

30 Year Transport Strategy for Northland

‘incorporating’ The Regional Land Transport Strategy



30 Year Transport Strategy for Northland

‘incorporating’ The Regional Land Transport Strategy

ISBN 0-909006-43-1

Northland Regional Council

Private Bag 9021
Whangarei
Telephone 09-438 4639

www.nrc.govt.nz/transport

Regional Offices: Dargaville
Opuā
Kaitiāia

APPROVAL OF THE 30 YEAR TRANSPORT STRATEGY FOR NORTHLAND

The Northland Regional Council by resolution dated 19 May 2010, approved and made operative the 30 Year Transport Strategy for Northland (incorporating the Regional Land Transport Strategy) contained herein, pursuant to the powers and authorities vested in it by the Land Transport Management Act 2003.

This approval will be publicly notified on 29 May 2010 and becomes operative on 31 May 2010.

The common seal of the Northland Regional Council was hereto affixed in the presence of:

A handwritten signature in blue ink, appearing to read 'Ken Roberts', is written over the common seal of the Northland Regional Council.

Chief Executive Officer

Message from the Regional Transport Committee Chairman

It is with great pleasure that I present this 30 Year Transport Strategy. The strategy, which incorporates the Regional Land Transport Strategy, is an in-depth look at where transport is now, where we want to be 30 years ahead and how we intend to get there.

Northlanders are renowned for their ability to develop new and innovative ideas and do things differently – this strategy encourages this approach and is, in itself, a new and innovative approach to the strategic planning of the transport network in Northland. This strategy has purposefully chosen to cover all aspects of the transport system and addresses coastal shipping as well as air travel.

The consultation process has been a very positive experience with over 200 submitters helping us enhance and improve the strategy. Two thirds of these were focused on the transport link between the communities of north and south Hokianga. I was impressed at the very passionate, thorough and well articulated presentations on the benefits of joining the two communities at north and south Hokianga.

This strategy is about Northland putting its hand up and being recognised nationally – we are not just an area north of Auckland - Northland is a nationally significant tourism destination with around 5 million visitors annually (1 million of those being from overseas). Northland has a thriving economy and is a major generator of freight movements. Northland has a deep water port at Marsden Point and the only Oil Refinery in the country. Northland is a significant contributor to New Zealand Inc.

Northland also has differences within its region that we must not lose sight of. The variations between the east and west coast, particularly in terms of population and deprivation, and the priorities of urban compared to rural transport improvements are challenges we must address.

I wish to thank the Hon Steven Joyce, Minister of Transport, for his support of the strategic route from Auckland to Whāngārei and the progress being made with the first stage: Puhoi to Wellsford, including bypasses at Warkworth and Wellsford.

On behalf of the Northland Regional Transport Committee, I would like to extend a personal thank you to the organisations and individuals who contributed so much to the preparation of this document. My fellow committee members and I look forward to working with you to achieve the direction and priorities outlined within this strategy over the coming years.



Councillor John Bain
Chairman
Northland Regional Transport Committee
January 2010

Table of Contents

Message from the Regional Transport Committee Chairman	1
1. Introduction	4
1.1 Consistency with National Policy.....	7
1.2 Consistency with Regional Policy.....	10
2. Northland's Key Challenges.....	13
<i>Map 1: Northland Population Distribution.....</i>	<i>14</i>
<i>Map 2: Deprivation Index for Northland.....</i>	<i>15</i>
2.1 Economic Success	16
2.2 Safety	17
2.3 Climate Change.....	18
2.4 Route Security	18
<i>Map 3: Major Risk Areas</i>	<i>20</i>
2.5 Freight	21
2.6 Connecting Communities	23
2.7 Better Integration of Land Use and Transport.....	23
2.8 Environmental Effects.....	23
2.9 Rural Communities and the Rural Roding Network	24
2.10 Fuel Prices and Electrification	24
3. Northland's Direction.....	25
3.1 Strategic Direction	25
3.2 Principles Underlying the Strategy	26
3.3 Vision for Northland	27
3.4 Economic Priorities for Northland.....	27
<i>Map 5: Current Economic Situation.....</i>	<i>29</i>
<i>Map 6: Indicative Economic Vision for Northland.....</i>	<i>30</i>
3.5 Northland Outcomes.....	31
3.6 Strategic Options	31
3.7 Addressing Environmental Effects	32
3.8 Integration with Land Use.....	33
4. Demand Management	34
4.1 Demand Management Principles	35
4.2 Strategic Direction	35
4.3 Demand Management Initiatives.....	37
4.4 Education and Enforcement	38
5. Modes.....	39
5.1 The Role of Transport Modes.....	39
5.2 Road	40
<i>Map 7: Strategic Tourism Route.....</i>	<i>42</i>
<i>Map 8: Strategic Freight Route</i>	<i>43</i>
<i>Map 9: Strategic Roding Priorities.....</i>	<i>44</i>
5.3 Rail.....	45
<i>Map 10: Auckland to Northland Rail Link</i>	<i>47</i>
<i>Map 11: Marsden Point Rail Link Designation Route.....</i>	<i>48</i>
5.4 Air	48
<i>Map 12: Airports in Northland.....</i>	<i>50</i>
5.5 Coastal Shipping	51

	<i>Map 13: Ports and Shipping in Northland</i>	<i>53</i>
5.6	Public Transport	54
5.7	Walking and Cycling and other Non-motorised Road Users.....	55
	<i>Map 14: Strategic Walking/Cycling Route Priority Development Areas.....</i>	<i>58</i>
6.	Key Initiatives	59
6.1	Impact of the Outcomes	70
7.	Monitoring and Implementation.....	71
7.1	Monitoring Framework.....	71
7.2	Funding.....	72
7.3	Risk Management.....	76
8.	Significance Policy	77
	APPENDIX A – Glossary of Terms.....	78
	APPENDIX B – Detailed Maps of Strategic Roding Priorities	79
	APPENDIX C – Assessment of Compliance with Sections 75 & 76 of LTMA.....	83
	APPENDIX D –Statement by Independent Auditor	87
	APPENDIX E – National and Regional Documents	88

1. Introduction

This 30 Year Transport Strategy (Strategy) has been produced by the Northland Regional Transport Committee (RTC). The RTC includes representatives from:

- The Northland Regional Council
- The Far North District Council
- The Kaipara District Council
- The Whāngārei District Council
- The New Zealand Transport Agency (NZTA)

The RTC also has a number of individual members who represent the five Land Transport Management Act 2003 (LTMA) objectives of:

- Environmental Sustainability
- Economic Development
- Safety and Personal Security
- Public Health
- Access and Mobility
- A sixth appointee to represent cultural interests

The purpose of this Strategy is to set the direction for the region's transport system over the next 30 years. The Strategy identifies what is needed to achieve an affordable, integrated, safe, responsive, and sustainable transport system. It is recognised that the LTMA focuses on the land based sectors of a transport system. However, this Strategy has chosen to cover all aspects of the transport system and has therefore addressed coastal shipping as well as air travel.

Northland's strategic direction is focused on encouraging and creating growth, both by better harnessing local opportunity and capability, and by inviting new investment into our regional economy. Current major sectors contributing to the regional economy are dairy production, forestry, tourism and building and construction. Horticulture, aquaculture and specialist engineering particularly marine are also increasingly significant contributors.

The LTMA requires the preparation of a Regional Land Transport Strategy (RLTS). The RLTS is a statutory document prepared under the LTMA. The RLTS must be prepared every 6 years and covers a period of at least 30 years. Appendix C contains an assessment of how the Strategy complies with sections 75 and 76 of the LTMA and Appendix D provides an independent Audit Statement in regard to the Strategy's compliance with the LTMA.

The LTMA requires that the RTC must, in the course of preparing the RLTS, take into account:

- the views of affected communities;
- the view of land transport network providers in the region;
- the need to give early and full consideration to land transport options and alternatives in a way that contributes to the avoidance of adverse environmental effects, and the views of affected communities; and
- the need to provide early and full opportunities for persons and organisations to contribute to the development of the RLTS.

The RTC took these matters into account by undertaking a process of informal consultation on the basic structure and key strategic options of the RLTS in May 2009. A number of parties provided comments and feedback and these have been incorporated into this Strategy.

This 30 Year Transport Strategy incorporates the RLTS for Northland.

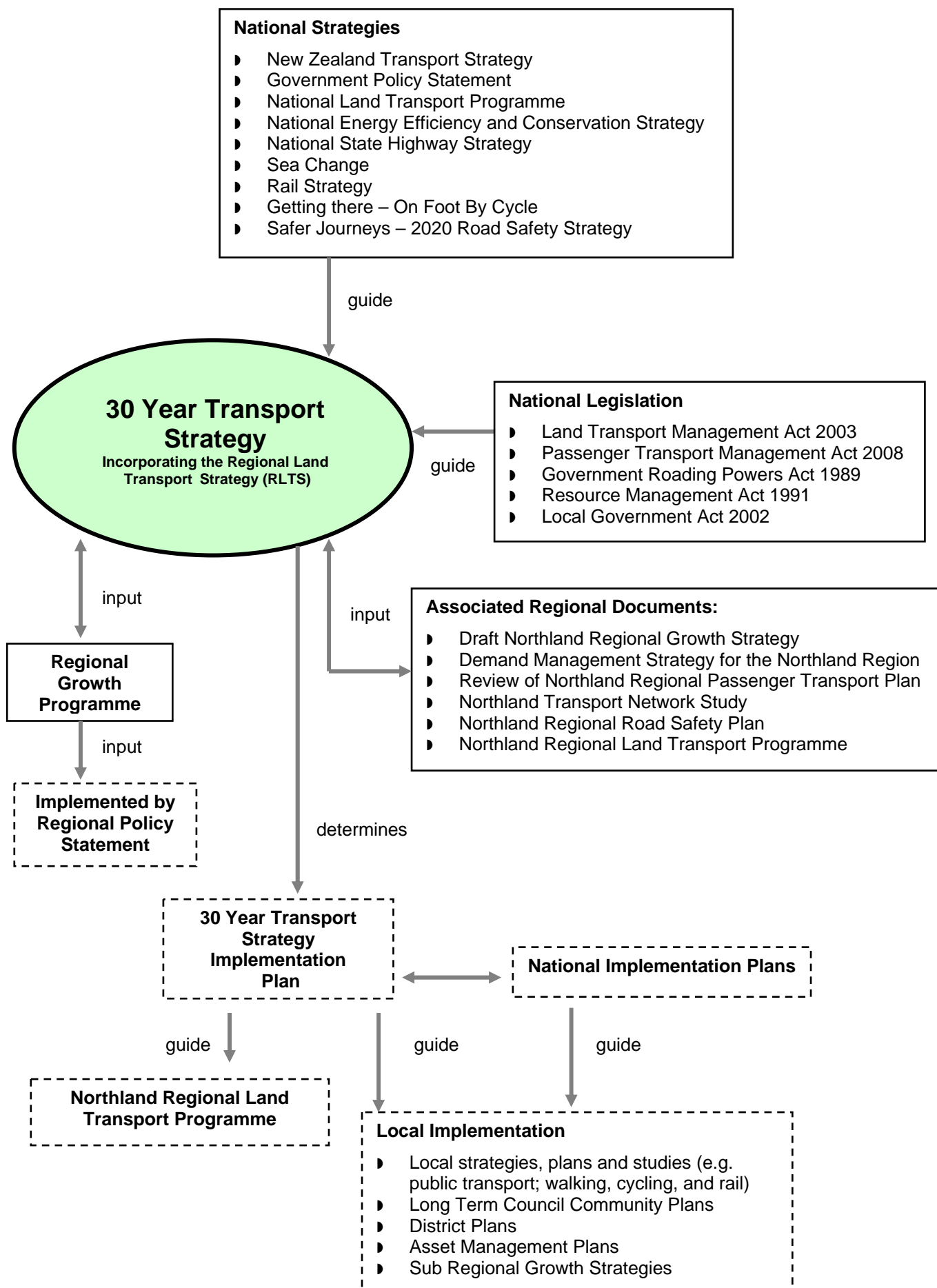
A review of the 2006 – 2016 Regional Land Transport Strategy was undertaken to identify gaps in both the expectations of the Strategy and its compliance with LTMA, as amended on 1st August 2008.

This Strategy reflects the unique challenges faced by the region over the next 30 years and provides direction for transport in Northland through a clear vision delivered through a unified approach. This Strategy has deliberately included air travel and coastal shipping to provide a complete picture of transportation within Northland, particularly as these two modes have a direct connection with land based transportation.

The Strategy was formally notified for public consultation in January 2010. A total of 219 submissions were received on the Strategy. None of the submissions completely opposed the development of the Strategy and the process has been positive with a common objective of enhancing and improving the Strategy. A significant number of the submissions were focused on the transport link between the communities of north and south Hokianga. Other key themes that were raised through this process (and resulted in changes to the Strategy) were Puhoi to Whāngārei roading, consistency with Government Policy Statement (GPS) and life after the current GPS, peak oil and electrification of the vehicle fleet, walking and cycling and public transport, and improvements to the rail network.

The following diagram illustrates the relationship of the Strategy to other key documents and strategies at both a regional and national level.

Figure 1: Relationship Diagram of the 30 Year Transport Strategy



1.1 Consistency with National Policy

The Strategy is required to be consistent with the national direction, both in terms of the legislative requirements and in terms of achieving the goals and initiatives that are a priority for government. In general terms the challenges we face as a region are consistent with the challenges identified nationally. Therefore, if we address the challenges faced in Northland then we will be going some way to meeting the challenges recognised nationally through the LTMA, GPS and the New Zealand Transport Strategy.

The purpose of the LTMA is to contribute to the aim of achieving an affordable, integrated, safe, responsive, and sustainable land transport system. The RLTS must contribute to this aim as well as contribute to each of the following LTMA objectives:

- assisting economic development;
- assisting safety and personal security;
- improving access and mobility;
- protecting and promoting public health; and
- ensuring environmental sustainability.

Government Policy Statement

The RLTS must take into account the GPS on Land Transport Funding. The GPS details the Government's desired outcomes and funding priorities for the use of the National Land Transport Fund to support activities in the land transport sector. The GPS covers the impacts the Government wishes to achieve from its investment in land transport:

- how it will achieve these impacts through funding certain activity classes;
- how much funding will be provided; and
- how this funding will be raised.

The GPS is the main guiding document by which the Government can ensure that the land transport funding system focuses on the priority of generating economic growth and productivity. The specific impacts the Government expects to be achieved through the use of the National Land Transport Fund are set out below.

Impacts that contribute to economic growth and productivity

- Improvements in the provision of infrastructure and services that enhance transport efficiency and lower the cost of transportation through:-
 - improvements in journey time reliability;
 - easing of severe congestion;
 - more efficient freight supply chain; and
 - better use of existing transport capacity.
- Better access to markets, employment, and areas that contribute to economic growth.
- A secure and resilient transport network.

Other impacts

- Reductions in deaths and serious injuries as a result of road crashes.
- More transport choices, particularly for those with limited access to a car where appropriate.
- Reductions in adverse environmental effects from land transport.
- Contributions to positive health outcomes.

Table 1: Recognising the Government Policy Statement Challenges in Northland

National Challenges – Government Policy Statement	Regional challenges – 30 Year Transport Strategy
Journey time reliability	Economic success, route security, and connecting communities: focus is primarily on the journey time along the strategic tourism route (Bay of Islands to Auckland) but also recognises journey time reliability for freight and for people to access markets and employment within the region.
Severe congestion	Economic success and better integration of land use and transport: particularly focused on the Whāngārei urban area for current congestion issues but also a key challenge is ensuring future land use and development decisions do not result in severe congestion.
Freight	Identification of key freight movements by mode, mapping of the strategic freight route (Whāngārei to Auckland) and the preferred route for heavy traffic (Kaitiāia to Marsden Point).
Better use of existing transport capacity	Freight and economic success: fit for purpose transport infrastructure, including improvements to rail and coastal shipping.
Better access to markets, employment and areas that contribute to economic growth	Economic success: development of successful industries including manufacturing within Whāngārei as well as growth at Marsden Point and appropriate location of forestry processing.
A secure and resilient transport network	Route security: restoring networks and drier summers and wetter winters through flooding, sea level rise and landslips. Consideration of areas where there is no appropriate alternative route.

New Zealand Transport Strategy

The RLTS must also be consistent with any New Zealand Transport Strategy that has been prepared. In August 2008, the Government launched the New Zealand Transport Strategy 2008 (NZTS). This Strategy included seven key challenges that it wants to see achieved:

1. Responding to climate change.
2. Energy security and cost.
3. Funding of investment in infrastructure and services while keeping transport affordable.
4. Increases in the environmental and social impacts of transport.
5. Changing demands arising from the ageing of the population.
6. Land use development and its impacts on transport demand.
7. Global terrorism.

Table 2: Recognising the National Transport Strategy Challenges in Northland

National Challenges – New Zealand Transport Strategy	Regional Challenges – 30 Year Transport Strategy
Responding to climate change	Route security: maintaining and restoring networks as drier summers and wetter winters impact through flooding, sea level rise, and landslips. Helping to reduce the direct causes of climate change by reducing per capita carbon emissions from land transport.
Energy security and cost	Impact of freight: transport of refined oil - either by upgraded rail, by pipeline, barging, or truck.
Funding of investment in infrastructure and services while keeping transport affordable	Connecting communities: recognising that the choices some communities have for travel are limited to a private car. Also commercial bus services may not be financially viable. Recognising that the easiest and most affordable connection for some communities is through water transport, and considering the social impact where connectivity is threatened due to increased maintenance and operational costs. Financial resource: low population with relatively small working age demographic supporting a large roading network with a high maintenance liability.
Increases in the environmental and social impacts of transport	Connecting communities: social impact where increased fuel costs may make car travel untenable. Consideration of any transport impacts on the natural environment.
Changing demands arising from the ageing of the population	Connecting communities: current focus of health facilities in Whāngārei particularly for the ageing population and mobility of elderly in remote communities - ageing in place.
Land use development and its impact on transport demand	Economic success: development of successful industries including manufacturing within Whāngārei as well as growth at Marsden Point and appropriate location of forestry processing. Land use development: ensuring rural and residential subdivision and development takes into consideration the effects on the transportation network. Impact of freight: future transport needs to and from the port including potential processing operations.
Global terrorism	The only possible risk from terrorism is the Oil Refinery at Marsden Point however unlikely this seems. There are more significant risks associated with the impact of natural disasters on Route Security.

The RLTS must also be consistent with relevant National Policy Statements, Strategies, and Acts. In the course of preparing this Strategy a detailed review of the relevant documents and their relationship with this Strategy has been completed as a background report. Of particular relevance, other than the documents mentioned above, is the National Energy Efficiency and Conservation Strategy (NEECS). This Strategy is generally consistent with the approach of the NEECS where it relates to transportation.

Further information on the key national and regional policy statements, plans, and strategies is provided in Appendix E.

1.2 Consistency with Regional Policy

The region is developing a comprehensive planning framework to sustainably manage the region into the future. It should be noted that the region wishes to see growth and productivity enhanced because, although Northland is a relatively large region (approximately 13,789 sq km, 5% of NZ total), it has a low population density for its size, reflected in its highly rural nature. Gross Domestic Product (GDP) is also low in the region, being a third lower than the national average, partly due to the low value commodity based economy.

Northland is developing strategic planning which focuses on sustainable growth and putting Northland first. It is a vision of a sustainable future; recognising and valuing the raw beauty of Northland's landscape, accepting the need to develop a vibrant economy to provide opportunities for our future generations, and ensuring that the infrastructure that we need is developed to support both.

Regional Growth Programme for Northland

Northland Regional Council has commenced work on the development of a Regional Growth Programme for Northland. The result will be an action plan to develop the region to its full potential using a sustainable development approach. The programme will consider social, environmental, and cultural factors alongside economic development, infrastructure, and growth opportunities.

This growth programme will be forward looking with a 30 year planning horizon. In order to achieve the vision and strategies of the growth programme, the region will need to implement the vision and strategies through a revision of its Regional Policy Statement (RPS).

Every effort has been made to incorporate the intentions of the growth programme into this Strategy. However, it is recognised that the growth programme is currently a draft document that has not been released by the Regional Council for public consultation and once it is finalised it may be necessary to review this Strategy.

Regional Policy Statement for Northland

A key strategic document for the region in regard to the sustainable management of natural and physical resources is the RPS for Northland. The transport issues and policies within the RPS are highlighted in table 3 below. The current RPS was made operative in 1999 and is currently undergoing a comprehensive review and it is anticipated that it will be substantially amended. It is essential that the revised RPS addresses any potential environmental effects from the development of transport infrastructure as well as the integration of land use planning with infrastructure planning. In addition, key strategic options and initiatives identified within this Strategy will need to be supported and assisted through the provisions of the RPS.

A new area for the RPS is the development of policy guidance in regard to the recent new function under section 30 of the Resource Management Act (1991):

(gb) the strategic integration of infrastructure with land use through objectives, policies, and methods;

Because of the impending review, the RPS does not yet address the integration of infrastructure with land use. The current provisions of the RPS focus on maintaining and enhancing the safety and efficiency of the region's transport network, while minimising adverse environmental effects.

Table 3: Operative Regional Policy Statement - Transport Issues and Policies

Issue	Policy
Energy efficiency	To ensure that energy efficiency is considered in the development and use of natural and physical resources.
Transport development	<p>To promote the development of an integrated transport network which makes efficient and environmentally sustainable use of resources.</p> <p>To reduce conflicts between heavy vehicles and other users of the roading network.</p>
Noise impacts	<p>To promote appropriate buffer areas around ports and other major transport facilities for noise mitigation purposes.</p> <p>To promote the incorporation of appropriate noise mitigation measures into the design of new road and rail facilities, especially those which pass through residential areas.</p> <p>To encourage the use of noise reduction materials in the design of buildings.</p> <p>To control, where appropriate, any adverse noise effects on the environment arising from the use of modes of transport.</p>
Effects of land use and subdivision activities	<p>To minimise the adverse effects of land use and subdivision activities on major transport facilities, particularly strategic and arterial roads and railways.</p> <p>To ensure that safe and convenient vehicle access is available to all sites and adequate provision is made for on site parking and loading of vehicles.</p>
Avoiding nuisance effects	To promote measures which reduce dust emissions from roads, particularly where they adversely affect adjacent land uses.
Greenhouse gas emissions	To avoid, remedy or mitigate the adverse effects of greenhouse gas emissions.
Diffuse source contamination, stormwater drainage system contamination and riparian area management	To promote the use of best management practices to avoid the contamination of natural water bodies and coastal waters arising from sediment and leachates in runoff and groundwater and from contaminated stormwater.
Transportation of hazardous substances	To ensure that effective systems are in place for tracking the transport of hazardous substances in the region and dealing with associated emergencies.

It is anticipated that the review of the RPS will provide a more comprehensive approach to the transport network and will provide more detailed guidance on the integration of infrastructure with land use. It may be necessary to review parts of this Strategy to ensure it is consistent with the revised RPS once it has been completed.

1.2.1 Supporting Information

In the course of preparing this Strategy, recent work undertaken in the region has been considered. This is to ensure that:

- use is made of previous investments in strategic planning through monitoring and review processes;
- complementary schemes, options or initiatives are identified; and
- any conflicts are identified and direction provided in this Strategy.

In the course of preparing this Strategy a detailed review of each of these documents, and their relationship with this Strategy has been completed as a background report (refer to Appendix E):

- Northland Regional Road Safety Plan - 2009
- Heavy Traffic Volumes Report – 2007
- WDC Walking and Cycling Strategy – 2007
- FNDC Walking and Cycling Strategy – 2007
- KDC Walking and Cycling Strategy – 2005
- Scoping Study into Prioritising Strategic Transport Links in Northland – 2005
- Northland Integrated Transport Study – 2002
- National State Highway Strategy, 2007
- Whāngārei Transportation Network Strategy – 2009
- Kerikeri - Waipapa Structure Plan
- Other local strategies.

The Northland Transport Network Study 2008 (NTNS) is of particular note and is discussed separately below.

A review of each of the three district plans of the region has been undertaken in the course of preparing this Strategy. The district plans generally focus on the provision of parking and access roads in association with land use and development. This Strategy provides direction for the key roading priorities, such as the strategic freight and tourism routes. This should assist district plans in their management of access onto the road network.

It is noted that the District Councils are at varying stages of undertaking more strategic growth planning in terms of sub-regional growth strategies, which will provide guidance on what areas of the district are expected to grow. Once this process has been undertaken, this Strategy may need to be reviewed to ensure the transport priorities are consistent with the anticipated growth areas.

1.2.2 Northland Transport Network Study - 2008

The purpose of the NTNS was to provide an integrated regional overview of transport network development in Northland and to provide information and guidance that will assist and support future transport planning studies. The NTNS report had the objectives of:

- providing a strategic overview of the current state and performance of the existing transport network, major risks to it, and recent trends in its use to identify any issues and gaps that need to be addressed;
- identifying expected traffic growth and land use development scenarios and identifying and agreeing appropriate interventions required to the network to meet these;
- identifying and gaining agreement on the key transport corridors (routes) and developing at a strategic level an appropriate hierarchy for Northland for these key corridors;
- identifying and gaining agreement of appropriate and achievable opportunities to pursue other forms and types of land transport modes other than road transport; and
- developing and gaining agreement on a consistent approach for agreeing prioritisation of transport projects within the identified available funding, future RLTS development and to support funding applications.

The outcomes of the NTNS have been used in the course of preparing this Strategy.

1.2.3 Inter-Regional Relationships

This Strategy identifies a number of significant connections with other areas and agencies outside the region. Of particular note are the freight and tourism connections by road to and through Auckland and the freight connection by rail to and through Auckland.

It is therefore essential to the success of this Strategy that the region maintain its sound working relationships with the following key organisations:

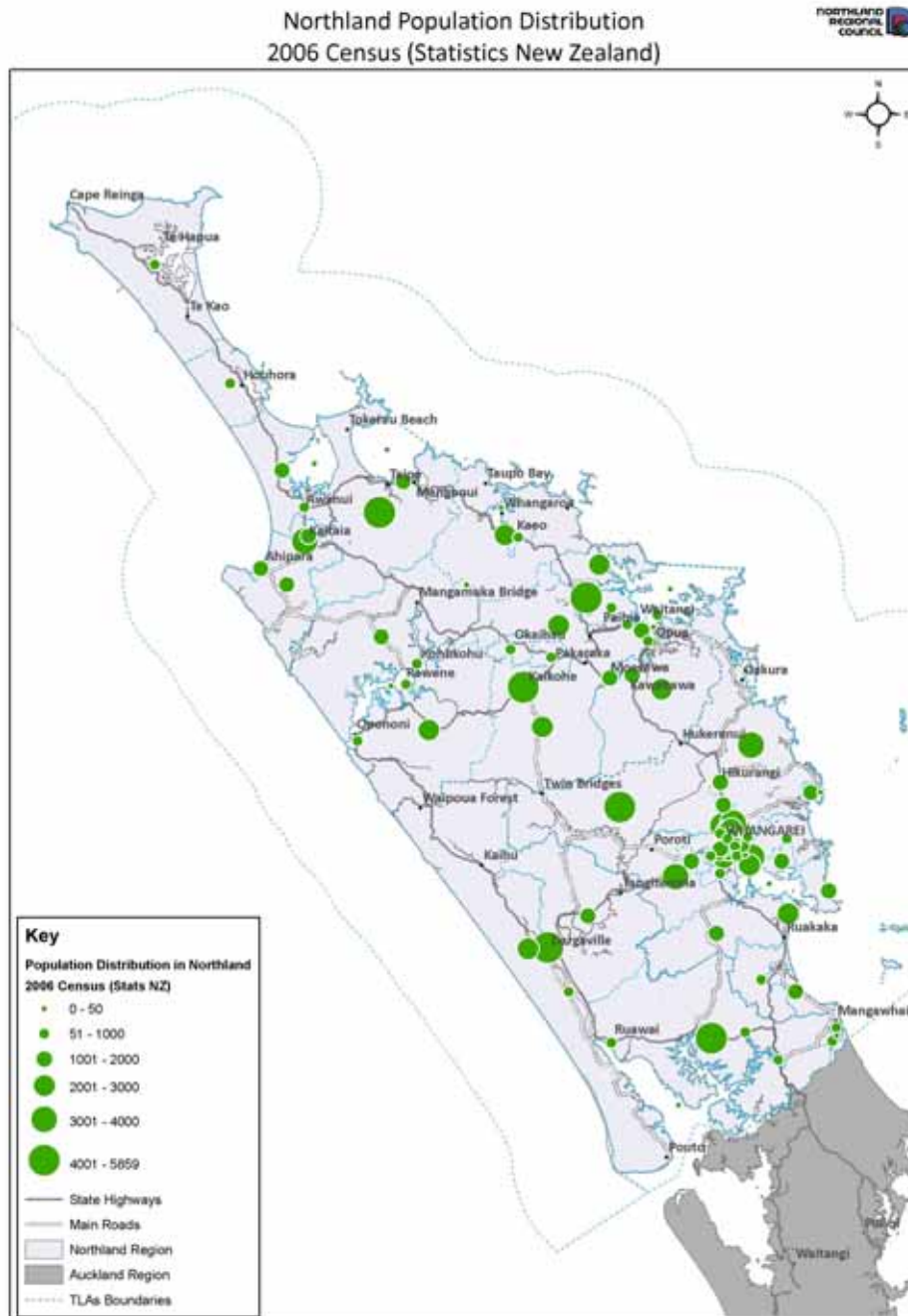
- The Auckland Council
- The Auckland Transport Agency
- The rail network operator (KiwiRail)
- Environment Waikato and Environment Bay of Plenty
- The New Zealand Transport Agency (NZTA)

2. Northland's Key Challenges

Situated at the northern most tip of New Zealand, Northland is 1.25 million hectares in size with 15 harbours and 3,200 kilometres of coastline. Connected to the rest of New Zealand through Auckland, and with a growing economy, transportation and route security are essential to Northland's continued growth and prosperity. Major sectors contributing to the regional economy are pastoral, forestry, tourism, building, and construction. Horticulture and specialist engineering particularly marine related are also increasingly significant contributors. Aquaculture and mineral exploration could have a significant impact in the future.

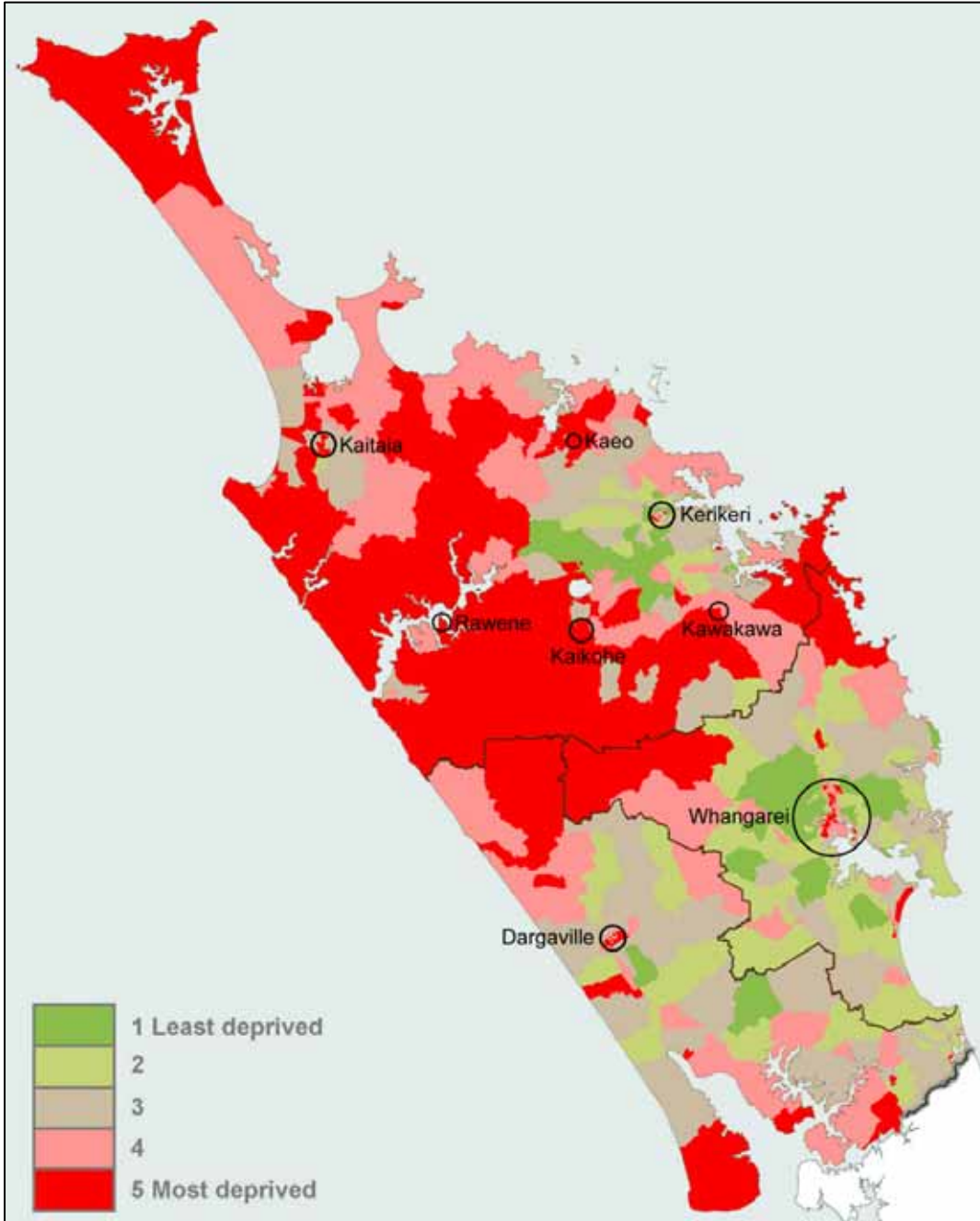
Northland has a population of 152,700 (*Census 2006*) spread through urban and rural communities. The people are distributed across a topography offering challenges of access, isolation, and communication. Northland has one city, Whāngārei, a number of rural towns, numerous townships, and hamlets and areas of coastal settlement with minimal services. Northland's population is largely concentrated along the east coast.

Map 1: Northland Population Distribution



Approximately 64,400 employees work for more than 12,000 businesses, predominantly in low skill/low wage employment (*Census 2006*.) Northland's economy has grown more slowly (2.9%pa) than the national economy over the past ten years (3.3%) but equalled it over the past five years. If measured in terms of Gross Domestic Product (GDP) per capita, Northland's growth matches that of the national economy over the ten year period and exceeds national growth over the past five years. However, because Northland's GDP per capita growth is of a considerably smaller base than at the national level, the absolute gap between Northland's per capita GDP and national per capita GDP has widened over the ten year period.

As a consequence of the low base, lack of economic stability and low levels of investment in value added industry in the region, Northland continues to feature poorly in the nation's deprivation statistics.



Statistically, Northland is placed sixth regarding annual 'Guest Nights' for regional tourist destinations in New Zealand, placing it behind Queenstown & Lakes District, Auckland region, Wellington region, Christchurch & Canterbury, and only slightly behind Rotorua, a fact that is not well promoted.

Leading on from this, Northland's geographically widespread population, and significant influx of seasonal visitors, results in many hired vehicles and unfamiliar drivers on the roads. This has significant implications for safety as well as increased demands on local services and infrastructure.

A key feature of the local authority network in Northland is the ratio of road length kilometres per square kilometre of land area, being 0.47km/km² compared with 0.34km/km² nationally; and the ratio of road length (metres) per head of population in Northland being 42.7m/person compared to 22.3m/person nationally. These statistics are partly a consequence of the regional topography which has numerous inlets, harbours and peninsulas and winding hill sections but they do emphasise the relatively high burden of road maintenance on the Northland population and particularly for a sparsely populated district such as Kaipara.

A further challenge to Northland is the existing state of the rail system, which is under developed and limited by weight and speed restrictions as well as the size of existing tunnels which will not take the new larger containers. This lack of investment has serious implications for road safety, as freight is forced to be transported by road and is also seen as a huge impediment to future economic growth for the region.

Northland has excellent potential for a commercial container port, along with increases in volumes of bulk cargo, with Marsden Point having the deepest natural harbour in Australasia. However, challenges arise in regard to access to the port area for freight, land-based loading facilities, and competition with the port facilities in Auckland and Tauranga.

General challenges to long term transport planning in Northland also exist in access to public transport including alternative modes, vehicle emissions and the effect on public health from issues such as physical activity, traffic safety, air quality (including dust from gravel roads), noise levels, social support and cohesion and access to health services and or facilities, along with general environmental sustainability.

Overall, eight key challenges that Northland will need to address over the next 30 years have been identified:

- 1. Economic success.**
- 2. Safety.**
- 3. Climate change.**
- 4. Route security.**
- 5. Freight.**
- 6. Connecting communities.**
- 7. Better integration of land use and transport.**
- 8. Environmental effects.**

2.1 Economic Success

There are several primary issues associated with the challenge of economic success in Northland. Northland's location north of Auckland results in an effective separation of the region from the rest of New Zealand, and as a result Auckland is a key lifeline for Northland.

As such, secure and reliable transport connections to Auckland and beyond are critical for economic success. Access difficulties (through Auckland, through Northland or both) may deter some visitors as well as having significant implications for freight movements, particularly with the trend towards 'just in time deliveries' rather than businesses stockpiling supplies.

There is scope in Northland to increase airport capability. The ability to land in adverse weather conditions and responsiveness for air travel services are issues that need to be addressed. Future planning would see an international airport in the Bay of Islands / Far North along with increased capacity in the region's other airports.

The potential for growth in tourism is also a primary issue for economic success that may be impacted by several factors:

- most visitors travel up the eastern coast of Northland and the potential to encourage a more balanced use of the Twin Coast Discovery roads;
- increased international tourist numbers arriving in Northland when they start their New Zealand holiday;
- increased international and domestic tourists holidaying in Northland; and
- promotion of the Regional Cycleway links and the reduction of freight on these routes in each of the three District Council areas.

Northland has recognised that the region has significant potential to develop its aquaculture industry. A significant contributor to this development will be to strengthen the processing industry within Northland. This includes identifying and supporting the key requirements of the processing industry which are access to the resource (the aquaculture farms) as well as access to key markets through freight connections by road, rail, and air transport.

2.2 Safety

The challenges presented to the safety of Northland's roads can be separated into five key issues being loss of control on bends, speed, alcohol, road factors, and roadside hazards. These are consistent with the Northland Regional Road Safety Plan and Safer Journeys – 2020 Road Safety Strategy.

Loss of Control on Bends

Generally drivers are travelling too fast for the conditions on bends as there are engineering issues relating to specific bends in Northland. Further analysis indicates that Learner, Restricted, Disqualified, and un-licensed drivers are over represented (as well as the 15-24 year age group) in crash statistics. Crashes on bends often mean the driver runs off the road hitting a roadside hazard or another vehicle. Alcohol and drug impairment may also be factors.

Speed

NZTA statistics indicate a higher proportion than the national average of male drivers aged under 29, and/or in the 'other than fully licensed' category as most highly represented in speed related crashes.

Alcohol

Northland has the highest proportion nationally of driver alcohol in casualty crashes. There is also a high proportion of males as drivers in alcohol related crashes and a high number of disqualified drivers i.e. a repeat drink driver problem.

Road Factors

These are involved in around 20% of the total crashes throughout the region and are identified as a predominantly rural issue.

Roadside Hazards

Run-off road crashes are caused mainly by excessive speed, alcohol, failing to drive to the conditions, fatigue, and distraction. NZTA road safety data indicates that half of all crashes in Northland (56%) involve a roadside object such as a power pole. Engineering methods such as road markings can help reduce run-off road crashes by signalling to drivers the appropriate speed to travel. Other treatments include skid-resistant surfaces, widening, or sealing the road shoulder, rumble strips, and guard rails. If crashes do occur, their impact can be minimised by protecting or removing roadside objects.

Consideration should be given to undertaking studies that identify whether particular groups of society are more vulnerable to road accidents.

2.3 Climate Change

According to the Ministry of the Environment, climate change is likely to have a significant effect on the Northland region. Even with a moderate effects scenario, temperatures could be as much as 3°C higher over the next 70-100 years and flooding could be up to four times more frequent by 2090. The potential implications for transport in Northland include:

- Route security is compromised (see section 2.4 below) with floods and heavy storm events becoming more frequent and severe. Risk could increase to the integrity of bridges and structures, leading to higher maintenance and replacement costs.
- Erosion and landslide risk due to higher saturated soils. Road surfaces could suffer from increased weathering leading to cracks and pot marks appearing sooner.
- Existing drainage systems could become overwhelmed increasing the severity of flood events.
- Higher crash rates resulting from more frequent severe weather events.
- Sea level rise leading to potentially more tidal flooding, closing roads that run alongside the coast.

As transport currently contributes 20% of greenhouse gas emissions in New Zealand (the second highest sector after agricultural methane), a big issue for Northland is to manage growing travel demand whilst balancing the demands of personal mobility, especially in the context of the region's dispersed population.

2.4 Route Security

Route security has a considerable impact on journey time reliability, particularly as there are limited alternatives to severed roads, with significant detours often required. Specific issues associated with route security in Northland arise from Northland's terrain and geology being extremely challenging for road construction and maintenance, and the impacts of climate change such as sea level rise, surface flooding, and landslips. Investment in addressing route security issues should be targeted at areas where there are overlaps with areas of economic opportunity.

Northland is particularly susceptible to landslips as a result of the frequency of heavy rainfall events and the region's short, steep, and unstable geology. The region has information on soil classification, areas at risk from flooding, and erosion prone land. It is essential that this information is considered when developing new infrastructure.

The increasing size, capacity, and frequency of heavy vehicles are also a concern for road safety, pavement, and bridge damage that may sever a route. Northland has a distinct lack of suitable easy alternative routes and as such a natural event or road crash can cause major delays to traffic movement.

Northland has numerous local roads which experience closures and damage resulting from flooding and storm events and road crashes. There are several major risk points for route security that have been identified in Northland (see Map 3 Major Risk Areas), including:

- Brynderwyn Hill and Te Hana Bridges have no easy alternative routes
- SH1 – North Cape Road at Mitimiti Stream Bridge, Waihou River (Rangiahua) Bridge, Mangamuka, Lemons Hill, North Larmers Rd, Kamo bypass, Otiria Stream (Moerewa), Whakapara, Otonga Flats, Waipu to Whāngārei, Kawakawa (flooding and landslip risk)
- SH10 – Bulls Gorge, Kaeo, Kaingaroa Bridge (flooding and landslip risk)
- SH11 – Tirohanga Stream Bridge, Kawakawa (flooding risk)
- SH12 – through Dargaville, Mangatoa (flooding and landslips risk)
- SH14 – Kirikopuni River Bridge (flooding risk)
- Paparoa – Oakleigh (landslip risk)

Map 3: Major Risk Areas



2.5 Freight

Freight transported on Northland's roads is from forestry, dairy products, livestock, fertiliser, horticultural produce, aggregate, and other general freight. These primary resource industries and supporting secondary manufacturing industries form an important component of the Northland economy. Freight generated within Northland is set to more than double by 2031 according to the National Freight Demands Study 2008. In another report, entitled 'The Prediction of New Zealand's Freight Growth by 2020' (2005) there is a forecast of heavy freight traffic growth based on the 'Development of a New Zealand National Freight Matrix' (2005). This provides a broad-brush forecast and does not include intra-regional freight. Map 4 (over page) shows the total heavy traffic movements from the Heavy Traffic Volumes Report 2007.

On this basis Northland's inter-regional heavy vehicle traffic over the 15 years from 2005 to 2020 is expected to grow by 100%, putting it at the top of regional growth rates.

It is considered that current transport provision holds back the region's full potential. Northland contains 9% of New Zealand's harvestable reserves of exotic forestry and the third largest tonnage of wood and wood based products by export via Northport. However, only 30% of this is value added wood based products such as Laminated Veneer Lumber (LVL), sawn timber and woodchip. This compares to 50% for Napier and almost 40% for Port Tauranga of overall percentage of wood exported that is processed in some form. In another example, Northland produces over 6% of the national total of milk, a substantial proportion of which is turned into dairy within the region, however currently this is all sent outside Northland for international export.

Forestry is a key growth sector of the regional economy and it is estimated that Northland's sustainable forest harvest has the potential to increase four-fold over the next 15 years. Future growth in the sector is closely tied to overseas production, overseas demand, and the NZ dollar. It is also influenced by forest ownership which has changed in recent years from forestry and forest products firms to investment companies; the investment companies have less constrained cash flow requirements and seek an optimal harvesting time for investment return which has delayed cutting.

Between 2003 and 2006 Northland contributed an average of 8.7% of the national roundwood harvest, which is a little below the regional share of planted forest. Assuming that Northland achieves a similar production rate as the national average over the longer term (and the national production rises to 30 million m³) Northland's contribution would be between 3.3 and 4.6 million m³.

The NZ Forest Industries wood supply forecast (based upon clear felling at 28 years) predicted a harvest rising to 4.2 million m³ in the 2006-2010 period. It is assumed that the rise to this peak will take place over a period of 10 years, and represents the expected "wall of wood" ramp up of cutting, but delayed by about 5 years on original forecasts.

Future growth in construction aggregate movement will be related to construction activity and general economic growth in Northland. Movement of construction aggregates does not encompass all construction-related freight growth, most of which will be included under general freight.

The National Freight Demands Study (2008) identified that the movement of aggregates within Northland accounts for approximately 19% of the total internal freight movements, the third highest contributor behind forestry (27%) and limestone, fertiliser, cement and concrete (26%).

An increase in road freight is likely to support economic growth in the short term where alternative rail and coastal shipping is not viable; however vehicle operating costs such as fuel and tyres are substantially higher due to road topography and conditions. This is a particularly important consideration for Northland's rural economies such as forestry, dairying, horticulture, and mining which rely heavily on road transport for their business operation.

There is also the potential of a future oil discovery off the coast of Northland which will have significant implications in terms of the necessary on-shore infrastructure and the transportation of the product to refineries at Marsden Point or overseas, or direct to market.

The size, capacity, and frequency of heavy vehicles have also increased over time, resulting in additional road crashes, pavement and bridge damage.

The Government has recently amended the Vehicle Dimension and Mass Rule. The main change under the amendment is the creation of a new class of vehicle called high productivity motor vehicles (HPMV's). These HPMV's can only operate under permit and on specified routes. Currently the maximum mass limit for a truck without a permit is 44 tonnes. HPMV's will be able to go over that limit and some will be able to be longer than current trucks. They cannot be any wider or higher.

There are limited options for minimising freight on the road at present, as rail is currently limited and not integrated with coastal shipping as well as being only suitable for certain goods and in certain locations. Improved rail connections in the long term however, to Northport and south to Auckland and beyond, would increase the competitiveness of the region for bulk loads (inbound and outbound) and the potential for manufacturing growth.

While the port is presently configured to handle mainly logs, woodchip and fertilisers, there is some container capability for self-supporting container and multi-purpose vessels. There are no physical constraints on storage space or berthage for adaptation to handle container vessels.

To become a container port handling significant numbers of containers, investment would be required in shore-based cranes and other container handling plant such as fork lifts or straddle carriers. A larger portion of the wharf area would need to be developed for container storage, with additional electrical reticulation for refrigerated containers.

Map 4: Heavy Traffic Movements



Source: Heavy Traffic Volumes Report 2007

2.6 Connecting Communities

Issues specific to connecting communities in Northland often stem from Northland's low and geographically dispersed population, outside of Whāngārei. There is considerable reliance on private cars to access jobs, recreation opportunities, and community facilities such as schools and public health centres. Short trips within urban areas and communities are made by car due to either a lack of, or inadequate, walking and cycling facilities.

There is also an acknowledged absence of subsidised public transport services outside Whāngārei, other than school buses, and coach services catering for inter-regional travel and the tourist market.

2.7 Better Integration of Land Use and Transport

A key consideration for Northland is how well any transport projects are integrated with surrounding land uses and correspondingly, how land use planning recognises and provides for transport in the region. Integrated land use and transport planning will be fundamental to implementing this Strategy.

Associated with this is the need for the Strategy to be responsive to ensure that the transport system provides and responds to the changing needs of the regional community and economy. The current RTC has explicitly recognised the need for the transport system to be proactive to the needs of the community through integrated planning, rather than being reactive to transport problems.

Sub-regional Growth Strategies and District Plans

The population of Northland is increasing. Between 2001 and 2006 population growth stood at 6% across the whole of Northland whilst parts of the Far North experienced a higher growth rate; Kerikeri's population increased by 18.2% and growth in Whāngārei District was slightly higher standing at 9% during the same period. Whāngārei and Far North District Council are currently developing sub-regional growth strategies to assess the implications of growth in their districts in the longer term.

These strategies will have a strong spatial component showing expected population growth which will be essential for the integration with future transport planning and decision making.

2.8 Environmental Effects

The environmental effects of the land transport network are greatly increased at environmentally sensitive sites. These effects are potentially most severe in previously undisturbed wilderness areas and include effects on:

- coastal processes;
- historic and natural heritage sites;
- landscape values; and
- ecological and habitat values.

Stormwater runoff from sealed areas such as roads, car parks, and service areas, the spillage of stock effluent, pollutants and hazardous substances and adverse effects caused by bridges and culverts, all contribute to the contamination of water. Stormwater runoff can contain a variety of contaminants including heavy metals, silt, and oil. Many of the region's roads are affected by effluent spilled from stock trucks or left by stock crossing roads or being herded along roads. Effluent discharged from campervans inappropriately can also affect water bodies. Northland also has a very high percentage of unsealed roads that have associated high sediment run off and issues with dust nuisance.

Modification of the coastal environment for land transportation purposes can cause stormwater run-off, loss of habitat, erosion, and adverse landscape effects. Coastal protection or reclamation works may be required and these can affect coastal processes, tidal estuaries and their aquatic habitats. The potential impact of climate change and sea level rise on the land transport network, particularly changes in the frequency and intensity of rainfall, storms, and tropical cyclones, should also be taken into account. Several of the major beaches in the region, including Ninety Mile Beach and the stretch of beach between Ripiro Beach and Poutō Point are used as road access. There are effects from vehicle use on these beaches particularly to the duneland areas, shellfish, and other wildlife. In addition, foredune environments have been affected by increasing coastal development in the region.

Northland's land transport network extends to, or passes through, a number of natural areas that have important conservation and landscape values such as Waipoua Forest. Careful attention needs to be given to the effects of new road and rail works on natural areas including:

- removal or alteration of vegetation with a subsequent loss of habitat;
- introduction of noxious weeds and predators to natural habitats;
- changes to natural drainage patterns and wetland system;
- creation of a physical barrier to the movement of some wildlife; and
- effects on wildlife from the noise, lights, and movements of traffic.

The loss of, or damage to, historic buildings and sites is of concern during the construction, maintenance and operation of the land transport network. Historic buildings, sites and areas are offered varying levels of protection according to their importance under the Historic Places Act, 1993, and the district plans for the Far North, Kaipara, and Whāngārei Districts.

The construction, maintenance, and operation of the land transport network can have adverse effects on culturally sensitive areas, including waahi tapu, urupa and coastal areas. Northland has one of the highest densities of archaeological sites in New Zealand.

The road and rail networks are also known to have effects on the environment from the spread of pests, weeds, and litter within their operating corridors.

2.9 Rural Communities and the Rural Roding Network

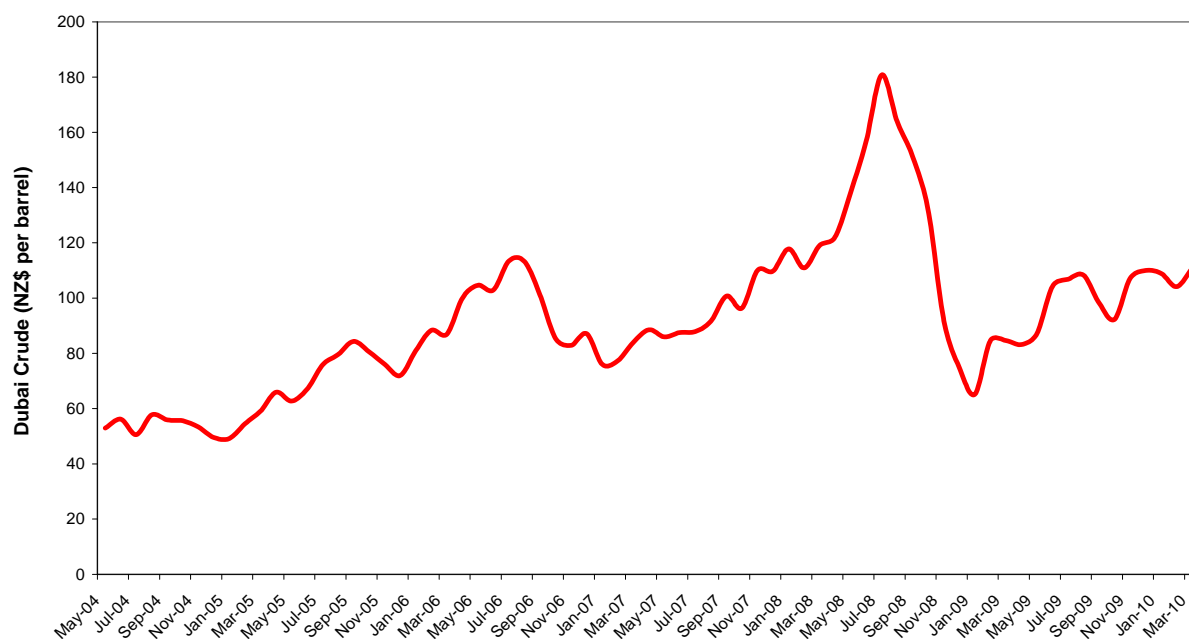
The sealing of unsealed roads, which are predominately rural roads, is a significant challenge for Northland and its communities. Unsealed roads can adversely affect personal health and wellbeing as well as crops, native vegetation, animal health and water quality from silt runoff.

Northland has a significant rural economy that relies on an effective rural road network. Whilst it is acknowledged that the Government Policy Statement (GPS) has focused Government priorities on significant economic centres in the short term, this Strategy has a 30 year view and must not lose sight of the rural economies in the longer term. Seal extensions and providing for the rural roading network are future needs that Northland should not lose sight of.

2.10 Fuel Prices and Electrification

A significant challenge for Northland will be changing fuel prices. Whilst it is impossible to predict the price of fuel in ten, twenty or thirty years time it is generally accepted that fuel will be relatively more expensive. This is not likely to be a smooth steady increase in price either, as history suggests it will be erratic with peaks and troughs along the way. This is illustrated in Figure 2 (over page) which shows recent trends in oil prices.

Figure 2: Recent Trends in Oil Prices 2004 - 2010



Source: www.med.govt.nz

Rising fuel prices are likely to change the way Northlanders travel, particularly within the urban areas where we have already seen significant increases in public transport use associated with spikes in fuel prices. It is expected that there will be demand for new passenger services throughout the region as well as increases in travel by other modes, particularly cycling.

Northland as a region is expected to experience effects on its economy from a reduction in available fuel, particularly those sectors which have a significant transport component of their operation. However there may also be opportunities from changing fuel prices as well.

In regard to electric and/or alternative fuel vehicles it is considered likely that the region may experience a shift in the vehicle fleet within significant urban areas where the journey time is relatively short. Current technological advances have improved the distances these vehicles are capable of between charges and the charging time required.

Any changes in the make-up of the vehicle fleet need to be linked with addressing security of supply and the encouragement of electricity generation within an infrastructure/growth Strategy and the RPS.

3. Northland's Direction

This 30 year Strategy responds to the need for forward thinking in Northland's transport future to provide for growth, and enables the RTC to provide guidance on the transportation outcomes sought for Northland.

3.1 Strategic Direction

In the course of preparing the previous Regional Land Transport Strategy (2006–2016), a significant amount of effort was focused on the development of the preferred strategic direction for achieving the options and initiatives that have been identified as important to the

region. This included a series of comprehensive workshops with stakeholders to develop the key objectives of the RLTS 2006 - 2016 as well as the strategic direction.

Seven strategic directions were selected and analysed against the key objectives to ensure they took into account the LMTA requirements and the long term sustainability of the Northland region.

The preferred strategic direction is to focus on investment decisions in roading, passenger transport, travel demand management and improvements in the rail network that will support proposed land use changes, economic growth and productivity and promote inter-regional connections as a way of connecting the Northland region with the rest of the country.

This Strategy has reconsidered the strategic option in light of the recent legislative amendments and particularly in light of the GPS. The GPS is clearly focusing on higher investment in projects that will provide economic benefit to the region and the nation. The current approach is considered to be consistent with the GPS and is appropriate for the region.

This Strategy is therefore consistent with this strategic direction and is focused on providing further detail in regard to the specific actions or initiatives that are required in order to achieve that direction. Of particular note within this Strategy is Section 6 Key Initiatives.

Additionally, this Strategy has included discussion on the role of air transport, with a particular focus on the type of passenger and services that each airport in Northland is likely to experience. This has been particularly helpful in understanding and planning for the land transport connections required for each airport; for example Kerikeri Airport and the route to the Bay of Islands.

3.2 Principles Underlying the Strategy

This Strategy seeks to benefit the whole region, over a 30 year horizon, creating an affordable, integrated, safe, responsive, and sustainable transport system.

National view	Northland Perspective
Affordable	Our communities will have access to employment, recreation and essential services without total reliance on the private car and fossil fuels. Investments in transport infrastructure will be affordable when viewed in the context of the long term strategic benefits.
Integrated	Transport users in Northland: residents, tourists and businesses, will have the ability to access key areas for employment, shopping and recreation. Champion the integration of infrastructure with land use through the upcoming changes to the RPS for Northland. Integration of transport through available modal choices and infrastructure to support use of those modes. Use of different modes to support transport efficiency and safety and ensure linking of modes.
Safe	Our people will be able to move safely within and through their communities.

National view	Northland Perspective
Responsive	Improving user information so that travel choices can be made. These include using different routes and alternative modes as well as sharing journeys. Minimise delays due to storms as well as road works. Ability to undertake a variation to this Strategy and the RLTP in order to respond to changing needs and priorities.
Sustainable	Decisions are made in a 30 year context that provides long term sustainable benefits. Environmental management is an active consideration in all decisions. Increased use of transport network across the region will be necessary in the short and medium term where economic activity is currently restrained due to poor transport connections and availability.

3.3 Vision for Northland

The vision for transport in Northland is as follows:

‘People and freight in Northland have access to an affordable, integrated, safe, responsive, and sustainable transport system.’

***“He tangata, he oranga, he putea taonga.”
It is people, it is health, it is wealth.***

The statement ‘It is people, it is health, it is wealth’ refers to:

‘It is people’ - How people travel around in Northland.

‘It is health’ - The health of our people from a cultural and social aspect.
- The health of our land from an environmental aspect.
- The health of our infrastructure now and in the future.

‘It is wealth’ - The economic success of Northland and the resources, people and materials available in Northland.

3.4 Economic Priorities for Northland

Current major sectors contributing to the regional economy are dairy production, forestry, tourism, and building and construction. Horticulture, aquaculture and specialist engineering particularly marine related, are also increasingly significant contributors. Major assets in the region include the country’s only oil refinery at Marsden Point, the most northerly (and nearest to the international market) deepwater port in New Zealand at Marsden Point and the Bay of Islands, a nationally important tourist destination.

Realistically, Northland needs interventions to both hold and develop its current comparative position. To improve its social and economic wellbeing in a substantive way requires new ideas, collaborative actions and a “Northland” approach.

Northland's planning must focus on enabling and creating socio-economic growth, by building upon our comparative advantages in resources and local capabilities, and attracting investment. This alone though will not be sufficient, and must be augmented by a shared vision, openness to change, an "interdependent" philosophy and cohesive and collaborative actions that drive growth and allow the region to grasp economic opportunities as they arise.

The following six industry sectors (in no particular order of priority) are most likely to contribute to Northland's growth in the medium term:

- 1. Value adding to primary production (dairy and meat processing, food processing, wood processing and aquaculture – including both the primary activity and processing).**
- 2. Manufacturing that builds on existing strengths (marine and engineering).**
- 3. Tourism.**
- 4. Mineral resources.**
- 5. Business services.**
- 6. Science and IT.**

Source: Infometrics 2009

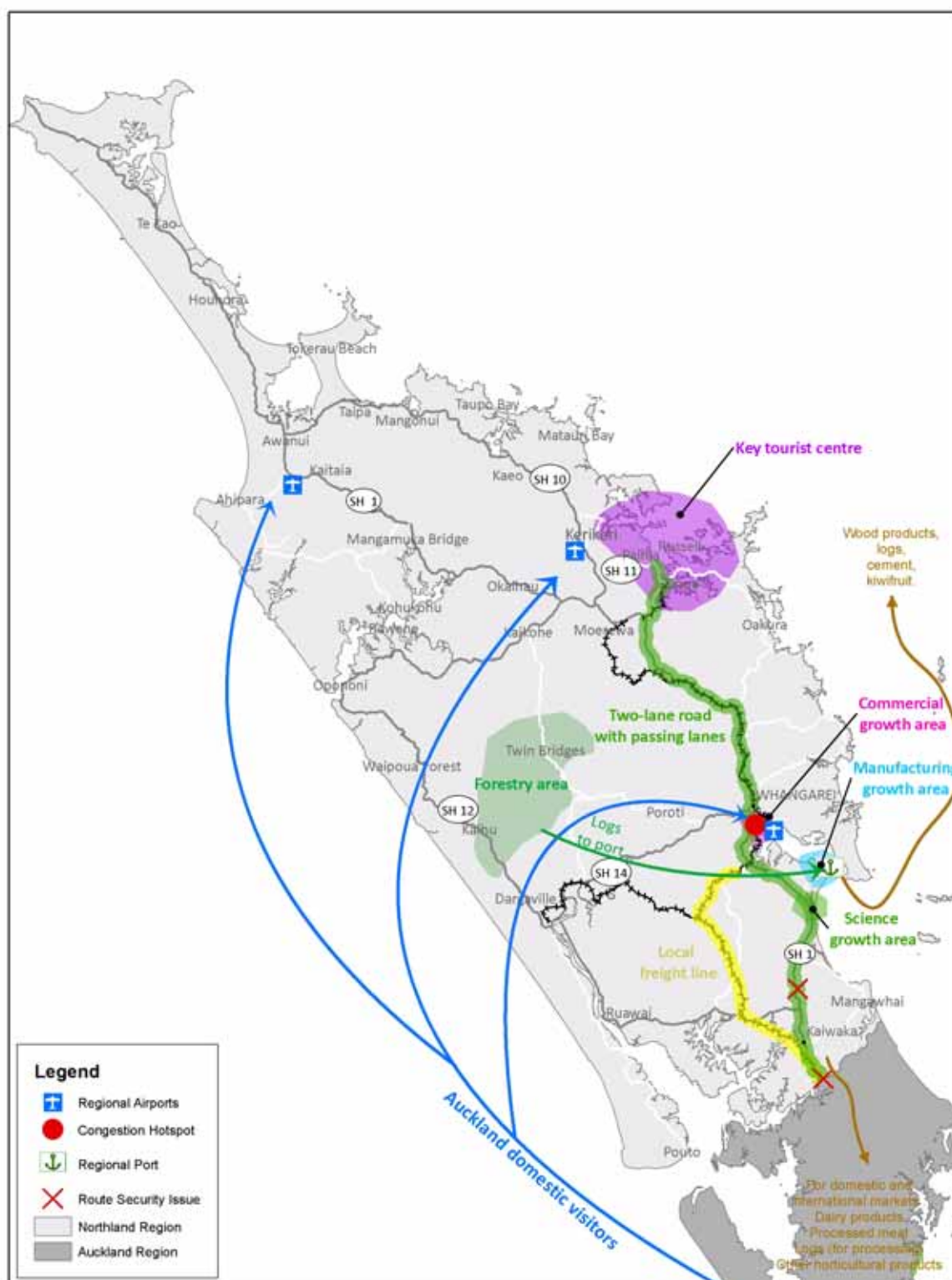
A key conclusion from the modelling and analysis (Infometrics 2009) of regional consequences of accelerated growth in the strategic industries identified above is that a focus on a few strategic industries is an effective approach for bolstering regional economic performance.

If the region can implement a Strategy that successfully bolsters output in the strategic industries, then this will spill over into significant increases in the pace of economic growth for the region as a whole.

Acknowledging the economic vision underpinning this Strategy assists in identifying where interventions will facilitate or bring about growth and development. The following two maps attempt to illustrate, at a conceptual level, the current economic drivers for the transport Strategy (map 5) and the future economic drivers for the transport Strategy (map 6).

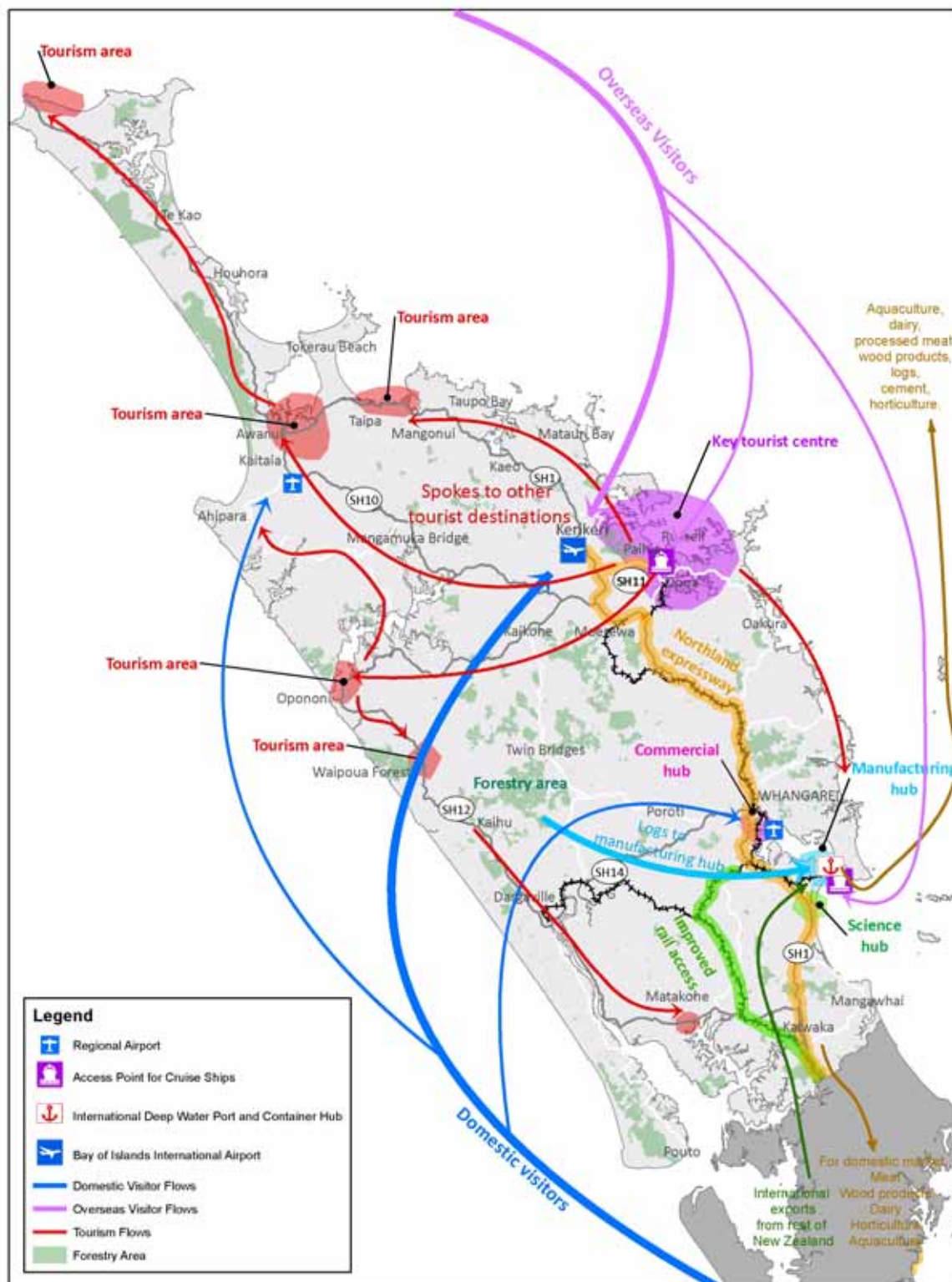
Map 5: Current Economic Situation

Transport Strategy - Now



Map 6: Indicative Economic Vision for Northland

Transport Strategy (Indicative Future) - 2040



3.5 Northland Outcomes

For the vision to be successful, Northland needs to establish a series of strategic outcomes. These will be the focus of this Strategy. These outcomes are consistent with the LTMA Objectives (refer to section 6.1 for more information).

Northland will focus on achieving the following outcomes:

1. A sustainable transport system that supports the growth and existing **economic development** of Northland and New Zealand.
2. All road users are **safe** on Northland's roads.
3. Northland is well **connected** to Auckland and to the rest of New Zealand.
4. Northland's roading **network** is developed and maintained so that it is fit for purpose.
5. Efficient and integrated multi-modal movement of **freight** with less impact on the roading network and the environment.
6. Our people have **transport choices** to access jobs, recreation and community facilities.
7. The transport system enhances the **environmental and cultural values** of Northland.
8. Effective **ports** servicing Northland and New Zealand.

Each outcome has been subject to specific analysis and supporting outcomes, which are broken down into specific targets that drive the achievement of the outcome. This establishes responsibility and reports on progress and effectiveness of the interventions (refer to section 6).

3.6 Strategic Options

The eight outcomes above drive towards achieving a sustainable transport network to service Northland now and into the future.

There are a number of strategic priorities that contribute significantly to these outcomes:

- The critical importance of the connection between Auckland and Northland, beginning with the Puhoi to Wellsford Road of Natural Significance (RONS) project.
- Route Security on key lifeline routes, including Te Hana Bridge and the Brynderwyn's, is critical to Northland. Climate change will have an impact on our roads especially coastal routes and areas prone to flooding. Alternative routes need to be investigated.
- Investigate the delivery of infrastructure improvements on key corridors by reducing travel time between Auckland and Northland with provision made for four laning from the Brynderwyn's to Whāngārei and to support the new growth areas being Mangawhai to Maungaturoto, Marsden Point, Waipapa, Kerikeri and Paihia.
- Improving route security and travel time on the nationally significant Tourism Route between Auckland and the Bay of Islands.

- Expanding the movement of bulk freight by rail by upgrading the North Auckland Line, supporting Marsden Point with a long term view of providing a viable alternative for freight distribution as an import/export port and alleviating the freight demands on the roading network.
- Focus on Northland's airports and facilities for use by commuters/destination travellers and upgrade as necessary.
- The Northport deep water port is a viable option as a container port due to its location. However, it is recognised that there is a need to investigate an inland freight distribution centre for the transport network to facilitate road to rail/shipping to road exchange. The construction of the Marsden Point Rail Link and upgrade of the North Auckland Line will be critical to the success of this development.

3.7 Addressing Environmental Effects

The seventh Northland Outcome: "The transport system enhances the environmental and cultural values of Northland", requires a number of strategic options and initiatives that focus on the environment and the opportunities to avoid adverse effects where possible (refer to section 6).

Individual projects must be developed in the context of this Outcome as well as the requirements of the Resource Management Act, 1991. The primary strategic mechanism for managing environmental effects is the RPS for Northland, but it is also recognised that environmental effects must be considered as part of the development of the strategic options of this Strategy.

Policies that address the causes of climate change are likely to involve the following methods of reducing greenhouse gas emissions from land transport:

- integrated land and transport planning can help ensure that development is located in sustainable locations reducing the need to make trips by car;
- encouraging freight growth to be directed onto the rail network in the long term, reducing the need for individual truck movements;
- promoting green travel initiatives;
- consideration of alternatives to fossil fuels such as electric vehicles and supporting the development of local scale renewable electricity generation;
- expanding and enhancing public transport;
- expanding and enhancing walking and cycling routes; and
- ensuring local public bodies lead by example on environmental best practices.

Policies that address the effect of climate change are likely to concern:

- future proofing infrastructure for increased flood risk / severe storm events;
- investigating use of sustainable drainage systems;
- strategic planning for road and structures; improving defect detection and monitoring; scheduling bridge replacements to reduce any contribution to up stream flooding problems; and
- integrated land and transport planning ensuring development is located away from areas of flood risk.

3.8 Integration with Land Use

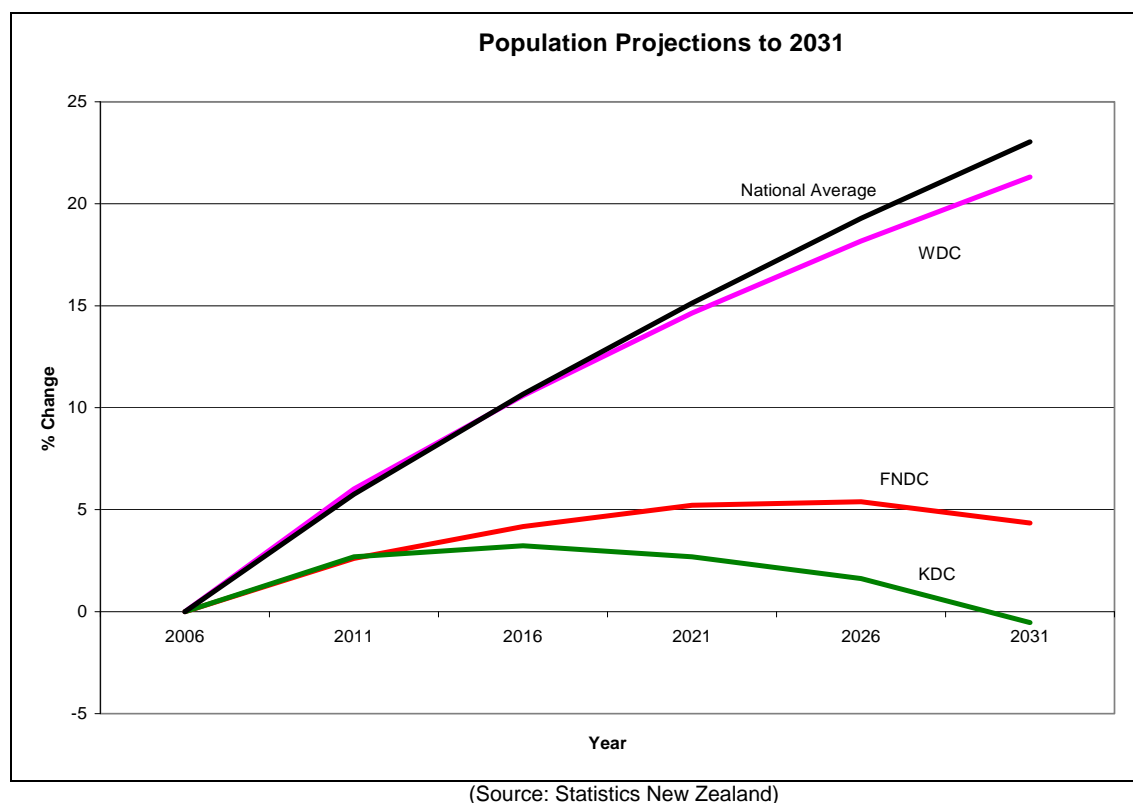
Land use is understood to affect transport in a number of significant ways. Dispersed land use patterns are typically linked with high levels of vehicle dependence. Conversely, concentrated land use is more commonly linked with lower levels of vehicle use and higher levels of public transport patronage. Northland falls mainly into the former category as the most rural of New Zealand's regions with a dispersed population outside the few main centres.

The effects of transport on land use can also be significant. Direct impacts result from the amount and location of land used for transport facilities (e.g. expanded roads, car parks, railways). Indirect impacts arise from transport decisions which affect land use accessibility. For example, an expanded motorway system that improves access to the urban fringe may encourage vehicle dependant development and suburban sprawl. On the other hand, transport decisions that result in improvements to public transport can make urban areas more accessible and reduce car dependency. However, the relationship between land use and transport decisions can be complex and is influenced by a range of socio-economic factors (e.g. car ownership, housing demand, income, and location of employment).

Growth in Northland has traditionally been centred on the east coast of the peninsula particularly in the Whāngārei District and the Bay of Islands. The Whāngārei District currently has a population of 74,000 which is predicted to grow to 109,000 by 2041. Much of this growth will take place in two areas, Whāngārei City itself, and the Ruakaka – Marsden Point area. In the Bay of Islands, Kerikeri is projected to double in population from 7380 in 2001 to 14975 in 2021. A strong driver of growth in Northland has been the demand for second homes and retirement units. This type of development is particularly centred on the Bay of Islands in the Far North District and Mangawhai in the Kaipara District. Elsewhere the region is experiencing population decline, particularly along the west coast.

It is noted that the District Councils are at varying stages of undertaking more strategic growth planning in terms of sub-regional growth strategies, which will provide further guidance on what areas of the district are expected to grow. Figure 3 below shows the expected population growth to 2031 for each territorial authority compared to the national average.

Figure 3: Population Projections to 2031



With increasing car ownership and improvements in the quality of the road network, there has been a trend for households and businesses to relocate away from town centres and inner suburbs to outer suburbs or rural locations. Much of the new residential and commercial development in Whāngārei for example is located away from the centre in the northern and southern suburbs. Commercial and industrial development in the Bay of Islands is being located at Waipapa. Topography has been an additional factor here preventing outward expansion of the centre. Traditionally the response to these trends has been to improve the overloaded links and junctions in the road network, build bypasses, and provide increased subsidy levels for public transport. This approach is not sustainable in the long run because:

- Dispersed settlement patterns mean it is costly to provide public transport for people who are unable to use private cars.
- Improvements in the road system reinforce the tendency for people and businesses to move further out from, or remain distant from, the centre leading to further growth in traffic levels.
- Road controlling authorities are unable to create enough new road capacity or upgrading to meet demand, as the financial, social, and environmental costs of road building become untenable.
- It is difficult for people to walk or cycle because of distances between trip origins and destinations, and the dominance of the motor vehicle in the use of the transport network.
- Dispersed land use patterns are difficult to reverse, which will present problems in the future when, for instance, fuel costs rise in real terms.

This Strategy has a strong interest in influencing long term planning in order to improve the prospects of the transport system being able to serve Northland's rural community and any new land use developments on a sustainable basis. This means encouraging transport planners to understand and use network management and transport demand to a greater extent with less reliance on the traditional predict and provide approach.

The integration of land use and transport planning is a vital component of sustainable strategies to optimise the use of networks and to manage transport demand. Accordingly, it is also necessary to ensure that those responsible for land use planning processes give adequate consideration to the transport sustainability implications of plans, policies, resource consents, and designations.

4. Demand Management

Statistics New Zealand data shows that Northland residents are close to the national average in relation to private ownership of motor vehicles. In rural areas access to a car is generally higher than average except in some of Northland's lower socio-economic areas.

Demand Management addresses both the way private individuals travel and the movement of freight. For private travel the focus is on reducing the need for travel in the first instance and encouraging the use of non-car and high occupancy modes of travel. For freight, the focus is on the most effective, efficient and sustainable means of moving freight.

4.1 Demand Management Principles

Demand Management in Northland recognises that:

- Travel alternatives in rural areas should be supported, particularly rural residential to urban employment, such as the existing bus service between Doubtless Bay and Kaitiāia.
- Urban communities can have access to employment and recreational areas that does not necessitate use of the private car.
- Formal public transport will service those areas likely to be financially viable within the large urban centres where clusters of employment and significant residential areas drive the demand.
- Increased transport choices are provided in the knowledge that fuel prices may continue to rise and local employment opportunities reduce.
- Future land use will support a 'live, work, and play' concept ensuring that residential developments are in close proximity of employment opportunities, schools etc.
- Growth areas are being identified through district planning initiatives.
- Plan infrastructure to encourage development where it is desirable, sustainable, and affordable.

4.2 Strategic Direction

The Strategic Direction for Demand Management is:

- Identifying initiatives that reduce the need for people to travel in the first instance.
- Reducing and changing the way people and freight move.
- Reducing travel distance and travel time.
- Promoting the most effective, efficient and sustainable movement of people and freight.

The Northland Outcomes and Strategic Options provide an integrated approach to demand management.

Demand Management Principles <i>(Note that changing time of travel is not realistically affected at this level)</i>	Reducing the need to travel in the first instance	Reducing and changing the way people and freight move	Reducing travel distance and travel time	Promoting more efficient travel
A sustainable transport system that supports the growth and existing economic development of Northland.	Promoting working from home.	Providing transport choice. Encouraging visitors to start trips in Northland. Development of broadband.	Ensure appropriate land use so that residential development is in close proximity to employment opportunities, schools etc.	Promoting modal interchange, car pooling, walking and cycling and working from home.
Northland is well connected with Auckland and to the rest of New Zealand.	Promoting access to communications including high speed broadband.	Promoting the Bay of Islands/Far North as a destination (international) airport and Kaitiāia and Whāngārei as commuter airports.	Reducing travel time and increasing reliability on key routes (Bay of Islands to Whāngārei and Whāngārei to Auckland).	Promoting alternatives to the private car. Promoting coastal shipping and rail services for freight.
Northland's roading network is developed and maintained so that it is fit for purpose.		Opportunities for safe walking and cycling.	Maximise efficient use of existing network by eliminating bottlenecks.	Improving transport efficiency between communities.
Efficient and integrated multi-modal movement of freight with less impact on the road and environment.		Inland freight distribution centre.		Modal shift of freight to rail and coastal shipping.
Our people have transport choices to access jobs, recreation, and community facilities.		Providing alternatives to the private car.	Ensure appropriate land use so that residential development is in close proximity to employment opportunities, schools etc.	Demand responsive services.
The transport system enhances the environmental and cultural values of Northland.		Improving walking and cycling within communities.		Promoting alternatives to the private car.
Effective ports servicing Northland and New Zealand.		Inland freight distribution centre. Development of Marsden Point Rail Link.		Modal shift of freight to rail and coastal shipping.

It must be recognised that the priority for Northland is to ensure that our people have access to employment. It may be that additional journeys are made to growing centres of employment and this would be embraced by this transport Strategy. Over time the focus will be to turn this around so that people are living close to their employment or people do not need to travel for their employment.

4.3 Demand Management Initiatives

The following initiatives provide further detailed actions and initiatives that will assist in achieving an integrated approach to Demand Management set out in the above table.

4.3.1 Reducing the need for travel in the first instance

1. Promoting working from home.
2. Promoting access to communications including high speed broadband.

4.3.2 Reducing and changing the way people travel

1. Enhance telecommunications to Northland for use of video and web conferencing.
2. Promote car sharing and other rideshare options.
3. Promote walking and cycling.
4. Information on travel options made available to households and visitors.
5. Encourage business to invest in web purchasing e.g. supermarkets.
6. Promotion of use of rail where feasible for movement of freight.
7. School travel plans.
8. Encourage working from home.
9. Providing safe walking and cycling facilities that can integrate with public transport.
10. Education to promote a change in travel culture in Northland.
11. Promote shared space/pedestrianisation in urban centres to enhance walking experience.
12. Prioritise walking and cycling over car use by reviewing parking requirements for businesses and new developments to include provision of cycle facilities and no minimum car parking. Review car park pricing in town centres especially if linked to public transport infrastructure development (e.g. park and ride).
13. Investigate, prioritise, and implement a travel plan programme.

4.3.3 Reducing travel distance and travel time

1. Workplace travel plans.
2. Investigate alternative, demand responsive, public transport opportunities.

4.3.4 Promoting more efficient travel

1. Alternative methods need to be investigated such as car pooling.
2. Promoting park and ride in the main centres – incorporate real time technology on buses.
3. Variable Message Signing strategically placed along the key routes informing travellers of any delays in travel time e.g. prior to the Brynderwyn's.
4. Promoting tour buses over private vehicles and motor homes for tourists.
5. Use of air travel as a more efficient mode of travel.

In addition, Northland should investigate the potential for existing and developing technology to address problems in the region. Specific areas of technology that could be investigated include: Variable Message Signing; Intelligent Traffic Systems; Transport Modelling; Real Time Information; Integrated ticketing; and Rumble Strips on State Highways and Local Roads.

Reference should be made to the Walking and Cycling Strategies prepared by each of the District Councils, which include implementation plans.

4.4 Education and Enforcement

Education plays a key role in supporting the Strategy outcomes. Demand Management initiatives are aimed at educating the public on alternative modes of travel and assisting users with changing from one mode to the next. Demand Management is also about understanding the drivers for travel (home to work) and finding opportunities to deliver improvements. Education can also assist with personalised travel planning to reduce or modify household trips. For some families this may mean the difference between having one or two cars per household, resulting in significant household savings, and thereby contributing to affordability outcomes.

Enforcement plays a principal role in contributing to safety and improving public transport accessibility. Speed management is also central to reducing injuries on local and rural roads, and visible enforcement is often the key. This includes greater acceptance by motorists to be aware of other road users. The police require new or enhanced tools to address serious traffic offenders such as red light runners.

Motorists require improved roads and programmes that reinforce safe driving habits such as observing the give-way rule, driving to the conditions and encouraging drivers to pass cyclists safely.

The majority of road crashes are due to driver error. However there is little evidence that education on its own contributes to safer road user behaviour except in some very specific and targeted ways e.g. repeat offender drink driver treatment programmes. Education is of the greatest benefit when linked to specific supporting legislation, enforcement or engineering interventions. It has been shown that drivers do value safety and respond positively to campaigns to encourage safety belt use and sober driving if they also encounter enforcement activities in their everyday travels. The perception of being caught is often a greater motivator for safer driving than the perceived likelihood of being involved in a crash. The benefits of regular enforcement therefore increase markedly when linked with education and advertising campaigns. However, many drivers are also willing to pay a premium for vehicle safety features and child restraints, and there is merit in promoting these to drivers.

Enforcement is highly mobile, and can be targeted to emerging road safety risks at short notice. However enforcement often reaches a threshold after a period of time when new legislative measures or interventions must be introduced to continue providing a deterrent effect e.g. new penalties, demerit points, technology, or tougher sanctions.

This dynamic link between enforcement and education can be improved in the region to create safer road users, particularly in relation to the growing speed and alcohol related crash risk where a stronger deterrent effect is needed. Section 6 contains further detail on the specific options and initiatives to address these matters, in particular refer to the second table which is headed with the key outcome 'All road users are safe on Northland's roads'.

5. Modes

This chapter focuses on the key modes of transport for the region and sets out the outcomes and the strategic direction sought for each specific mode as well as potential areas where the role of the mode could be future proofed. Each mode is treated separately within this section in order to clearly define the role of that mode. However, it is recognised that each mode contributes to the overall regional vision of this Strategy and the separate treatment of each mode is not intended to discourage integration between modes.

5.1 The Role of Transport Modes

This section sets out the role of each transport mode for the future, and the challenges that face each role. Each of the modes of transport are considered within the Northland context. Road transport is likely to remain the main means of moving freight and people.

However, there is an emerging role, and a strong desire, for the promotion of other forms of transport including bus services in key urban areas and increased promotion of walking and cycling within communities.

Rail will increase its role in the movement of freight, particularly with the development of the Marsden Point Rail Link and an Inland Freight Distribution Centre. Coastal shipping is also likely to increase its role. It is envisaged that the tourist entry point and subsequent journey may change with the further development of air travel in Northland.

The New Zealand Refinery (located at Marsden Point) moves a significant volume of product to Auckland through an underground pipeline. Whilst this movement of a commodity is not specifically addressed within this Strategy, the value and importance of the Refinery to Northland's economy, and this significant movement of a commodity should not be understated.

Role in Northland	
Road	Due to the low and geographically dispersed population base there is a high private vehicle dependency for inter and intra regional trips and this will remain so outside the main urban centres. Northland also has a significant number of holiday homes which generate seasonal and weekend traffic. Rooding priorities need to balance accessibility and safety with the provision of freight corridors to support economic development. Northland has identified a number of priority corridors with the top priority being the connection to Auckland.
Rail	<p>The need to preserve the rail corridor is paramount for the future success of Northland with the long term aim being that increased freight levels go by rail to alleviate the pressure on the roading network.</p> <p>Upgrade and expansion of the existing rail network in Northland needs to be undertaken in order for this to be a viable option. There needs to be effective inter-modal facilities to allow effective transfer of freight. With improved rail facilities, Northland will be to be able to more effectively move bulk freight to domestic and international markets, aiding economic growth and increasing the regional GDP.</p> <p>Northland will become a regionally significant destination for the import and export of bulk freight, driven by its proximity to the significant economic areas in the North Island (particularly Auckland and Hamilton).</p>
Air	There are four airports in Northland: Whāngārei and Kaitiāia airports cater primarily for the commuter whereas Kerikeri currently is a destination airport and will require upgrading to allow aircrafts the ability to land in all weather. Kaikohe is recognised as a recreational aviation facility. In addition, Dargaville is looking to expand from an aerodrome to an airport.

Coastal Shipping	Other than recreational and tourism boating, there is very little in the way of coastal shipping within the Northland region. However 42 cruise ships did visit the Bay of Islands in 2008/2009 season. Fuels and cement are expected to continue to be transported by coastal shipping. The development of Northport and the Marsden Point Rail link will open the options for coastal shipping and an alternative for transporting general freight. It is anticipated that Northport will become a nationally significant import and export port – particularly given its natural deep water harbour and its proximity to international shipping lanes. Northport also has significant areas of industrial land available landward of the port facilities.
Public Transport	<p>Regional public transport is provided entirely by bus although there are a number of water taxis in the Bay of Islands and vehicle ferry services operate between Ōpua and Ōkiato Point in the Bay of Islands and between Rāwene and Kohukohu in the Hokianga harbour.</p> <p>The Strategy recognises that public transport is more economically viable in the main centres and will continue to promote public transport in Whāngārei (along with supporting demand management and modal shift initiatives). Improvements have been made to bus services in Whāngārei with a view to investing in other service centres where there is not only a need but the patronage to make the service viable.</p> <p>Commercial companies operate long distance passenger services from Auckland to Whāngārei and Kawakawa and a loop through Paihia, Kerikeri, Kaitiāia and Kaikohe and back to Kawakawa providing an alternative to private transport for longer distance travel only stopping at the main centres.</p> <p>There is a need to assist communities outside of the urban areas where there is limited access to a car and provide more transport choices.</p>
Walking and Cycling	This Strategy has taken the view that whilst walking and cycling are important, projects need to be a priority for connection and safe movement within communities, such as encouraging modal shift within the Whāngārei Urban area. The exception to this is the development of the Northland Cycleway.

5.2 Road

Roads are Northland's primary communications links, with approximately 6,510 kilometres of road spanning the entire length and breadth of the region. It is the principal transport link with Auckland and a major carrier of freight, passenger and tourist related traffic.

The integrity, safety, and efficiency of the state highway network are vital to the economic and social wellbeing of Northland.

Outcomes sought that are specific to Roothing in Northland include:

- All road users are safe on Northland's roads.
- Northland is well connected to Auckland and to the rest of New Zealand.
- Northland's roading network is developed and maintained so that it is fit for purpose.
- Efficient and integrated multi-modal movement of freight and people with less impact on the road and environment.

5.2.1 Strategic Direction for Roads

Northland has a significant tourism route and a significant freight route. The tourism route links the nationally significant tourism area of the Bay of Islands with Whāngārei and Auckland. The significant freight route links the two key economic centres of Whāngārei and Marsden Point with Auckland. These two routes are shown on maps 7 and 8 respectively.

The long term strategic direction for Northland is centred on several key priorities (refer to Map 9). Appendix B includes more detailed maps of each of the specific priority areas identified below.

The first of these priorities is the stretch of SH1 spanning from Puhoi, where the current four lane road from Auckland ends, to Whāngārei. The section of State Highway One (SH1) between Puhoi and Wellsford has been identified in the GPS on Land Transport funding as being a Road of National Significance (RONS) for national road development priorities. Improvements must be made to secure this entire stretch of SH1, particularly at the Brynderwyn hills where landslips frequently threaten the road, and Te Hana where a single bridge that spans the Te Hana Creek could be placed at risk by flooding or structural uncertainty, effectively severing the road network between the North and the South.

Other priorities for this stretch of road include reducing total travel time by the most cost effective method possible – the best ‘bang for buck’ – and prioritising projects that will facilitate significant communities being within a one hour commute of Marsden Point and Whāngārei. Also, the severe congestion issues that occur at Warkworth and Wellsford must be addressed.

Maps 7 and 8 show the priority routes for tourism and freight movements within the region.

There are several other road links that are seen as strategic priorities for Northland's road network. The ‘T in the South’ refers to the link between Maungaturoto and Mangawhai, including SH1 and the road via Kaiwaka. These have been identified as priority growth areas by the Kaipara District Council, and as such there is a need to ensure that the roads are upgraded to a satisfactory level to allow the efficient flow of traffic to and from these locations, and the state highway.

The ‘Triangle in the North’ refers to the road system linking Waipapa, Kerikeri, and Paihia. These areas have been identified as priority growth areas by the Far North District Council, and as such there is significant value in upgrading this link to allow efficient traffic flow, particularly in regard to tourism. The Kerikeri Waipapa Structure Plan identifies a potential future link between Kerikeri and Paihia. It is noted that NZTA considers that the investigation phase of these projects needs to be initiated before any commitments can be made to implementation.

Another strategic priority for Northland is a section of State Highway 10 (SH10), the coastal route heading north to Kaitiāia. Currently the coastal route (SH10) is generally used for light vehicles and tourism traffic and the mainland route (SH1 to Kaitiāia) is for freight and heavy traffic. It is suggested that these routes have their designations changed to better reflect the existing traffic situation i.e. the coastal route would become SH1 and the mainland route would become SH10. It is also being considered whether the current SH10 route should be re-routed further inland around the Doubtless Bay area with feeder links to existing settlements established, resulting in an efficient coastal route that could become SH1. It is noted that NZTA considers that the investigation phase of these projects needs to be initiated before any commitments can be made to implementation.

The final strategic priority is the construction of a bridge across the Hokianga Harbour linking the northern and southern communities. The proposal is two bridges, one at the area known as The Narrows and the other crossing the Waima River providing access into Rāwene. This proposal is expected to provide significant social and economic benefits to the community as well as providing 24 hour access across the harbour. This proposal needs further investigation of the potential funding options along with secondary community benefits such as the opportunities for renewable electricity generation. Once these have been identified there must be community approval of a preferred option and funding arrangement.

Inclusion of the Hokianga Harbour Bridge Crossing does not place any less importance on the retention and maintenance of the existing vehicular ferry service.

Northland has a large roading network to maintain in a fit for purpose state – that is suitable for the type of use that is normally expected on that piece of road. A priority for Northland is to develop a clear region wide network hierarchy for the local road network. This should be developed in an integrated manner in conjunction with the strategic land use forecasting being developed through the sub-regional growth strategies.

5.2.2 Future Proofing Roads

Whilst we may not want to do it now, we should make sure we can easily do it in the future should the situation change:

- It is our intention to continually consider future needs and opportunities within transport corridors e.g. installing underground ducting to facilitate the future deployment of electricity or fibre networks.
- Identify and protect routes for future road construction.
- Future proof roads against climate change.

Map 7: Strategic Tourism Route

Strategic Tourist Route - Northland



Map 8: Strategic Freight Route

Strategic Freight Routes - Northland



Map 9: Strategic Roding Priorities



5.3 Rail

Northland's connections south to Auckland and beyond depend not only on road linkages, but also rail. The North Auckland Line is 281 kilometres long, originating in West Auckland and terminating at Otiria, west of Kawakawa (refer map 10). There is additional capacity within the rail network to accommodate increased freight movement, and this is the focus of the future of rail. Efficiency of the rail network is however hampered by inadequate infrastructure (such as low clearances and single tracking), a lack of wagons and locomotives, and a relatively long route (at least compared to road alternatives) with speed restrictions north of Auckland.

The approximate volume of freight moved by all modes in Northland in 2006/07 was 12.36 million tonnes. However, the rail network handled only 226,000 tonnes which represents less than 2% of the total volume of freight moved. The costs of rail versus road transport were outlined in a report by the Ministry of Transport in 2005 (based on 2000/2001 data), *Surface Transport Costs and Charges*. Rail incurs a cost of \$0.088 per tonne/km compared to road which stands at \$0.129 per tonne/km. A handling charge of \$7.00 per tonne applies to rail, a cost which is covered in the tonne/km rate for road. There is also a transfer fee for goods that are transported to the railhead by road which works out at a standard rate of \$120-\$140 per container regardless of distance. Rail therefore incurs greater costs at the loading/unloading stage but is cheaper once the goods are being transported. It is expected that an updated assessment, '*Understanding Transport Costs and Charges*', will shed more light on freight costs when it is published in full at the end of 2010. This is important to note as there have been substantial changes in the road and rail sectors since the original data was published.

Since the closure of Port Whāngārei and the opening of the Northport at Marsden Point, with no rail link, rail freight has declined from nearly a million tonnes per annum in 2000 to less than 300,000 tonnes today. Establishing the Marsden Point Rail Link should provide for at least some of this lost tonnage to be directed from road back to rail.

Rough estimates indicate that it would cost approximately \$80M to construct the Marsden Point Rail Link and approximately \$200M to upgrade the North Auckland Line. The priority is to construct the Marsden Point Rail Link in order to ensure that rail within Northland is economic to operate and maintain. Then as soon as possible after this the priority is to upgrade the North Auckland Line.

Outcomes sought that are specific to Rail include:

- A sustainable transport system that supports the growth and existing economic development of Northland and New Zealand.
- Northland is well connected to Auckland and to the rest of New Zealand.
- Efficient and integrated multi-modal movement of freight with less impact on the road and environment.

5.3.1 Strategic Direction

The rail network is to be the first option considered for the movement of bulk freight both intra and inter regionally, facilitated by an efficient inland freight distribution centre.

The primary strategic priority for rail is the construction of the Marsden Point Rail Link and then the upgrading of the existing North Auckland Line. Currently this line is limited by weight and speed restrictions resulting in much of the freight being transported by road. Shipping companies are moving towards larger scale containers and the current tunnel sizes on the rail line are not sufficient for these larger containers to pass through. For freight volumes to be increased on the existing network, the dimensions of seven tunnels would need to be modified by lowering the tracks. The installation of heavier weight tracks and bridges to allow heavier

loads at greater speeds is essential to encourage more freight to be moved by rail rather than road.

In line with the need for upgrading the North Auckland line, is the development of an inland freight distribution centre with feeder spurs to Marsden Point in the east, Dargaville in the west and Otiria in the north.

In regard to the Marsden Point Rail Link, the resource consent and designation application has been approved for the various stages of development of the link. The Marsden Point Rail Link (refer map 11) will be the first significant expansion of the rail network in more than 50 years, and will greatly assist with freight transport and increase rail freight volumes.

The modal shift of freight from road to rail will also rely on the Port developing container handling facilities and therefore becoming a significant generator of containerised freight movements through both import and export functions. In the shorter term it is expected that the development of the Marsden Point Rail Link and the upgrading of the North Auckland Line will provide significant opportunities and benefits to the Auckland economic centre.

However, there must be recognition that the existing road network needs to be able to support increased freight movement in the short term, in order to generate critical mass for the upgrade of the North Auckland Line and the construction of the inland freight distribution centre and the Rail Link to Marsden Point.

There are advantages in locating industries and development near rail, both for ease of transfer to and from road and for the potential for direct connections which avoid road transport all together. This needs to be actively considered in the development of strategic land use planning and its integration with infrastructure through the Regional Policy Statement for Northland.

Longer term, further tourism opportunities for the northern most section of the rail line into the Bay of Islands are anticipated.

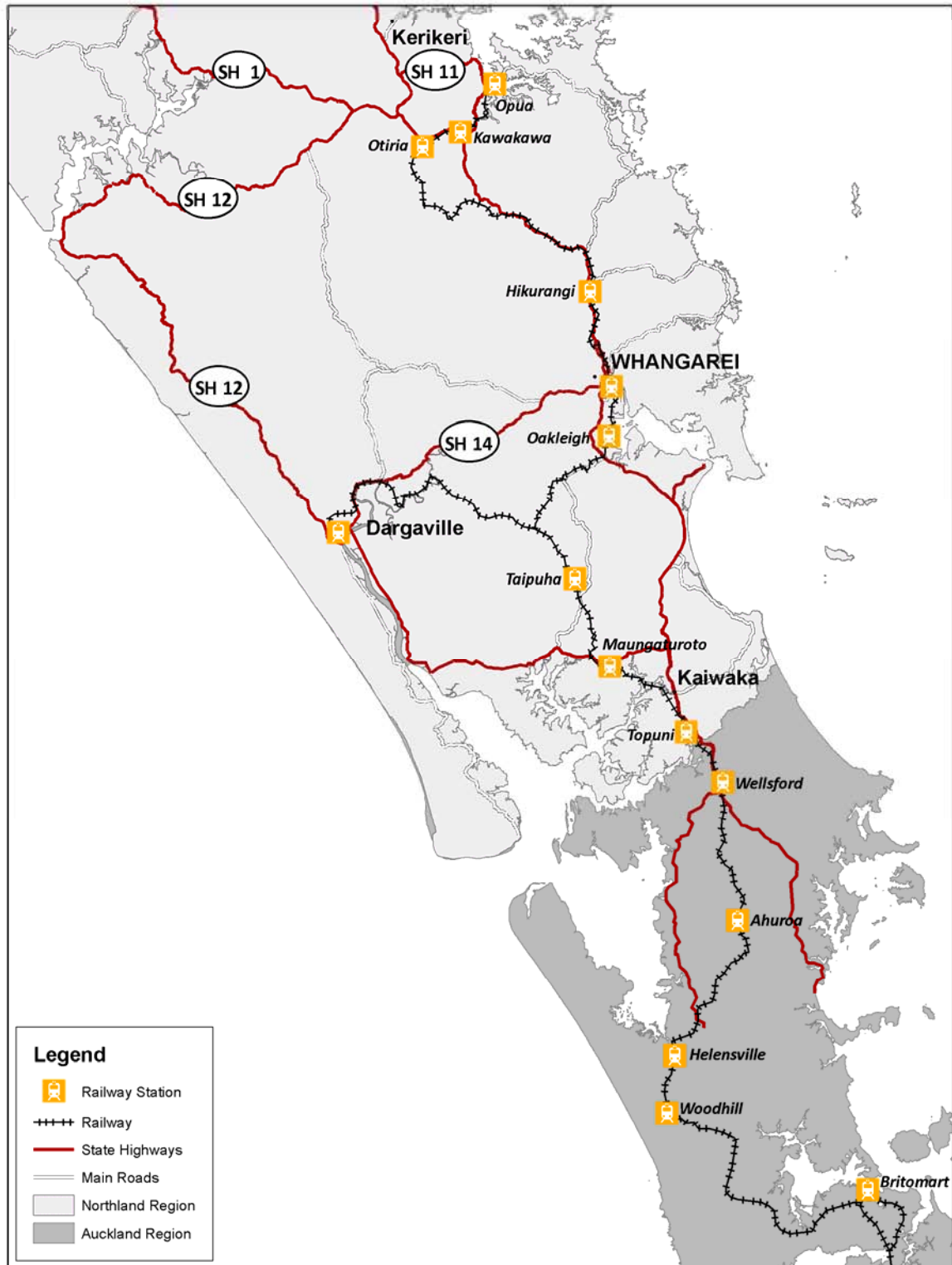
5.3.2 Future Proofing Rail

Whilst we may not want to do it now, we should make sure we can easily do it in the future should the situation change:

- Develop walking and cycling opportunities adjacent to the rail corridor.
- Capability to convert to electricity or diesel/electric.
- New rail designations should provide for multiple tracks.
- Rail corridors could provide a conduit for services e.g. electricity/broadband.
- Some existing road corridors/designations could also serve as rail routes in the future (or vice versa), particularly light rail – the ability for this to occur should not be compromised e.g. width/terms of designation.

Map 10: Auckland to Northland Rail Link

Transport Strategy Railway Lines and Stations in Northland



Map 11: Marsden Point Rail Link Designation Route



5.4 Air

Air travel offers a quick and efficient means of transportation, which is especially convenient for business travellers and therefore essential to economic growth. Northland has three airports where commercial operators offer domestic flight services, located at Whāngārei, Kerikeri (Bay of Islands Airport) and Kaitiāia (see map 12, over page). There are also airports operating at Kaikohe and Dargaville, but these do not currently involve commercial domestic flights.

There is no international airport in Northland, although the Bay of Islands airport has the facilities to clear passengers through customs for private international flights of 12 people or less. The Kaipara district is currently the only district in Northland not operating commercial domestic flights.

Outcomes sought that are specific to Air include:

- A sustainable transport system that supports the growth and existing economic development of Northland and New Zealand.
- Northland is well connected to Auckland and to the rest of New Zealand.
- The transport system enhances the environmental and cultural values of Northland.

5.4.1 Strategic Direction

Northland's airports are unique in their positioning and demand. The strategic direction of each will be governed by these factors. It is intended that an airport in the Bay of Islands / Far North area is to be developed as the gateway to the Bay of Islands for international visitors. The Whāngārei and Kaitiāia airports are to be developed to provide direct flights nationally servicing business and commercial travellers' needs.

Whāngārei's airport, located at Onerahi, is a commuter airport used both privately and for domestic commercial flights. A recent extension of Whāngārei airport allows larger aircraft (50 seat capacity) to land. It is not likely that this airport can be extended any further than this due

to physical constraints. A new location for the airport is not considered feasible. The approach is to concentrate on increased frequency of flight times and destinations per day.

The Bay of Islands airport, owned and operated by Far North Holdings Ltd., is the only airport in Northland with the facilities to clear passengers through customs for private international flights. The airport will be upgraded to allow planes to land in all weather, as currently many flights are cancelled or delayed. Far North Holdings Ltd. is currently planning for future expansion of the airport, including runway lengthening and widening. The intention is that an airport in the Bay of Islands / Far North area is developed into an international airport with a strong road transport link within the Bay of Islands.

Kaitiāia Airport is Crown-owned and leased to Far North Holdings Ltd. In 2005 the airport upgraded its runway to a standard that will allow 50 seat capacity aircraft to land. Further investment is needed to bring the airport to a standard that will facilitate direct flights beyond Auckland. It is noted that the land that the airport is situated on is currently subject to land settlement processes, which will need to be resolved before future development can be undertaken.

It is noted that aircraft are now able to carry more passengers and are able to land on shorter runways. It is also essential that Northland's airports and the aircraft using those airports have the necessary technology to land in all weather.

The region will also need to assess the value and opportunities to be gained from the Kaikohe and Dargaville airfields.

5.4.2 Future Proofing Flight

Whilst we may not want to do it now, we should make sure we can easily do it in the future should the situation change:

- Safeguard land both under flight paths and adjacent to existing airports from other development and land uses to allow for future airport expansion.

Transport Strategy - Airports in Northland



5.5 Coastal Shipping

In 2006/07 2.508 million tonnes of freight was transported by coastal shipping in Northland. This represents 20% of the total movement of freight in Northland that year. It is anticipated that there is considerable scope to expand this further.

The primary focus of Northland's port facilities is on the deep water port at Marsden Point (in operation since 2003), and existing oil handling facilities for the Marsden Point Oil Refinery, New Zealand's only oil refinery and therefore a nationally significant asset. These two operative commercial port facilities are the major facilities in Northland.

While Marsden Point is recognised as the primary coastal shipping hub in Northland, there are several other coastal shipping operations around the north, including the regular berthing of cruise liners in the Bay of Islands (refer to map 13). The Bay of Islands and Whāngārei are both Ports of Entry for international yachts. Northland is a very popular destination for recreational boating.

Whāngārei and Portland are identified as large scale wharf and jetty facilities, and Northland has a number of smaller commercial wharves within its harbours. Specialised bulk cement carriers operate out of Portland servicing the Golden Bay Cement operation.

Currently barging operations in the Kaipara Harbour move sand between the Kaipara Harbour and Dargaville, and also move crushed aggregate to Helensville.

Outcomes sought that are specific to Coastal Shipping include:

- A sustainable transport system that supports the growth and existing economic development of Northland and New Zealand.
- Northland is well connected to Auckland and to the rest of New Zealand.
- Efficient and integrated multi-modal movement of freight with less impact on the road and environment.
- Effective ports servicing Northland and New Zealand.

5.5.1 Strategic Direction

The strategic direction for the deep water port at Marsden Point is centred on the maintenance and upgrading of the existing facilities, and providing for future growth. Three berths have recently been constructed as part of the port development, and consent has been gained for one more, to be opened 'when increasing port volumes attain a viable level'.

Investigations are being undertaken into the enhancement and/or straightening of the deep water entrance to the harbour. It is estimated that it would cost \$5 million for the Regional Council to secure this channel (approximately 1.8% of the cost to secure the channel into the Auckland Port).

Northland's location makes its port the closest in New Zealand to the international shipping lanes, and as such there is great potential to further develop the Northport deep water port facility. Additionally, Northland Port Corporation has the significant advantage of having secured land to facilitate future development and storage facilities. The challenge that currently exists is the port's lack of container handling capability.

Facilities for container handling are essential in order for the port to be able to compete with the ports of Auckland and Tauranga, and to develop into a nationally significant logistics centre.

Whilst the Marsden Point Rail Link has been designated, significant enhancements in the port operation and the move to container handling capacity will be restricted until the rail link is built. Further discussion in regard to an inland freight distribution centre and upgrades to the North Auckland Line are contained in the Rail section of this Strategy.

Construction is currently underway on the New Zealand Refining Company's (NZRC) new jetty, which will facilitate the transport (using a tanker) of fuel to Auckland to refuel cruise liners and other large vessels. This is a new activity that has arisen in response to a change in the current approach to fuel movement following the closure of the existing port facility (Wynyard Wharf).

In the future the NZRC may be visited by super tankers that are too large to use the existing refinery jetty facilities. In this case a Single Buoy Mooring facility may need to be considered that allows these large tankers to moor off shore, with associated equipment to facilitate the movement of crude oil from the ships to the refinery storage facilities.

The region will maintain its commercial wharves and shore-based facilities for coastal shipping and will continue to investigate opportunities through-out the region for coastal shipping and barging.

In the future, ferry services may become viable, including a ferry service between Whāngārei Heads and Marsden Point. Opportunities may also exist for ferry and tourism based water transport services in other Northland harbours such as the Hokianga and Kaipara Harbours. These initiatives will require the development of land based infrastructure for loading and unloading.

5.5.2 Future Proofing Coastal Shipping

Whilst we may not want to do it now, we should make sure we can easily do it in the future should the situation change:

- Safeguard land/infrastructure corridors around ports to allow for future expansion.

Map 13: Ports and Shipping in Northland

Transport Strategy - Ports in Northland



5.6 Public Transport

Whāngārei City was until recently the only area of the region with a subsidised bus service. Public transport patronage for the Whāngārei bus service has increased significantly since the commencement of the service in July 2000. There is limited demand for public transport provision outside Whāngārei other than school buses, and commercial coach services catering for inter-regional travel and the tourist market. A recent trial bus service has started with the Regional Council's support in the Kaitāia area between local communities.

There is currently no provision for passenger rail services other than a small non-scheduled tourist service between Kawakawa and the Port of Ōpua.

It is noted that the Regional Council has an existing Regional Passenger Transport Plan (RPTP) that was prepared in 2003. It is anticipated that a full review of the RPTP will be undertaken in 2010.

Outcomes sought that are specific to Public Transport in Northland include:

- Our people have transport choices to access jobs, recreation, and community facilities.
- A sustainable transport system that supports the growth and existing economic development of Northland and New Zealand.

5.6.1 Strategic Direction

The strategic direction of public transport in Northland is focused on the main economic centres. Scheduled public passenger transport services are only likely to be viable within main centres with sufficient patronage to service clusters of employment and residential areas.

Bus patronage in Whāngārei City has tripled since 2000 to more than 20,000 passengers a month by 2008. It is anticipated that the service will continue to grow in both patronage and city coverage, and be economically viable, particularly if private car use is reduced. Sites for a 'Park and Ride' service in Whāngārei will be investigated and trialled. Further integration of public transport will be investigated, in particular to allow customers to link trips with other local and regional transport services.

Outside Whāngārei City, opportunities for public transport services within and between towns need to be investigated, such as a 'West Coast' service, a 'Mid North' service linking rural areas to urban centres, and a 'Dargaville to Whāngārei' service. Opportunities for alternative transport methods for rural communities with poor access and lower incomes need to be investigated. These may include community services and ride sharing initiatives.

In future, other forms of public transport such as ferry services may become viable, including a ferry service between Whāngārei Heads and Marsden Point. These will require the development of land based infrastructure for loading and unloading.

Ongoing consideration needs to be given to the transportation needs of the disabled community and particularly the funding and support for the Total Mobility Scheme.

5.6.2 Future Proofing Public Transport

Whilst we may not want to do it now, we should make sure we can easily do it in the future should the situation change:

- The ability to provide integrated ticketing (such as the 'Thales' system as a universal smart card for all transport modes).
- Urban road networks are designed to accommodate bus lanes and bus stops in the future.

- Strategic land use planning incorporates future passenger terminals and 'Park and Ride' facilities.
- Urban land use planning considers future public transport routes.

5.7 Walking and Cycling and other Non-motorised Road Users

Walking and cycling are important yet often overlooked means of travel. This travel might be to work, school, the shops, or as a form of recreation or sport.

Not only are walking and cycling valid forms of transport in their own right, but the benefits from walking and cycling are numerous, including health, environmental, and economic. Thus more people walking and cycling instead of using a car will be better for the individual and the community.

The nature and characteristics of Northland that are of particular relevance are:

- a low and dispersed population base;
- the geography of the region, which results in narrow and windy roads that are dangerous to cyclists;
- a lack of funding and low rating base to fund infrastructure projects; and
- limited footpaths outside urban areas.

It is important that these characteristics are recognised and taken into account. It is also important that this Strategy compliments the walking and cycling work undertaken by the District Councils of the region, NZTA, and those other organisations involved with promoting walking and cycling e.g. Sport Northland.

There are a number of reasons why walking and cycling should be encouraged. These include:

- not all people have cars - particularly applies to the young and the elderly;
- there are substantial health benefits;
- walking and cycling are the most environmentally friendly forms of travel;
- there are economic benefits from having to build fewer roads/car parks etc.;
- other low-cost alternatives to the car, such as public transport, are not always available; and
- walking is already a component of most trips.

The major issues that need to be addressed are:

- lack of walking and cycling facilities, particularly in urban areas but also between towns;
- lack of national and local funding;
- safety concerns, particularly for the young;
- the importance of promoting walking and cycling (for work, school, and recreational purposes) for environmental, health, and economic reasons;
- the need for the education of pedestrians, cyclists and motorists in appropriate and considerate road use; and
- the value to the Northland of a region-wide walking and cycling network for tourists.

Promoting Walking and Cycling

The indications are that people will walk and cycle more if the right conditions exist. Walking and cycling can be promoted by addressing the barriers that deter people from walking and cycling. This can be done through a combination of:

- **Planning and Engineering** - appropriate land use planning, and providing suitable, safe facilities.
- **Education and Encouragement** - promoting the benefits of walking and cycling, and providing cycle parking and cycle maps and improving motorist, cyclist, and pedestrian behaviour towards each other.
- **Enforcement** - setting and enforcing appropriate speed limits, and ensuring road rules are obeyed.

Outcomes sought that are specific to Walking and Cycling include:

A region where walking and cycling is encouraged and is a safe, convenient, and easily accessible transport option.

1. More walking and cycling facilities.
2. More people walking and cycling more often.
3. Walking and cycling are seen as safe and beneficial forms of transport.

5.7.1 Strategic Direction for Walking and Cycling

When planning for walking and cycling, the following strategic direction (in no particular order of priority) should be followed:

1. Implement a hierarchy of solutions, including traffic volume reduction and speed reduction, junction treatment and traffic management, redistribution of the road space, and expansion of facilities.
2. Plan land use to allow shorter distances that can be covered by cycle or on foot.
3. Infrastructure itself is not enough. Education, encouragement and enforcement are also needed, including promotion of the cycling code of practice and liaison with established Northland cycling groups.
4. Access is more important than mobility.
5. Integrate walking and cycling into every level of the planning and engineering process.
6. Improve inter-modal connection.
7. Use landscape and urban design to create attractive routes.
8. Provide for recreation as well as transportation.
9. Provide a network with linkages.
10. Provide routes for cyclists and not cycle routes.
11. Create safe environments from the outset.
12. Traffic modifies pedestrian behaviour.
13. Pedestrians, cyclists, and equestrians have diverse characteristics that must be recognised.

There are five widely accepted requirements that need to be in place in order to encourage cycling:

- Coherence
- Directness
- Attractiveness
- Safety
- Comfort

There are five widely accepted requirements that need to be in place in order to encourage walking:

- Comfort
- Convenience
- Conviviality
- Conspicuousness
- Connectivity

5.7.2 Developing Walking and Cycling Networks

Strategic areas of Northland where walking and cycling can be enhanced have been identified in map 14 over page. The areas identified are:

- Whāngārei Harbour area (including Whāngārei City)
- Bay of Islands
- Doubtless Bay
- Kaitāia
- Kaikohe
- Opononi
- Dargaville
- Mangawhai
- Maungaturoto
- Kaiwaka

These areas represent the most significant concentrations of population within the Northland Region and would therefore benefit most from a strategic approach to creating and enhancing local networks for recreational and commuting use. There is also scope for creating long distance trails, such as through the New Zealand Cycleway; however usage will likely be for recreational tourism purposes rather than local commuting.

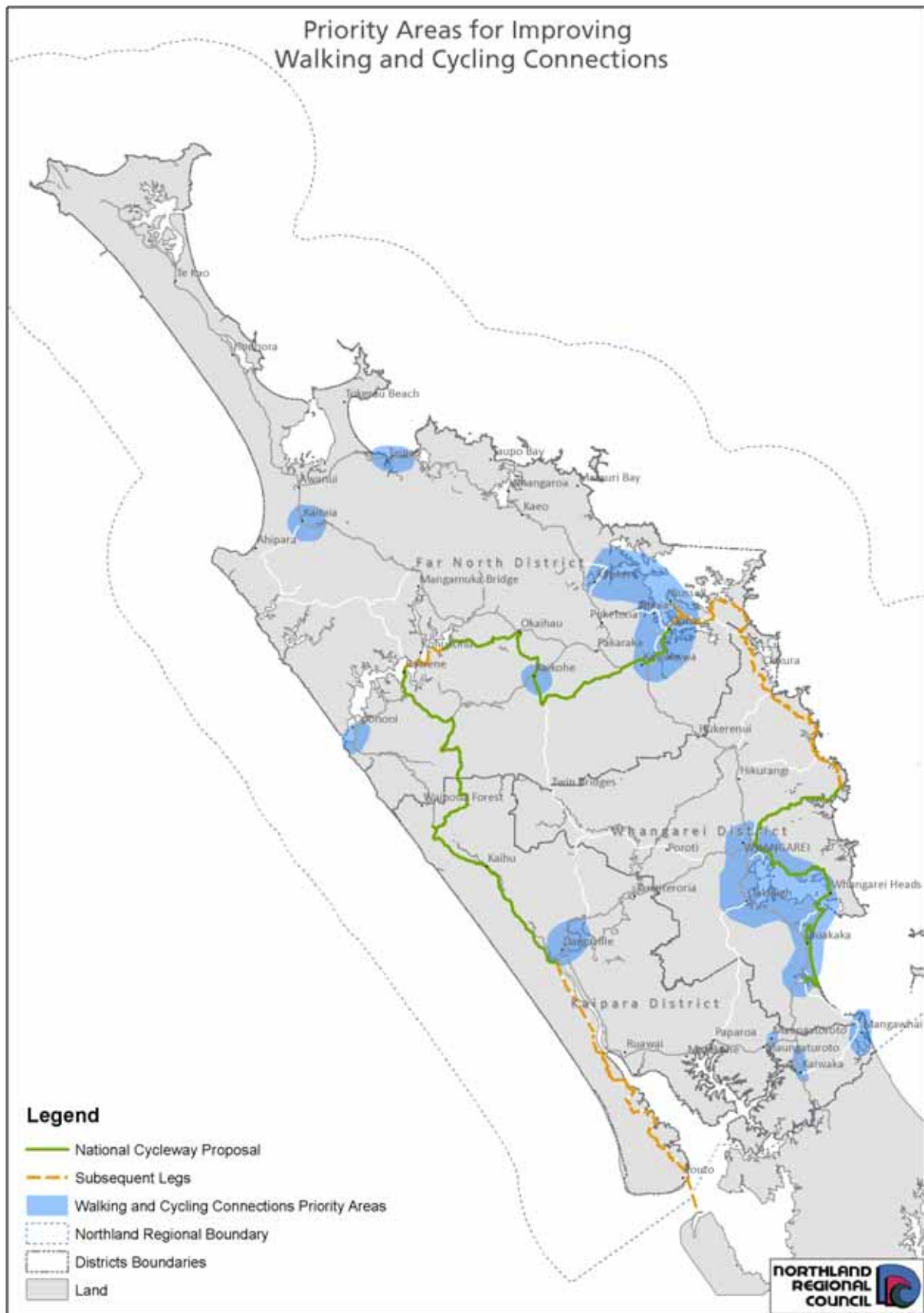
The region should also promote walking and cycling opportunities as a part of other significant projects such as works on stop-banks and the creation of flood protection schemes.

Cross reference: Section 2.10 Fuel Prices and Electrification

5.7.3 Other Non-motorised Road Users

There are also other non-motorised users of the road network that need to be given consideration. Horse riding, in particular, is common in rural parts of the road network.

Map 14: Strategic Walking/Cycling Route Priority Development Areas



6. Key Initiatives

This Strategy has identified a vision for transportation in Northland. For the vision to be successful, Northland needs to establish a series of strategic outcomes that will achieve the vision. Each outcome has been subject to specific analysis and supporting outcomes, which are broken down into specific targets that drive the achievement of the outcome. This establishes responsibility and reports on progress and effectiveness of the interventions. The lead agency (in **bold**) or agencies are identified for each strategic option and initiative.

Key Outcome: A sustainable transport system that supports the growth and existing **economic development** of Northland and New Zealand.

Supporting outcomes		Strategic options & initiatives	
		Immediate (6 Year focus)	30 year focus
Ec1	Reliable travel times and transport choice for communities servicing employment areas	<p>Identify key employment and catchment areas. (Northland Regional Council (NRC), District Councils (DC's))</p> <p>Undertake strategic studies for infrastructure improvements on key corridors:</p> <ul style="list-style-type: none"> - Expressway from Puhoi to Bay of Islands; - Strategic freight and tourism routes; - SH14 North to Kamo Bypass; - SH14 / SH1 Intersection; and - SH14 south to Blue Goose <p>Develop travel plans for hospitals, schools and large business. (DC's)</p> <p>Support transport connections between significant population centres and centres of employment. (NRC, DC's)</p>	<p>Deliver infrastructure improvements to support new growth areas. (NZTA, DC's)</p> <p>If identified as appropriate, deliver infrastructure improvements on key corridors:</p> <ul style="list-style-type: none"> - SH1 south to Puhoi; - Triangle in the North; - Maungaturoto to Mangawhai link. <p>Note these areas are referred to in section 5.2 and shown in more detail in Appendix B.</p>
Ec2	Reduced vehicle operating costs for freight movements into and within Northland	<p>Identify key cost aspects that can be addressed. (NRC)</p> <p>Reduce costs on strategic routes into ports and key employment areas. (NZTA, DC's)</p> <p>Investigate the regional economic opportunities and costs from a reduction in available fossil fuel. (NRC)</p> <p>Investigate the potential energy demands associated with electrification of 50% of the urban vehicle fleet. (NRC)</p> <p>Identify, and upgrade if there is funding available, routes suitable for high productivity vehicles (over 44 tonnes). (NZTA, NRC, DC's)</p> <p>Investigate load capacity of bridges on local road networks. (DC's)</p>	
Ec3	Effective infrastructure for the transportation of goods via rail and coastal shipping	<p>Implementation of Marsden Point Rail Link. (KiwiRail)</p> <p>Active encouragement of movement of bulk freight by rail. (NRC, KiwiRail)</p> <p>Development of inland freight distribution centre (NRC, Enterprise Northland. (EN))</p> <p>Investigate opportunities for coastal shipping. (NRC)</p>	Effective and efficient rail link to Auckland. (KiwiRail)
Ec4	Effective Infrastructure that supports key industries	<p>Identification (and potential development of the infrastructure necessary to support opportunities for growth in industries such as tourism, minerals, maritime, research and aquaculture). (NRC, DC's & Industry)</p> <p>Promotion of Electricity Generation opportunities. (NRC)</p>	

Supporting outcomes		Strategic options & initiatives	
		Immediate (6 Year focus)	30 year focus
Ec5	Increased contribution to local economy through visitors and tourists	<p>Improved destination signage on roads. (NZTA, DC's)</p> <p>Improved road-side stops and public amenities. (NZTA, DC's)</p> <p>Improve key tourism routes – particularly the twin coast discovery highway and access to the Bay of Islands. (NZTA, DC's)</p> <p>Identify funding available for tourist related transport infrastructure such as local tourist routing. (NRC, EN, DC's)</p> <p>Promote the Bay of Islands / Far North area as a destination (international) airport. (EN, FNDC)</p> <p>Address accessibility and safety of access to airports to ensure their efficient use. (DC's)</p> <p>Investigate passenger rail services. (KiwiRail, NRC)</p> <p>Support infrastructure improvements associated with regional celebrations and or events. (All)</p> <p>Identification and subsequent community approval of funding solution for the construction of the Hokianga Harbour Bridge Crossing Project. (NRC, FNDC)</p> <p>Maintenance of the existing ferry links within Northland. (DC's)</p> <p>Development of strategies for the improvement of supporting infrastructure for the recreational and marine tourism industries. (NRC, DC's)</p>	<p>Increased proportion of international visitors. More visitors starting their trips in Northland.</p> <p>Increased number of cruise liners stopping in Bay of Islands with refuelling facilities available. (EN)</p> <p>Subject to agreement on a funding solution, the construction of the Hokianga Harbour Bridge Crossing Project. (FNDC, NRC)</p>

Leading Indicator:

Modal share of freight transported in the region (change per year).

Lagging Indicators:

Number of guest nights spent in the region (change per year).

Percentage of public roads that are sealed (identified per year).

Target:

Increase modal share of freight by rail and coastal shipping by 10% by 2016.

Increase freight volumes handled in the region by 20% by 2016.

Expected journey time is within 10% of actual journey time.

Key Outcome: All road users are **safe** on Northland's roads

Supporting outcomes		Strategic options & initiatives	
		Immediate (6yr focus)	30 year focus
S1	Northland recognised as road safety leader	<p>Identify and analyse the top road safety risks and crash sites annually. (RoadSafe Northland Forum (RSNF))</p> <p>Implement the current Regional Road Safety Plan for Northland. (RSNF)</p> <p>Ensure safety management systems and road safety plans in place. (NZTA, DC's, Police)</p> <p>State highway emergency detour route programme which includes the need for:</p> <ul style="list-style-type: none"> • A computerised system to take over from the present paper based system; and • Development of appropriate signage; and • Upgrading the deviation routes (NZTA, NRC) <p>Promote the rules of the road to overseas visitors - left hand drive and speed limits. (RSNF)</p>	
S2	Minimised death and injury rate	<p>Promote a regular and ongoing programme of 'black spot' crash reduction studies. (RSNF)</p> <p>Promote safety audits of existing infrastructure and of new projects. (RSNF)</p> <p>Promote development of safer pedestrian and cycling facilities. (RSNF)</p> <p>Support police enforcement and publicity programmes. (RSNF)</p> <p>Coordinate health and road safety programmes. (RSNF)</p> <p>Coordinate with the tourism Strategy and upgrade tourist routes to a consistent level of service. (RSNF)</p> <p>Mitigate loss of control on bends by improving geometry and skid resistance. (NZTA, DC's)</p>	
S3	Pro-active rather than reactive approach to improving safety	<p>Co-ordinated application of the 3 E's – Engineering, Education and Enforcement together with the new 'Safe System Approach':</p> <ul style="list-style-type: none"> – Safer road users – Safer travel speeds – Safer roads & roadside – Safer vehicles (RSNF) <p>Promote safer visitor and freight facilities – signage, lighting, fatigue and rest stops. (RSNF)</p> <p>Prepare and implement a regionally based standard and guideline for road construction and maintenance. (NRC, NZTA, DC's)</p>	

Leading Indicator:

Number of persons killed and injured requiring hospitalisation (change per year for Under 16, Youth (16-25) and Adult (over 25)).

Lagging Indicators:

Social cost of crashes (change per year).

Target:

To reduce killed and injured requiring hospitalisations to 160 per annum by 2015.

Key Outcome: Northland is well **connected** to Auckland and to the rest of New Zealand

Strategic options & initiatives		
Supporting outcomes	Immediate (6yr focus)	30 year focus
Con1 Improved reliability of journey times on routes of national importance	<p>Promote cross-boundary collaboration and consistency of approach with adjoining authorities on strategic inter-regional corridors:</p> <ul style="list-style-type: none"> - strategic study to extend motorway North from Puhoi to Warkworth; - strategic study to identify the suitable standard and location of network corridor from Warkworth to Wellsford (anticipated this will at least be of expressway standard); - strategic study to identify the suitable standard and location of the network corridor from Wellsford to Whāngārei (anticipated this will at least be of expressway standard); and - strategic study to identify the suitable standard and location of the network corridor from Whāngārei to Bay of Islands (anticipated this will at least be of expressway standard). (NZTA, NRC) <p>Maintain operational rail network between Whāngārei and Auckland. (KiwiRail)</p> <p>Investigate the viability of permanent Variable Message Signing across the network. (NZTA, NRC)</p> <p>Promote improvements to strategic network. (NZTA, NRC)</p> <p>Promote improvements to SH1 within urban Whāngārei. (WDC, NZTA)</p> <p>Address route security for Te Hana Bridge, Brynderwyn's and Kaeo, including identification of suitable emergency deviation routes. (NZTA, NRC)</p> <p>Promote coastal shipping initiatives. (NRC)</p> <p>Feasibility study for upgrading North-Auckland line. (KiwiRail, NRC)</p> <p>Investigate ways to enhance inter-regional bus and coach services including service patterns and infrastructure. (NRC)</p> <p>Manage improved integration between local authority and state highway controlling authorities to improve efficiencies and promote regional growth. (DC's, NZTA, NRC)</p> <p>Work with tourism bodies outside of Northland to provide connection and information for tourists. (All)</p>	<p>If identified as appropriate and feasible through the Strategy studies, implement the strategic inter-regional corridor projects. (NZTA, NRC)</p>
Con2 Air travel capacity for business and visitors is responsive to future needs	<p>Extend Kaitiāia airport in line with funding. (FNDC)</p> <p>Install radar equipment at the Bay of Islands airport to allow for all-weather landing. (FNDC)</p> <p>Feasibility study of developing a Bay of Islands / Far North international airport. (EN)</p> <p>Investigate and compare regional benefits of expanding the airports in Whāngārei, Kaitiāia and Bay of Islands / Far North. (EN, NRC)</p> <p>Domestic (commuter) airports operating at Kaitiāia and Whāngārei. (FNDC, WDC)</p> <p>Investigate potential for commercial airport services at Kaikohe and Dargaville. (FNDC, KDC, EN)</p> <p>Investigate road accessibility to potential airport expansions. (DC's)</p> <p>Investigate land availability for planned expansion projects. (DC's, NRC)</p>	<p>Monitor need for more services and support commercial interests. (EN)</p> <p>International airport at the Bay of Islands / Far North with high standard road connection to Paihia. (FNDC, EN)</p>

Leading Indicator:

Reliability of journey time forecasts SH1 north of Auckland.

Lagging Indicators:

Percentage of passing lane and divided carriageway on SH1: Puhoi to Whangarei and Whangarei to Cape Reinga.
Arrivals/ Departures numbers at Northland airports (change per year).

Target:

Expected journey time is within 10% of actual journey time.

Key Outcome: Northland's roading **network** is developed and maintained so that it is fit for purpose

Supporting outcomes		Strategic options & initiatives	
		Immediate (6yr focus)	30 year focus
N1	Reliable travel times between communities, businesses and regional destinations	<p>Subject to investigation address congestion on SH1, particularly at Warkworth and Wellsford. (NZTA, NRC)</p> <p>Investigate route security and impacts on communities. (NZTA, NRC)</p> <p>Investigate the potential to enhance and expand the existing urban traffic control system for Whāngārei. (WDC)</p> <p>Develop travel plans for hospitals, schools and large business. (DC's)</p>	Investigate options to improve journey time / reliability times by completing key road links and improving connectivity between communities in the Far North. (FNDC)
N2	Maintenance and improvements investment is aligned with gaps in levels of service	<p>Develop a regional network hierarchy for local roads that is integrated with land use expectations. (NRC)</p> <p>Define and promote an intended level of service (LOS) for Northland roads and the changes require to meet a regionally developed road hierarchy. Create a LOS agreement between regional, local authorities and the NZTA. (NRC, DC's, NZTA)</p> <p>Communicate local share requirements for funding planned investments in the network. (DC's)</p> <p>Investigate and support transport connections between significant population centres and centres of employment. (DC's, NRC, NZTA)</p> <p>Establish regional levels of service that differentiate between expectations on a State Highway, strategic detour route, and local road network. (NRC)</p> <p>Identify levels of service and gaps within each corridor. (NRC, DC's)</p> <p>Investigate load capacity of bridges on local road networks. (DC's)</p> <p>Identification and subsequent community approval of a funding solution for the construction of the Hokianga Harbour Bridge Crossing Project. (NRC, FNDC)</p>	Subject to agreement on a funding solution, the construction of the Hokianga Harbour Bridge Crossing Project. (FNDC , NRC)
N3	Clearer access and management direction providing clarity for developers	<p>Direction developed in conjunction with second generation RPS. (NRC)</p> <p>Coordinate expectations for collecting, using, and communication around requirements for developer contributions and ensure agreements are in place. (DC's)</p> <p>Ensure and coordinate actions so that development aligns with structure planning and transport strategies. (DC's, NRC)</p> <p>Provide design principles and guidelines that support pedestrian movement and local transport connections. (DC's)</p>	
N4	Public transport opportunities on appropriate corridors	<p>Investigate public transport services outside of Whāngārei City where economically viable. (NRC, DC's)</p> <p>Support demand management initiatives to increase public transport patronage in urban Whāngārei. (WDC, NRC)</p>	

Leading Indicator:

Percentage of primary route network receiving maintenance.

Lagging Indicators:

Percentage of bridges and structures receiving maintenance and/or upgrade.
Traffic volumes on all monitored roads in Northland.

Target:

Reduce percentage of primary roads needing maintenance by 20% by 2016.

Key Outcome: Efficient and integrated multi-modal movement of **freight** with less impact on the road and environment.

Strategic options & initiatives		
Supporting outcomes	Immediate (6yr focus)	30 year focus
F1 Increase movement of freight via rail and coastal shipping	Investigate potential funding sources for the construction of the Marsden Point Rail Link. (KiwiRail , NRC) Investigate funding sources for upgrading the North Auckland Line. (KiwiRail , NRC) Investigate inland freight distribution centre for multi modal movement of freight within Northland. (EN)	Efficient and effective rail link to Auckland through the construction of the Marsden Point Rail Link and upgrading of the North Auckland Line. (KiwiRail)
F2 Reduce operating costs for freight	Prepare for a short term increase in road freight, prior to rail freight becoming feasible. (NRC) Identify routes suitable for high productivity vehicles (over 44 tonnes). (NZTA, NRC, DC's)	
F3 Improved road construction and maintenance	Develop long term programme for road and rail bridge improvements and risk analysis. (NRC, Road Freight Reference Group (RFRG)) Identify and upgrade all single lane bridges on state highways. (NZTA) Investigate regional requirements for aggregate sources and distribution. (NRC) Develop a regional network of stock truck effluent disposal sites: <ul style="list-style-type: none"> Develop a new stock truck effluent disposal site in the Far North. (NRC, FNDC) Promote and support the use of a private facility for stock truck effluent disposal in Kaipara. (NRC, KDC) Undertake investigations into the identification of key areas in need of improvement. (NRC) Develop funding mechanism to follow on from present regional development funding to allow key forestry routes to be upgraded with minimal cost burden on ratepayers. (NRC, DC's)	
F4 Reduced greenhouse gases via efficient use of freight modes	Assess and monitor increases in freight across different modes. (NRC) Investigate opportunities for coastal shipping. (NRC)	Efficient and effective rail link to Auckland. (KiwiRail)

Leading Indicator:

Modal share of freight transported in the region.

Lagging Indicators:

Percentage of primary route network needing maintenance.
Percentage of bridges and structures requiring maintenance and /or upgrade.

Target:

Increase modal share of freight by rail and coastal shipping by 10% by 2016.

Key Outcome: Our people have **transport choices** to access jobs, recreation and community facilities

Strategic options & initiatives		
Supporting outcomes	Immediate (6yr focus)	30 year focus
C1 Effective and efficient bus network in main centres	<p>Increased usage of public transport in Whāngārei. (NRC)</p> <p>Public transport systems established and maintained in other main centres where viable. (NRC, DC's)</p> <p>Investigate the potential for real time passenger information for key bus routes in Whāngārei. (NRC)</p> <p>Feasibility study into adopting a smart card or RFID based system. (NRC)</p> <p>Feasibility of Park and Ride in Whāngārei City to be investigated. (NRC, WDC)</p> <p>Support demand management initiatives to increase public transport patronage in urban Whāngārei. (WDC, NRC)</p> <p>Integrate public transport options with private transport. (DC's, NRC)</p> <p>Implement schemes that reduce congestion caused by private vehicles, particularly peak times for commuter and school traffic. (DC's, NZTA, NRC)</p>	
C2 People have access to shared transport options	<p>Develop rideshare opportunities. (NRC)</p> <p>Conduct a disability audit of urban centres in Northland identifying enhancements to improve mobility. (DC's).</p> <p>Investigate potential to access funding from the Community Transport Fund in the National Land Transport Programme. (NRC, DC's)</p> <p>Provide on-going financial support for the Total Mobility Scheme. (DC's, NZTA)</p> <p>Ensure links to main health facilities (hospitals) are prioritised. (NRC)</p> <p>Investigate the potential for accessibility to be mapped in Whāngārei. (WDC)</p> <p>Implement infrastructure upgrades for ferry services. (FNDC)</p> <p>Invest in and promote broadband to enhance working from home opportunities and reduced need for travel from remote communities. (EN, NRC, DC's)</p> <p>Develop travel plans for hospitals, schools and large business. (DC's)</p> <p>Develop individual travel plans for town centres that lead to creating walkable, pleasant environments for communities and visitors. (DC's)</p> <p>Develop parking management strategies for urban areas. (DC's)</p> <p>Support transport connections between significant population centres and centres of employment. (DC's, NZTA, NRC)</p> <p>Support a Hokianga Harbour crossing link as a key transport route. (FNDC, NRC)</p>	
C3 A network of appropriate and safe cycling routes within communities	<p>Implement regional walking and cycling Strategy and promote strategic walking and cycling route priority development areas. (NRC)</p> <p>'Share the Road' culture developed and promoted e.g. giving cyclists, equestrians and other non-motorised road users 1.5m at all times. (NRC)</p> <p>Establish minimum cycle parking requirements for new commercial/public developments. Where they exist, review to ensure fit for purpose. (DC's)</p>	

Strategic options & initiatives		
Supporting outcomes	Immediate (6yr focus)	30 year focus
C4 Interconnected cycling routes between communities where safe and viable	Investigate opportunities presented by central government cycleway programme and links with sub-regional walking and cycling strategies. (NRC, EN) Identify existing and potential cycle routes. (NRC, EN) Establish economic benefit to communities. (EN)	Segregated cycle network established through Northland. (NRC) Increase in visitors for active mode based holidays. (EN)

Leading Indicator:

Bus patronage in Whāngārei City (change per year).

Lagging Indicators:

Kilometres of new cycle route added to the network per year.
Mode of travel to work and mode of travel to school.
Percentage of residents within 5/10/15/20min walk of a bus route.
Traffic volumes on all monitored roads in Northland.

Target:

Bus patronage increase by 20% by 2016 in Whāngārei.

Key Outcome: The transport system enhances the **environmental and cultural values** of Northland

Strategic options & initiatives		
Supporting outcomes	Immediate (6 yr focus)	30 year focus
Env 1 Communities benefit from through traffic and the change in traffic if bypassed	<p>Investigate potential for State Highway bypasses:</p> <ul style="list-style-type: none"> - Warkworth and Wellsford; - Kaiwaka; - SH10 from Doubtless Bay; and - Link from Kerikeri to Paihia. (NZTA, NRC, DC's) <p>Improve access for through traffic to good quality and safe services. (NZTA, DC's)</p> <p>Effective entry and exit point strategies for bypassed communities. (NZTA, DC's)</p> <p>Revitalise the feasibility and social and economic implications of a Kawakawa bypass to determine if it would enhance a developing strategic and tourism town. (FNDC, NZTA, NRC)</p>	Investigate the feasibility of an alternative route around Whāngārei. (NZTA, NRC, WDC)
Env 2 Transport infrastructure enhances or is sympathetic to sites of significant landscape, natural, cultural and historic heritage value	<p>RMA processes are valued for their contribution towards avoiding adverse environmental effects. (All)</p> <p>Identify areas of value adjoining or near transport network. (NRC)</p> <p>Identify potential rest areas and upgrade existing rest areas. (NZTA, NRC, DC's)</p> <p>Identify mitigation and adaptation methods to climate change e.g. sustainable urban drainage. (All)</p> <p>Develop a regional network of stock truck effluent disposal sites:</p> <ul style="list-style-type: none"> • Develop a new stock truck effluent disposal site in the Far North. (NRC, FNDC) • Promote and support the use of a private facility for stock truck effluent disposal in Kaipara. (NRC, KDC) <p>Investigate potential for shared space and/or partial pedestrianisation to be implemented in town centres in Northland and identify any other environmental improvements. (NRC)</p> <p>Undertaken appropriate consultation with Iwi groups on matters of environmental and cultural heritage. (All)</p>	
Env 3 Transport Management is effectively incorporated into land use planning	<p>Key outcomes supported in second generation RPS. (NRC)</p> <p>Promote green travel planning in schools and businesses. (DC's)</p> <p>Reduce greenhouse gas emissions from transport. (NZTA, NRC, DC's)</p> <p>Avoid, minimise, or mitigate adverse effects of the transport system on sensitive environments such as watercourses, estuaries, and inlets. (NRC, NZTA, DC's)</p> <p>Reduce silt runoff from unsealed roads into watercourses. (NZTA, DC's)</p> <p>Eliminate bottlenecks and congestion that make travel times unpredictable and increase emissions. (NZTA, NRC, DC's)</p> <p>Manage improved integration between local authority and state highway controlling authorities to improve efficiencies and promote regional growth. (DC's, NZTA, NRC)</p>	

Strategic options & initiatives		
Supporting outcomes	Immediate (6 yr focus)	30 year focus
Env 4 Key transport routes have minimised adverse environmental impact.	Understand the current environmental impact of the transport network. (NRC) Investigate potential for recycled materials (such as secondary aggregates) to be used in the construction process. (All) Investigate potential for carbon monoxide monitoring at key roadside sites in Northland. (NRC) Investigate potential for roadside planting and or restoration. (NRC, DC's, NZTA)	

Leading Indicator:

(No Indicator Identified)

Lagging Indicators:

Percentage of schools covered by a green travel plan.
 Percentage of businesses employing 100+ or with a largely mobile workforce covered by a green travel plan.
 Percentage of public buildings employing 50+ covered by a green travel plan.
 Number of guest nights spent in the region change per year.

Target:

(No Indicator Identified)

Key Outcome: Effective **ports** servicing Northland and New Zealand

Strategic options & initiatives		
Supporting outcomes	Immediate (6 yr focus)	30 year focus
P1 Improved route security and travel time reliability between the port and inland destinations	Implement Marsden Point Rail Link. (KiwiRail , NRC) Investigate inland freight distribution centre for multi modal movement of freight within Northland. (EN) Enhance and protect key routes including SH15A link and SH1 to Auckland. (NZTA , NRC) Establish and protect a safe network of routes for over-dimension, over-weight loads and hazardous substances. (NZTA , NRC, RFRG)	Investigate enhanced barging facilities to assist in the transportation of aggregates. (EN)
P2 Efficient deep water port and international operation for the future of Northport	Provide efficient facilities for rail and coastal shipping. (NRC, Northport) Investigate options for coastal shipping in the Far North to complement the planned growth in other transport modes. (NRC)	Container handling facilities at Marsden Point port. (Northport) Investigate the potential for a cruise ship terminal to be developed at Marsden Point. (Northport, EN)
P3 Integrated operation between ports of Tauranga, Auckland and Northport	Coordinated discussions with other ports and authorities. (NRC)	

Leading Indicator:

Freight loaded and unloaded at ports in Northland.

Lagging Indicators:

Modal share of freight transported in the region.

Target:

Increase freight volumes handled in the region by 20% by 2016.

6.1 Impact of the Outcomes

By achieving these initiatives, Northland aims to make a significant contribution to New Zealand's transport objectives. Examples of initiatives are given to show how the key outcomes for Northland relate to the national objectives.

Northland's Key Outcomes	National Objectives				
	Ensuring Environmental Sustainability	Assisting Economic Development	Assisting Safety and Personal Security	Improving Access and Mobility	Protecting and Promoting Public Health
A sustainable transport system that supports the growth and existing economic development of Northland and New Zealand.	Reduced vehicle operating costs Effective infrastructure	Visitors and tourists Infrastructure for key industry sectors Rail and coastal shipping		Reliable travel times & transport choices Reduced vehicle operating costs	
All road users are safe on Northland's roads.			Northland as a road safety leader	Proactive approach 3E's	Minimised death and injury rate
Northland is well connected to Auckland and to the rest of New Zealand.		Strategic inter-regional corridors		Reliability of journey times Air travel	
Northland's roading network is developed and maintained so that it is fit for purpose.	Clear access Strategy	Reliable travel times Strategic routes	Route security	Public transport opportunities on corridors	Connecting communities
Efficient and integrated multi-modal movement of freight with less impact on the road and environment.	Land use planning	Rail link Distribution centre Strategic freight route		Increased modal shift to rail and coastal shipping	
Our people have transport choices to access jobs, recreation and community facilities.		Public transport and shared transport options	Public transport Safe cycling routes	Bus network in main centres Ride share	Walking and cycling within communities
The transport system enhances the environmental and cultural values of Northland.	Infrastructure that enhances or is sympathetic to environment Strategic land use planning	Communities benefit from through traffic and change in traffic if bypassed			
Effective ports servicing Northland and New Zealand.		Deep water port with international operations		Route security and travel time reliability	

7. Monitoring and Implementation

7.1 Monitoring Framework

Monitoring of the Strategy will take place on an annual basis in May and reflect the previous year's performance. The monitoring report is not intended to be an exhaustive review of this Strategy but will be an opportunity to address slippage against targets and will enable resources to be redirected as required. It is envisaged that any significant redirection of resources will be through a formal review of the RLTP.

After six years, a full strategic review of this Strategy will be conducted including a review of the options and initiatives detailed in section 6 of the Strategy looking at both what went well and what can be improved for the future.

7.1.1 Monitoring Indicators

The Strategy has identified a leading indicator and one or more lagging indicators that are designed to assist in monitoring progress and achievement of the Strategy.

The Leading indicator is designed to signal or predict future events or trends that are occurring and is intended as the primary indicator for monitoring progress. The Lagging indicators are generally indicators used to confirm that a pattern is occurring or about to occur and are intended as supplementary indicators for monitoring progress.

7.1.2 Working Group

It is envisaged that one of the key tasks, once this Strategy is adopted, will be to identify approaches to meeting the initiatives outlined in section 6. Some of the initiatives are of a more strategic nature than others and projects will need to be identified that go towards meeting the strategic direction taken in this Strategy. As the Strategy is developed and implemented, there may be the opportunity for dedicated teams to be formed around specific projects. It is anticipated that a technical working group will be established to drive the actions and initiatives outlined in this Strategy. This working group would regularly report on progress to the RTC.

7.1.3 Timetable

It is envisaged the following will happen over the next six years:

May 2010:	Adoption of this Strategy Establishment of Technical Working Group
May 2011:	First year monitoring report Review of Regional Land Transport Programme based on monitoring report
May 2012:	Second year monitoring report <i>Adoption of new Regional Land Transport Programme</i>
May 2013:	Third year monitoring report Review of Regional Land Transport Programme based on monitoring report
May 2014:	Fourth year monitoring report Review of Regional Land Transport Programme based on monitoring report
May 2015:	Fifth year monitoring report <i>Adoption of new Regional Land Transport Programme</i>
May 2016:	Full six year review of this Strategy

7.2 Funding

The purpose of this Strategy is to establish what we need to achieve at a regional level and is therefore not primarily focused on individual projects. The RLTP defines the next three years of investment in detail and estimates the next six and nine years of investment for all transport organisations. The Long Term Council Community Plan's (LTCCP's) set out the next ten years of investment for local authorities.

Under Section 76 (b) of the Land Transport Management Act 2003 (LTMA), when preparing a regional land transport Strategy on behalf of a Regional Council a regional transport committee must also take into account:

“...the land transport funding likely to be available within the region for implementing the Strategy during the period covered by the Strategy.”
(30 years)

The LTMA supports an integrated and sustainable land transport system. This includes taking an integrated approach to land transport funding and management and improving long term planning and investment in land transport. The LTMA also allows for alternative forms of funding, such as tolls and public/private partnerships.

Potential funding sources currently available to implement this Strategy include:

- Local Government Rates
- Other Local Government revenues including dividends and charges
- Development or financial contributions
- Developer agreements / cost sharing for particular projects (e.g. between local authorities and developers or between NZTA and developers)
- NZTA (National and Regional funding)
- Regional or local authority cash injections (e.g. from investments)
- Tolling and Public Private Partnerships
- KiwiRail rail funding and Track Access Charges
- Nationally funded initiatives (such as the Government's National Cycleway Programme)

Shorter term projects which are affordable are included within the RLTP and each individual Council's LTCCP. The RLTP can be viewed on the NRC website: www.nrc.govt.nz/transport

The major projects that are included within the RLTP are:

New and improved infrastructure projects for the State Highways:

- Construction of Waitiki Landing to Cape Rēinga Seal Extension — stage 2
- Construction of Kamo Bypass — stage 2
- Matakohe realignment
- Bulls Gorge realignment
- Investigation of Brynderwyn Hill realignment
- Akerama curves realignment and passing lane
- Design of Snake Hill realignment
- Selwyn Ave and Tarewa Road

New and improved infrastructure for local roads are:

Whāngārei District Council:

- Design and construction of Spedding Road link
- Porowini Ave extension
- Whāngārei bus service infrastructure
- Onerahi Road improvements
- Mill Road/Nixon Street upgrades
- McEwan Road upgrades
- One Tree Point upgrades
- Riverside Drive/Onerahi Road upgrades
- Lower Hātea River crossing
- McEwan Road upgrades
- Walton Street upgrades

Far North District Council:

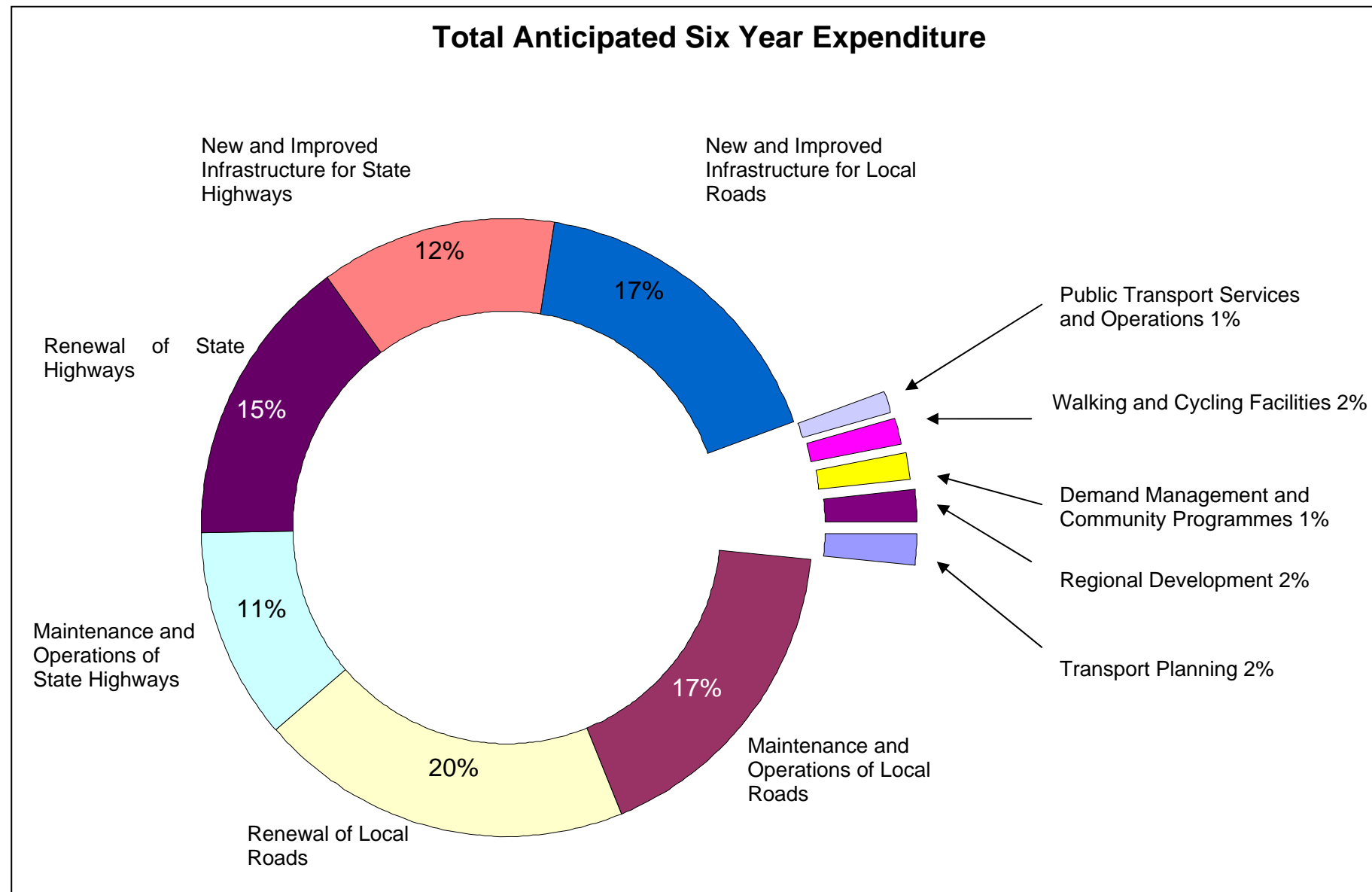
- Bridge replacement programme at: Sawyers Road, Wainui Road, Matawherohia Road, Waharua Road, Quarry Road, off State Highway 1 (Kawakawa — Paihia), Jasons Road, Churtons Road, Pokapu Road, Waikuku Road, and Browns Road
- Waipapa Road seal widening
- Seal extensions on Pungaere Road, Picadilly Road, Haruru Falls Road, Matawaia to Maromaku Road, Ngapipito Road, Taheke Road, Oturu Road, and Fairburn Road

Kaipara District Council:

- Ōtamatea Area Road reconstruction
- Bridge replacements
- Ōtamatea Area seal extensions
- New Dargaville link road

The total funding identified within the RLTP for 2009–2015 is \$981 million. Figure 4 below identifies the percentage allocation based on activity class over the six year period 2009-2015. This expenditure is based on those projects that have been included within the RLTP for the next six year period.

Figure 4: Total Anticipated Six Year Expenditure



It is assumed that Northland will have a similar level of local funding available within the RLTP over the next 30 years. Northland is not expecting to see significant increases in available funding over this period (other than through Government Projects such as RONS and any future broader government investment in infrastructure) and therefore will have to continue to prioritise the projects identified within this Strategy to fall within the available funding.

The exceptions to this are those projects that are not covered by the RLTP such as the Marsden Point Rail Link, upgrading the North Auckland Rail Line and improvements to airports and coastal shipping facilities. These projects require further investigation through scoping studies which will include estimates of construction costs and benefits. Once this information has been determined a more robust assessment of the affordability of these parts of the Strategy can be undertaken.

It is envisaged that the adoption of this Strategy will trigger a review of the RLTP after Year 1 in May 2011 when the first monitoring report is produced. This is important as the Strategy needs to inform spending in the RLTP and the current RLTP was adopted prior to the development of the Strategy.

This Strategy identifies a number of other strategic projects, studies, and investigations that have not yet been costed as well as a number of initiatives for shipping, air travel and the rail network that are not included within the RLTP funding assessment. The funding identified above does not reflect the amount of funding required to implement all the initiatives identified in section 6 of this Strategy.

This Strategy recognises that, in the longer term, the projects and actions required to bring about significant change in the region and its transport network will not generally be “affordable” if viewed only from the immediate cost and immediate benefits.

Leadership and a long term vision are required to enable Northland to make significant improvements to infrastructure that will support our economy whilst safeguarding the environment.

In the course of implementing this Strategy and justifying the projects that will bring about significant change to the region, it will be necessary to provide a robust assessment of the long term economic benefits of those projects on the local and regional economy as well as their benefits to the broader transport network.

The region will need to be proactive in identifying opportunities for additional or alternative funding for transport projects, both in terms of national funding and local share funding.

The region will also need to be an advocate for those areas or parts of the region that are not benefiting from the current government direction (as outlined in the GPS). Of particular note is the maintenance and improvement of the rural road network which is not favourably viewed under the current GPS but is a significant driver and contributor to the Northland economy (particularly for forestry and agriculture).

It is also noted that the region is not able to undertake all the road safety initiatives and campaigns that it considers essential to address the road safety statistics. Increased or alternative funding sources must be found to assist this cause.

7.3 Risk Management

There are a number of risks attached to the delivery of this Strategy. It is envisaged that the Year 1 monitoring report will flag up risks to delivery that have emerged and enable effective targeting. Effective targeting may take the form of a review of the RLTP or through other identified mitigation measures. Potential risks and identified mitigation measure include:

Risk	Significance	Likelihood	Mitigation
Increase in cost of materials.	High	Medium	Look to use recyclable material and secondary aggregates where possible.
Insufficient funding available to deliver Strategy.	High	Medium	Constantly review RLTP and national funding against the priorities of this Strategy.
Extreme weather events made more frequent by climate change.	High	Medium	Difficult to predict. Ensure that schemes have a built in assessment of the effects of extreme weather/climate change. Ensure adoption of environmentally friendly practices.
National and international economic conditions deteriorate meaning less money available to spend on initiatives.	High	Medium	Review RLTP against the priorities of this Strategy.
Public and political reactions to plans and programmes. Other delays in statutory processes.	High	Medium	Ensure robust communication Strategy. Involve community stakeholders at an early stage.
Resources diverted towards maintenance due to faster than expected degradation on road networks/structures etc.	High	Medium	Increase proportion of freight taken by rail in the long term to reduce wear and tear on roads. Develop long term programme for road and rail bridge improvements and risk analysis.
Changes in freight and shipping patterns.	High	Medium	Maintain key contacts at Northport.
Internal resource restrictions. Lack of skills to deliver Strategy.	High	Medium	Possible buy in from outside if resources allow. Ensure effective joint working arrangements.
Conflicting delivery with other plans and programmes (such as the RPS).	Medium	Medium	Maintain this Strategy as a live document that can be reviewed as necessary.
Changes to information provided for monitoring purposes.	Medium	Medium	Ensure robust set of indicators that are consistently reported yearly.
Changes to available funding patterns.	High	Medium	Review RLTP against the priorities of this Strategy.
Breakdown of joint working arrangements.	High	Medium	Ensure multi-agency working arrangements through technical groups implementing this Strategy.
Cost overrun – failure to adhere to budget constraints.	High	Medium	Ensure robust project management systems in place.
Failure of coordination with growth Strategy/district plans leading to resources targeted in wrong localities.	High	Medium	Maintain this Strategy as a live document that can be reviewed as necessary.

8. Significance Policy

This policy is provided in accordance with section 106 of the Land Transport Management Act. This section requires that the RTC must adopt a policy that determines significance in respect of variations made to the 30 Year Transport Strategy. This significance policy was formally adopted at the Regional Transport Committee meeting on 15 December 2009.

If a variation is significant, the RTC must follow a more rigorous consultation and decision making process, including the consultation principles and Special Consultative Procedure as detailed in the Local Government Act 2002.

For the purpose of this policy:

- significance is a continuum, from variations of high significance to variations of low significance;
- the policy sets a significant threshold relating to a high degree of significance; and
- if a variation is not significant it does not mean that it is unimportant and that no consultation will be undertaken. The implication of not meeting the significance threshold is that consultation as required by section 78 of the LTMA will not need to be followed.

A significant variation for the Strategy will be one that is likely to have an impact that is more than minor on any of the following: contributing to the vision; key outcomes and strategic options; reallocation of the funding available in the region; preference for the strategic option; and the ability of the region to achieve the vision.

The RTC will assess the significance of the variation having regard to:

- the implication for the present and future economic development, safety and personal security, access and mobility, environmental sustainability, public health, growth Strategy and economic efficiency of the region;
- the magnitude of the decision in terms of financial costs to the region; and
- the effect on the RLTP or the local authority Long Term Council Community Plan, and consistency with national or regional policies and strategic documents.

When making a decision as to the significance of a matter, the RTC will consider information on the reasons for the variation, the options, relative costs and benefits and those affected by, or having an interest in, the decision, commensurate with the significance of that decision. Criteria that will be considered when making a decision are:

- the extent to which the decision flows logically from the decisions already made in the Strategy;
- the extent to which external factors (such as the price of fuel, climate change, etc.) which were unforeseen by the RTC at the time of completing the Strategy, will impact on the strategic direction envisaged by the Strategy;
- the extent to which a proposed alternative strategic option varies from the preferred strategic option contained within the Strategy;
- the reversibility of the outcomes as a result of the variation; and
- the benefit of the precautionary approach, where there is a level of uncertainty of the outcomes.