mapped and published	Low

Table 8.5 Asset Risk Schedule

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
1.0	Road pavements (including footpaths, cycleways and car parks)					
1.1	Structural failure/blockage due to earthquake or landslide	Pavement failure and road closure	Maintenance contractor has 24 hour call out facility	Low		
1.3	Vehicle crash damage	Road closure and chemical/load spill clean up. Pollution of watercourse	Maintenance contractor has 24 hour call out facility. Establish a pollution emergency response plan and make ready for implementation	Low		
1.4	Inadequate maintenance	Road failure	Maintenance programme implemented	Low		
1.5	Inadequate Traffic Management Plan for high volume roads	Reduced safety leading to increased crash risk	Update TMP guidelines as identified in OFI 8 of Safety Management System	Low		
1.6	Inadequate on-road residential parking	Unsafe parking or installation of no-parking lines leading to public dissatisfaction		Mod	Consider when designing local road upgrades	Low
2.0	Road bridges (including footbridges and cycleway underpasses)					
2.1	Structural failure due to earthquake	Catastrophic damage to bridge structure. Prolonged road closure	Arterial and Lifeline bridges designed and constructed to earthquake loading standards	High	Implement recommendations from seismic strengthening of lifeline bridges	Low
2.2	Flooding greater than bridge capacity	Damage to bridge structure	All bridges constructed to Q50 or Q15 standard (depending on location). Structural inspections every five years and maintenance inspections annually	Low		
2.3	Flooding that closes cycleway underpasses	Inconvenience to cyclists and pedestrians	Suitable warning signage	Low		
3.0	Road retaining walls					

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
3.1	Structural failure due to earthquake or landslide	Catastrophic damage to several retaining walls. Road closure	Arterial and lifeline bridges designed and constructed to earthquake loading standards	Low		
3.2	Inadequate design	Damage to retaining wall	Design to comply with Building Control Act requirements	Low		
3.3	Inadequate maintenance	Retaining wall failure	Structural inspections every six years. Worst walls to occur every two years.	Low		
4.0	Roading drainage (sumps, pipework and culverts)					
4.1	Inadequate road drainage	Downstream flooding, pavement damage and increased maintenance costs	Upgrade road drainage where secondary flow paths are inadequate and historically private property flooding occurs	Low		
4.2	Inadequate design or no kerb, channels and sumps	Downstream flooding, pavement damage increased maintenance costs	All road upgrades include drainage in accordance with Land Development Manual	Low		
4.3	Inadequate maintenance	Downstream flooding, pavement damage, increased maintenance costs, increased risk of storm water pollution	Maintenance programme implemented	Low		
5.0	Streetlights					
5.1	Inadequate streetlights that do not comply with Land Development Manual	Non-compliance with level of service requirement		Mod	Implementation programme established	Low
5.2	Energy inefficient streetlights	Additional power consumption		Mod	Renewal programme established using LED	Low
5.3	Inadequate maintenance	Streetlights or streetlight column failure	Maintenance programme implemented	Low		
6.0	Traffic Signals					

No.	Risk Event	Consequence or Outcome	Mitigation Strategies	Gross Risk	Action Plan	Residual Risk
6.1	Power failure or damage	Lights inoperable		Mod	Manage as uncontrolled intersection and install appropriate signs except at critical asset intersections in peak hour where Police appointed as Pointsmen until standby generators are installed.	Low
6.2	Inadequate maintenance	Lights inoperable or column failure	Maintenance programme implemented. Where signals are disconnected install temporary priority give way signs	Low		
7.0	Safety Barriers					
7.1	Inadequate barriers not complying with Land Development Manual	Non-compliance with SMS		Mod	Review safety barriers and develop upgrade and maintenance programme as identified in OFI 10 of SMS	Low

9. PERFORMANCE MONITORING AND IMPROVEMENT PLAN

The primary focus of this improvement plan is to improve our asset management practices and process that will assist in achieving the least whole of life cost in maintaining the transport assets and bring improvements to the services provided.

Priority Areas	Improvement Action	Commentary	Timeline	Estimated cost
Data collection, analysis and monitoring	Improve data collection methodology of delay and travel time data.	Current sample is very small using the following car method. Potential to improve sample size by improving survey method.	2015	Within existing data collection budget
	Improve data availability to enable more effective tracking of compliance with Levels of service.	A large amount of data is currently collected but is difficult to access and relies on a single person to analyse. Wider availability is essential to ensuring the data is monitored at least quarterly rather than every 1-3 years as currently is the case. GIS integration is needed.	2015-2016	Included in staff cost budgets
	Improve data collection and reporting for Nbus punctuality, trips and passenger data.	Current data collected does not allow evaluation of demand at different points along routes. No punctuality data is collected or reported on with the supplier expected to self monitor. This is unlikely to be accepted by NZ Transport Agency as a performance monitoring method in the next contract. Integrated electronic monitoring system is due in 2016.	2016	$61,000 in total over the next three years
	Increase coverage and frequency of pedestrian and cycle data collection.	Currently, comprehensive cycle and walking data is collected every five years. The availability and cost of other third party data sets (e.g. Strava) will be investigated to widen the data set. This will allow closer monitoring of changes in use of these transport modes.	2017	Unknown (Further investigation needed)
	Develop parking demand model based on meter data.	Comprehensive parking demand data is collected manually every 4-5 years on average. In order to have a more 'live' data set data the meters can be used to give an indication of trends. This will still need to be validated using the manually collected data. This will not be possible should Council choose to remove the charges for parking.	2016	Included in staff cost budgets

Priority Areas	Improvement Action	Commentary	Timeline	Estimated cost
	Reduce reliance on RAMM for strategic asset management other than maintenance and renewals	The current focus of RAMM is not on what isn't there or where levels of service are lacking but instead on managing what we already have. Improved in-house GIS development is needed to allow a higher level of data customisation than is available through RAMM.	2017-2018	Included in staff cost budgets
Programming	Develop polices to encourage officers to reject/accept potential projects	Currently, a large number of potential projects make it to the network deficiencies lists that are unlikely to ever be considered any further for investigation or construction. There will be an increased focus on dealing with these immediately and informing the party that raised the issue that the particular project will not be proceeding any further.	2015	Included in staff cost budgets
	Investigate pavement condition testing and analysis regime	Current practice is to be reactive rather than predicting when failures are likely to occur in road pavement structures. A testing programme to allow prioritisation prior to failure will be investigated in the next three years and recommended in the next AMP.	2015-2018	Included in staff cost budgets
	Develop expertise in-house for benefit/cost analysis of pavement maintenance versus rehabilitation	This work is currently contracted out. Council holds all of the available data. Performing this work in-house will allow a higher level of flexibility in when and how often it is used in evaluating the value for money of maintenance works.	2018	Included in staff cost budgets
Asset Strategies	Develop strategy for planning for sea level rise	Sea level rise is expected to result in inundation of the current level of the key coastal arterials around 2050. Early planning is necessary to understand impacts.	2017-2018	Included in staff cost budgets
	Redefine Nelson road hierarchy to align with NZ Transport Agency One Network Road Classification	NZ Transport Agency have finalised the One Network Road Classification (ONRC) that they are expecting RCAs to implement in the next 1-2 years. This classification will directly influence the levels of funding that NCC receive from NZ Transport Agency.	2015-2016	$50,000

Priority Areas	Improvement Action	Commentary	Timeline	Estimated cost
	Develop Council Policy	Private Access on Road Reserve; Land slips on and above Road Reserves; Speed complaints procedure; Speed Hump Policy; Signage Policy; Power and Telecom Undergrounding; Road Reserve maintenance limitations; Fatal Accident Site Marking; Resident Parking Zones.	2018	Included in staff cost budgets

APPENDIX A RELEVANT TRANSPORT LEGISLATION

The overall framework for planning, funding and managing the land transport system includes the following Acts, Regulations and Rules. Bills and Rules under development have been provided as they are likely to become legislation in the short term:

Resource Management Amendment Act (2003)

- Local Government Act 1974, Local Government Act 2002;
- Land Transport Act 1998, Land Transport Management Act 2003, Land Transport Management Amendment Act 2008, Land Transport Management Amendment Act 2013, Land Transport (Enforcement Powers) Amendment Act 2009, Land Transport Amendment Act 2009, Land Transport (Road Safety and other matters) Amendments Act 2011, Land Transport (Road Safety and other Matters) Amendment Act 2011, Government Roading powers Act 1989;
- Resource Management Act 1991, Resource Management (simplifying and streamlining) Amendment Act 2009, Resource Management Amendment Act 2013, Building Act 2004, Building Amendment Act 2012, Building Amendment Act 2013, Health Act 1956;
- Requirements of the Auditor General (refer Appendix J for improvement measures specific to the Transport Activity).

Bills

- Local Government Act 2002 Amendment Bill (No.3).

Regulations

- Heavy Motor Vehicle Regulations 1974;
- Land Transport (Infringement and Reminder Notices) Regulations 1998 and 2012, Land Transport (Offences and Penalties) Regulations 1999, Land Transport (Ordering a Vehicle off the Road) Notice 1999 Land Transport (Requirements for Storage and Towage of Impounded Vehicles) Regulations 1999;
- Land Transport (Storage and Towage fees for Impounded Vehicles) Regulations 1999, Transport Services Licensing Regulations 1989, Traffic Regulations 1976.

All Land Transport Rules, including

- Operator Licensing 2007, Passenger Service Vehicles 1999, Road User Rule 2004, Setting of Speed Limits 2003, Traffic Control Devices 2004, Vehicle Dimensions and Mass 2002, Vehicle Lighting, Driver Licensing.

Bylaws

- Parking and Vehicle Control Bylaw 207 (2011) and 2012 Amendment;
- Speed Limits Bylaw 210 (2011) and associated Amendment 1 (2013).

APPENDIX B NELSON'S STRATEGIES AND POLICIES

NELSON CITY COUNCIL LONG TERM PLAN

The last Long Term Council Community Plan was adopted in July 2012. It is a requirement of the Local Government Act 2002 to have such a plan to manage the Council's activities and budgeting. Details in the plan forms the basis for the Council's annual planning process. The plan must have a focus on social, cultural, economic and environmental outcomes. The next LTP 2015 -2025 will be adopted by Council in June 2015.

NELSON REGIONAL POLICY STATEMENT 1997

This document is at the top of the hierarchy of resource management considerations. It is prepared under the Resource Management Act and has statutory force.

Its purpose is to identify regional issues in terms of natural and physical resources and to outline objectives, policies and methods to achieve integrated management of the natural and physical resources of the whole region, including cross-boundary issues with other regions.

Other plans prepared under the Resource Management Act must now "give effect" to the provisions of the relevant regional policy statement for a region or district (changes to the Resource Management Act in 2005 have increased the importance of the Regional Policy Statement).

Nelson's Regional Policy Statement was made operative in 1997.

Amongst the regional cross-boundary issues identified are:

- "consistent management of transport nodes (including the port and airport), their adverse effects and equality of access (Nelson City/Tasman District)"; and
- "a consistent approach to roading (Marlborough District/Nelson City/Tasman District)."

Key Chapters of the Regional Policy Statement in relation to the arterial study are Chapter 8, The Coast; and Chapter 14, Infrastructure. In general terms, Chapter 6, Development and Hazards, anticipates an increasingly compact urban form for the city, for efficiency reasons but also to protect and retain the rural setting of the city and to avoid natural hazards which are perceived as significant in areas adjacent to urban areas in the future (including climate change and sea level rise).

NELSON RESOURCE MANAGEMENT PLAN

This document is an integrated district and regional plan for the management of all the region's natural and physical resources under the Resource Management Act (with the exception of air quality, for which there is a separate regional plan). The Plan was made operative in 2004 and has full statutory weight.

While much of the Plan and its policy framework is organised to apply to individual zones (e.g. residential, commercial, industrial) there is a set of District wide objectives and policies which apply across the whole region. Amongst them is a significant section on land transport, DO10.

REGIONAL LAND TRANSPORT PLAN 2015-2025

RLTPs are six-year documents with a ten year horizon that provide strategic context and direction for each regional programme. Key considerations include:

- developing a significance policy to prioritise significant activities;
- developing the front end strategic case using business case approach principles;
- having a programme of activities, not just projects, with clear linkages between all activities and agreed outcomes, e.g. relationship between investing in different modes and activities funded outside the National Land Transport Fund;
- setting out land transport objectives, policies and measures for at least 10 financial years;
- considering the infrastructure implications and/or public transport service improvements that are needed to support growth areas;
- considering the feasibility and affordability of alternative regional land transport objectives;
- identifying performance measures that will be used to monitor activities.

The Regional Land Transport Plan is under development at the time of writing this Asset Management Plan. It will be adopted by Council in April 2015.

REGIONAL PUBLIC TRANSPORT PLAN 2015

The purpose of the regional public transport plan is to provide:

- A means for encouraging councils and operators to work together in developing public transport services and infrastructure.
- An instrument for engaging with the public in the region on the design and operation of the public transport network.
- A statement of:
    - The public transport services that are integral to the public transport network.
    - The policies and procedures that apply to those services.
    - The information and infrastructure that supports those services.

The Regional Public Transport Plan is under development at the time of writing this Asset Management Plan. It will be adopted by 30 April 2015.

ARTERIAL TRAFFIC STUDY 2011

The Arterial Traffic Study was a key initiative in order to achieve the Community Outcomes 2009/19 Nelson Community Plan.

The objective of the Arterial Traffic Study was to determine the best transport system configuration between Annesbrook and the Queen Elizabeth II/Haven Road roundabouts that will improve the city as a whole in the long term. Refer to section 2.1 for more details on the outcomes of the study.

SOCIAL WELLBEING POLICY 2010

The Counci's vision for this policy is that Nelson has a happy, healthy community where people have access to necessary services and facilities and feel connected to each other and to the city.

Council will ensure that social wellbeing issues are considered when planning and delivering new services, facilities and activities.

Areas where Council has a key responsibility or role include the physical environment, leisure and recreation, social connectedness, cultural identity, civil and political rights and safety (particularly relating to safety in public spaces). With limited resources

available Council needs to focus on areas where it can have a significant impact and rely on partners to take the lead in other areas.

Council has chosen to focus on particular issues surrounding older people, youth and affordable housing in this policy. These three areas relate to key trends affecting Nelson and have been raised as particular concerns by the community.

Over and above initiatives that directly aim to improve social wellbeing, most Council activities (such as economic development, transport, water supply, waste collection, environmental planning, parks and community facilities) impact on the wellbeing of the community.

Council's social wellbeing role includes:

- **Leading by example** - looking at Council activities through a social wellbeing "lens" to improve social wellbeing outcomes for the community;
- **Partnering, collaborating and facilitating** – with central government, community organisations and other stakeholders to target initiatives effectively;
- **Delivery** – of services and activities (including through grants to community groups) within wellbeing areas where Council has responsibility;
- **Advocacy** – at regional and national levels;
- **Planning** – ensuring that the development of facilities and services contributes to enhancing wellbeing in the future.

PEDESTRIAN STRATEGY (2005) AND CYCLING STRATEGY (2006)

These two strategies are well-developed documents, which link back to the Regional Policy Statement for statutory policy and to the LTP for community outcomes and a budget. They are complementary to the Regional Transport Plan.

HEART OF NELSON – CENTRAL CITY STRATEGY

This was a special study, carried out in 2009, focused at the Council's interest in achieving various community outcomes in the LTP. The Mayor's Foreword states that the Council "wants to maintain a vibrant and vital heart of the city" for locals and visitors, and to encourage economic development. It is intended "to manage growth in a coordinated manner and to maintain and enhance the successfulness of the City Centre and surrounding area".

The Strategy consists of an overall vision supported by numerous specific suggestions and proposals to enhance the function, usability and vitality of the city centre over time.

TAHUNANUI STRUCTURE PLAN

This structure plan is dated 2004 and had its genesis in the Tahunanui Enhancement Study 2002, which looked at improvements needed in the City's popular beach recreational area arising from expressed concerns about the "existing condition of Tahunanui".

The achievement of the Structure Plan relies primarily on public expenditure to achieve street layout and access changes, and changes to the Nelson Resource Management Plan to enable intensification and cohesion around the traditional commercial heart of Tahunanui. The structure plan has no statutory force.

OTHER KEY PLANS & STRATEGIES RELATING TO TRANSPORT

- Nelson Urban Growth Strategy 2005
    - Road Reserve Management Policies and Procedures (pending)
      Objective is to provide for a consistent approach to road reserve asset and activity management and to demonstrate to the community that Council recognises the critical importance of managing the road reserve asset and activities in an effective and sustainable manner;
    - Council will manage the city's assets and activities on the road reserve in a cost effective, sustainable, well planned and coordinated manner to provide agreed levels of service. Council will use the various policies and procedures referenced in Road Reserve Management Policy as the means to fulfil its ownership responsibilities under the Local Government Act 2002.
- Land Development Manual 2010;
- Safety Management Strategy 2007;
- Road Safety Action Plan.

APPENDIX C STRATEGIC DOCUMENTS, STUDIES AND MODELS PROVIDING DEMAND DATA

Demand Driver	Document Name	Date	Source reference	Notes
Sustainability	Sustainability Stock take	April 2011	A293617	
Population	Population projections	October 2010 2012	A235753 A874060 A887913	
All	Arterial Traffic Study	2010-2011	A371678 - Stage 1 A362768 - Stage 1B A431870 – Stage 3 A618888 - Stage 4	Includes consideration of fuel price rises, sea level rises etc.
Update on several key demand drivers	Regional Land Transport Strategy & Regional Land Transport Programme Annual Monitoring report	September 2010 November 2013	A378027 A478601	Includes journey to work, main means of travel, traffic volume, travel times on arterials, vkt's, cycle and ped counts, comprehensive cycle count data, pt patronage, safety data.
Traffic growth	Nelson Tasman Transport Model TRACKS model building report	2009-2010	A673715-model building report 1089224-model data 945050,945051-turning movement data 945048-level of service	Includes data on future transport demands.
Population, demographic, household car ownership, journey to work, freight, air connections and employment data	Regional Land Transport Strategy	June 2009	RAD 696474	Also provides future travel demand and future journey to work predictions, along with Council's long term passenger transport aspirations.
Central City strategic direction	Heart of Nelson Strategy	Aug 2009	RAD 845339	
Population, freight, car parking, future land use and residential growth areas	TRACKS models input data	May 2009	781450 813236	
Traffic flow along Waimea Road	Waimea Rd Microscopic Traffic Simulation Model	July 2009	798279, 798280, 813239, 797883	Includes various intersection scenarios.

Demand Driver	Document Name	Date	Source reference	Notes
Car Parking	2009 Central Business District Parking assessments and district ratio analysis	2009	800221, 800227, 800228	
Sea-level rise	Review of Nelson City minimum ground level requirements in relation to coastal inundation and sea level rise	August 2009	RAD 825295	
Population and employment growth to 2016, journey to work patterns and discussion of travel patterns	Passenger Transport Network Review	October 2008	RAD 701862	
Traffic flow	Signalised intersection design data		796898	
Road safety data	Crash Accident Study	1995 1998 2001 2008	799187 342066 799203 742399	
Car Parking	Parking Studies	2005 2008	682309 788326	
Traffic flow and parking data	Nelson Central Business District Microscopic Traffic Simulation Model	2012 5/2005	A789874 789948	

APPENDIX D GROWTH INDICATORS

Congestion –Traffic Flow Data on the Main Arterials – ATS

Peak hour traffic count information has been obtained for three locations on the arterial routes and are summarised below. The data was obtained during February 2014.

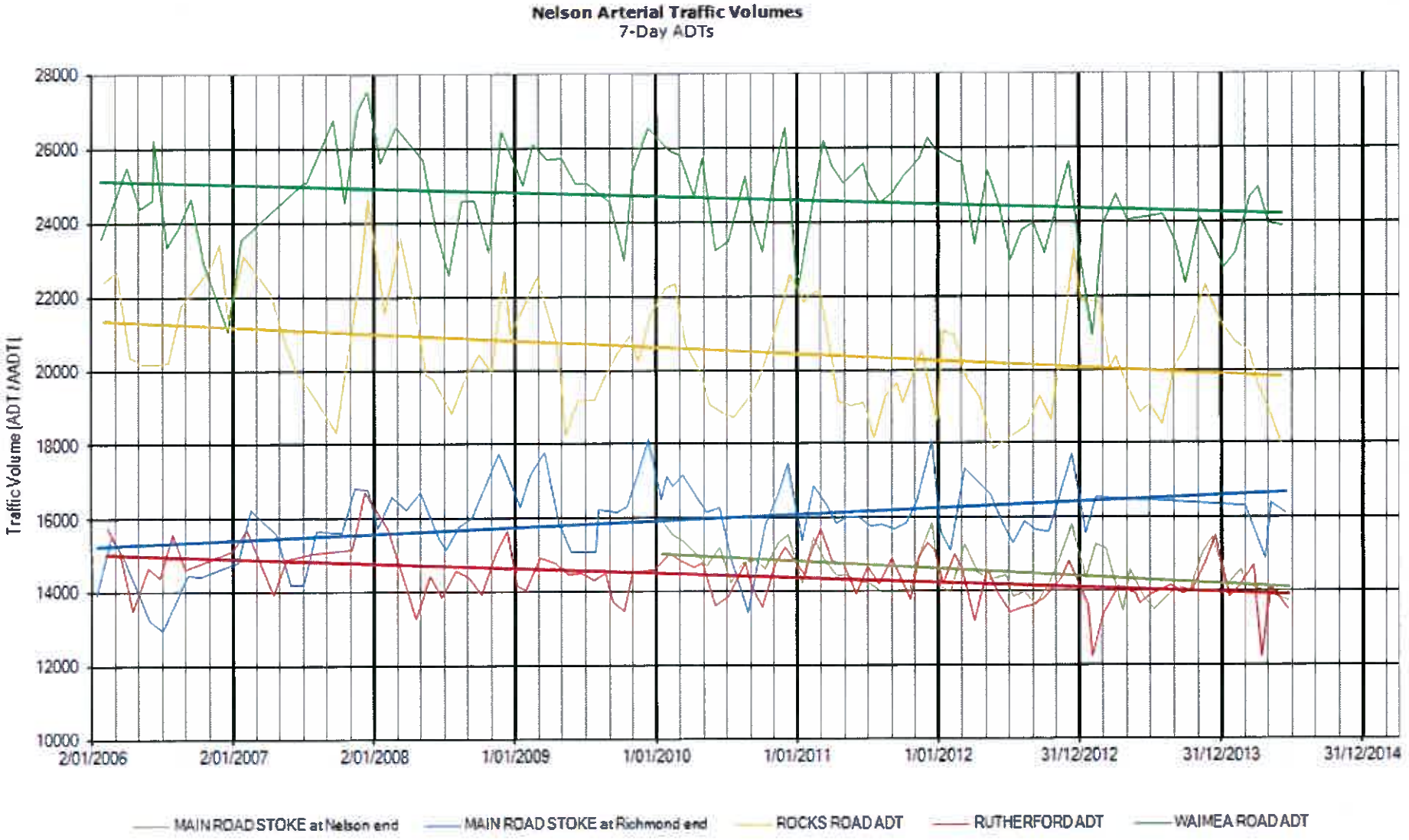
Table D.1 Peak Hour Volumes

	Rocks Road	Waimea Road	Rutherford Street
AM Peak Northbound	1234 vph	1505 vph	734 vph
PM Peak Southbound	1074 vph	1684 vph	906 vph

Car Trips –Traffic Flow Data on the Main Arterials

The following graph shows the 7-day average daily traffic volumes for selected roads over time.

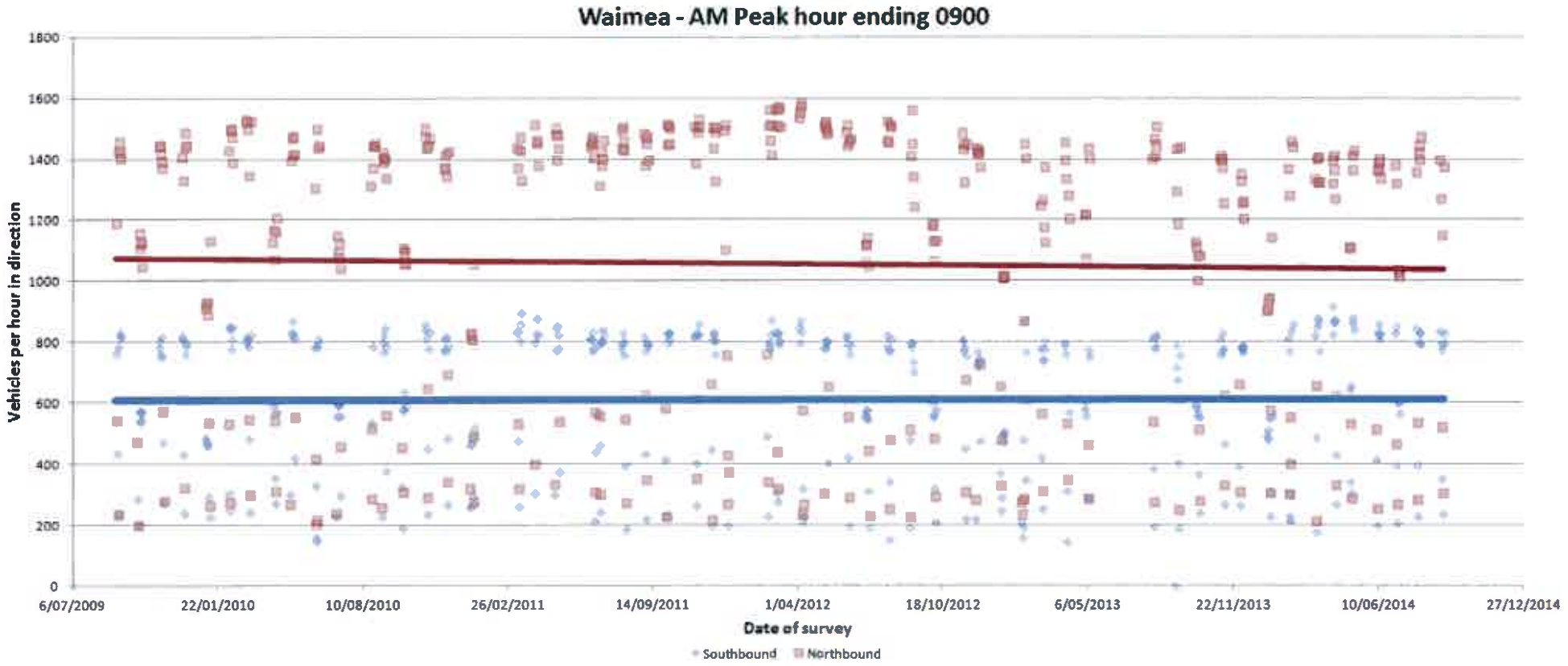
Figure D.1 Nelson Arterial Traffic Volumes



Nelson City Council
te kaunihera o whakatū

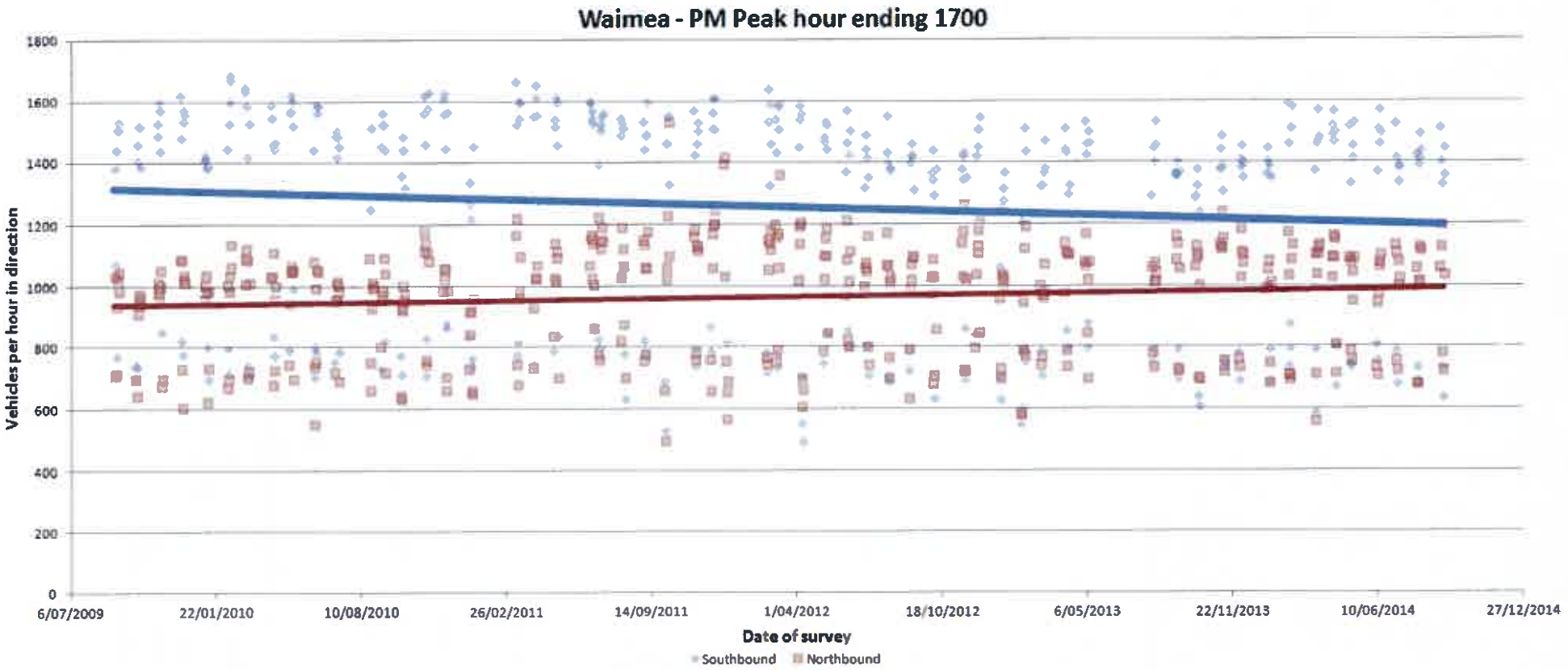
The following graphs show the peak hour traffic volumes on the arterial routes by direction. The data has been presented from 2009 to the latest data available for 2014. This data range is for the period that the current traffic counting contractor has been working for Nelson City Council. Data prior to this does not contain enough detail to present graphs such as those following and as a result it has been excluded.

Figure D.2 Waimea-AM Peak Hour Ending 0900



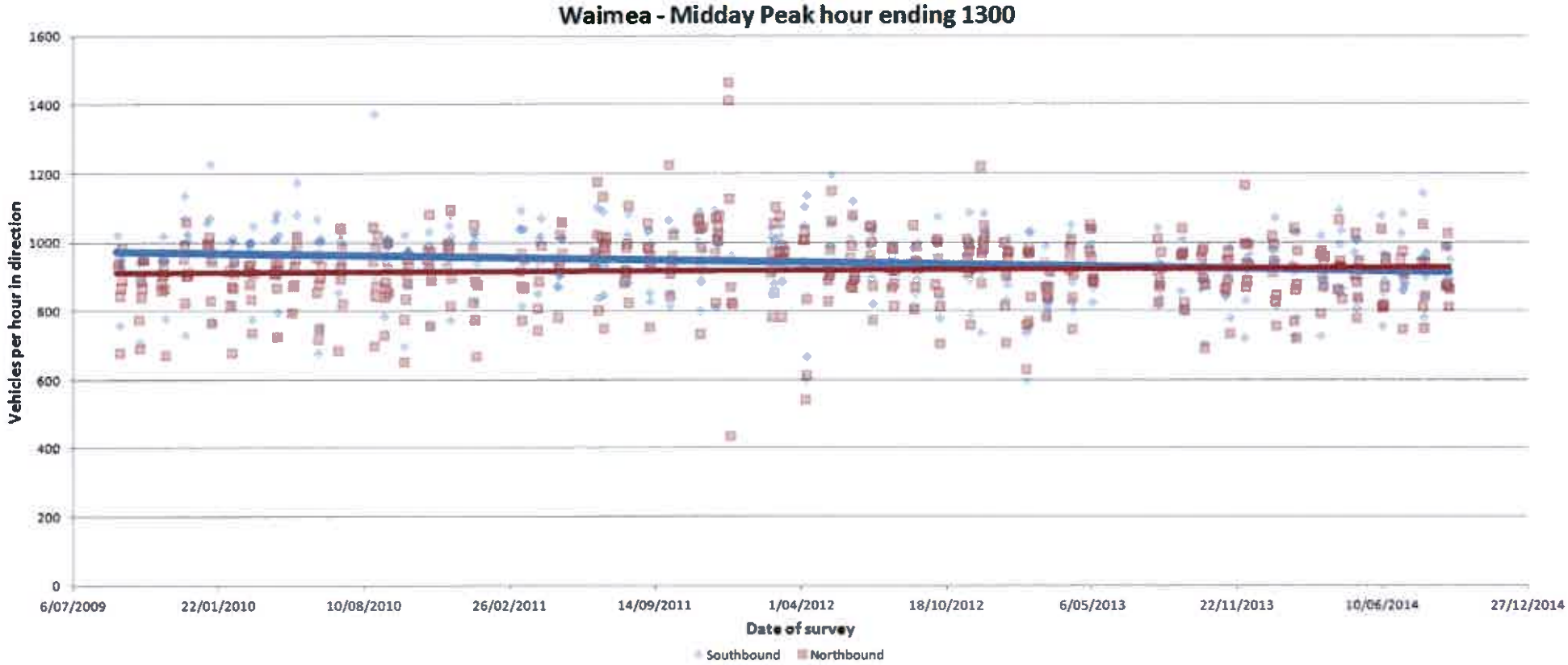
Traffic volumes on Waimea Road in the AM peak hour have been reducing slightly in the northbound direction and have remained static in the southbound direction.

Figure D.3 Waimea – Peak Hour Ending 1700



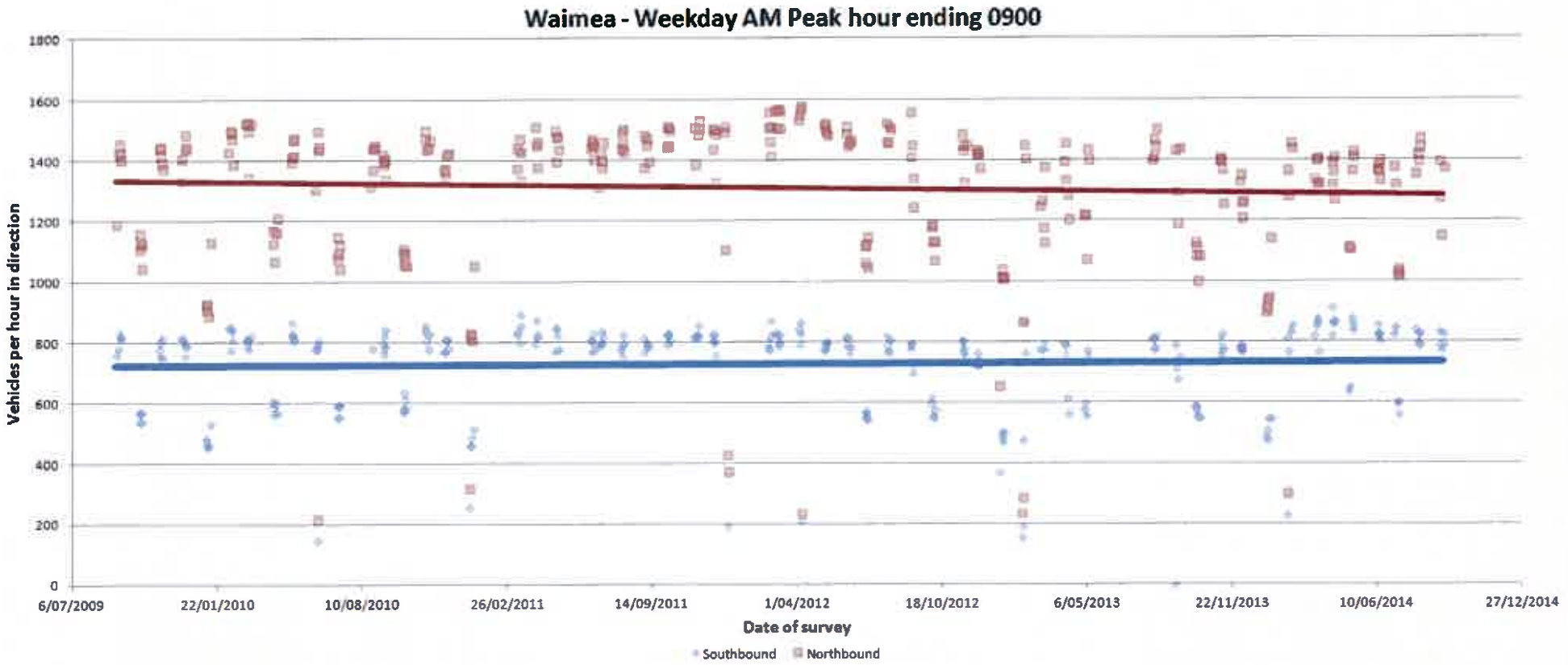
Traffic volumes on Waimea Road in the PM peak hour have been reducing in the southbound direction and increasing in the northbound direction.

Figure D.4 Waimea – Midday Peak Hour Ending 1300



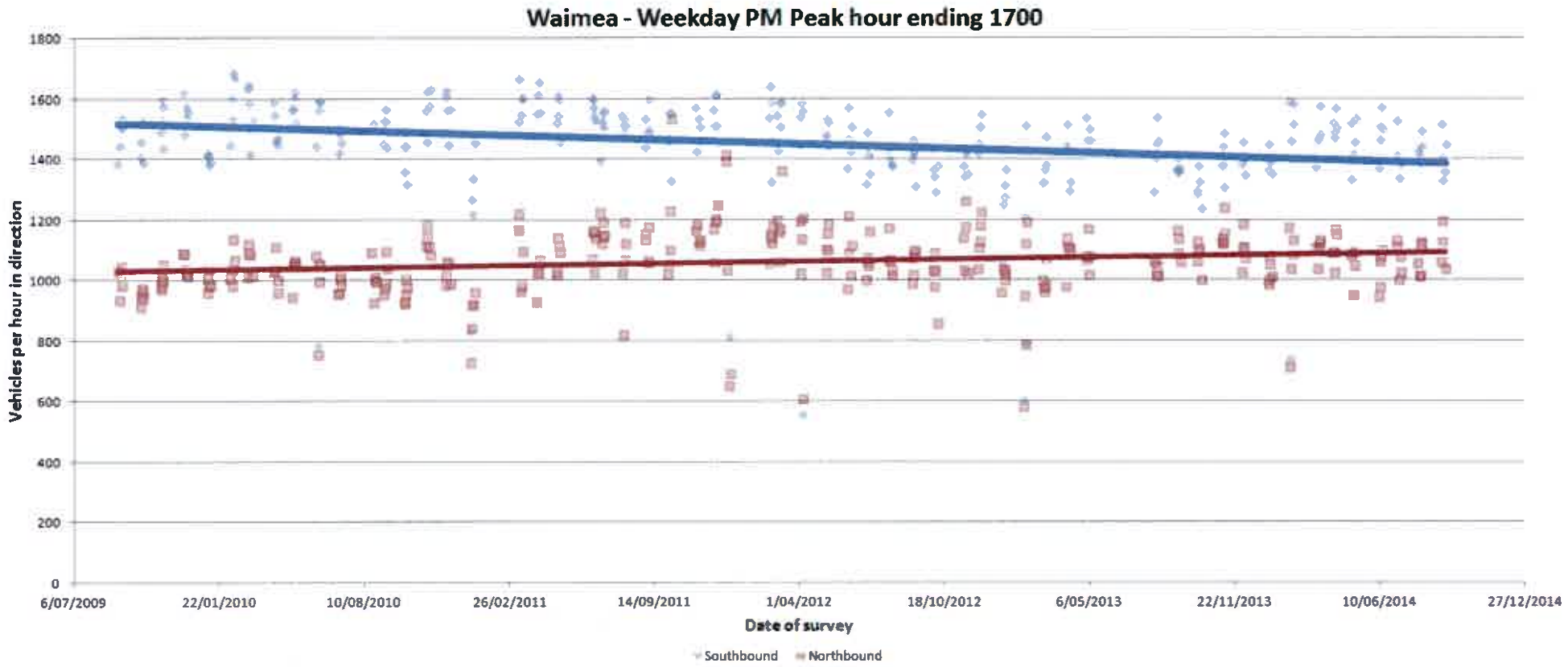
Traffic volumes on Waimea Road in the midday peak hour have been reducing in the southbound direction and have remained static in the northbound direction.

Figure D.5 Waimea – Weekday AM Peak Hour Ending 0900



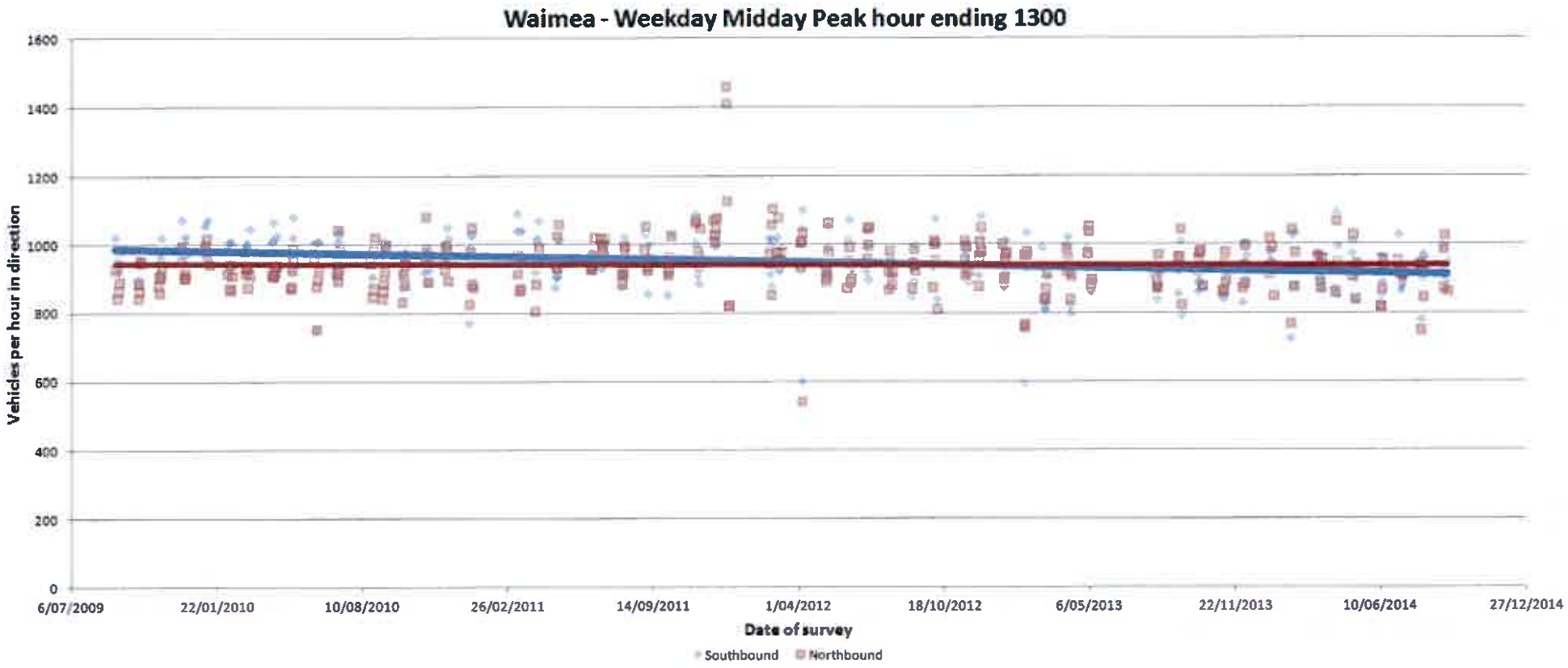
Traffic volumes on Waimea Road, with weekend data removed, in the AM peak hour have been remained static in the southbound direction and have decreased in the northbound direction.

Figure D.6 Waimea – Weekday PM Peak Hour Ending 1700



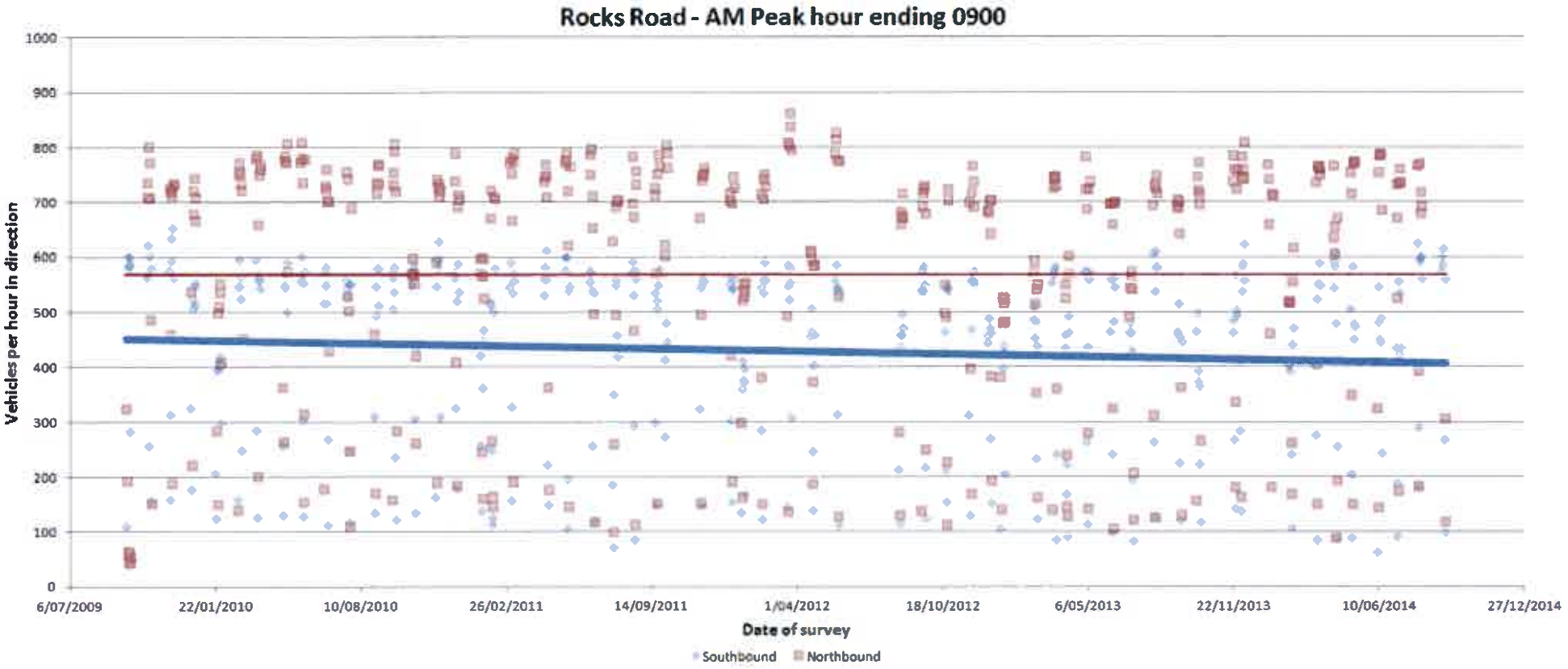
Traffic volumes on Waimea Road, with weekend data removed, in the PM peak hour have reduced in the southbound direction and have increased in the northbound direction.

Figure D.7 Waimea – Weekday Midday Peak Hour Ending 1300



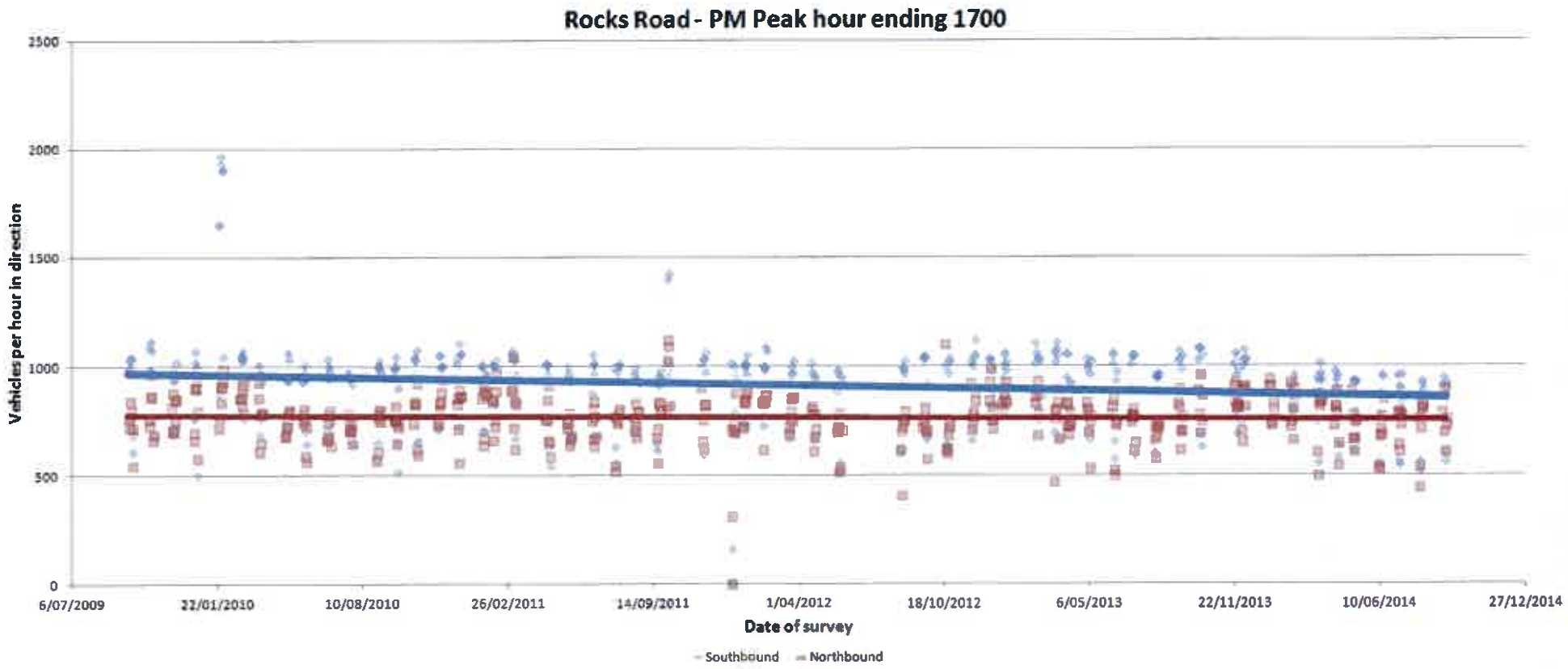
Traffic volumes on Waimea Road, with weekend data removed, in the midday peak hour have been reducing in the southbound direction and have remained static in the northbound direction.

Figure D.8 Rocks Road -AM Peak Hour Ending 0900



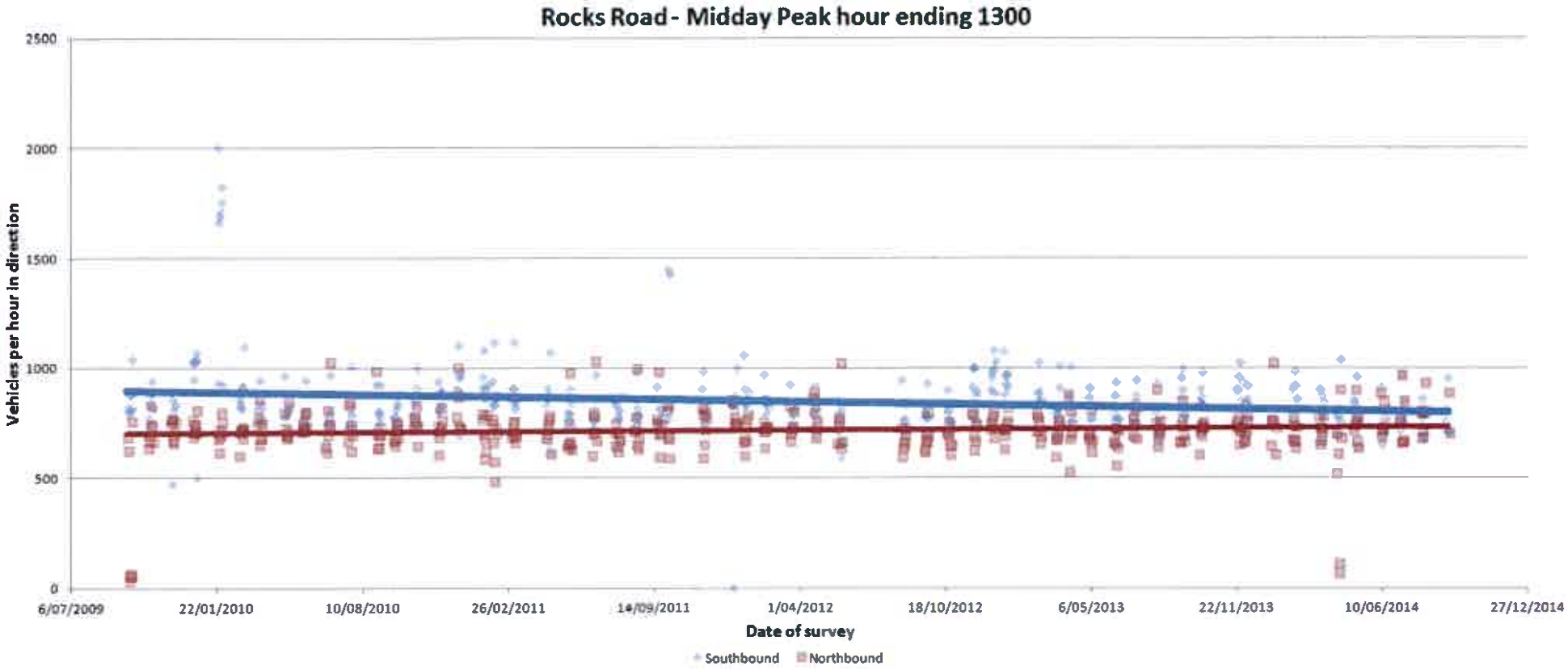
Traffic volumes on Rocks Road in the AM peak hour have remained static in the northbound direction and have reduced in the southbound direction.

Figure D.9 Rocks Road– PM Peak Hour Ending 1700



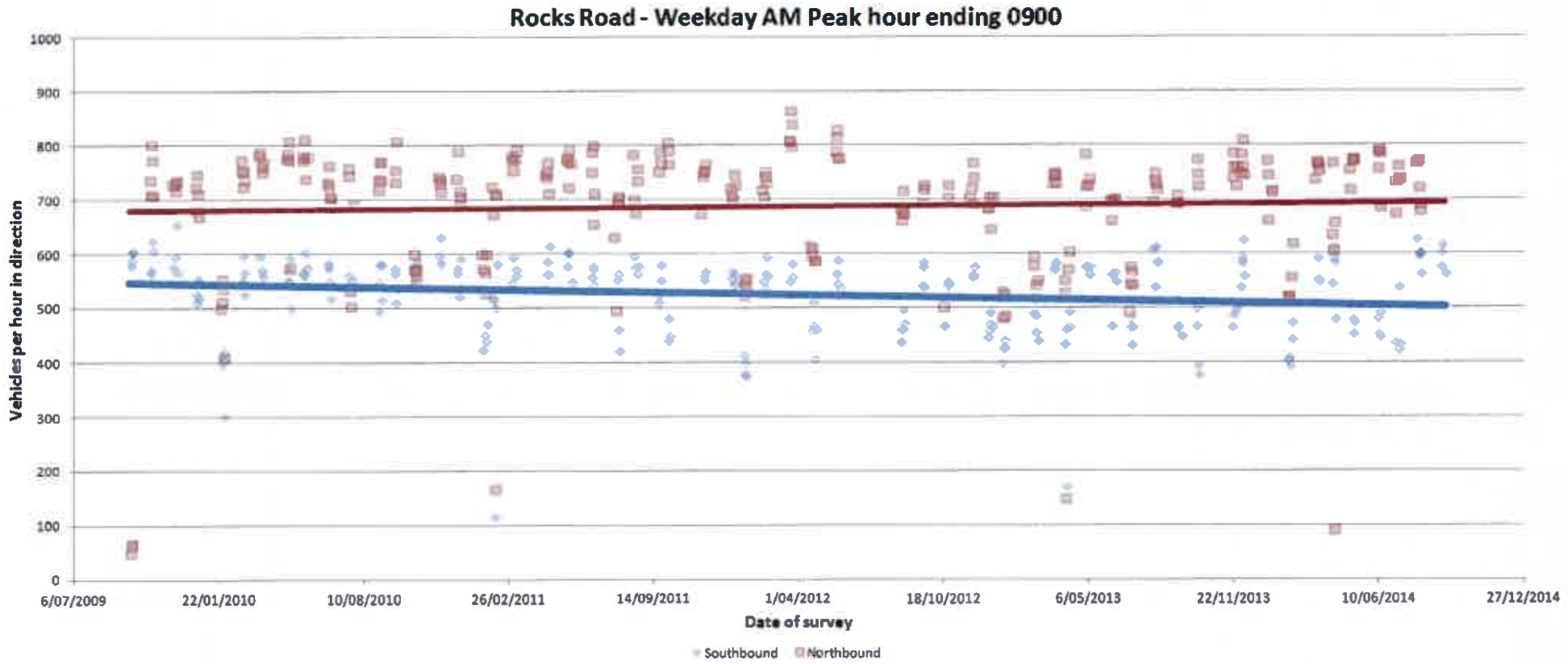
Traffic volumes on Rocks Road in the PM peak hour have remained static in the northbound direction and have reduced in the southbound direction.

Figure D.10 Rocks Road– Midday Peak Hour Ending 1300



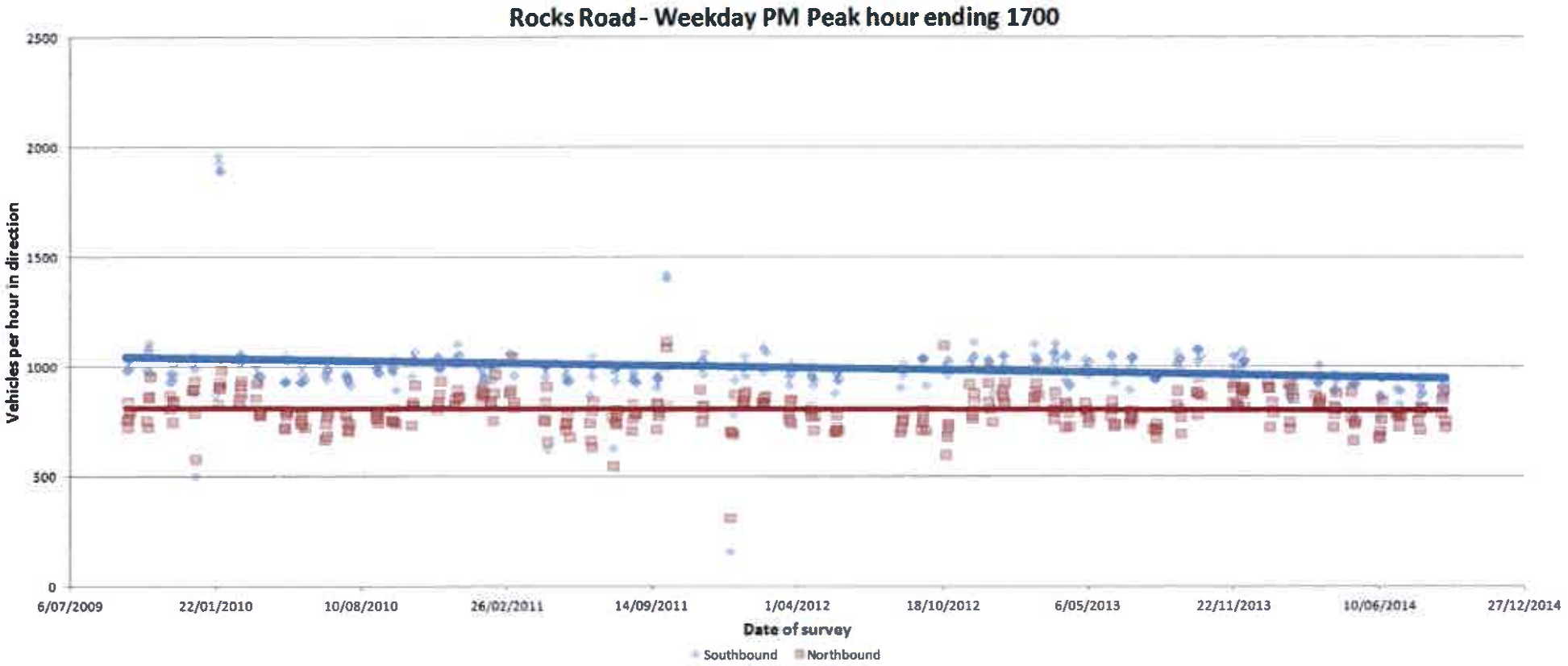
Traffic volumes on Rocks Road in the midday peak hour have remained static in the northbound direction and have reduced in the southbound direction.

Figure D.11 Rocks Road – Weekday AM Peak Hour Ending 0900



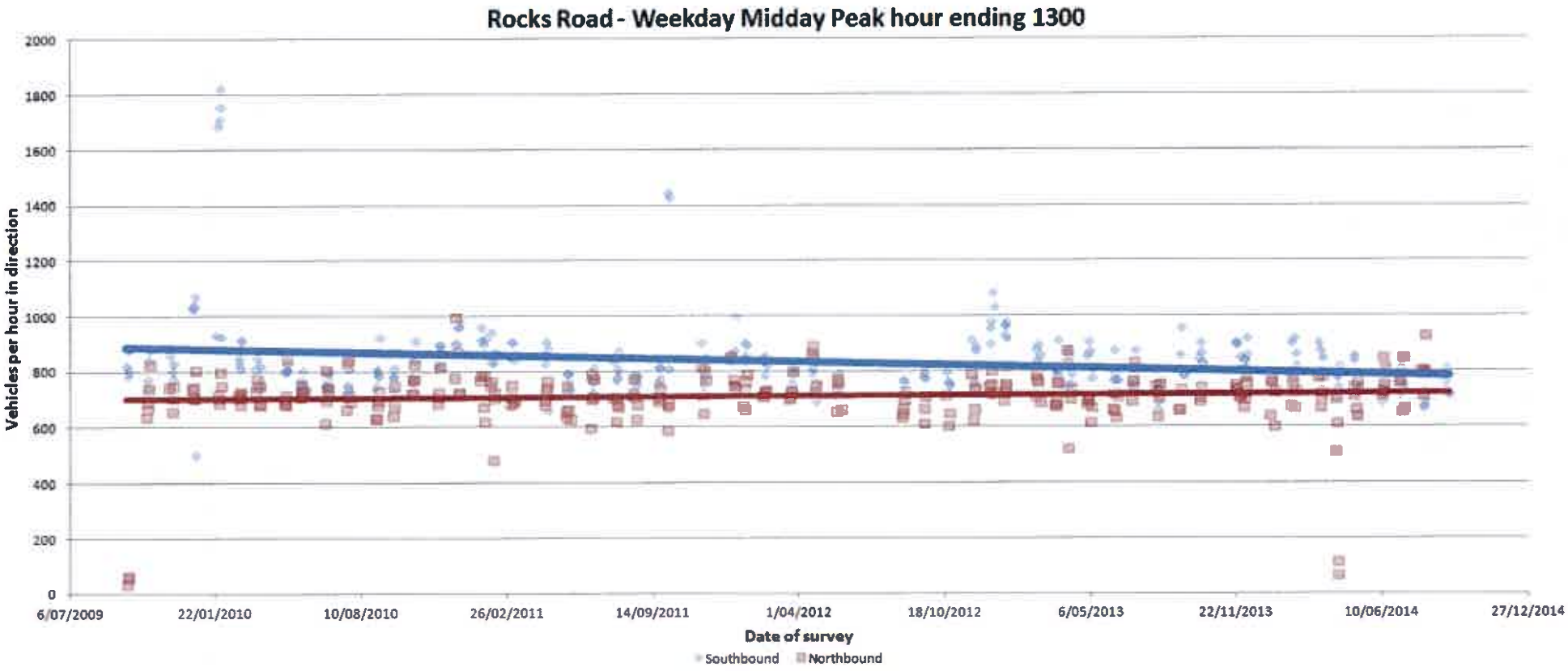
Traffic volumes on Rocks Road in the AM peak hour, with weekend data removed, have increased in the northbound direction and have reduced in the southbound direction.

Figure D.12 Rocks Road– Weekday PM Peak Hour Ending 1700



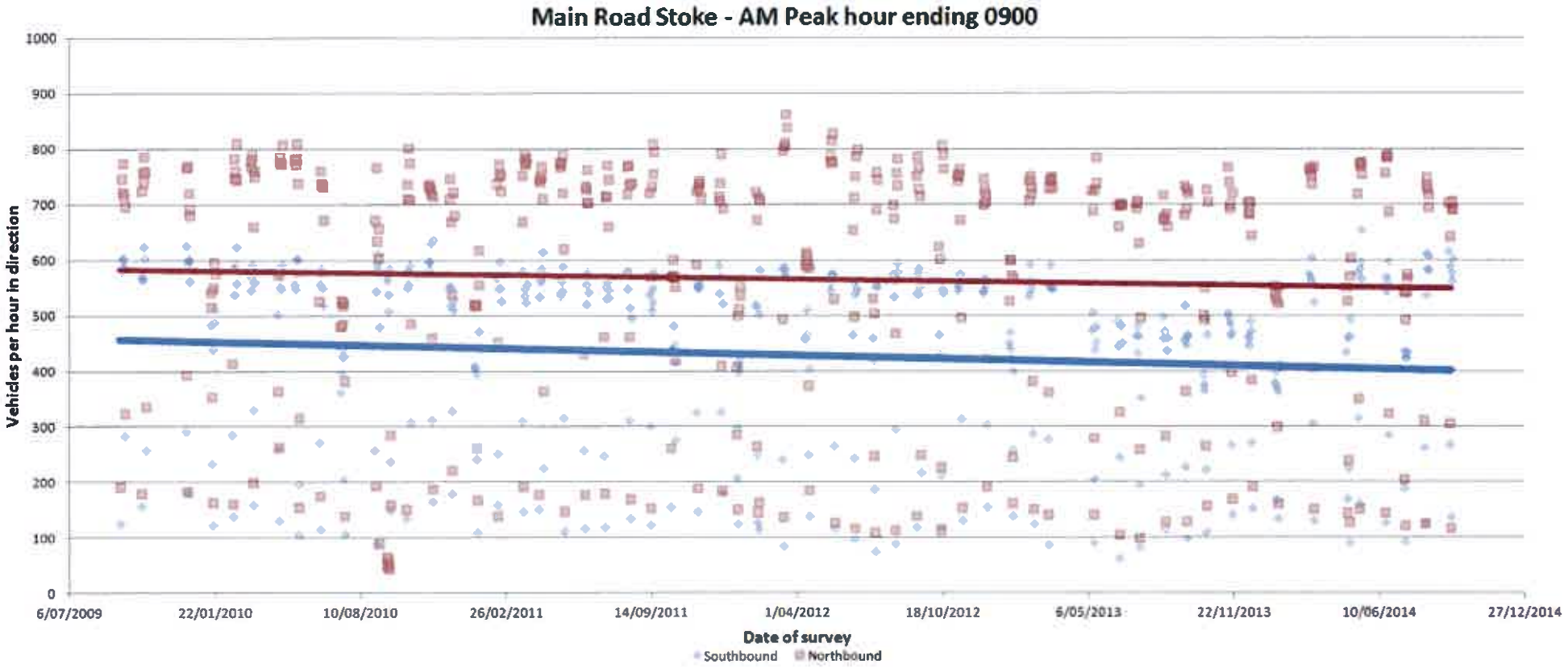
Traffic volumes on Rocks Road in the PM peak hour, with weekend data removed, have remained static in the northbound direction and have reduced in the southbound direction.

Figure D.13 Rocks Road – Weekday Midday Peak Hour Ending 1300



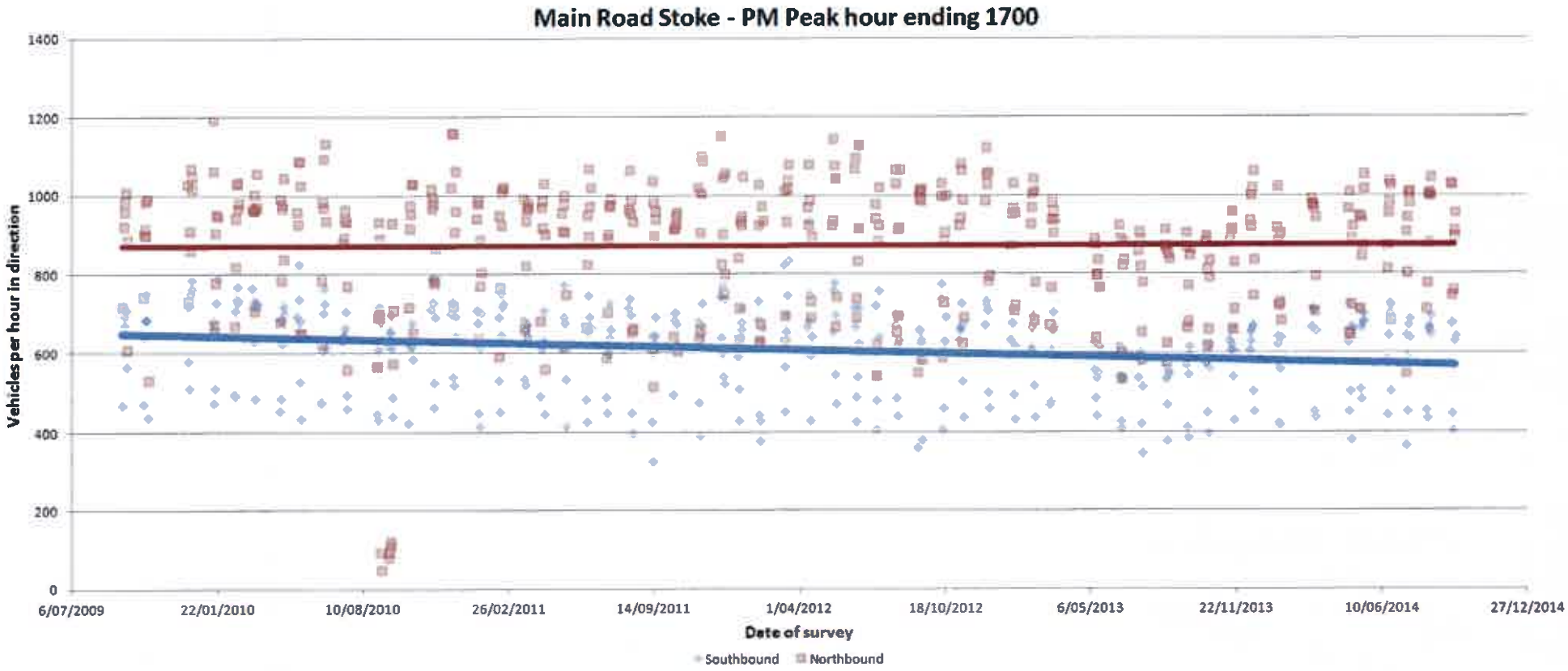
Traffic volumes on Rocks Road in the weekday peak hour, with weekend data removed, have increased slightly in the northbound direction and have reduced in the southbound direction.

Figure D.14 Main Road Stoke –AM Peak Hour Ending 0900



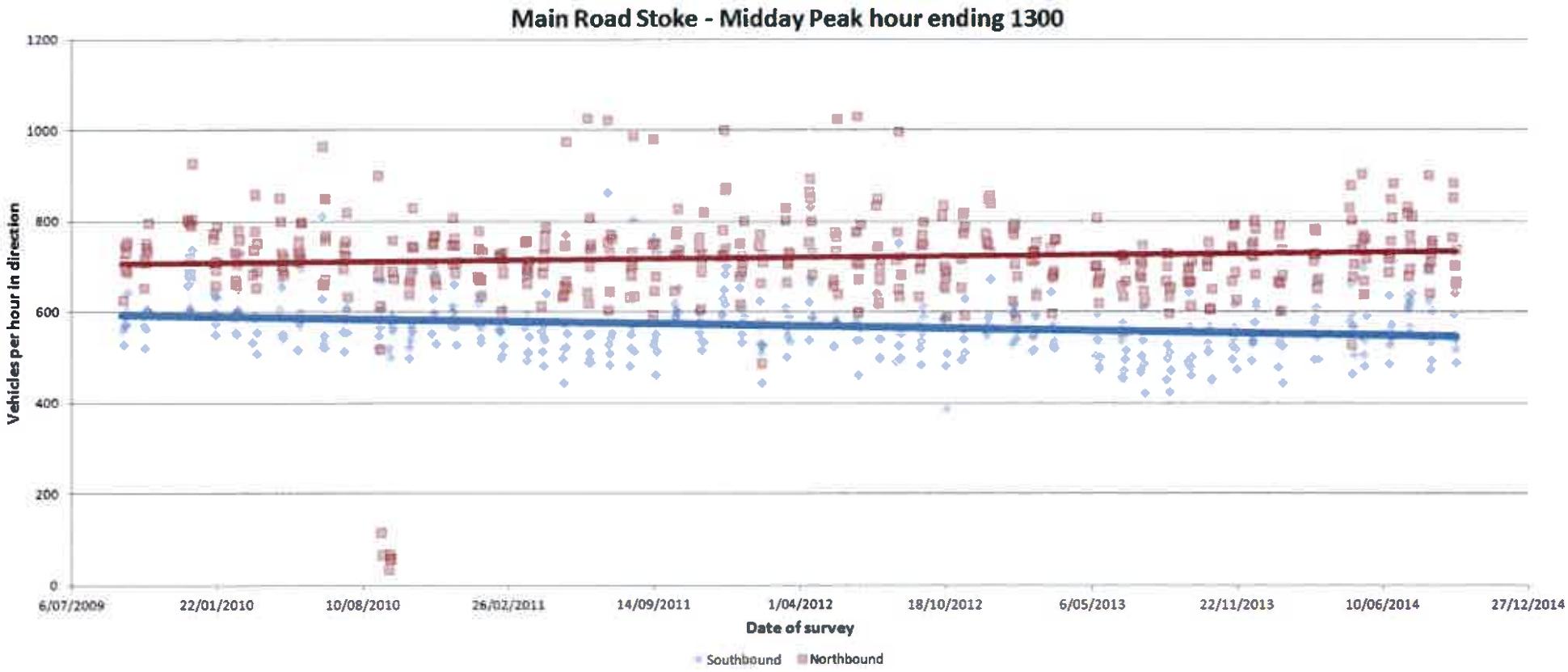
Traffic volumes on Main Road Stoke in the AM peak hour have reduced in both the northbound and southbound directions.

Figure D.15 Main Road Stoke – PM Peak Hour Ending 1700



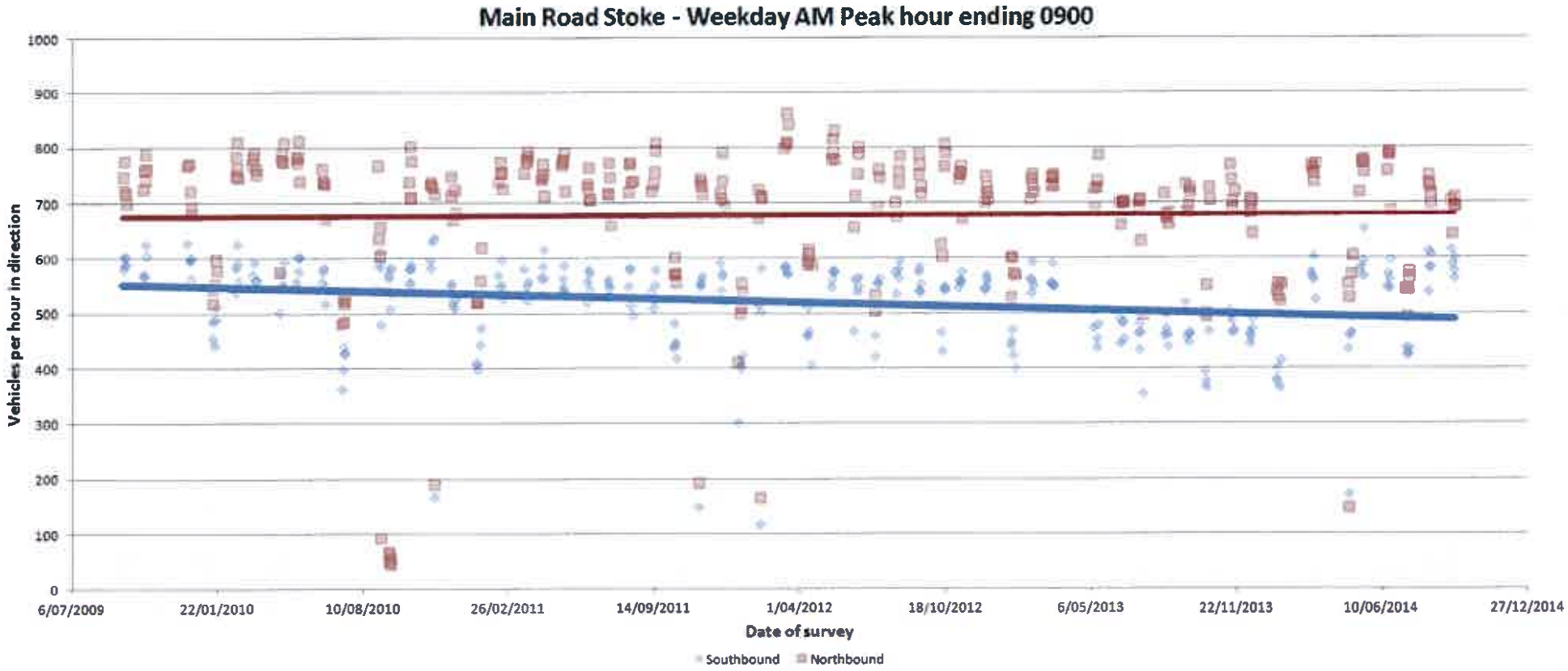
Traffic volumes on Main Road Stoke in the PM peak hour have remained static in the northbound direction and reduced in the southbound direction.

Figure D.16 Main Road Stoke – Midday Peak Hour Ending 1300



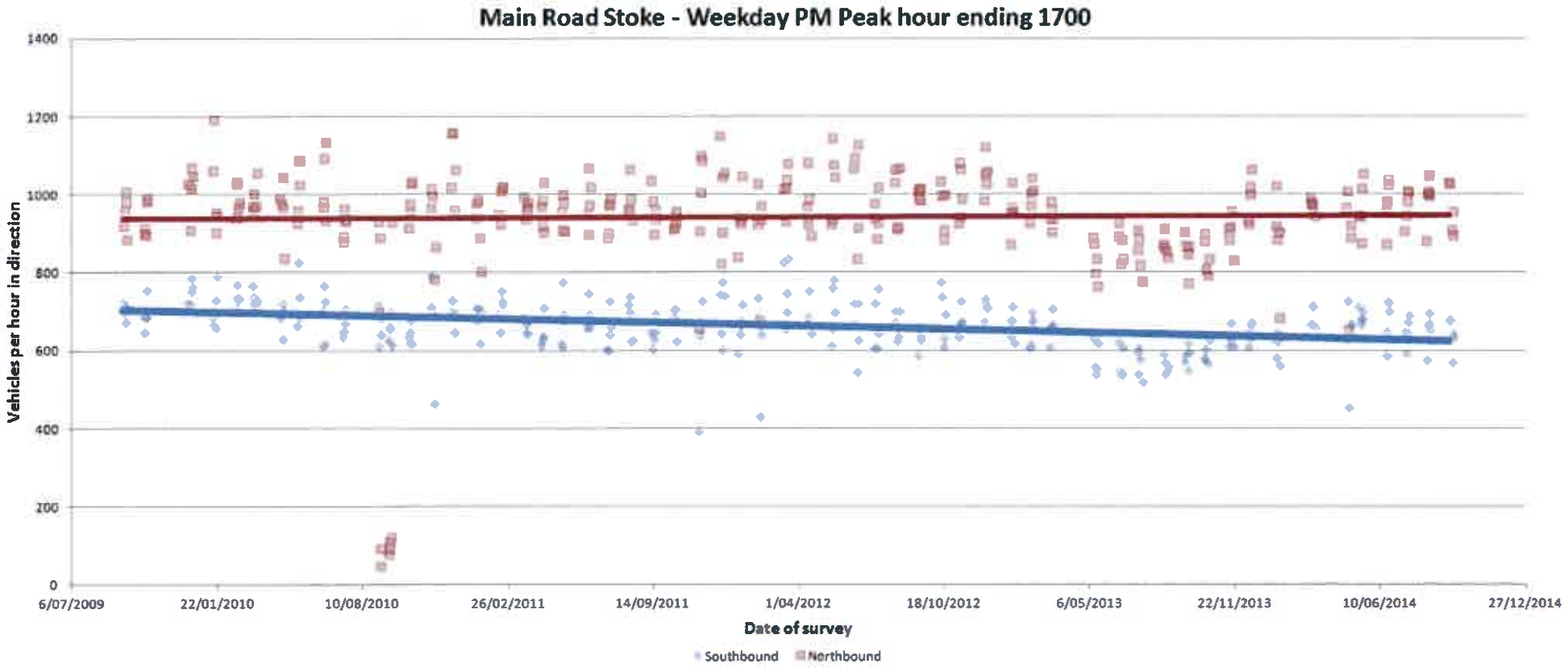
Traffic volumes on Main Road Stoke in the PM peak hour have increased in the northbound direction and reduced in the southbound direction.

Figure D.17 Main Road Stoke – Weekday AM Peak Hour Ending 0900



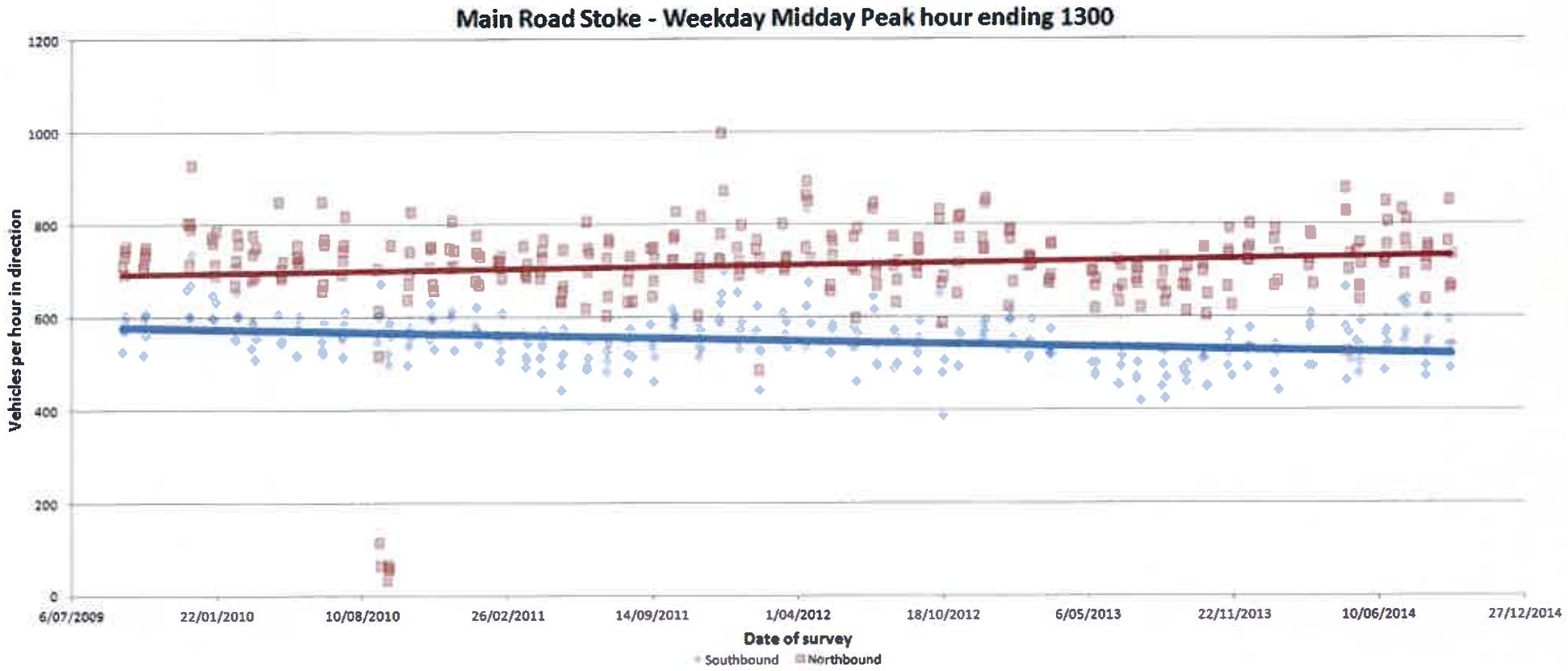
Traffic volumes on Main Road Stoke in the AM peak hour, with weekend data removed, have remained static in the northbound direction and reduced in the southbound direction.

Figure D.18 Main Road Stoke – Weekday PM Peak Hour Ending 1700



Traffic volumes on Main Road Stoke in the PM peak hour, with weekend data removed, have remained static in the northbound direction and reduced in the southbound direction.

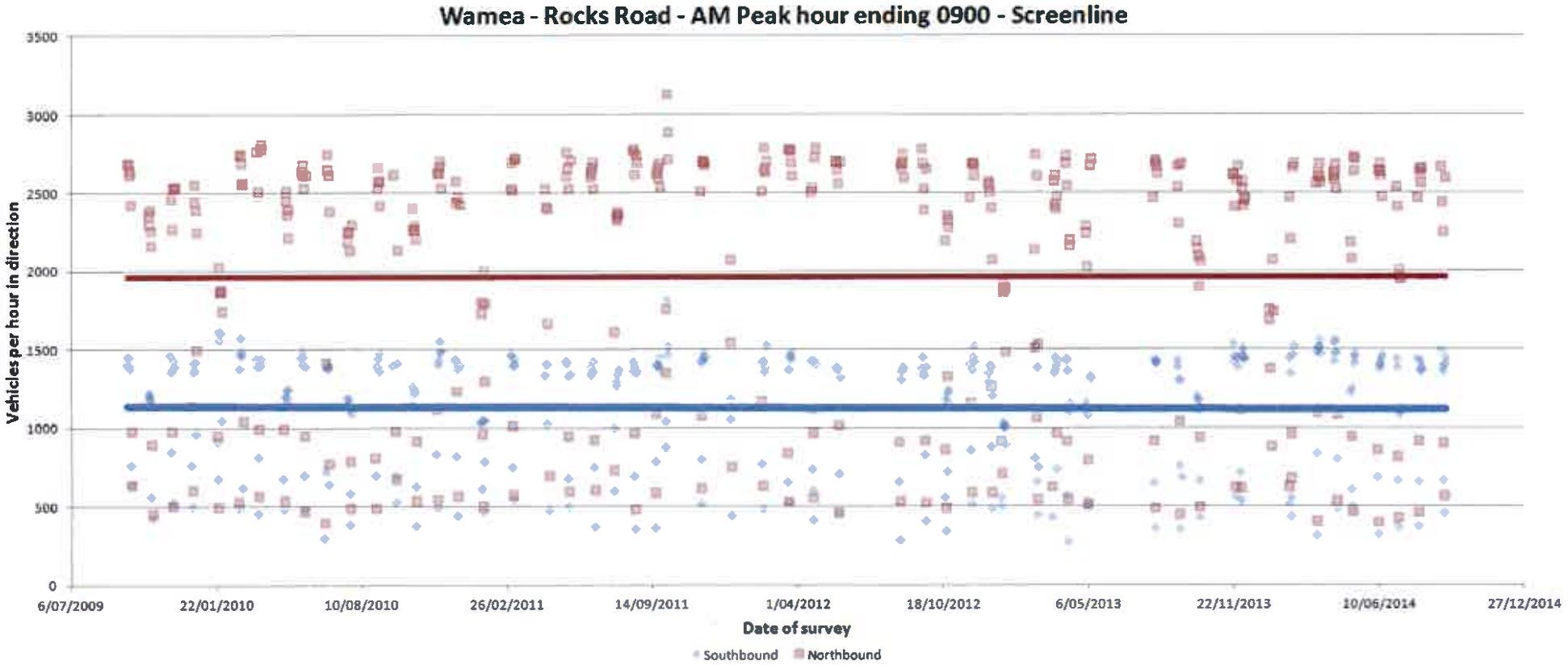
Figure D.19 Main Road Stoke– Weekday Midday Peak Hour Ending 1300



Traffic volumes on Main Road Stoke in the midday peak hour, with weekend data removed, have increased in the northbound direction and reduced in the southbound direction.

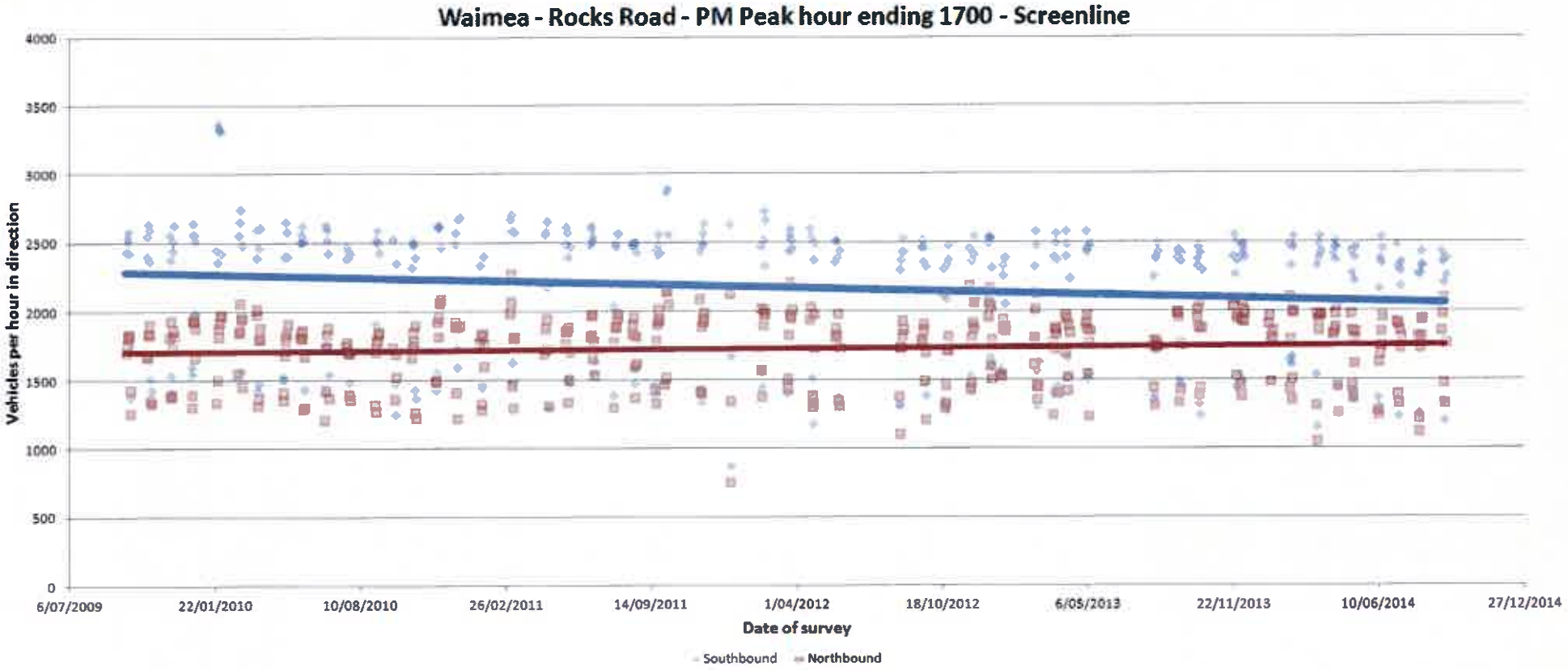
The following graphs show the total traffic using Waimea Road and Rocks Road. Note that these are composite peak hour volumes due to the surveys for both arterials being done at different times. The numbers presented show the totals for each weekday per month surveyed but are offset by up to three weeks.

Figure D.20 Waimea – Rocks Road - AM Peak Hour Ending 0900 - Screenline



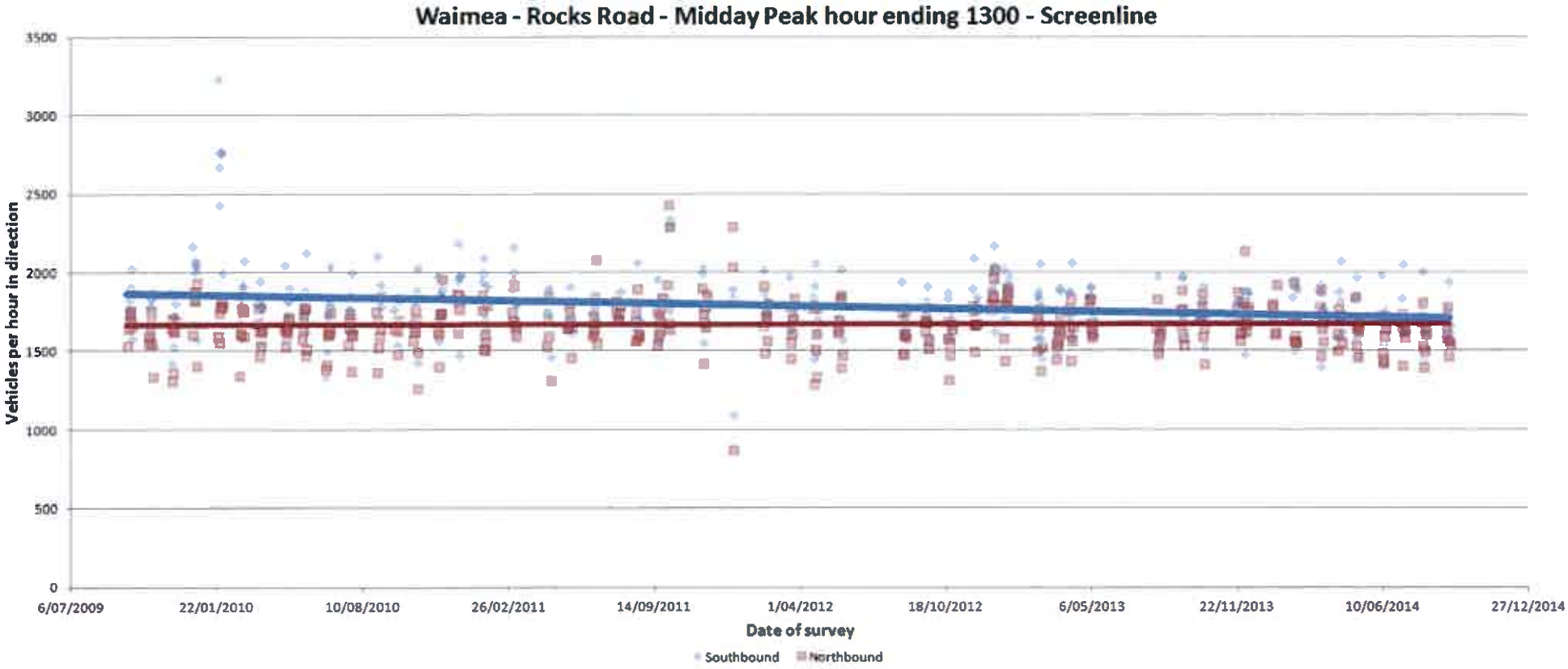
The AM peak has remained essentially static from 2009 to date. The weekend data is included in this graph and is shown by the band of data points well below the main concentration of data associated with the weekdays.

Figure D.21 Waimea – Rocks Road - PM Peak Hour Ending 1700 - Screenline



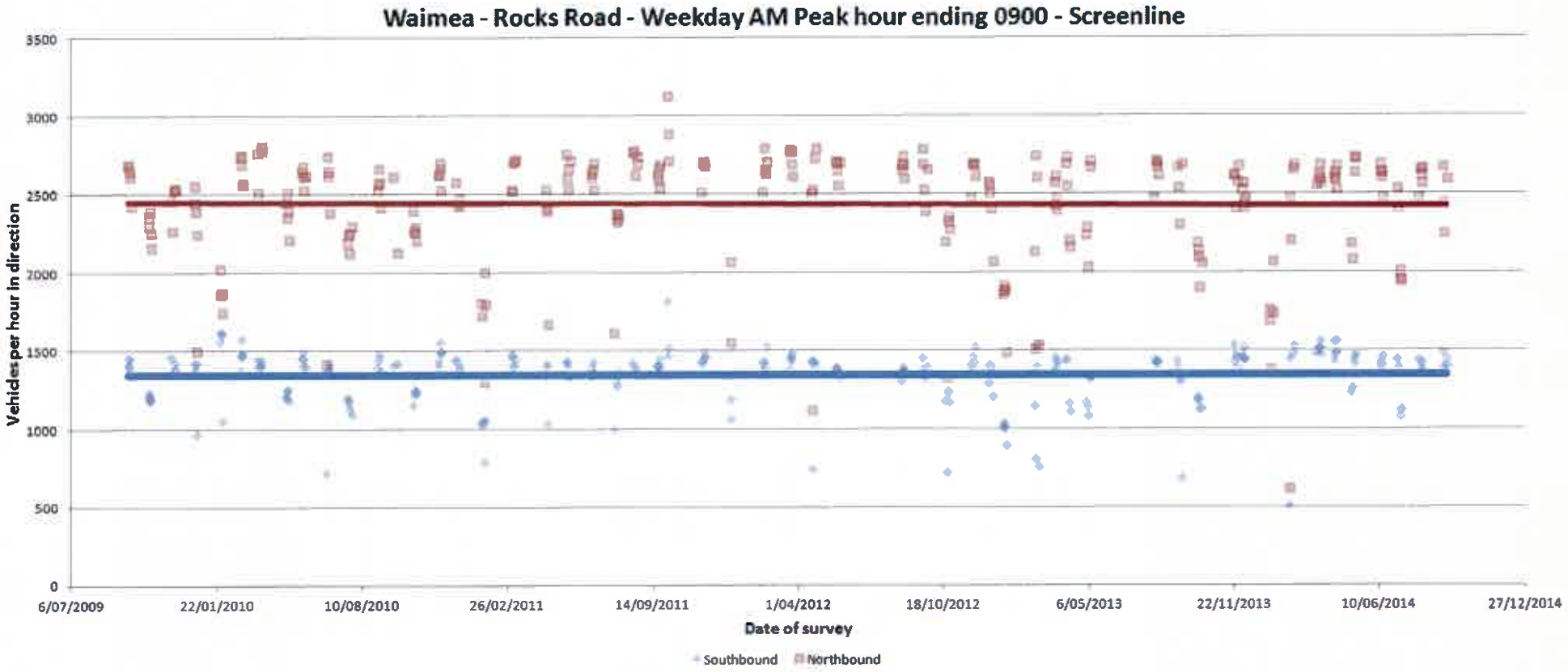
The PM peak data does not show the same range as the AM data with weekends operating at a level much closer to the main weekday data set. The traffic in the northbound direction has remained essentially static. Southbound PM peak flows have trended downwards over the period presented above.

Figure D.22 Waimea – Rocks Road - Midday Peak Hour Ending 1300 - Screenline



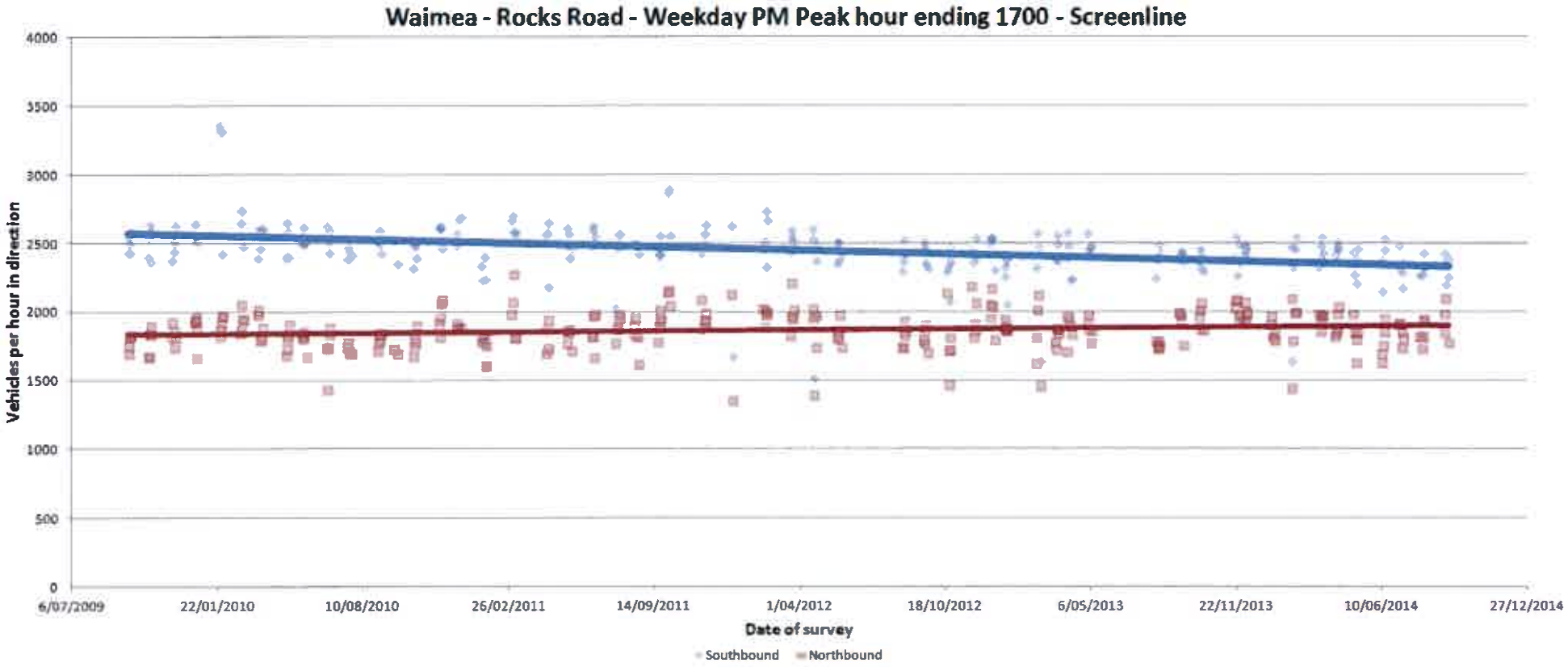
Data for the midday peak show that northbound traffic has remained static and southbound traffic has deceased.

Figure D.23 Waimea – Rocks Road – Weekday AM Peak Hour Ending 0900 - Screenline



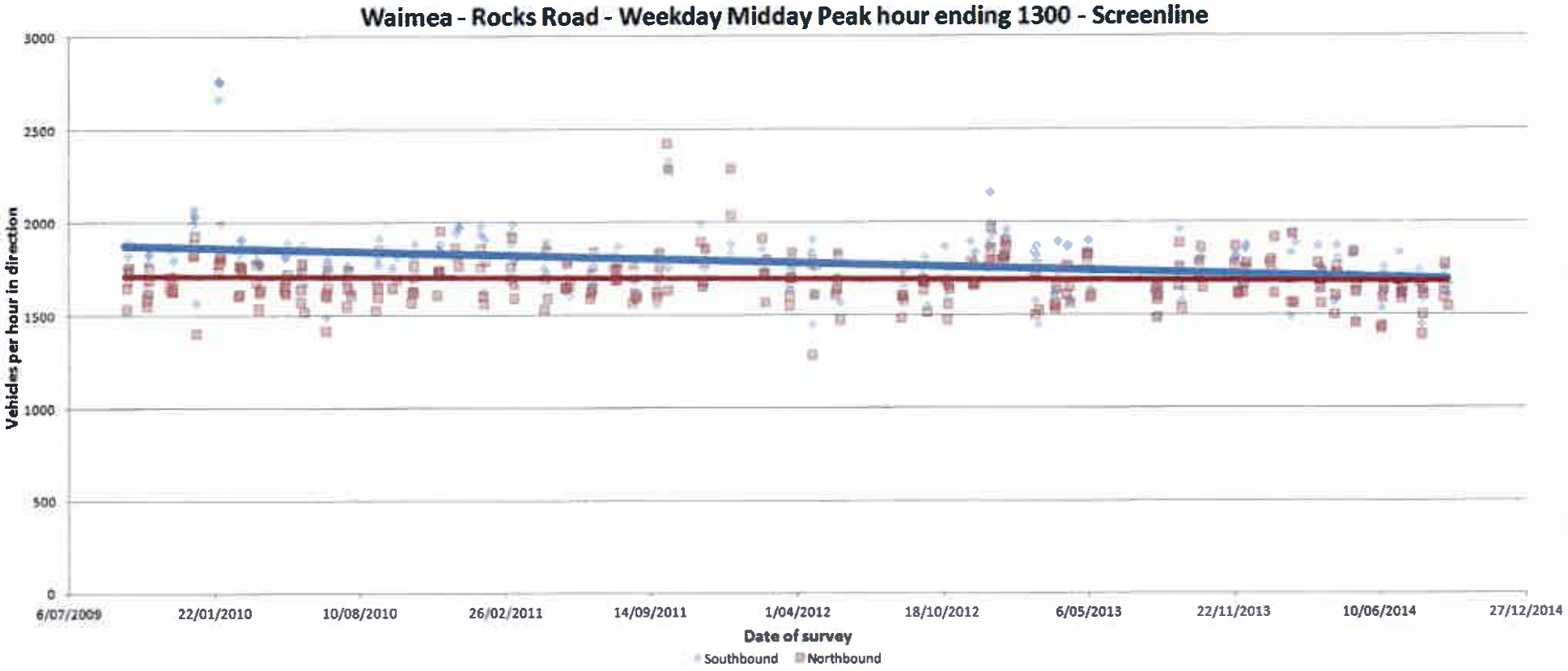
When the weekend data is removed the trend does not change with traffic volumes in the AM peak remaining essentially static from 2009 to date but with a very slight reduction in northbound traffic.

Figure D.24 Waimea – Rocks Road – Weekday PM Peak Hour Ending 1700 - Screenline



Once the weekend data is removed the northbound PM peak traffic shows a slight increase. The decreasing trend in the southbound traffic volumes remains.

Figure D.25 Waimea – Rocks Road – Weekday Midday Peak Hour Ending 1300 - Screenline



The trends in the midday peak remain unchanged by removal of the weekend data. The southbound traffic volumes have been decreasing and the northbound volumes remaining static.

Walking –Historic Pedestrian Counts

The following graphs show the time series data for pedestrian counts extrapolated out to 24 hours. Counts were started in 2001 and counted regularly every 6 months from 2005 onwards. Two additional sites were added in 2010, the Whakatu Drive and Atawhai Drive shared paths. The seasonal difference in number of pedestrians is clearly visible.

Figure D.26 Pedestrian Counts

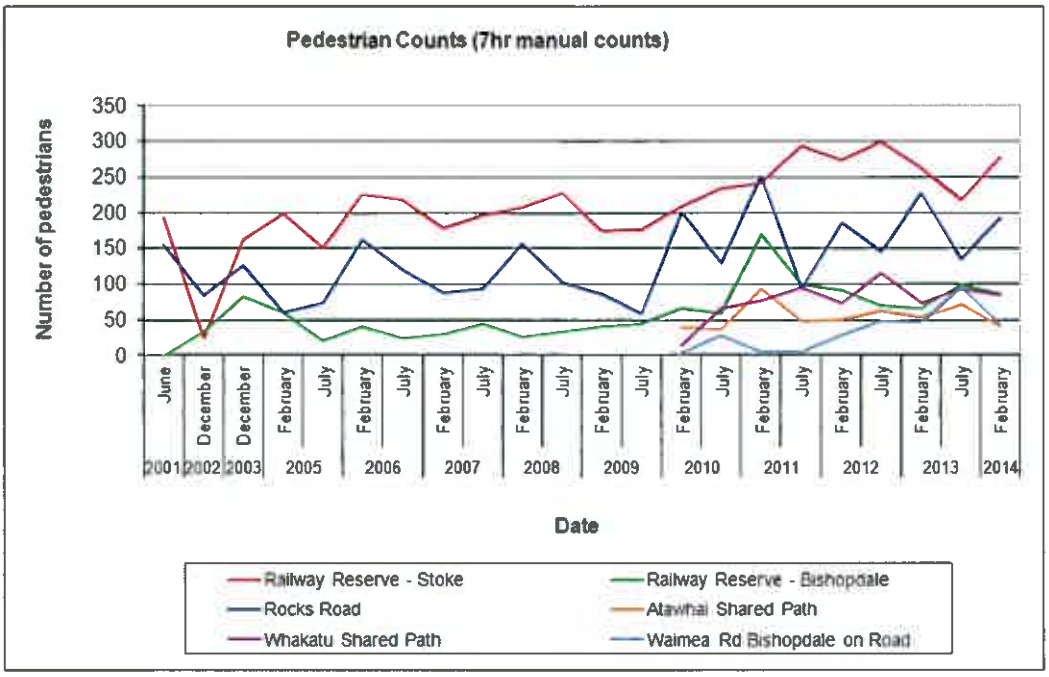


Figure D.27 Pedestrian – 7 hr Count Total

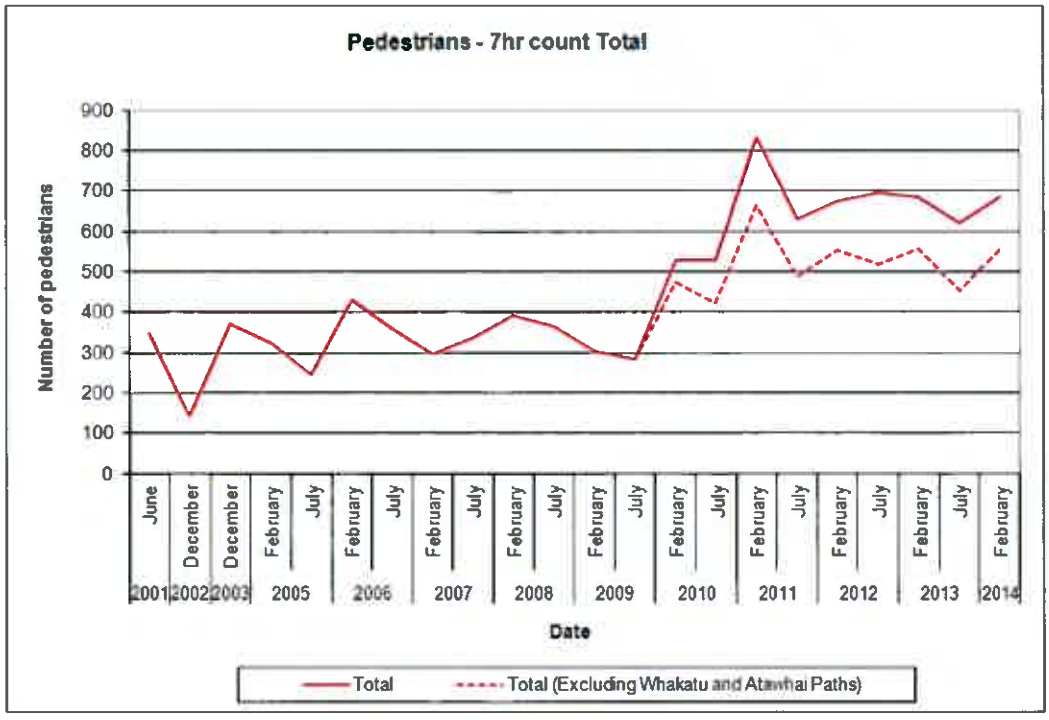
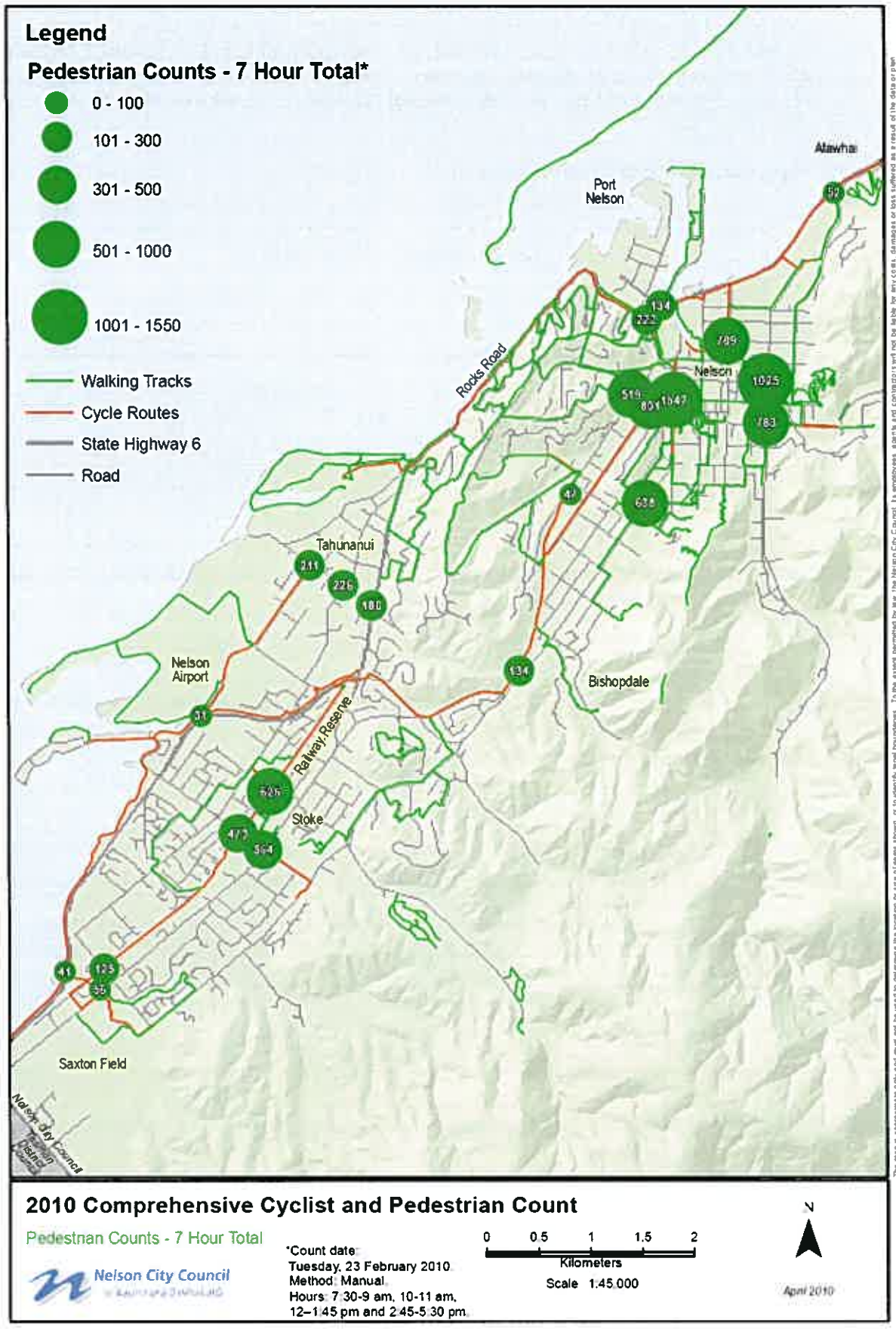


Figure D.28 2010 Comprehensive Cyclist and Pedestrian Count



Note: These surveys are to be repeated at five yearly intervals with the next due in 2015.

Cycling –Historic Pedestrian Counts (Regional Land Transport Strategy Annual Report)

The following graphs show the actual number of cyclists counted over a 7 hour period. Counts are taken at the same sites and times as the pedestrian counts.

Figure D.29 Cyclists – 24 hrs Estimates

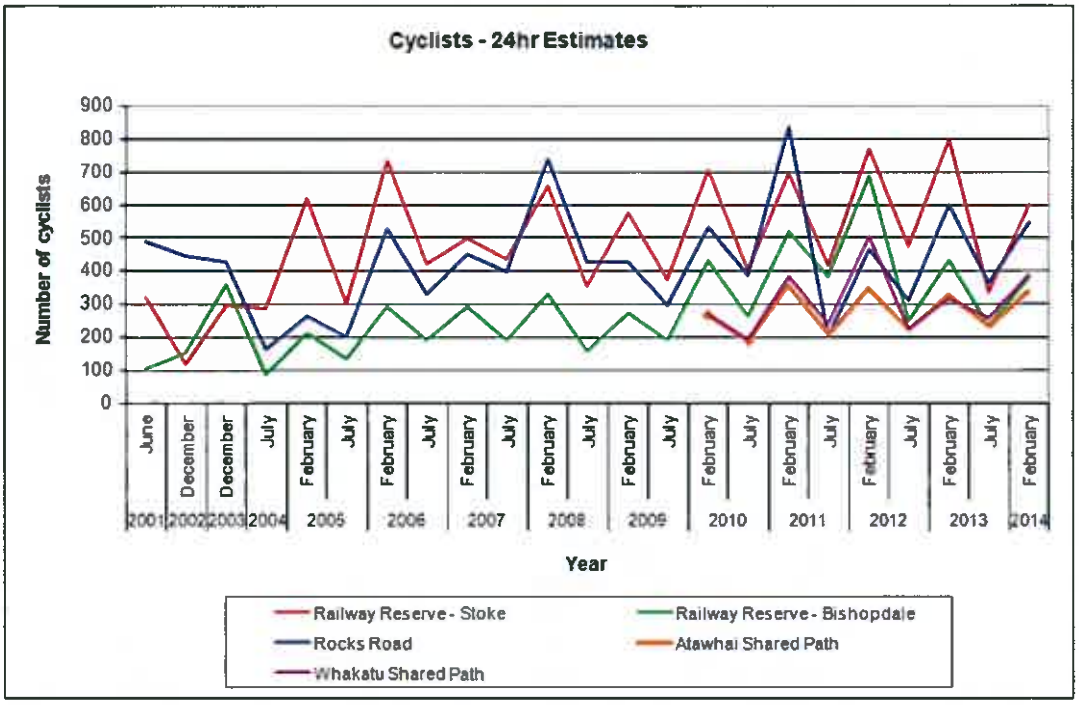


Figure D.30 Cyclists – 24 hrs Estimates (All Routes Above)

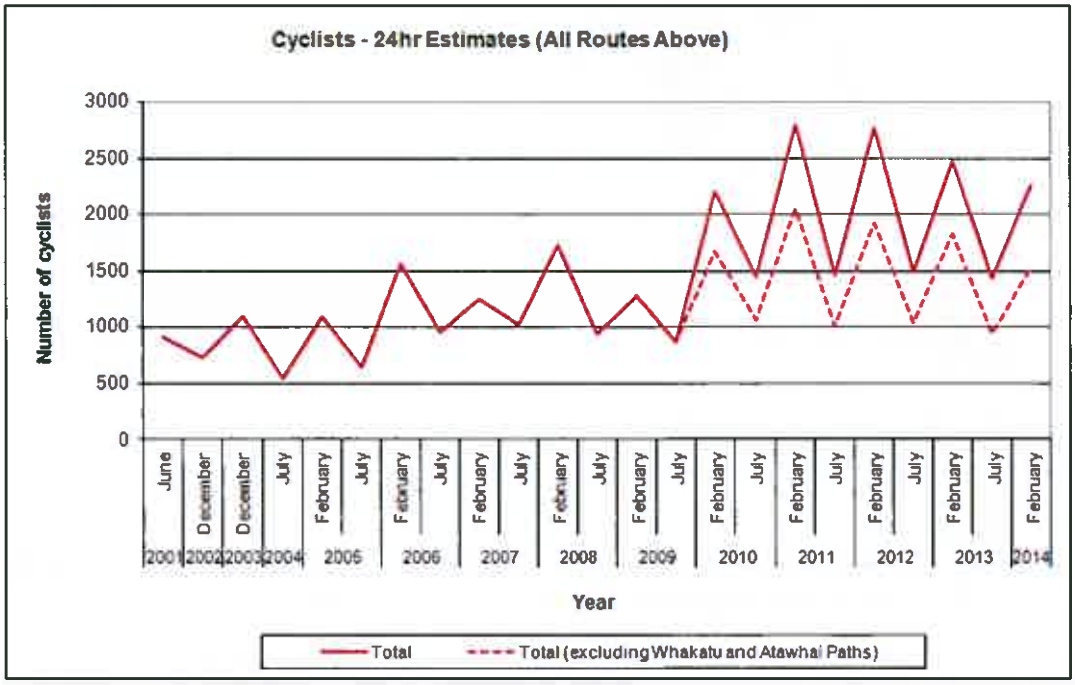
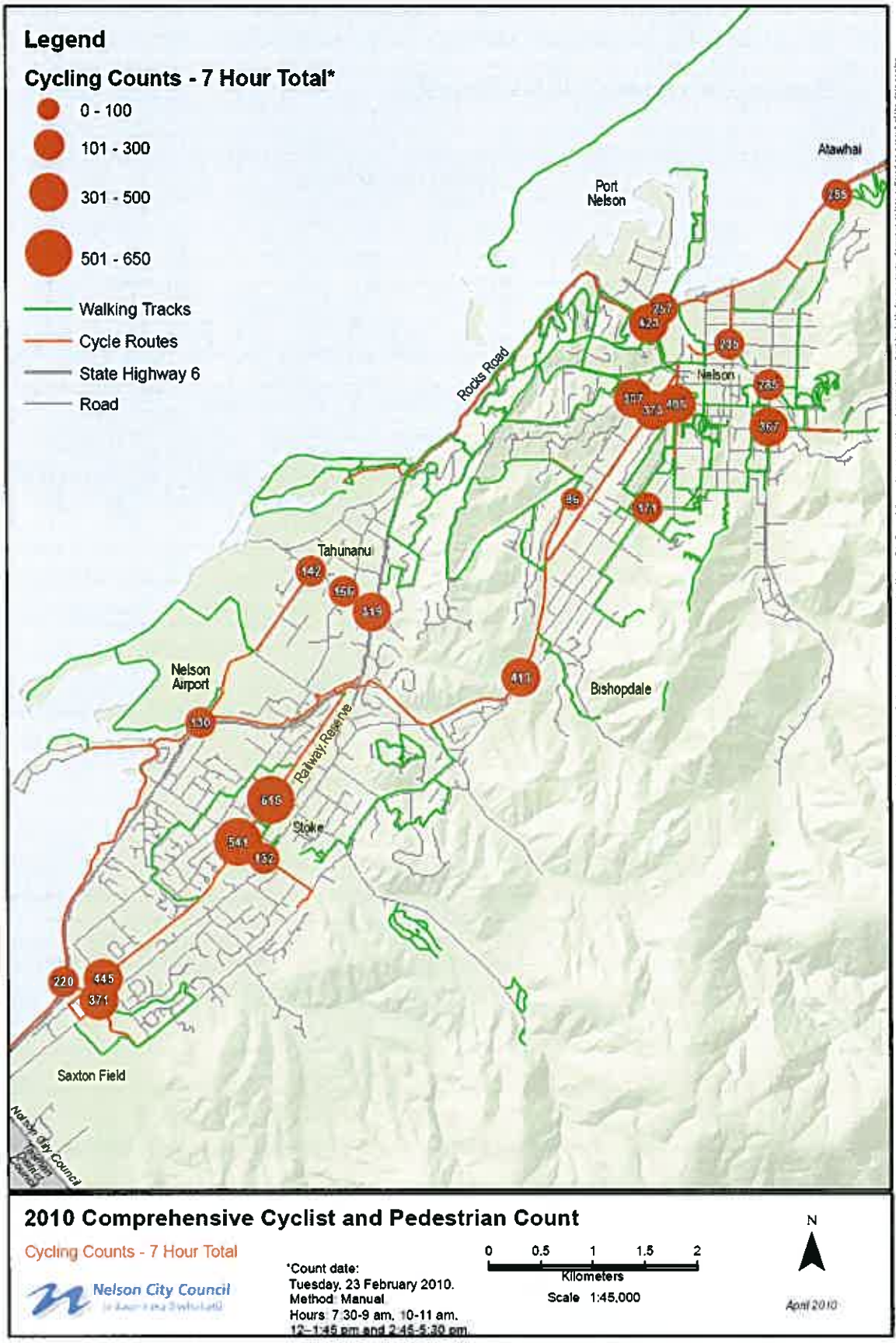


Figure D.31 2010 Comprehensive Cyclist and Pedestrian Count



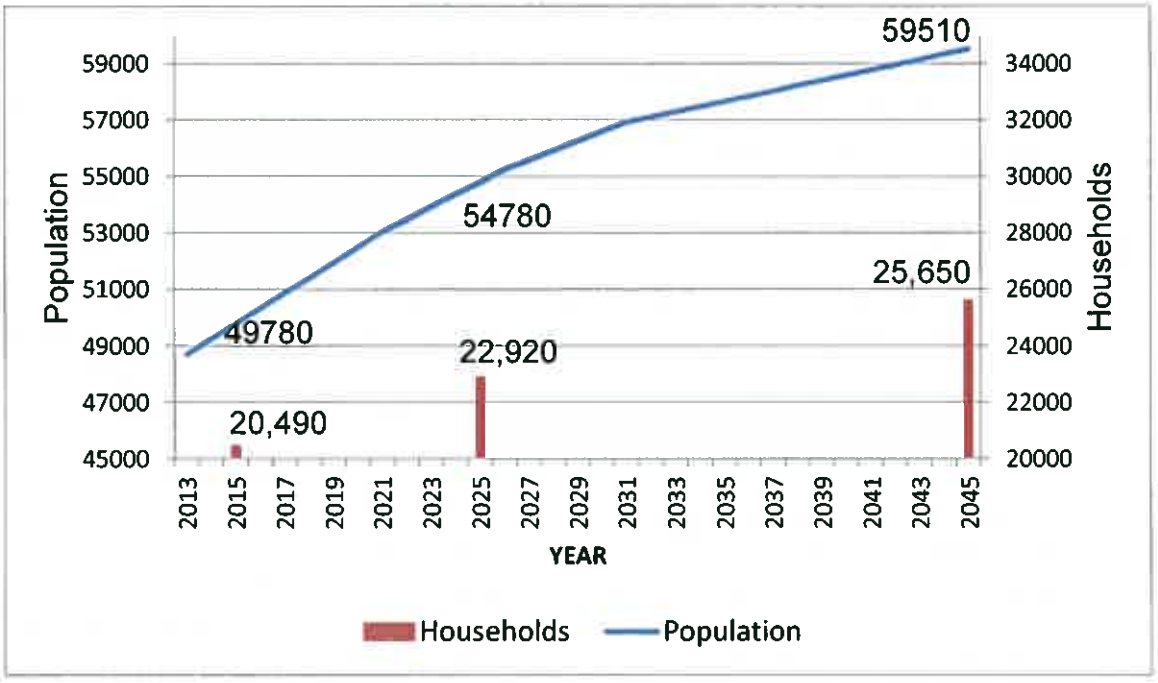
Note: These surveys are to be repeated at five yearly intervals with the next due in 2015.

NELSON PROJECTIONS

Table D.2 Population projections, 2015-2045

POPULATION	2013	2015	2025 (change between 2015 and 2025)	2045 (change between 2025 and 2045)	TOTAL CHANGE between 2015 and 2045
NELSON	48,700	49,780	54,780 (+5,000)	59510 (+4,730)	+9,730
STOKE	17,930	18,360	20,730 (+2,370)	23,790 (+3,060)	+5,430
TAHUNA	5,510	5,700	6,230 (+530)	6,600 (+370)	+900
CENTRAL	19,760	20,100	21,410 (+1,310)	21,960 (+550)	+1,860
NORTH	5,480	5,620	6,400 (+780)	7,160 (+760)	+1,540

Figure D.32 Nelson - Projected population, 2015-2045



KEY TRENDS

- Population and household numbers increasing but at a slower rate;
- Ageing population;
- Smaller households;
- Growth in Stoke.

POPULATION GROWTH

- Nelson's population expected to grow by 5,000 residents over the next ten years, to almost 55,000 in 2025
- Almost half the growth between 2015 and 2025 is driven by a population increase in Stoke and about a quarter is from Nelson Central
- Population growth is expected to slow down after 2025, resulting in an increase of 4,700 residents over the 20 years between 2025 and 2045, to almost 60,000 in 2045
- Most of the growth in these later years is driven by an increasing population in Stoke but Nelson North, Nelson Central and Tahuna are also projected to have increasing populations
- An ageing population with an increasing median age and an increasing proportion on older people
- The number of children is likely to keep increasing until around 2025

HOUSEHOLDS GROWTH

- The number of households in Nelson is projected to increase by about 2,400 in the ten years between 2015 and 2025, to almost 23,000
- As with the population growth, almost half the growth in households between 2015 and 2025 is driven by growth in Stoke and over a quarter is in Nelson Central
- The number of households in Nelson is projected to increase by a further 2,700 in the twenty years between 2025 and 2045, to almost 26,000, with over half of the increase driven by an increasing number of households in Stoke
- Overall there is a trend towards smaller households with an increase in one-person households

This information is based on population projections by Statistics New Zealand, using a combination of public and private series. Results from the 2013 Census suggest that Nelson's population has grown faster than expected. Population projections based on the 2013 Census will be available in February 2015. In the meantime, based on advice from Statistics New Zealand on which 2006-based projections to use, these projections are based on the high growth series in the short term, to 2021, and medium-high growth after that, starting with the 2013 estimated population for Nelson, based on Census 2013.

APPENDIX E HOW THE FOCUS AREAS LINK WITH THE GOVERNMENT'S, NZ TRANSPORT AGENCY'S AND COUNCIL' S STRATEGIC DOCUMENTS

Focus Area Safety

Government's long-term outcomes:

- To drive improved performance from the land transport system by focussing on:
  - Economic growth and productivity;
  - Road safety;
  - Value for money.

Government's Forward Plan for Transport:

- Implement the Safer Journeys road safety strategy and its Safe System approach, so there is a sustained reduction in deaths and serious injuries on the roads over time.

Government Policy Statement 2015 objective:

- Free of death and serious injury.

Regional Land Transport Plan:

- Aligns with GPS.

Nelson Community Plan outcomes:

- People-friendly places - We build healthy, accessible and attractive places and live in a sustainable region;
- Kind, Healthy People – We are part of a welcoming, safe, inclusive and healthy community.

Nelson City Council Pedestrian Strategy goals:

- Provide a safe network;
- Provide a user friendly network.

Nelson City Council Cycling Strategy outcomes:

- A culture that acknowledges cycling as a part of everyday life, where people support cycling and see it as a safe transport choice;
- A safe, convenient and continuous cycle route network linking all parts of the City, incorporating best practice design and engineering standards.

Focus Areas: Local Roads, Walking, Cycling and Schools, and Public Transport

Draft Government Policy Statement 2015 objective:

- A land transport system that provides appropriate transport choices.

Government Policy Statement 2015 long term result:

- Improved returns on investment in public transport.
- Enable access to social and economic opportunities, particularly for people with limited access to a private vehicle.
- Increased safe cycling through improvement of the cycle lane network.

Regional Land Transport Plan:

- Aligns with GPS.

Nelson Community Plan outcomes:

- Healthy land, sea, air and water – We protect the environment;
- People-friendly places – We build healthy, accessible and attractive places and live in a sustainable region;
- A strong economy – We all benefit from a sustainable, innovative and diversified economy;
- Kind, Healthy People – We are part of a welcoming, safe, inclusive and healthy community.

Nelson City Council Pedestrian Strategy goals:

- Develop a linked network;
- Recognise walking as an important physical activity.

Nelson City Council Cycling Strategy outcomes:

- A culture that acknowledges cycling as a part of everyday life, where people support cycling and see it as a safe transport choice.

Focus Areas: Arterial Traffic, Parking and Value for Money Principle

Draft Government Policy Statement 2015 Objective:

- A land transport system that is reliable and resilient.
- A land transport system that addresses current and future demand.
- A land transport system that provides appropriate transport choices.
- A land transport system that appropriately mitigates the effects of land transport on the environment.

Government Policy Statement 2015 long term result:

- Support economic growth and productivity through provision of better access to markets, employment and business areas;
- Improved returns from investment in road maintenance;
- Support economic growth of regional New Zealand through providing better access to markets;
- Improved network resilience and reliability at the most critical points;
- Understand the costs associated with environmental mitigation.

Regional Land Transport Plan:

- Aligns with GPS.

Nelson Community Plan outcomes:

- People-friendly places – We build healthy, accessible and attractive places and live in a sustainable region;
- Kind, Healthy People – We are part of a welcoming, safe, inclusive and healthy community.

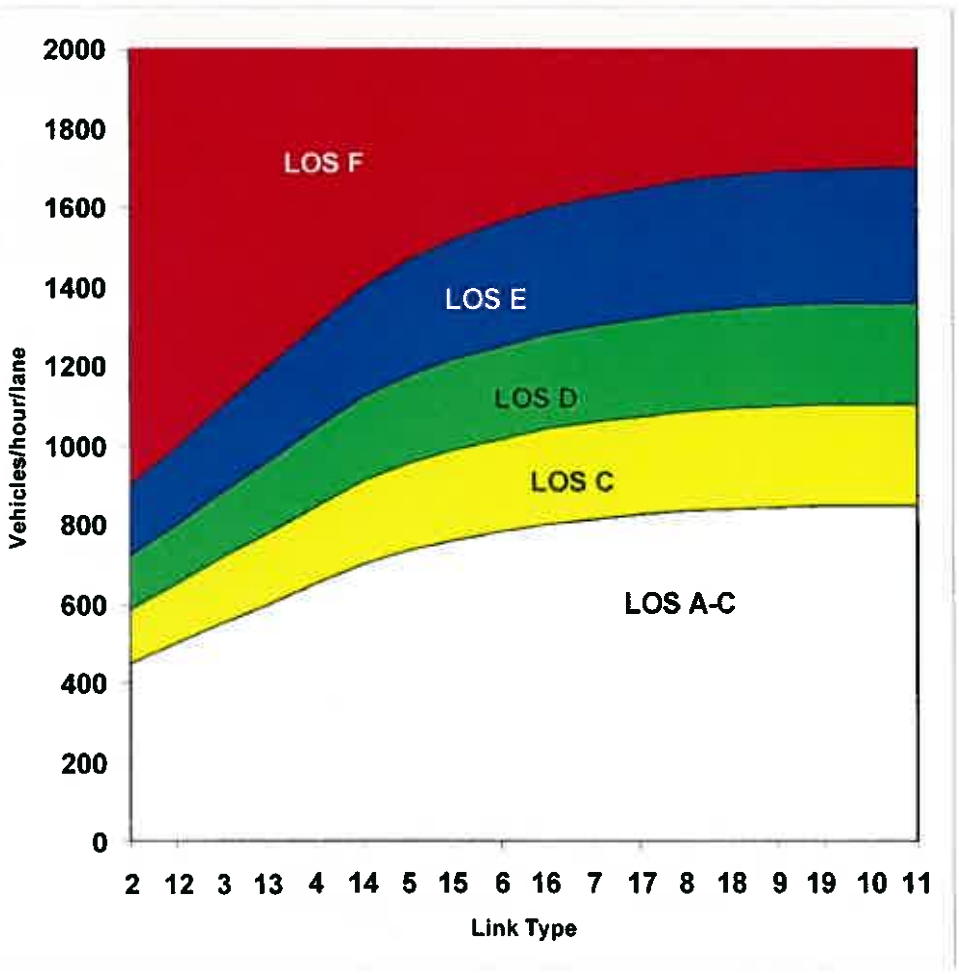
APPENDIX F DEFINITION OF LEVELS OF SERVICE

Table F.1 Definition of Levels of Service

Definitions Of LoS				Table 1
LoS	Description	Nelson Traffic Model LoS criteria		
		Link (vehicles per hour)	Intersection (delay/veh)	
			Priority	Signal/Rotary
LoS F	Forced flow. The amount of traffic approaching a point exceeds that which can pass it. Flow break-downs occur, and queuing and delays occur.	In excess of **900-1700** depending on link type	50 sec	80 sec
LoS E	Traffic volumes are at or close to *capacity and there is virtually no freedom* to select desired speed and to manoeuvre within the traffic stream. Flow is unstable and *minor disturbances within the traffic stream will cause break-downs in operation.*	Between **720-1360** depending on link type	35 sec	55 sec
LoS D	Approaching unstable flow where *all drivers are severely restricted* in their freedom to select desired speed and to manoeuvre within the traffic stream. The general level of *comfort and convenience is poor* and small increases in traffic flow will cause operational problems.	Between **585-1105** depending on link type	25 sec	35 sec
LoS C	Stable flow but most drivers *are restricted to some extent* in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of *comfort and convenience has declined noticeably.*	Between **450-850** depending on link type	15 sec	20 sec
LoS B	Stable flow where drivers still *have reasonable freedom* to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is less than LoS A.	Not Applicable	Not Applicable	
LoS A	Free flow in which drivers are *virtually unaffected* by the presence of others in the traffic stream. Freedom to select desired speeds and to manoeuvre within the traffic stream is extremely high and the general level of *comfort and convenience is excellent.*			

NB The LoS for priority intersections is dictated by the delay on the worst approach and the LoS for roundabouts and signalised intersections is calculated based on the weighted average delay across all approaches.

Figure F.1 Nelson-Tasman Transportation Model Link LoS Criteria



	2	12	3	13	4	14	5	15	6	16
kph	20	25	30	35	40	45	50	55	60	65
vhl	900	1000	1100	1200	1300	1400	1467	1520	1563	1600
vhl	720	800	880	960	1040	1120	1174	1216	1250	1280
vhl	585	650	715	780	845	910	954	988	1016	1040
vhl	450	500	550	600	650	700	734	760	782	800

	7	17	8	18	9	19	10	20	11
kph	70	75	80	85	90	95	100	105	110
vhl	1627	1650	1669	1682	1692	1698	1700	1700	1700
vhl	1302	1320	1335	1346	1354	1358	1360	1360	1360
vhl	1058	1073	1085	1093	1100	1104	1105	1105	1105
vhl	814	825	835	841	846	849	850	850	850

Nelson-Tasman Transportation Model	**Nelson-Tasman Transportation Model Link LoS Criteria (Vehicles per Lane per Hour)**	**Figure 25**
Gabites Porter		

Table F.2 Nelson Arterial Traffic Study Network Performance Summary Statistics

Nelson Arterial Traffic Study
Network Performance Summary Statistics

		Base 2006			Option A 2016			Option A 2036		
		AMP	INP	PMP	AMP	INP	PMP	AMP	INP	PMP
Whole Network [1]	**Total person trips**									
	Car driver	37058	39414		40881	43425		45888	50427	
	Car passenger	6811	12782		7236	13873		7805	15999	
	PT	277	175		351	307		383	340	
	Walk / cycle	14082	21601		15106	23897		16310	27613	
	Private cars trips [1hr]									
	Total driver trips (incl. park)	24636	20821	26255	27257	22893	29581	31035	26686	33970
Corridor Study Area	Vehicle kilometres	109958	93596	122721	123274	105662	138041	144701	129079	163223
	Vehicle in-motion minutes	123055	102218	138674	139663	115834	155993	163720	141097	182338
	Mean running speed (km/hr)	53.61	54.94	53.10	52.96	54.73	53.10	53.03	54.89	53.71
	Vehicles subject to delay	285103	240166	330582	303612	250100	352419	331601	278606	388064
	Total vehicle delay (mins)	21295	16592	26324	28339	23530	37055	32948	28229	47062
	Delay per delayed vehicle	4.5	4.1	4.8	5.6	5.6	6.3	6	6.1	7.3
	Total vehicle minutes (in-motion + delay)	144350	118810	164998	168002	139364	193048	196668	167167	229400
	Mean network speed (km/hr)	45.7	47.3	44.6	44.03	45.49	42.9	44.15	46.02	42.69
	Veh operating costs on links	$34,516	$29,261	$38,477	$38,678	$32,960	$43,116	$45,481	$40,386	$51,127
	Veh operating costs of intersections	$677	$528	$837	$901	$748	$1,178	$1,048	$898	$1,497
	Veh operating costs of speed changes	$8,268	$6,965	$9,587	$8,805	$7,253	$10,220	$9,616	$8,080	$11,254
	Total vehicle operating costs	$43,460	$36,753	$48,900	$48,384	$40,961	$54,514	$56,145	$49,363	$63,877
	Total in-vehicle occupant time cost	$47,750	$39,302	$54,581	$55,574	$46,101	$63,860	$65,057	$56,013	$75,885
	Total additional congestion cost	$1,854	$1,332	$2,114	$2,490	$1,893	$3,396	$2,830	$2,284	$3,853
	TOTAL ROAD USER COST	$93,066	$77,389	$105,881	$106,449	$88,956	$121,770	$124,033	$107,660	$143,616
	EXPANDED ROAD USER COST	$93,066	$77,389	$105,881	$106,449	$88,956	$121,770	$124,033	$107,660	$143,616
Whole Network [2]	**Public transport trips**									
	Total person trips by PT	236	155		247	189		252	201	
	Total passenger.minutes	1320	706		1642	1092		1617	1037	
	Total passenger.kilometres	717	382		834	556		807	518	
	Total passenger wait	2678	1085		2849	1320		2897	1379	

Notes: [1] These are model convergence mode split trip distributions from the base models. Because options are assigned only, ie use same trip matrices, these distributions are unchanged.
[2] These PT trips are determined from the PT assignment which is run after the vehicle assignment.

Table F.3 Nelson Arterial Traffic Study Network Performance Summary Statistics

Nelson Arterial Traffic Study
Network Performance Summary Statistics

		BASE 2006			BASE 2016			BASE 2036		
		AMP	INP	PMP	AMP	INP	PMP	AMP	INP	PMP
Whole Network	**Total person trips**									
	Car driver	37058	39414		40881	43425		45888	50427	
	Car passenger	6811	12782		7236	13873		7805	15999	
	PT	277	175		351	307		383	340	
	Walk / cycle	14082	21601		15106	23897		16310	27613	
	Private cars trips [1hr]									
	Total driver trips (incl. park)	24636	20821	26255	27257	22893	29581	31035	26686	33970
Corridor Study Area	Vehicle kilometres	109958	93596	122721	122841	105256	137895	144255	128665	163128
	Vehicle in-motion minutes	123055	102218	138674	139259	115186	159839	163116	140347	186017
	Mean running speed (km/hr)	53.61	54.94	53.10	52.93	54.83	51.76	53.06	55.01	52.62
	Vehicles subject to delay	285103	240166	330582	310253	257512	361501	338039	287245	399251
	Total vehicle delay (mins)	21295	16592	26324	27245	22263	33836	31964	27231	44466
	Delay per delayed vehicle	4.5	4.1	4.8	5.3	5.2	5.6	5.7	5.7	6.7
	Total vehicle minutes (in-motion + delay)	144350	118810	164998	166504	137449	193675	195080	167578	230483
	Mean network speed (km/hr)	45.7	47.3	44.6	44.26582	45.9471	42.71949	44.36786	46.06755	42.46584
	Veh operating costs on links	$34,516	$29,261	$38,477	$38,529	$32,831	$43,314	$45,328	$40,242	$51,306
	Veh operating costs of intersections	$677	$528	$837	$866	$708	$1,076	$1,016	$866	$1,414
	Veh operating costs of speed changes	$8,268	$6,965	$9,587	$8,997	$7,468	$10,484	$9,803	$8,330	$11,578
	Total vehicle operating costs	$43,460	$36,753	$48,900	$48,392	$41,006	$54,873	$56,147	$49,437	$64,298
	Total in-vehicle occupant time cost	$47,750	$39,302	$54,581	$55,079	$45,468	$64,067	$64,532	$55,434	$76,243
	Total additional congestion cost	$1,854	$1,332	$2,114	$2,407	$1,790	$3,316	$2,740	$2,202	$3,843
	TOTAL ROAD USER COST	$93,066	$77,389	$105,881	$105,879	$88,265	$122,257	$123,420	$107,074	$144,385
	EXPANDED ROAD USER COST	$93,066	$77,389	$105,881	$105,879	$88,265	$122,257	$123,420	$107,074	$144,385
Whole Network	**Public transport trips**									
	Total person trips by PT	235.9	155.3		246.5	188.9		251.6	200.9	
	Total passenger.minutes	1319.66	705.7		1613.26	1056.24		1603.23	1026.19	
	Total passenger.kilometres	716.91	382.45		819.51	544.46		806.28	516.07	
	Total passenger wait	2677.53	1084.99		2853.35	1296.27		2914.87	1369.47	

APPENDIX G STREETS WITHOUT FOOTPATHS

Nelson City Council
te kaunihera o whakatū

APPENDIX H ANNUAL PEAK TRAVEL TIME DELAYS ON ROCKS ROAD AND WAIMEA ROAD

Figure H.1 Annual Average Morning Peak Travel Times – Waimea Road

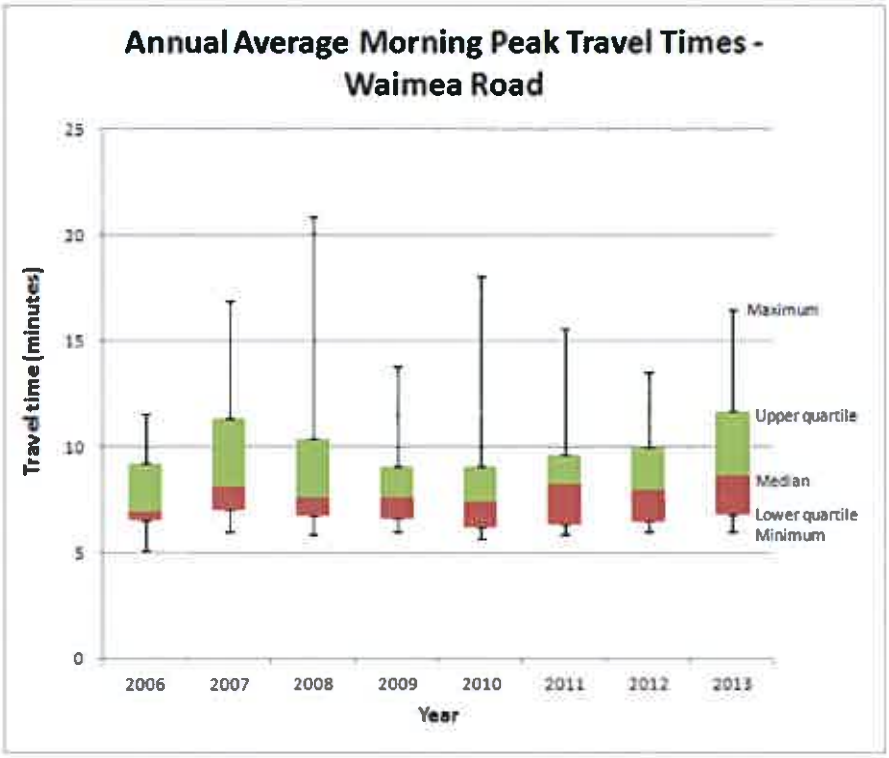


Figure H.2 Annual Average Evening Peak Travel Times – Waimea Road

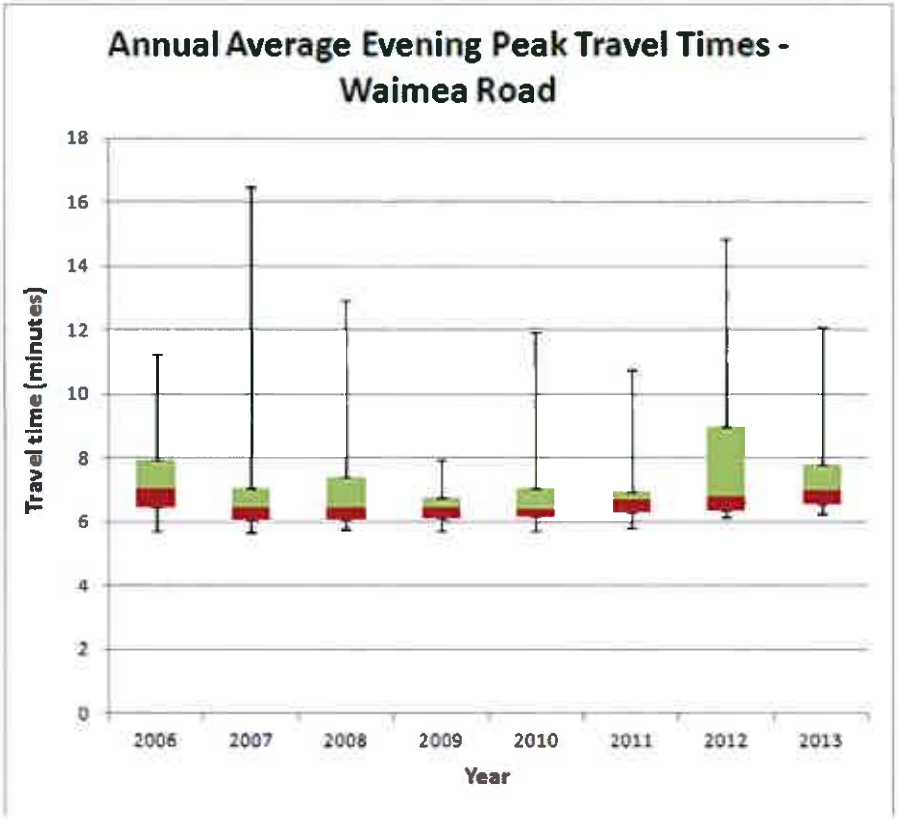


Figure H.3 Annual Average Morning Peak Travel Times – Rocks Road

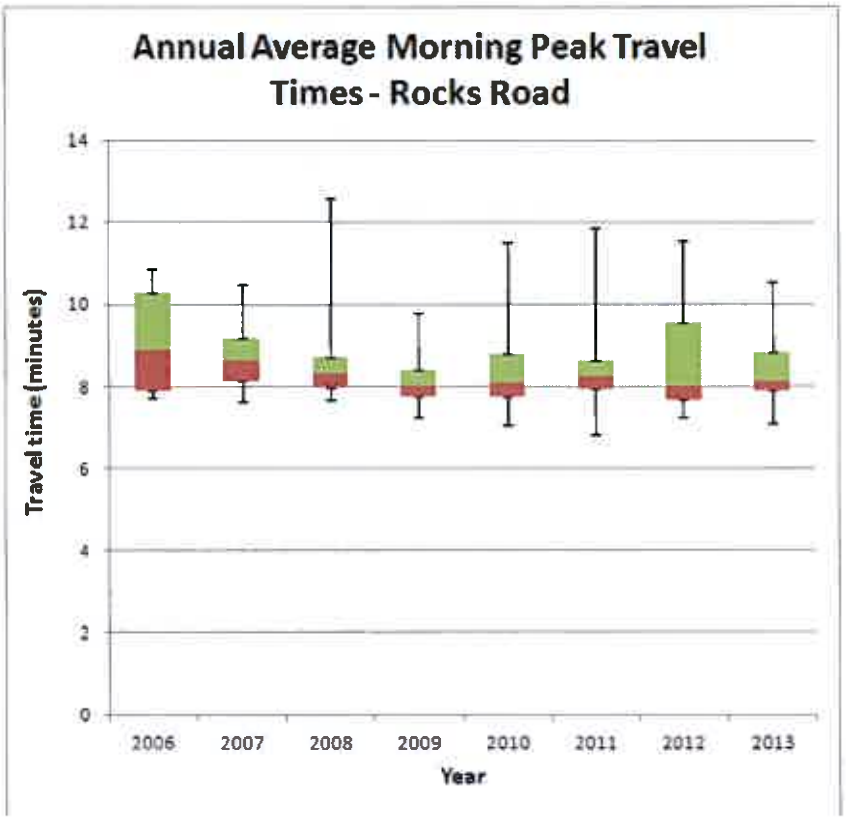
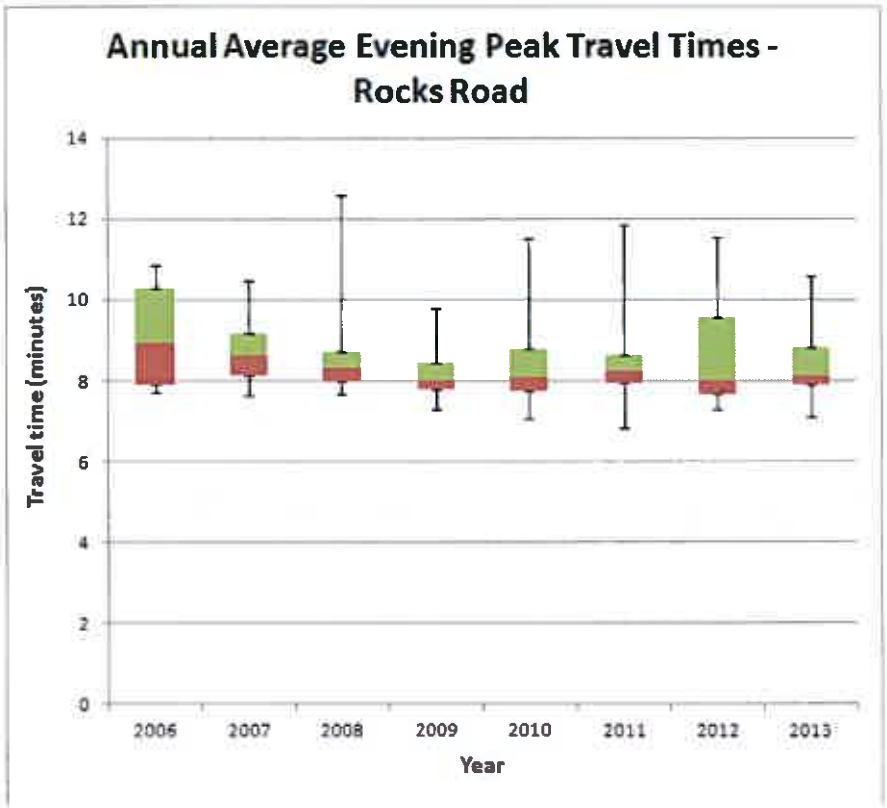


Figure H.4 Annual Average Evening Peak Travel Times – Rocks Road



It is noted that the size of the sample is very small at around 36 surveys in total per year. As a result there is more variability in the sample then would be expected from a larger sample and indeed within the population. As a result, it is proposed to change the survey to increase the sample size.

APPENDIX I PREVIOUS LEVEL OF SERVICE AND WHY THEY HAVE CHANGED

Service	Previous Level of Service	Proposed Level of Service	Reason for change
Safety	Nelson City Council cyclist causalities are below the peer group average.	The social and economic costs of crashes on the transport network are minimised Nelson City Council crash rates are below the peer group average. Total social cost of urban crashes at the worst 10 intersection, is below the previous 5 year average. The personal risk for each year reduces at least 2% per year from a base of 2007. The collective risk for each year reduces by at least 4% per year from a base of 2007. The total social cost for all intersections each year reduces by t least 4% per year from a base of 2007. Nelson City Council pedestrian casualties are below the peer group average.	The previous performance targets are difficult to quantify. The number of crashes including pedestrians each year reduces by at least 4% per year from a base of 2007. Nelson City cycle crashes do not increase from these in the base year of 2007.
Public Transport	Public transport services that meet the transport needs of the community with an equitable sharing of costs. Using the farebox recovery ratio 30-35% increase to approx 50% between 2015/16 and 2018/19.	Farebox recovery ratio to be greater than 50%.	New levels of service reflects actual improvement in performance to date more accurately.
Parking	Availability of long stay parking spaces in the interpeak as a percentage of the total long stay spaces within 20 min walk of the Central Business District, no less that 5%.	A reducing trend in occupancy of long-stay parking spaces between peak travel times at 9 sample locations within the Central Business District fringe.	The new level of service supports the balanced approach and the and is a better measure of the parking performance to assist with creating modal shift from single occupancy vehicles.

APPENDIX J SUMMARY ACTIVITY DESCRIPTIONS

This section contains summary descriptions of key work proposed.

SUBSIDISED MAINTENANCE

Network and Asset Management 151

- Maintenance of RAMM database ($130.000/year)
    - Assumes roughness and rating measurements and database updated annually.
    - Includes $10,000/year for improving retaining wall and bridge data.
- Bridge inspections ($20,000/year)
- Retaining wall inspections ($31,000 in year 1 and increasing 2% per year, every year for years 2-10)
    - Assumes that there will be a 2% annual growth in retaining walls due to the land remaining to be developed being predominantly on hillsides.
- Staff time for operations and maintenance ($250,000/year)
- Staff time for asset management ($60,000/year)
- Corridor access requests ($30,000/year)
- Network wide crash analysis ($10,000/year)
- Pavement testing for informing renewals programme ($50,000/year)
    - Dtims, FWD and similar.
- Promotion of car pooling and other travel demand measures ($57,000/year)

Transportation Model Update ($150,000)

- Allows for an update of the regional transportation model once the 2018 census data is available in year 4. This work may be done as part of a southern arterial study.

SUBSIDISED CAPITAL EXPENDITURE

Sealed Road Resurfacing

- 1.3M/year for years 1-3 and then 1.4M for years 4-10

Pavement Rehabilitation

- $280,000/year average for years 1-3 and then $390,000/year average for years 4-10
- In year one the pavement on Quarantine Road between SH6 and Nayland Road is programmed.

Drainage Renewals 213 ($100,000 in year 1 with 0.6% increase per year, every year for years 2-10)

- This work has not previously been budgeted for however work under this category is essential to keep the pavement structure dry.
- Allows for 0.6% growth in the network with new development.

Traffic Services Renewals 222

- The single significant item in this work category is $200,000/year for streetlight renewals in years 1-3 then reducing to $130,000/year for years 4-10.

Structures Component Replacement 215

- Average of $380,000pa for first 3 years then 250,000pa for years 4 to 10.
- Provides for the renewal of bridge and retaining wall structures, or their major components

Minor Improvements ($650,000/year)

- Under the current funding regime, minor improvement projects up to an individual value of $300,000 are permitted without robust economic justification up to 5% of the total annual transport expenditure. This allows projects to receive NZ Transport Agency co investment without the rigor of a full benefit cost analysis.
- Historically Council has progressed minor safety projects under this budget. In this AMP we have included all projects that are eligible for NZ Transport Agency co investment.
- The following projects will be completed in year 1:
    - Maori Road Retaining Wall
    - Home zone projects
    - Waimea Road/The Ridgeway Intersection improvements
    - Gibbs Bridge – Maitai valley Seismic Upgrade
    - Poleford Bridge - Maitai Valley Road seismic upgrade

Waimea Road/ Van Diemen Street Junction Improvements

- Intersection is highly congested with delays induced on Waimea Road by drivers stopping to let vehicles into and out of Van Diemen Street.
- $50,000 in year 8 for investigation, $100,000 in year 9 for detailed design and $1,2M in year 10 for construction.
- Anticipated to be traffic signals at this stage but Central Business District West traffic study in year 3 will likely define form and timing.
- Until the investigation work is done it is not possible to know whether the threshold for funding subsidies will be met. There is a chance that an appropriate BCR will not be achievable due to the increase in delay to Waimea Road traffic.

Waimea Road Retaining Wall at Snows Hill

- $485,000 to secure the steep unsupported cut slope above Waimea Road at Snows Hill opposite the Girls College Playing Fields.

HPMV Upgrades – 50Max Maitai Valley Road

- Upgrades to the bridges in the Maitai Valley to accommodate 50 Max HPMV vehicles. Three bridges to be improved; Smiths Ford, Jickells and Gibbs bridges.

Quarantine Road Nayland Road Intersection Upgrade

- Modelling shows that the queues from the intersection will cause unstable flows as traffic volumes increase.
- $2,75M planned over three years from year 7.

Rocks Road Walking and Cycling Facilities

- Currently these are no cycle lanes running the full length of Rocks Road. The Rocks Road Walking and Cycling Study was undertaken in 2014 to determine the form of the walking and cycling facilities along this route. At the time of publishing this AMP no final decision has been made.
- Nelson City Councils contribution is $3M in total spread out over years 1-3. NZ Transport Agency will contribute in the order of $14M.
- Allows for an improved walking and cycling facility between Crop and Food Research and Tahunanui Drive.

Maitai Shared Path (Saltwater Creek Bridge)

- $30,000 in year 1 for design and $345,123 in year 2 for construction.
- Allows for replacement of the existing bridge adjacent to the Maitai River to allow two-way pedestrian and cycle use.

Tahunanui Cycle Network

- There is a significant gap in the cycle network between Rocks Road and Stoke. Vulnerable users are required to negotiate busy roads with no cycle facilities.
- $100,000 for design in year 1 then $260,000 in year 2 and $500,000 in year 3 for construction.
- Provides a link between the end of Rocks Road and Stoke. Option 4 in the Opus report for the project is preferred but yet to be confirmed.

UNSUBSIDISED EXPENDITURE

Stoke Foothills Traffic Study ($100,000 in year 1)

- Study to determine the likely effect of growth in the Marsden and Ngawhatu Valleys on the surrounding transport network.
- The primary focus of the study will be to determine where future investment in the transport network should occur, particularly on the links to Main Road Stoke and Waimea Road and along the Ridgeway.

Atawhai Hills Traffic Study ($100,000 in year 2)

- Study to determine the viability and likely route of a link road running the length of the Atawhai Hills.
- The Study will include a high level geotechnical assessment along with a landscape assessment.
- The final route will be included in the Nelson Plan as an indicative road.

Milton Street (Grove to Cambria)

- This section of road currently has no kerb and channel. There is high demand for parking in this location so improving pedestrian safety with a full height kerb is priority.
- $20,000 for design in year 2 with $500,000/year in years 3 and 4 for construction.
- Allows for the construction of new kerb and channel, footpaths and carriageway surface.

Halifax Street (Maitai River to Milton)

- $10,000 in year 1 for investigation, $50,000 in year 2 for detailed design and $600,000 in year 3 for construction.
- Allows for the construction of new kerb and channel and carriageway surface.
- Aligns with timeline for stormwater upgrades.

Wigzell Area Speed Reduction

- The primarily residential Wigzell area south of Nelson hospital has very wide streets with straight alignment. As a result, vehicle speeds in the area are higher than the ideal 30km/h for a residential zone.
- $10,000 in year 2 for investigation, $40,000 in year 3 for design and $800,000 in year 4 for construction.
- Allows for kerb and channel on Alfred Street and calming measures on other roads in the area. Stormwater on Alfred Street will be upgraded at the same time.

Todd Bush Road

- There is currently no footpath along Todd Bush Road. There is a school bus stop at the intersection of Todd Bush Road and SH6 and relatively high demand for its services. A footpath is needed to improve safety for students walking to and from the bus stop.
- $600,000 for construction in year 2.
- Allows for construction of kerb and channel and a footpath on one side of Todd Bush Road between SH6 and Todd Reserve.

Main Road Stoke/Marsden Road

- With access to Waimea Road from The Ridgeway difficult and unlikely to be improved due to the difficulties in providing additional capacity, it is important that alternative access to the arterial network is provided.
- Traffic volumes on Main Road Stoke are significantly lower than on Waimea Road which may make improving side road access at this intersection more economically viable.
- $30,000 in year 7 for initial investigation, $70,000 in year 8 for design and $900,000 in year 9 for construction.
- Allows for a signalised intersection with minor kerb changes. No land purchase allowed for.

Lighting of Railway Reserve

- The current standard of lighting on the Railway Reserve shared path is non-existent in sections and poor in other areas and does not provide an adequate level of safety or convenience for users.
- $20,000 has been allocated to undertake a robust business case.

Muritai SH6 Including Pedestrian Crossing Across SH6

- The alignment of Muritai Street as its intersection with SH6 encourages high speed through the left turn from Muritai in particular. Left turning drivers typically attempt to turn into marginal gaps in the SH6 traffic while maintaining high speed which is a safety concern. Crossing SH6 is unsafe for pedestrians unless they direct from their desired line to the nearby signals.
- $40,000 in year 1 for design and $60,000 in year 4 for construction.
- Allows for Muritai Street to be squared up to SH6 to lower vehicle speeds as well as for a pedestrian crossing facility on SH6 north of Muritai Street.

Tahunanui Car Park

- NZ Transport Agency agreed to remove the clearway on the east side of Tahunanui Drive to give council four years to find an alternative location for parking for businesses that currently rely on the on-street parking. At the end of the four year period, the parking on the east side will be removed which is expected to increase the capacity of the Bisley Avenue/SH6 intersection by approximately 10%.
- $50,000 in year 1 for design and $150,000 in year 2 for construction.
- Allows for piping of the open drain adjacent to 23 Tahunanui Drive and construction of a shared parking and access resource over the old drain, existing chemist parking and right-of-way serving numbers 15, 17 and 19 Tahunanui Drive.

New Footpaths ($200,000/year)

- There are a large number of streets in Nelson that do not have footpaths on both sides. While it is ideal to have footpaths on both sides of all roads, in some situations, like hillside sites, it is difficult to provide them. In other situations developers have chosen to only provide a single footpath, particularly on short cul-de-sacs.
- With the limited resources we have available to us, it is important to prioritise footpath extension projects carefully. Footpath projects are typically prioritised on the basis of proximity to schools, whether there is a footpath on the opposite side of the road, the traffic volume, the zone served by the footpath and whether the project represents value for money. The priority matrix can be found in A777631, the programme is included in Appendix L.
- The planned footpath extensions for the 2015/16 financial year are as follows:
    - Waimea Road between Chings Road and The Ridgeway.
    - Songer Street between Nayland Road and Durham Street.

Footpath Renewals ($300,000/year)

- A programme of footpath renewals has been developed based on a City wide footpath condition inspection report. It prioritises footpaths in higher use areas, close to schools, shops and elderly centres. It seeks to address the condition of the footpaths to improve pedestrian safety, comfort and convenience whilst managing the condition of our footpaths with a timely and economic priority.

Marsden Valley-Ridgeway Upgrade

- There is an existing road safety problem at this intersection with limited visibility available on some approaches and relatively high speeds on The Ridgeway. Minor road marking changes will be undertaken in the short term.
- Marsden Valley is expected to be one of the largest sources of population growth in Nelson along with Ngawhatu Valley. All traffic generated in the valley will use this intersection.
- A roundabout has previously been designed for this location although significant design changes will be needed.
- $75,000 in year 3 for minor safety works, $120,000 in year 7 for design, $400,000 in year 8 for property purchase and $1,600,000 in year 9 for construction.
- Allows for a single lane roundabout .

Marsden Valley Road

- The current road cross-section and alignment has the feeling of a high speed rural road which is unsuitable for the residential activity that it will serve as development grows in the valley.
- $50,000 in year 8 for investigation, $75,000 in year 9 for design and $1.2M in year 10 for construction.
- Allows for localised traffic calming and alignment changes to reduce speed environment.

Main Road Stoke Marsden Valley Road

- The Stoke Foothills Study will confirm the form of the intersection. In order to encourage traffic from that development onto the arterial network providing an efficient and safe link is necessary.
- $2.0M budgeted over 3 years starting in year 7.

Lucas Terrace

- Current carriageway needs to be upgraded to local residential standard to allow for the residential development of the greenfields site at the end of the current formation.
- $150,000 budgeted over 2 years starting in year 6.

CBD Enhancement

- This provides a budget to continue the work started under The Heart of Nelson initiative. Council will need to prioritise projects which are still relevant during the LTP development.
- $100,000 in year 1 then $500,000 per year for the next 9 years has been provisionally budgeted.

Parking Strategy

- The parking strategy, once finalised in 2014 will be reviewed every 8-10 years in order to ensure that the city's parking resources are being used and managed in the most appropriate manner.
- $20,000 in year 7 and $80,000 in year 8 for development of a new Parking Strategy.

Parking Strategy Implementation ($270,000 year 1 and $120,000 year2)

- Install signage directing users to the parking squares from the CBD ring route, $200,000 in 2015/16 and $100,000 in 2016/17.
- Reconfigure the traffic signals on Main Road Stoke at the Putaitai intersection to allow the right turn out to prevent unnecessary movements through Strawbridge Square carpark, $40,000 in 2015/16.
- Modify the tree planters in Strawbridge Square carpark to minimse damage, $30,000 in 2015/16.
- Allocate a small number of campervan and motor home spaces within the CBD, $20,000 in 2016/17.

Renewals: On- and Off -Street Parking Meters

- The current parking meters are due for replacement in the 2015/16 financial year as they have come to the end of their design life. There has not been any increase in maintenance cost in the last few years approaching the retirement date so replacement has been deferred until the 2017/18 and 2018/19 financial years.
- The renew would include a technology upgrade to enable payment by credit card and integration with smart phone apps to extend the stay.
- $470,000/year in years 3 and 4.

Bus Services – (WC 511) Subsidised ($710,000/year)

- Allows for wider route coverage of Stoke.
- A large proportion (almost 100%) is expected to be funded by NZ Transport Agency with Councils costs remaining at a similar level to previous years.

Stoke Interchange (WC531)

- It is expected that as Stoke grows that there will be an increase in bus trips starting and finishing in the Stoke town centre.
- $20,000 in year 8 for design and $200,000 in year 9 for construction.
- Allows for a small central interchange area within the Stoke town centre area. The location, timing and size will be guided, in part, by the outcomes of the 2014 Stoke Needs Study.

Integrated Ticketing (WC531)

- Moving from the current manual ticketing system to an electronic one for the bus service is required as the current system is inefficient and nearing its end of life.
- NZ Transport Agency are leading a joint procurement process in partnership with all of the participating Councils. This approach allows for the sharing of the up front capital costs based on the size of each councils service.
- NZ Transport Agency are also subsidising the costs at a rate of 58%.
- Nelson City Councils share of the total capital cost will be $61,000 spread over years 1 and 2 and the 2014/15 financial year.

APPENDIX K REGIONAL LAND TRANSPORT PROGRAMME (2009)

Priority	Profile	Project	Cost estimate ($ M)	Nelson City Council local share	Proportion - R Fund	PHASES			TOTAL R
						SA/I	D & RC	CONST	
1	HMM	SH6 Safety Retrofit	0.720		0.720			0.720	0.72
2	MMH	SH6 Stock effluent facility	0.548		0.548	0.080		0.468	1.268
3	MMH	SH6 Nelson to Blenheim/Richmond HPMV route 4	1.148		1.148	0.093	0.159	0.896	2.416
4	MML*	Nelson City Council - Waimea Road Enhancement Package							
		Waimea/Motueka Street intersection	1.224	0.575	0.649			1.224	
		Waimea/Ridgeway intersection	0.935	0.439	0.496	0.06	0.075	0.800	
		Waimea/Market Road intersection	0.140	0.066	0.074		0.140		
		Waimea Road widening at Snows Hill	0.050	0.024	0.027	0.050			
		Subtotal	2.349	1.104	1.246				3.662
5	MML*	Nelson City Council – Walking , cycling and schools package							
		Waterfront to Annesbrook walk/cycle route	0.050	0.024	0.026	0.050			
		Rocks Road walk/cycleway (50/50:Nelson City Council/Highways and Network Operations)	5.700	1.340	4.361	0.220	0.500	5.000	
		Bishopdale to the Ridgeway shared path	0.390	0.183	0.207		0.040	0.350	
		Cyclelane extension from Clifton Terrace to Cable Bay	0.151		0.151	0.151			
		Railway Reserve/Princess Drive extension overbridge	0.500	0.235	0.265	0.050	0.050	0.400	
		Maitai shared path widening (Akerston to Nile)	1.595	0.749	0.845		0.050	1.545	
		City/Maitai to Dun Mountain Trail start	0.530	0.249	0.281	0.030	0.050	0.450	

Priority	Profile	Project	Cost estimate ($ M)	Nelson City Council local share	Proportion – R Fund	PHASES			TOTAL R
						SA/I	D & RC	CONST	
		Poormans Stream walk/cycle improvements	0.083	0.039	0.044		0.030	0.053	
		Other walk/cycle projects i.e Ridgeway cyclelanes, Maitai Valley Road on-road cycle improvements (Nile Street to Sharlands), Nile Street (Tasman to Tory), St Vincent Street (Gloucester to Halifax), Suffolk Road, Halifax Street (Haven Road to Rutherford), Central Business District Cycle parking facilities, St Vincent Street	0.950	0.447	0.503	0.200		0.750	
		Variable speed signs - local and (HNO) Tahuanui school	0.730	0.343	0.387			0.730	
		Integration activities	0.900	0.423	0.477			0.900	
		School approach and frontage treatments	0.450	0.212	0.239	0.050		0.400	
		Nelson City Council – Walking , cycling and schools package continued							
		Walkway connections	0.255	0.120	0.135			0.255	
		Lighting study and improvements	0.750	0.353	0.398			0.750	
		Subtotal	13.044	4.715	8.328				11.99
6	MML	Nelson City Council – Minor improvements from 'R'	0.906	0.426	0.480			0.906	12.47
7	MMM	SH6 Property Acquisition	2.813		2.813			2.813	15.283
8	MML*	SH6 Whakatu Drive/Link Road roundabouts	2.576	0.028	2.548	0.266	0.212	2.098	17.831
9	MLH	SH6 Quarantine Road I/S	1.414		1.414		0.212	1.202	19.245
10	MLH	SH6 Hillwood Drive Intersection Improvements	1.313		1.313	0.123	0.203	0.987	20.558
11	MLH	SH6 Rai Saddle second curve realignment	4.798		4.798			4.798	25.356

Priority	Profile	Project	Cost estimate ($ M)	Nelson City Council local share	Proportion - R Fund	PHASES			TOTAL R
						SA/I	D & RC	CONST	
12	MLM	SH6 Cable Bay Intersection	0.852		0.852			0.852	26.208
13	MLM	SH6 The Glen Intersection Improvements	0.880		0.880	0.186	0.082	0.612	27.088
14	MLM	SH6 Teal River Bridge	2.100		2.100			2.100	29.188
15	MLM	SH6 Whakatu Drive 4-laning northbound	1.467		1.467	0.155	0.212	1.100	30.655
16	MLL*	SH6 Atawhai Drive Intersections	2.558		2.558			2.558	33.213

APPENDIX L 10 YEAR LONG TERM PLAN - PROGRAMME

			(,000)										
Activity	**Budget Type**	**GL Name**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**Total**
5001 Roads: Subsidised	OPEX-Base	Network and Asset Management 151	581.0	581.6	582.3	582.9	583.6	584.2	584.9	585.6	586.3	587.0	5839.4
		Cyclepath Mtce 124	77.0	80.9	84.9	89.1	93.6	98.3	103.2	108.3	113.8	119.5	968.5
		Sealed Pavement Mtce 111	500.0	503.0	506.0	509.1	512.1	515.2	518.3	521.4	524.5	527.7	5137.2
		Unsealed Pavement Mtce 112	45.0	45.3	45.5	45.8	46.1	46.4	46.6	46.9	47.2	47.5	462.3
		Routine Drainage Mtce 113	135.9	136.8	137.6	138.4	139.2	140.1	140.9	141.8	142.6	143.5	1396.8
		Structures Mtce 114	170.0	171.0	172.0	173.1	174.1	175.2	176.2	177.3	178.3	179.4	1746.6
		Environmental Mtce 121	647.0	649.4	651.8	654.2	656.6	659.1	661.5	664.0	666.5	669.0	6578.9
		Traffic Services Maintenance 122	908.9	909.7	910.4	911.2	912.0	912.9	913.7	914.6	915.5	916.4	9125.4
		Operational Traffic Mgmt 123	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	710.0
		Opex Staff Contra	0	0	0	0	0	0	0				0
		Regional Land Tspt Programme	15.0	20.0	55.0	15.0	20.0	55.0	15.0	20.0	55.0	15.0	285.0
		Road Safety Promotion 432	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	900.0
	OPEX-Base Total		3240.9	3258.6	3306.5	3279.8	3298.3	3347.2	3321.4	3340.9	3390.7	3365.9	33150.2
	OPEX-Prog	Activity Mgmt Planning Programme	10.0	30.0	30.0	10.0	30.0	30.0	10.0	30.0	30.0	10.0	220.0
		Studies & Strategies	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	200.0
		Transportation model update	0	0	0	150.0	0	0	0	0	0	0	150.0
	OPEX-Prog Total		30.0	50.0	50.0	180.0	50.0	50.0	30.0	50.0	50.0	30.0	570.0
	Renewal	Sealed Road Resurfacing 212	1330.0	1330.0	1330.0	1400.0	1400.0	1400.0	1100.0	1100.0	1100.0	900.0	12390.0
		Unsealed Road Metalling 211	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	580.0
		Drainage Renewals 213	100.0	100.6	101.2	101.8	102.4	103.0	103.7	104.3	104.9	105.5	1027.4
		Traffic Services Renewals 222	405.0	425.5	366.0	266.4	266.9	267.4	267.9	268.4	268.9	269.4	3071.9
		Renewals Staff Contra	0	0	0	0	0	0	0	0	0	0	0
		Sealed Road Pavement Rehabilitiation 214	352.0	117.0	369.4	777.8	322.7	322.7	322.7	322.7	322.7	322.7	3552.4
		Strutures Component Replacment 215	450.8	367.7	317.4	250.0	250.0	250.0	250.0	250.0	250.0	250.0	2885.9
	Renewal Total		2691.8	2394.8	2538.1	2851.0	2397.1	2398.2	2399.3	2400.4	2401.5	2402.7	24874.7
	Upgrade: growth	Growth Staff Contra	0	0	0	0	0	0	0	0	0	0	0
	Upgrade: growth Total		0	0	0	0	0	0	0	0	0	0	0
	Upgrade: LOS	Waimea Rd/Van Diemen Jct improvements	0	0	0	0	0	0	0	50.0	100.0	1200.0	1350.0
		Maitai shared path (Saltwater Creek Bridge)	30.0	345.1	0	0	0	0	0	0	0	0	375.1
		Tahunanui Cycle Network	100.0	260.0	500.0	0	0	0	0	0	0	0	860.0
		LOS Staff Contra	0	0	0	0	0	0	0				0
		Quarantine/Nayland intersection upgrades							100.0	150.0	2500.0		2750.0
		HPMV Upgrades - 50MAX Maitai Valley Road			50.0	200.0	200.0						450.0
		Rocks Rd to Maitai Path			60.0	240.0	1500.0		0	0	0	0	1800.0
		Minor Improvements 341	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	6500.0
		Walk cycle Schools Package - Integrated Activities	150.0										
		Waimea Road Retaining Wall at Snows Hill				50.0	435.0						

			(,000)										
Activity	**Budget Type**	**GL Name**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**Total**
	Upgrade: LOS Total		930.0	1255.1	1260.0	1140.0	2785.0	650.0	750.0	850.0	3250.0	1850.0	14085.1

			(,000)										
Activity	Budget Type	GL Name	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	Total
5002 Roads: Unsubsidised	OPEX-Base	Insurance	19.7	20.4	20.9	21.5	22.2	23.0	23.7	24.3	25.0	25.6	226.4
		Legal Fees	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	350.0
		Other professional Advice	0	0	0	0	0	0	0				0
		Rates	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	11.0
		Rental: Maitai / Wakatu	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	66.7
		Road & Footpath Maintenance	273.0	274.6	276.3	277.9	279.6	281.3	283.0	284.7	286.4	288.1	2804.9
		Street and Sump Cleaning	229.0	230.4	231.8	233.1	234.5	236.0	237.4	238.8	240.2	241.7	2352.8
		Mtce: Rocks Rd Bollards	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	300.0
		Artwork Maintenance	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	100.0
		Street Tree Maintenance	150.0	150.9	151.8	152.7	153.6	154.6	155.5	156.4	157.4	158.3	1541.2
		Street Garden Maintenance	223.1	224.4	225.8	227.1	228.5	229.9	231.3	232.6	234.0	235.4	2292.3
		After Hours Duty Officer	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	200.0
		Provide Corridor Access Requests	0	0	0	0	0	0	0				0
		Corridor Access Requests UFB	0	0	0	0	0	0	0				0
		Electricty Non Sub	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	123.0
		Streetgarden water	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	82.2
		Valuation Fees	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	85.0
	OPEX-Base Total		1026.6	1032.5	1038.4	1044.3	1050.3	1056.4	1062.6	1068.6	1074.7	1080.9	10535.4
	OPEX-Prog	Pest Control on Road Reserve	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	100.0
		Southern Arterial Corridor Management Plan	50.0	0	0	0	0	0	0	0	0	0	50.0
		Stoke Foothills Traffic Study	100.0	0	0	0	0	0	0	0	0	0	100.0
		Atawhai Hills Traffic Study		100.0	0	0	0	0	0	0	0	0	100.0
		CBD West traffic study			100.0								100.0
	OPEX-Prog Total		160.0	110.0	110.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	450.0
	Renewal	Renewals: Street/Garden Furniture	5.6	5.8	6.0	6.2	6.5	6.8	7.1	7.3	7.5	7.8	66.4
		Renewals: Street Lights on walkways	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	50.0
		Renewals: Footpaths	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	3000.0
	Renewal Total		310.6	610.8	311.0	311.2	311.5	311.8	312.1	312.3	312.5	312.8	3116.4
	Upgrade: growth	Sundry Land Purchases - Growth	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1000.0
		Cncl Share Development Cont	0	0	0	0	0	0	0				0
		Todd Bush Rd	600.0										600.0
		Marsden Valley Ridgeway Upgrade			75.0				120.0	400.0	1600.0		2195.0
		Main Rd Stoke/Marsden Rd							60.0	140.0	1800.0		2000.0
		Marsden Valley Road Upgrade								50.0	75.0	1200.0	1325.0
		Lucas Terrace Upgrade						15.0	135.0				150.0
	Upgrade: growth Total		700.0	100.0	175.0	100.0	100.0	115.0	415.0	690.0	3575.0	1300.0	7270.0

			(,000)									
Activity	**Budget Type**	**GL Name**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**Total**
	Upgrade: LOS	Land Purchase - LOS	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	500.0
		Road Frontage Planting Program	25.0	25.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	330.0
		Street Garden Dev	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	70.0
		Street Tree Dev	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	200.0
		Milton St (Grove to Cambria)		20.0	500.0	500.0							1020.0
		Halifax (Maitai to Milton)	10.0	50.0	600.0								660.0
		Lighting of Rail Reserve	20.0										20.0
		Muritai SH6 including Ped crossing across SH6	40.0			160.0							200.0
		Tahunanui car park	50.0	150.0									200.0
		New Footpaths	50.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	1850.0

			(,000)									
Activity	Budget Type	GL Name	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	Total
		Rocks Rd Walking and Cycling Facilities	390.0	1305.0	1305.0		0	0	0	0	0	0	3000.0
		Wigzell Area Speed Reduction		10.0	40.0	800.0							850.0
	Upgrade: LOS Total		1112.0	2337.0	3307.0	2546.0	882.0	312.0	312.0	312.0	312.0	312.0	11744.0
5505 Inner City Enhancement -Parking Regulation	OPEX-Base	Engagement	0	0	0	0	0	0	0				0
		GST expense	0	0	0	0	0	0	0				0
		Legal Expenses	0	0	0	0	0	0	0				0
		Providing Parking Reg Service	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	370.0
		Vehicle Identification Fee/MOT	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	5.0
		Court Processing	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	1140.2
		Providing service - EIL contract	401.3	401.3	401.3	401.3	401.3	401.3	401.3	401.3	401.3	401.3	4013.2
		Flea Market Towing	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	95.0
	OPEX-Base Total		562.3	562.3	562.3	562.3	562.3	562.3	562.3	562.3	562.3	562.3	5623.4
	Upgrade: growth	Capital: Plant & Equipment	0	0	0	0	0	0	0				0
	Upgrade: growth Total		0	0	0	0	0	0	0				0
5510 Inner City Enhancement -Car Parks	OPEX-Base	Insurance	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	14.1
		Rates	340.7	340.7	340.7	340.7	340.7	340.7	340.7	340.7	340.7	340.7	3406.9
		Valuations	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	43.9
		Water By Meter	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	13.2
		Mtce: Off Street Parking Meters	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	560.0
		Mtce: On Street Parking Meters	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1000.0
		Mtce: CBD Street Sweeping	95.0	95.6	96.1	96.7	97.3	97.9	98.5	99.1	99.7	100.3	976.1
		Clean Asphalt Footpaths	137.0	137.8	138.6	139.5	140.3	141.2	142.0	142.9	143.7	144.6	1407.6
		Mtce: Street Gardens	8.0	8.0	8.1	8.1	8.2	8.2	8.3	8.3	8.4	8.4	82.2
		Mtce: Street Trees	20.0	20.1	20.2	20.4	20.5	20.6	20.7	20.9	21.0	21.1	205.5
		Mtce: Blockwork Maintenance	80.0	80.5	81.0	81.4	81.9	82.4	82.9	83.4	83.9	84.4	821.9

			(,000)									
Activity	**Budget Type**	**GL Name**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**Total**
		Mtce: Carpark Maintenance	19.7	19.9	20.0	20.1	20.2	20.3	20.5	20.6	20.7	20.8	202.8
		Hanging Baskets	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	900.0
		Mtce: CBD Seat Cleaning	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	200.0
		Provide: CBD Professional Serv	27.5	27.7	27.8	28.0	28.2	28.3	28.5	28.7	28.8	29.0	282.5
		Provide: CCTV Operation	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	420.0
		Provide CBD Coordinator	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	1490.0
		Parking Revenue to Public Transport											0
		Electricity car parks	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	150.0
		Rent (Wakatu Leases)	194.7	194.7	194.7	194.7	194.7	194.7	194.7	194.7	194.7	194.7	1946.8
		Mtce: CBD Litter Collection	26.6	26.6	26.6	26.6	29.2	29.2	29.2	29.2	29.2	29.2	281.6
		CBD rubbish bin collection	106.3	106.3	106.3	106.3	116.9	116.9	116.9	116.9	116.9	116.9	1126.4
		Security / Cash Collections	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	400.0
		CCTV Fibre connection	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	300.0
	OPEX-Base Total		1604.5	1606.9	1609.2	1611.6	1627.2	1629.6	1632.0	1634.4	1636.8	1639.3	16231.4
	OPEX-Prog	Valuation Fees	0	0	0	0	0	0	0				0
		Parking Surveys	50.0	10.0	10.0	50.0	10.0	10.0	50.0	10.0	10.0	50.0	260.0
		Parking Strategy	0	0	0	0	0	0	20.0	80.0	0	0	100.0
			(,000)										
Activity	Budget Type	GL Name	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	Total
		Grant: Christmas Tree Decorations	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	50.0
		Grant: Bank Lane Canopy	0	0	0	0	0	0	0				0
	OPEX-Prog Total		55.0	15.0	15.0	55.0	15.0	15.0	75.0	95.0	15.0	55.0	410.0
	OPEX-UnProg	Towing Off Street Permits	0	0	0	0	0	0	0				0
	OPEX-UnProg Total		0	0	0	0	0	0	0				0
	Renewal	Parking Strategy implementation-unspecified	270.0	120.0									390.0
		Electric charging stations						10.0	80.0				90.0
		Renewal: CCTV	20.0	0	90.0	0	0	0	0	90.0	0	0	200.0
		Renewals: On and Off St Parking Meter	0	0	470.0	470.0	0	0	0	0	0	0	940.0
		Renewal CBD Rubbish Bins	5.4	5.4	96.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	144.7
		Carpark Street Light Renewal	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	150.0
		Bank Lane Surface Replacement	25.0										25.0
	Renewal Total		310.4	140.4	671.4	490.4	20.4	30.4	100.4	110.4	20.4	20.4	1649.7
	Upgrade: LOS	CBD Enhancement	100.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	4600.0
	Upgrade: LOS Total		100.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	4600.0
5560 Public Transport	OPEX-Base	Opex Staff Contra	0	0	0	0	0	0	0				0
		Bus concession fares	0	0	0	0	0	0	0	0	0	0	0
		Bus Services - 511 Subsidised	710.0	710.0	710.0	710.0	710.0	710.0	710.0	710.0	710.0	710.0	7100.0
		PT facilities O & M - 514	20.0	20.0	20.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	620.0
		Supergold Card Operators	147.5	156.4	165.7	175.7	186.2	197.4	209.2	221.8	235.1	249.2	1944.2
		PT info supply & O & M 524	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	450.0

			(,000)										
Activity	**Budget Type**	**GL Name**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**Total**
		Administration Expenses	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	21.9
	OPEX-Base Total		924.7	933.5	942.9	1012.9	1023.4	1034.6	1046.4	1059.0	1072.3	1086.4	10136.1
	OPEX-Prog	Passenger Transport service review	0	0	0	0	50.0	0	0	0	0	50.0	100.0
	OPEX-Prog Total		0	0	0	0	50.0	0	0	0	0	50.0	100.0
	Upgrade: growth	Stoke interchange (WC531)	0	0	0	0	0	0	0	20.0	200.0	0	220.0
		Integrated Ticketing (WC531)	33.3	95.8	0	0	0	0	0	0	0	0	129.2
	Upgrade: growth Total		33.3	95.8	0	0	0	0	0	20.0	200.0	0	349.2
	Upgrade: LOS	PT Minor Improvements	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	360.3
		LOS: External Resourcing Provision	0	0	0	0	0	0	0				0
	Upgrade: LOS Total		36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	360.3
5570 Total Mobility	OPEX-Base	General Expenses	4.4	4.6	4.9	5.2	5.5	5.9	6.2	6.6	7.0	7.4	57.8
		Total mobility services (WC 517)	258.7	274.3	290.7	308.2	326.6	346.2	367.0	389.0	412.4	437.1	3410.3
		Service Provision: Operators	0	0	0	0	0	0	0				0
		Wheelchair hoist use (WC521)	65.5	69.4	73.6	78.0	82.7	87.7	92.9	98.5	104.4	110.7	863.3
		Wheel chair replacement 519	40.0	0	20.0	0	0	60.0	0	0	0	0	120.0
	OPEX-Base Total		368.6	348.3	389.2	391.4	414.9	499.8	466.2	494.1	523.8	555.2	4451.5

APPENDIX M MINOR IMPROVEMENT AND FOOTPATHS PRIORITY LIST

Minor Improvements Projects				
Original description	**Road**	**Location**	**Comments**	**Construction estimate**
Maori Road retaining wall	Maori Road		Retaining wall is failing and needs immediate attention.	$300,000
Homezone Area project			Prioritised based on Homezone spreadsheet.	$100,000pa
Waimea Road/The Ridgeway - Safety improvements	Waimea Road/The Ridgeway	Intersection of Waimea Road and The Ridgeway	Tighten the radius of the kerb for vehicles turning left into The Ridgeway to reduce speeds. Relies on the speed limit being reduced to 50km/h on Waimea Road.	$200,000
Poleford Bridge Seismic Upgrade	Maitai Valley Road	Poleford Bridge	Life Line route to water supply with bridge with poor seismic and HPMV capacity	$35,000
Gibbs Bridge Seismic Upgrade	Maitai Valley Road	Gibbs Bridge	Life Line route to water supply with bridge with poor seismic and HPMV capacity	$60,000
Airport Bridge Replacement		Coastal Shared Path	Existing bridge reached end of serviceable life. Piles and main span decayed	$230,000
Neale Ave - Parking and safety improvements	Neale Avenue	Neale Ave adjacent to Neale Park	Parents park on Neale Ave at the back of Nayland School to pick up and drop off children, but speeding vehicles. Angle parking and traffic calming on the approaches are options.	$50,000
Atawhai Crescent - Bus stop relocation	Atawhai Crescent	Atawhai Crescent and intersections with Dodson Valley Road and Rainbow Drive	Bus stop has been relocated but pedestrian refuge/build outs still need to be designed and constructed to allow safer pedestrian access from all footpath approaches.	$50,000
Toi Toi Street/St Vincent Street safety improvements	Toi Toi Street/St Vincent Street intersection	Toi Toi Street/St Vincent Street intersection	High number of crashes at this intersection. Partially due to unbalanced sight distances. Need to improve pedestrian safety so allow for raised pedestrian tables on all four approaches.	$300,000
Wigzell Area wide traffic calming	Kawai Street South	All of Kawai Street South	re Neighbourhood Support letter, investigate. Has been transferred to Homezone/shared zone/traffic calming programme for area wide treatment.	$300,000
Alton St - Streetlights	Alton Street	Alton Street for 100m south of Hardy Street adjacent to planted central median	Very dark in places. Ped safety issue	$20,000
Strawbridge Square Car Park- Footpath narrowing	Strawbridge Carpark		Driveway from Songer Street is very narrow. Cost depends on solution chosen. At lower end remarking and signing the driveway for exit only would solve the issue.	$50,000
Polstead Rd - Pedestrian refuge	Polstead Road	Polstead Road/Nikau Street Intersection	By the shops. Safe Journey to School, project in 2011/12. Couldn't get agreement to project.	$70,000
Grove St	Grove Street	Between Collingwood Street and Tasman Street	Long straight section with few cars parked encourages higher speeds. Kindergarten on this section. Allows for build-outs or chicane.	$20,000
State Highway 6 Pedestrian Crossing - Muritai Street	State Highway 6	North of Muritai Street	Difficult to for pedestrians to cross without a walking to the traffic signals. Central pedestrian refuge and kerb build-outs proposed.	$200,000
Trafalgar St South - Footpath and kerb repairs	Trafalgar Street South	Trafalgar Street South adjacent to Nelson Girls High	Safety improvements - fix footpath / low kerb by roundabout. Need to lift f/p and retain etc -cycle accident 3/09	$90,000
The Ridgeway/Arapiki Road - Pedestrian safety improvements	The Ridgeway/Arapiki Road	Intersection of Arapiki Road and The Ridgway	Children coming down Arapiki to cross Ridgeway have poor sightlines to north. Tighten left turn radius, construct pedestrian build-outs.	$50,000
Marsden Valley/The Ridgeway Intersection Upgrade	Marsden Valley/The Ridgeway intersection	Marsden Valley/The Ridgeway intersection	Sight distances are inadequate in at this intersection. Allows for minor kerb changes and calming to reduce speeds to match visibility.	$75,000

Minor Improvements Projects				
Original description	**Road**	**Location**	**Comments**	**Construction estimate**
Vanguard Street - Right-turn bay safety improvements	Vanguard Street	Vanguard Street between Toi Toi Street and North Esk Street	Improve safety at the Vanguard / Toitoi intersection. The safety record of this intersection has improved since the change in give way rule so uncertain whether any further work is necessary.	$300,000
Quebec Rd - Speed reduction	Quebec Road	Quebec Road for 600m east of Prince Drive	Traffic calming required along straight connecting to Princes Dr. Straight section is out of character with the remainder of Quebec Road. Traffic calming will reduce speeds on this section to be similar to the rest of the route.	$50,000
Shakespeare Walk/Bridge	Shakespeare Walk		Pedestrian conflict - To be mitigated with pedestrian buildouts on both sides of the road.	$100,000
Karaka St - Traffic calming	Karaka Street	Karaka Street north of Orchard Street	Traffic calming by Council flats. Some has been done already but 200m between build-outs so an additional build-out needed.	$20,000
Examiner St - Speed humps	Examiner Street	Examiner Street 30m west of Trafalgar Street South	Speed humps too severe. They are likely to be achieving the objective of slowing vehicles down. The profile of the humps complies with the relevant design guidelines.	$10,000
Annesbrook Drive by Black Cat dairy with road remark	Annesbrook Drive		Opportunity to provide ped refuges adjacent to the Black Cat Dairy.	$100,000
Nile Street/Maitai Valley Road intersection upgrade	Nile Street/Maitai Valley Road intersection	Nile Street/Maitai Valley Road intersection	Poor safety record at this intersection caused by limited visibility and poor alignment. Allows for minor kerb changes and calming to reduce speeds and improve stop position.	$100,000
Arrow St/Quebec St intersection - Safety improvements	Arrow Street/Quebec Road	Intersection of Arrow Street and Quebec Road	Small flush roundabout to allow for safer right turn movements from down hill approach of Arrow Street.	$30,000
Vanguard St - Protection of shared path from parked cars	Vanguard Street		Need some sort of protection to prevent vehicles parking on Shared path. This is an enforcement issue.	$70,000
Stafford Ave/Annesbrook Drive one way section	Stafford Avenue		AJ worked with residents to agree a plan in 2012. Allows for minor changes to marking and islands to make turning in difficult from Main Road Stoke.	$30,000
Marybank Road - Roundabout improvements	Marybank Road	Intersection of Marybank Road and Noel Jones Drive	WALTER Ingram S/R 108823 (Larger trucks will struggle to track through intersection but this is uncommon and only really during construction. Tresillian Ave will be connected through in the next couple of years so an alternative route will be available.)	$30,000
Near misses with cyclists driving out of Marsden Cemetery	Marsden Valley Road		Conflict between cyclists on path and cars exiting cemetery driveway. Road marking and signage to inform drivers of cycle activity.	$50,000

NETWORK DEFICIENCIES - FOOTPATHS				
Original description	**Road/Walkway Name**	**Location**	**Notes**	**Construction estimate**
Footpath in front of 413 Waimea Road	Waimea Road	Between Chings Road and The Ridgeway - South side	Evidence of high use by school children.	$ 33,750.00
Songer Street footpath, south side west of Nayland Rd 360m	Songer Street	Between Nayland Road and Durham Street - South side	Some levels issues, driveway, gardens on road reserve.	$ 85,500.00
Bronte Street footpath behind St Joseph's	Bronte Street	Between Scotland Street and Collingwood Street	No footpath along the back of St Josephs School. Trees and bank make construction more expensive.	$ 72,000.00
Centennial Road footpath	Centennial Road	Full length on south side.	Gap in footpath on south side, popular with school children.	$ 45,000.00

NETWORK DEFICIENCIES - FOOTPATHS				
Original description	**Road/Walkway Name**	**Location**	**Notes**	**Construction estimate**
Kea Street footpath	Kea Street	Full length on north side.	Tracks on grass show desire lines, crossings at intersection with Kaka St lead you nowhere, just into middle of intersection	$ 29,250.00
Nikau Street footpath	Nikau Street	Full length on south side.	Full length to provide higher level of service for pedestrians accessing back of school in particular.	$ 69,750.00
Palm Avenue footpath	Palm Avenue		Between Nikau Street and Apple Lane.	$ 20,250.00
Manson Avenue footpath	Manson Avenue		Full length. Close to school.	$ 110,250.00
Stanley Crescent footpath	Stanley Crescent	From Beachville Crescent to end - South side	Some visibility issues over crests.	$ 108,000.00
Emano Street footpath (Lower section)	Emano Street	Piko Street to Orsman Crescent	Footpath on one side only. High proportion of children in the area walk to school.	$ 222,000.00
Emano Street (Upper section)	Emano Street	Orsman Crescent to end	No footpath. Part of walkway to the top of port hills.	$ 192,000.00
Arapiki Road footpath	Arapiki Road	South side west of crest	80m of footpath between No 24 and 32, south side to improve schoolchildren visibility to cross Arapiki Rd, avoids crossing at toe of hill(poor visibility) or at Ridgeway/Arapiki.	$ 64,000.00
Scotia Street footpath	Scotia Street	Anglia Street to 140m north	Visibility around corner difficult, new house on corner will complicate lack of footpath.	$ 168,000.00
Maire Street Footpath	Marie Street	50m at end	Involves sale of land. Links end of existing footpath to walkway at end of road.	$ 40,000.00
Maitai Path	Maitai Path	Adjacent to Whakatu land	Length of Maitai path to be upgraded once Whakatu redevelop the site at 16 Paru Paru Road. Agreements in place to allow widening once they establish café outdoor area on neighbouring park.	$ 35,000.00
Brougham Street footpath	Brougham Street	East of Collingwood Street	Footpath is missing on southern side. Very difficult to construct as all driveways would need to be regraded for a long way back into properties. No opportunity to join to the Scotland Street footpath as road gets too close to boundary.	$ 300,000.00
Dodson Valley Road footpath	Dodson Valley Road	South side between Winton Place and Atawhai Crescent	Hill in the way. Not feasible to provide footpath on this side of the road and still provide access to properties. Have added pedestrian build-outs to minor improvements list instead.	$ 372,000.00
Bledisloe Avenue footpath	Bledisloe Avenue	In front of numbers 2-16	Missing section in front of 2-16 leads to Bledisloe Reserve.	$ 29,250.00
Reeves Street footpath	Reeves Street	West side for 70 m north of Aldinga Avenue	Restricted visibility when crossing at end of footpath on north side.	$ 35,000.00
Montreal Road footpath	Montreal Road	South of Toi Toi Street	Footpath on one side only.	$ 252,000.00
Joyce Place footpath	Joyce Place	Full length	Footpath on one side only. Is a new subdivision and in a short cul-de-sac so not a priority.	$ 36,000.00
Washington Road footpath	Washington Road	East of Brittania Heights intersection	No footpath on residential side of road, 4 houses affected, steep bank and tight road alignment. Children have to cross road to reach footpath at bottom of bank. No feasible option for providing a footpath on the west side of the road and still being able to provide vehicle access to the properties affected.	$ 192,000.00
Rangiora Terrace footpath	Rangiora Terrace	Between end of existing footpath and Tamaki Steps	Rough surface from base of steps onto existing footpath, No footpath around Rangiora Tce intersection and over rise towards sea. Too dangerous and have to cross road. Rangiora Tce upgrade no longer in AMP. Rough surface to be dealt with by maintenance.	$ 12,000.00

NETWORK DEFICIENCIES - FOOTPATHS				
Original description	**Road/Walkway Name**	**Location**	**Notes**	**Construction estimate**
The Ridgeway footpath	The Ridgeway	From Somerset Tce towards Kauri St on the east side	Footpath is in poor repair, when repaired can it be moved 1 metre back from traffic lanes, peds are very close to moving traffic lanes.	$ 210,000.00
Jellicoe Ave footpath	Jellicoe Avenue	Bledsloe Ave to Railway Reserve	Well worn path from Bledsloe Ave to Railway Reserve.	$ 27,000.00
Airlie Street footpath	Airlie Street	Full length	No footpath.	$ 336,000.00
Bridge on approach to the Airport/Quarantine Rd	Quarantine Road		Bridge on approach to Quarantine Rd/Bolt Rd roundabout on Quarantine has no footpath on south side. Some pedestrians to airport and general walkers.	$ 200,000.00
Douglas Rd to Observatory Hill walkway	Off Road	Off Road	Off road recreational route. Needs to be part of any development of the land above Douglas Road. Over private property.	$ 600,000.00
Observatory Hill to Emano St walkway	Off Road	Off Road	Off road recreational route. Needs to be part of any development of the land above Emano Street. Over private property.	$ 270,000.00
Stanley Crescent to Washington Rd walkway	Off Road	Off Road	Off road recreational and transport route. Over private property.	$ 240,000.00

APPENDIX N FOOTPATH REHABILITATION SITES

Proposed Footpath Rehabilitation sites - Draft Treatment Selection 2015/2018

Road Name	Start	End	Carriageway Start Name	Carriageway End Name	Side	Length
Year 1						
MAIN ROAD STOKE	316	336	LOUISSON AVENUE	MAITLAND AVENUE	Left	20
MAIN ROAD STOKE	715	895	MARSDEN ROAD	ROAD WIDENS	Left	180
MOTUEKA STREET	287	297	TIPAHI STREET	WAIMEA ROAD	Right	10
VICKERMAN STREET	141	153	HAVEN RD	WILDMAN AVE	Right	12
WILDMAN AVENUE (EASTBOUND)	353	373	VICKERMAN STREET	LOW STREET	Right	20
BRIDGE STREET	863	873	HARLEY STREET	TASMAN ST BRIDGE	Right	10
BRIDGE STREET	262	505	TRAFALGAR ST	COLLINGWOOD STREET	Right	243
BRIDGE STREET	262	502	TRAFALGAR ST	COLLINGWOOD STREET	Left	240
CAR PARK MONTGOMERY SQUARE	286	359	ACCESS NW CORNER BY ROLLOS	RUTHERFORD ST KERB LINE	Left	73
CAR PARK MONTGOMERY SQUARE	50	168	EAST SIDE OF CARPARK (WHITCOULLS)	WEST SIDE OF CARPARK (RSA)	Right	118
CAR PARK MONTGOMERY SQUARE	168	286	WEST SIDE OF CARPARK (RSA)	WEST SDIE OF NOTHERN HALF CARPARK	Right	118
COLLINGWOOD STREET	1342	1407	NILE STREET	BRONTE STREET	Left	65
DURHAM STREET	5	100	SONGER ST	RUTLAND ST	Left	95
YEAR 2						
EXAMINER STREET	350	371	RUTHERFORD STREET	TRAFALGAR STREET	Left	21
EXAMINER STREET	176	225	RUTHERFORD STREET	TRAFALGAR STREET	Right	49
FRANKLYN STREET	300	320	TIPAHI ST	KAWAI ST	Left	20
FRANKLYN STREET	552	622	WAIMEA RD	END AT JUDDER BAR	Right	70
HALIFAX STREET	213	310	RUTHERFORD ST	TRAFALGAR ST	Left	97
HALSTEAD STREET	7	42	HALIFAX ST	NEW ST	Left	35
HAVEN ROAD (ARTERIAL, NORTHBOUND)	194	264	HALIFAX STREET	QUEEN ELIZABETH II DRIVE	Left	70
HAVEN ROAD (ARTERIAL, NORTHBOUND)	72	177	HALIFAX STREET	QUEEN ELIZABETH II DRIVE	Left	105
HAVEN ROAD (ARTERIAL, NORTHBOUND)	267	391	HALIFAX STREET	QUEEN ELIZABETH II DRIVE	Left	124
MAIN ROAD STOKE	627	637	MAITLAND AVENUE	KEA STREET	Left	10
MAIN ROAD STOKE	637	681	KEA STREET	MARSDEN ROAD	Left	44
MAIN ROAD STOKE	1629	1688	LEMARI AVENUE	TAINUI STREET	Left	59
MAIN ROAD STOKE	1071	1170	PUTAITAI STREET	SONGER STREET	Left	99
MAIN ROAD STOKE	1509	1629	RANUI STREET	LEMARI AVENUE	Left	120
MAIN ROAD STOKE	4200	4505	ELMS STREET	SALISBURY ROAD	Left	305
SCOTLAND STREET	4	64	BRONTE STREET	SEYMOUR AVENUE	Right	60
SEAVIEW ROAD	176	186	ALLPORT PLACE	SEAVIEW LOOP ROAD	Left	10
SHELBOURNE STREET	98	112	NILE ST	EDUCATION BUILDING	Right	14
SONGER STREET	620	635	DERBY STREET	REEVES STREET	Left	15
SONGER STREET	410	435	SEAVIEW ROAD	DURHAM STREET	Left	25
TASMAN STREET (SOUTH)	36	134	BRIDGE ST	HARDY ST	Left	98
THE RIDGEWAY (NORTH)	290	300	ROAD NARROWS	BAIGENT ROAD	Left	10
TRAFALGAR SQUARE (WEST SIDE)	87	97	ROAD NARROWS	NILE STREET WEST	Right	10
TRAFALGAR SQUARE (WEST SIDE)	55	68	ROAD NARROWS	NILE STREET WEST	Left	13
YEAR 3						
TRAFALGAR SQUARE (WEST SIDE)	108	312	NILE STREET WEST	TRAFALGAR STREET ROUNDABOUT (EXAMIN	Left	204
TRAFALGAR STREET (NORTH)	286	340	ROAD WIDENS	GROVE STREET	Left	54
TRAFALGAR STREET (NORTH)	759	814	HALIFAX STREET	BRIDGE ST	Right	55

Road Name	Start	End	Carriageway Start Name	Carriageway End Name	Side	Length
TRAFALGAR STREET (NORTH)	726	814	HALIFAX STREET	BRIDGE ST	Left	88
TRAFALGAR STREET (SOUTH)	219	246	ROAD WIDENS	BRONTE STREET (CENTRAL)	Left	27
TRAFALGAR STREET (SOUTH)	248	298	ROAD WIDENS	BRONTE STREET (CENTRAL)	Left	50
TRAFALGAR STREET (SOUTH)	162	217	ROAD WIDENS	BRONTE STREET (CENTRAL)	Left	55
TRAFALGAR STREET (SOUTH)	91	162	EXAMINER STREET	ROAD WIDENS	Left	71
VAN DIEMEN STREET	395	410	RUTHERFORD ST	TRAFALGAR ST	Right	15
VANGUARD STREET	29	39	RUTHERFORD STREET	HARDY STREET	Left	10
VANGUARD STREET	1987	2004	MOTUEKA STREET	END	Right	17
WAIMEA ROAD	1200	1215	FRANKLYN STREET	MOTUEKA STREET	Left	15
WAIMEA ROAD	478	490	VAN DIEMAN STREET	HAMPDEN STREET	Left	12
WAIMEA ROAD	4670	4708	QUARANTINE ROAD	ANNESBROOK DRIVE CENTRE ISLAND	Left	38
ANNESBROOK DRIVE	344	476	QUARANTINE ROAD EAST	MAPLE AVENUE	Left	132
BRONTE STREET (EAST)	0	63	CDS	BROOK ST	Left	63
CHAMBERLAIN STREET	207	219	RANGIORA	MAIRE ST	Right	12
CHAMBERLAIN STREET	109	152	TOSWILL ST	RANGIORA	Right	43
GREEN STREET	249	327	MURITAI ST	ROTO ST	Left	78
KONINI STREET	424	476	MOUNT ST	GLOUCESTER ST	Left	52
MAITLAND AVENUE	225	235	MAIN RD STOKE	KOROMIKO AVE	Right	10
MOTUEKA STREET	143	153	VANGUARD STREET	TIPAHI STREET	Right	10
MOTUEKA STREET	20	42	VANGUARD STREET	TIPAHI STREET	Right	22
NEALE AVENUE	95	115	BLEDISLOE AVE	KEA ST	Left	20
NGATITAMA STREET	35	45	RUTHERFORD ST	HAMPDEN ST	Right	10
NORTH ROAD	198	208	WEKA ST	START KERB LHS	Left	10
NORTH ROAD	453	463	START KERB LHS	END	Left	10
PARKERS ROAD	250	270	BULLEN STREET	MURITAI STREET	Left	20
PARKERS ROAD	850	930	OTTERSON STREET	GOLF ROAD	Left	80
PARKERS ROAD	725	806	PARKERS ROAD ROUNDABOUT (BOLT)	OTTERSON STREET	Left	81
QUARANTINE ROAD	505	515	BOLT ROAD	PASCOE STREET	Left	10
QUARANTINE ROAD	86	145	BOLT ROAD	PASCOE STREET	Left	59
SCOTLAND STREET	64	189	SEYMOUR AVENUE	BROUGHAM STREET	Right	125
SUFFOLK ROAD	490	502	KINGSFORD DRIVE	CLAIRMONT HEIGHTS	Left	12
YEAR 4 AND BEYOND						
SUFFOLK ROAD	815	957	KINGSFORD DRIVE	CLAIRMONT HEIGHTS	Left	142
THE RIDGEWAY (SOUTH)	520	560	KAURI STREET	SOMERSET TERRACE	Left	40
THE RIDGEWAY (SOUTH)	408	453	KAURI STREET	SOMERSET TERRACE	Left	45
THE RIDGEWAY (SOUTH)	620	680	KAURI STREET	SOMERSET TERRACE	Left	60
TRAFALGAR SQUARE (CUL DE SAC)	3	91	TRAFALGAR SQ (WEST SIDE)	END	Right	88
WAIMEA ROAD	4709	4784	QUARANTINE ROAD	ANNESBROOK DRIVE CENTRE ISLAND	Left	75
WASTNEY TERRACE	265	275	JACKSON ST	JOLLIE ST	Right	10
WESTBROOK TERRACE	56	218	SEYMOUR AVE	MIRO ST	Right	162
			UFB YET TO BE INSTALLED *			
BEACH ROAD	170	180	BISLEY WALK	WAIKARE STREET	Left	10
FRANKLYN STREET	40	68	VANGUARD ST	TIPAHI ST	Left	28
FRANKLYN STREET	110	130	VANGUARD ST	TIPAHI ST	Left	20
TUKUKA STREET	314	324	KAWAI ST	WAIMEA RD	Right	10
TUKUKA STREET	197	212	TIPAHI ST	KAWAI ST	Right	15
TUKUKA STREET	269	369	KAWAI ST	WAIMEA RD	Left	100

Road Name	Start	End	Carriageway Start Name	Carriageway End Name	Side	Length
BAIGENT ROAD	50	120	THE RIDGEWAY	NEWMAN DR	Left	70
EMANO STREET	590	620	MURPHY ST	ORSMAN CRESENT	Left	30
JENNER ROAD	440	465	JENNER ROAD CUL-DE-SAC 1	JENNER ROAD CUL-DE-SAC 2	Left	25
JENNER ROAD	345	400	JENNER ROAD CUL-DE-SAC 1	JENNER ROAD CUL-DE-SAC 2	Left	55
KARAKA STREET	0	10	TITOKI ST	POLSTEAD RD	Right	10
KARAKA STREET	62	72	TITOKI ST	POLSTEAD RD	Right	10
KARAKA STREET	72	97	TITOKI ST	POLSTEAD RD	Left	25
MARSDEN ROAD	168	277	MAIN RD STOKE	THE RIDGEWAY	Left	109
MARSDEN ROAD	7	159	MAIN RD STOKE	THE RIDGEWAY	Left	152
NILE STREET (EAST)	1363	1383	MAITAI RD	CLEVELAND TCE	Right	20
SCOTIA STREET	815	825	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	10
SCOTIA STREET	884	895	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	11
SCOTIA STREET	775	790	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	15
SCOTIA STREET	260	290	BEATSON ROAD (NORTH END)	ULSTER STREET	Right	30
TOSSWILL ROAD	285	300	STATE HIGHWAY 6	CHAMBERLAIN STREET	Right	15
ALFRED STREET	220	230	VANGUARD STREET	TIPAHI STREET	Right	10
BEACH ROAD	365	385	BISLEY WALK	WAIKARE STREET	Left	20
COLLINGWOOD STREET	1535	1600	BRONTE STREET	BROUGHAM STREET	Left	65
MILTON STREET	380	464	GROVE ST	HALIFAX STREET EAST	Left	84
TIPAHI STREET	616	740	MOTUEKA ST	TUKUKA ST	Left	124
TUCKETT PLACE	6	95	WAIMEA RD	END	Left	89
TUKUKA STREET	0	20	START	TIPAHI ST	Right	20
TUKUKA STREET	0	50	START	TIPAHI ST	Left	50
WAIMEA ROAD	34	200	RUTHERFORD STREET	VAN DIEMAN STREET	Left	166
WAIMEA ROAD	345	395	RUTHERFORD STREET	VAN DIEMAN STREET	Left	50
WAIMEA ROAD	1950	1975	TUKUKA STREET	BOUNDARY ROAD	Left	25
WAIMEA ROAD	96	111	RUTHERFORD STREET	VAN DIEMAN STREET	Right	15
WAIMEA ROAD	1606	1625	TUKUKA STREET	BOUNDARY ROAD	Left	19
AKERSTEN STREET	218	228	WILDMAN AVENUE	MARINA CAR PARK	Left	10
ALFRED STREET	126	136	VANGUARD STREET	TIPAHI STREET	Right	10
ALFRED STREET	200	210	VANGUARD STREET	TIPAHI STREET	Right	10
ALFRED STREET	290	317	TIPAHI STREET	KAWAI STREET (NORTH)	Right	27
BISLEY AVENUE	580	630	CHAMPION TCE	MOANA AVE	Left	50
BOLT ROAD	310	345	PARKERS ROAD ROUNDABOUT (BOLT)	ROTHERHAM STREET	Left	35
BOUNDARY ROAD	6	116	WAIMEA RD	KAWAI ST SOUTH	Left	110
BROOK STREET	308	490	STORE	BLICK TERRACE	Left	182
JENNER ROAD	320	335	JENNER ROAD CUL-DE-SAC 1	JENNER ROAD CUL-DE-SAC 2	Left	15
JENNER ROAD	400	425	JENNER ROAD CUL-DE-SAC 1	JENNER ROAD CUL-DE-SAC 2	Left	25
JERNINGHAM STREET	0	112	TORLESSE ST	END	Left	112
KARAKA STREET	10	62	TITOKI ST	POLSTEAD RD	Right	52
KARAKA STREET	175	250	TITOKI ST	POLSTEAD RD	Right	75
KARAKA STREET	72	167	TITOKI ST	POLSTEAD RD	Right	95
KAWAI STREET (NORTH)	401	445	ALFRED ST	FRANKLYN ST	Left	44
KAWAI STREET (SOUTH)	667	690	TIPAHI ST	BOUNDRY RD	Left	23
KAWAI STREET (SOUTH)	160	200	MOTUEKA ST	TUKUKA ST	Left	40
KAWAI STREET (SOUTH)	615	664	TIPAHI ST	BOUNDRY RD	Left	49
MARSDEN ROAD	360	396	MAIN RD STOKE	THE RIDGEWAY	Left	36

Road Name	Start	End	Carriageway Start Name	Carriageway End Name	Side	Length
MOANA AVENUE	185	205	BISLEY AVENUE	CENTRE MOANA AVENUE ROUNDABOUT (STA	Right	20
MOANA AVENUE	679	830	MONCRIEFF AVENUE (PAINTED CENTRELIN	PRINCES DRIVE ROUNDABOUT (MOANA)	Left	151
MURPHY STREET	190	202	EMANO ST	JENNER ROAD	Right	12
NILE STREET (EAST)	740	816	TASMAN ST	DOMETT ST	Left	76
NILE STREET (EAST)	1210	1258	DOMETT ST	MAITAI RD	Left	48
PRINCES DRIVE	970	990	MOANA ROAD	ROAD NARROWS	Left	20
SCOTIA STREET	170	182	BEATSON ROAD (NORTH END)	ULSTER STREET	Right	12
SCOTIA STREET	729	749	ROAD NARROWS	ANGLIA STREET	Right	20
SCOTIA STREET	754	775	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	21
SCOTIA STREET	790	815	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	25
SCOTIA STREET	825	850	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	25
SCOTIA STREET	851	884	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	33
SCOTIA STREET	895	947	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Left	52
SCOTIA STREET	749	948	ANGLIA STREET	BEATSON ROAD (SOUTH END)	Right	199
STANSELL AVENUE	240	270	PADDYS KNOB ACCESS	CHANGE IN CARRIAGEWAY WIDTH	Right	30
STANSELL AVENUE	360	390	CHANGE IN CARRIAGEWAY WIDTH	TOSSWILL ROAD	Right	30
THE RIDGEWAY (NORTH)	981	1017	ARAPIKI ROAD	MARSDEN ROAD	Left	36
TIPAHI STREET	937	947	TUKUKA ST	KAWAI ST	Left	10
TORLESSE STREET	4	165	WATERHOUSE ST	START ONE WAY	Left	161
WAIMEA ROAD	3993	4083	BEATSONS ROAD (SOUTH END)	WATERHOUSE STREET	Left	90
WAIMEA ROAD	3898	3991	BEATSONS ROAD (SOUTH END)	WATERHOUSE STREET	Left	93
WASHINGTON ROAD	470	600	HASTINGS ST	PRINCES DR	Left	130
WATERHOUSE STREET	6	50	WAIMEA RD	COSTER	Right	44
WATERHOUSE STREET	6	111	WAIMEA RD	COSTER	Left	105
WESTBROOK TERRACE	265	325	MIRO ST	HINAU ST	Right	60

* Priority shown indicates the current condition of the footpath, however UFB schedule may be different.