Northland Region

Road Safety Action Plan

1 August 2012

NORTHLAND REGIONAL COUNCIL

Foreword

Northland has made huge progress in Road Safety over the last few years. This is firstly demonstrated by the spectacular reduction year on year in our road toll. In 2009, 35 people perished on our roads. In 2010 this number was 21 and last year 7 people died. We cannot celebrate even one fatality but our Road Safety community can take some satisfaction from the improved driver behaviour evident in our statistics. Some people raise the question about what role luck plays in these results. There is no doubt there is some and we will take that, but any comment about luck would be quite disingenuous to the efforts of our Police, road controlling authorities and community organisations who continue to work together to improve driver behaviour and the safety of our roads.

Much of Northland's road safety activity has been guided by our Road Safety Strategy developed three years ago. A national strategy "Safer Journeys" has been developed since then which is founded on the safe system approach. This approach joins the four tenets of: safe roads and roadsides; safe speeds; safe vehicles; and safe road use in a focussed approach to road safety.

This Northland Road Safety Action Plan has been developed to link the national strategy to our Northland action. It provides a toolbox of actions available to assist our local action plans in tackling the identified local issues.

Over the last few years we have had a heightened conversation about road safety within our communities. Let us continue to talk about and act on those issues which most affect us in our communities. Thank you for your efforts in keeping the momentum going.

John Williamson
Chairman
RoadSafe Northland

1. Introduction

1.1 Purpose

This Regional Road Safety Action Plan is a step forward that can be used to communicate Northland's road safety issues. The action plan uses a simple format and easily repeatable content, to present information that can be used to describe the problems, and to provide a list of activities that can be used to address the problems.

This regional RSAP is designed to complement the district RSAP's, so that districts can draw on regional information and provide feedback on the results of locally delivered interventions.

Northland is a remarkable place in terms of its location, its landscape and its people. Addressing Northland's road safety issues has always been achieved through partnerships between organisations and with communities. Northland strength is in working together to communicate and share responsibility for issues. Results are gained from a long term view and a consistent approach that gradually builds awareness, developing into lasting solutions.

1.2 Background

The social cost of crashes in Northland in 2010 was $201.96 million.

While 2011 was a successful year after decades of work, this success is hard won and hard to maintain without strong systems in place to identify issues, develop effective interventions, monitor progress, and communicate the results.

Recently there has been a change in national approach that brings in a similar philosophy for New Zealand's road safety plan, a system based approach that removes the compartments and recognises that all people have responsibility for a safe road system, from the decision makers and planners to the designers and builders, and to the users of the transport system.

1.2.1 The Safe System Approach

The approach is that New Zealand will move into a safe road system that is increasingly free of death and serious injury. The forces that are experienced in a crash will be managed down to a level where people are protected from death or serious injury.

Northland is proactive and through the dedication of our road safety forum, we are already implementing a safe system approach with regards to the connections with the many stakeholders and diverse communities.

1.2.2 High Risk Rural Roads Guide

The High Risk Rural Roads Guide (HRRRG) has been introduced to provide national consistency regarding the identification of high risk rural roads and the application of proven engineering counter-measures. The HRRRG takes into account both consequences and likelihood of fatal and serious crashes occurring.

1.2.3 'Safer Journeys for Motorcycling'

The proposed 'Safer Journeys for Motorcycling' guide reflects the Safe System approach. It considers motorcycling safety from the perspective of:

- safe roads and roadsides
- safe road use
- safe speed, and
- safe vehicles.

'Safer Journeys for Motorcyclists' will:

- provide guidance on the implementation of safety treatments on high-risk motorcycling routes
- reflect international best-practice, input from stakeholders, and the results of pilot projects, and
- provide advice on how to identify, assess and prioritise high-risk routes using crash data and input from riders and other key stakeholders

2. Road Safety Action Plan

2.1 Introduction

Rather than finding who is at fault, in Northland we can use the energy, community spirit, funding and planning to create an environment that is safe for all road users.

This action plan is a way of:

- presenting the correct data to clearly communicate the problem we face
- starting a tool box of solutions that can be drawn upon and added to as time goes on and successful interventions are delivered
- monitoring the implementation of solutions and measuring effectiveness

The plan is to provide information and links to resources that are buildable and provide regular updates on current issues, emerging trends and targeted solutions using a repeatable set of data.

The action plan will assist the road safety stakeholders of Northland to:

- recognise the problems,
- decide on the best solutions for those problems
- implement those solutions.

2.2 The current situation

There are four action plans already in place for Northland; one for each of the road controlling authorities (RCA's) There is also a regional road safety plan which outlined Northland's issues which ends 30 June 2012 and being replaced by this new Action Plan.

This action plan translates identified issues into lists of measurable activity. It is intended to be a buildable resource of information from which the other action plans can validate their work and gain support. It will distil national programmes into local activities that match the characteristics of Northland's roads, issues and people.

2.3 Problems Identified

Eleven road safety issues have been identified for Northland, which form the basis of this Road Safety Action Plan. These issues have been identified and collated from three sources:

- NZTA's Transport Data – includes 'Trend' reports outlined in Safer Journeys, 'Statistical Statements' and 'Briefing Notes' documents
- The previous Northland Regional Road Safety Plan 2009-2012
- Road Safety Co-ordinators

These issues are identified in Table 1.

In addition to identifying the key factors and crash types in Northland, the proportions of crashes in certain categories have been compared to similar local regional authorities within New Zealand (referred to as a peer group). Those authorities are Bay of Plenty, Gisborne, Hawkes Bay, Manawatu/ Wanganui and Taranaki. Making a peer group comparison helps to identify where certain crash types and characteristics are over-represented and thus where targeted measures may have a significant impact.

Table 1 - Northland's Road Safety Issues

Rank	Issue	Percent of injury crashes in Northland	Percent of injury crashes peer group	Graph
1	Open road crashes	69.8%	47.7%	Figure 1
2	Loss of control crashes on bends	50.4%	31.5%	Figure 2
3	Fatal and serious crashes	25.3%	24.5%	Figure 3 & 4
4	Drivers aged 45-64	23.1%	21.3%	Figure 5 & 6
5	Driving too fast for the conditions	23.0%	17.7%	Figure 7 & 8
6	Driving with excess alcohol	20.7%	16.7%	Figure 7 & 9
7	Hitting roadside objects (ditch cliff/bank, tree)	20.0%	20.0%	Figure 10
8*	Young Drivers (15 to 19)	18.5%	19%	Figure 5&6
9	Driver and fatigue observation factors	16.8%	24.8%	Figure 7
10	Road and weather factors	15.1%	10.5%	Figure 7
11	Not using restraints	5.8%	3.7%	Figure 11
12	Vehicle factors	3.6%	3.1%	Figure 7

The above table highlights ranked issues and will drive Northland's RSAP.

*Whilst young drivers are over-presented Nationally it has been acknowledged and forms one of the 12 issues in Northland.

2.4 Crash Issue Graphs

The graphs in this section illustrate the issues identified in Table 1, they all refer to injury crashes and where appropriate make a peer group comparison. These graphs can be updated by approved persons, from the NZTA Crash Analysis System (CAS) at any time using injury crash data exported to spreadsheets and pivot tables. A guide to this process is included in Appendix 1.

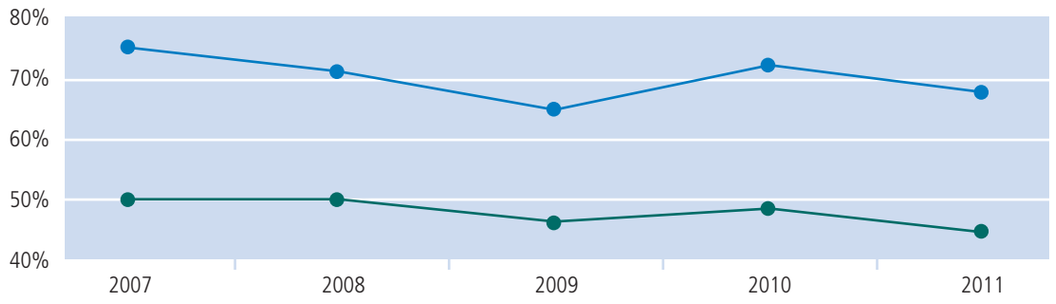
These graphs are presented here, included in an excel spread sheet and included on a PowerPoint display so the data can be communicated across the region. These graphs may also form the basis of data for district RSAP if desired by the 3 district councils; Far North District, Kaipara District and Whangarei District.

Progress can be measured over time. The figures can be updated as required to provide a reporting mechanism for district and regional groups. Unless otherwise stated each graph refers to crashes occurring over the most recent complete 5-year period.

2.4.1 Issue 1 – Open road crashes

The open road refers to locations with a speed limit in excess of 70km/h. Figure 1, below shows how the proportion of injury crashes in Northland occurring on open roads has tracked over the last five years compared to the peer group average.

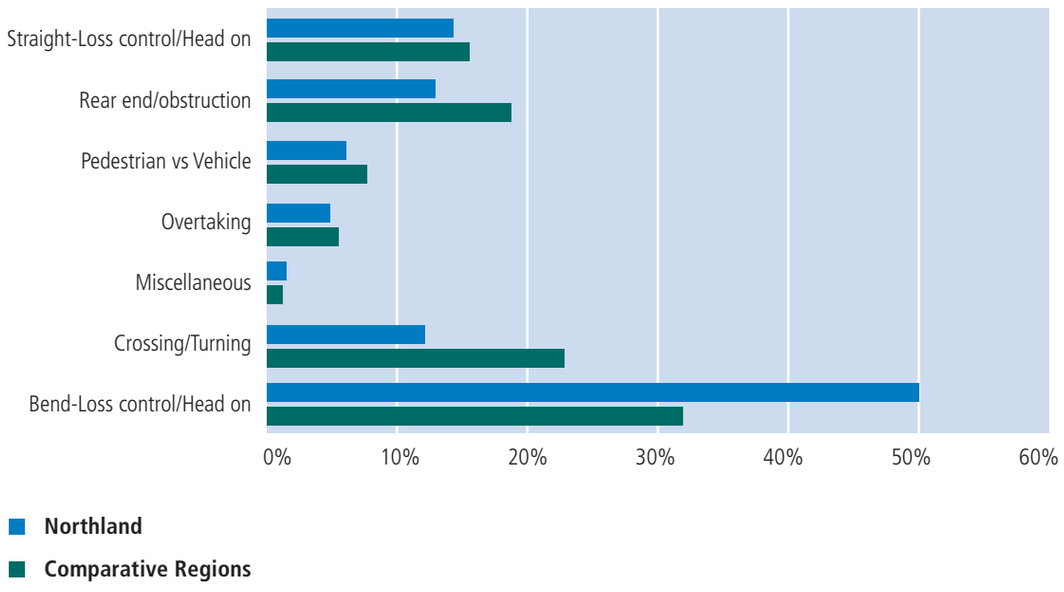
Figure 1 – Proportion of injury crashes occurring on the open road



2.4.2 Issue 2 – Loss of control on bend crashes

Figure 2, below shows what proportion of the total injury crashes in Northland were attributed to each of the eight Police movement coding groups compared to the peer group averages over the last 5 years. The proportion of crashes involving loss of control on a bend in Northland is more than three times that for any other movement category and is significantly higher than the peer group average indicating a real issue with bend lost control / head-on crashes in the region.

Figure 2 – Proportion of injury crashes according to movement



2.4.3 Issue 3 – Fatal and serious crashes

Figure 3, below shows the proportions of injury crashes in Northland that have resulted in fatal or serious injury compared to each district within the comparative peer group over the last five years. Figure 4 shows the proportions of fatal, serious and minor injury crashes in each of the three districts making up the Northland region. Northland has one of the higher severity ratios within the peer group, and reducing the severity of crashes is one of the key drivers of the safe system approach.

Figure 3 – Proportion of fatal and serious injury crashes

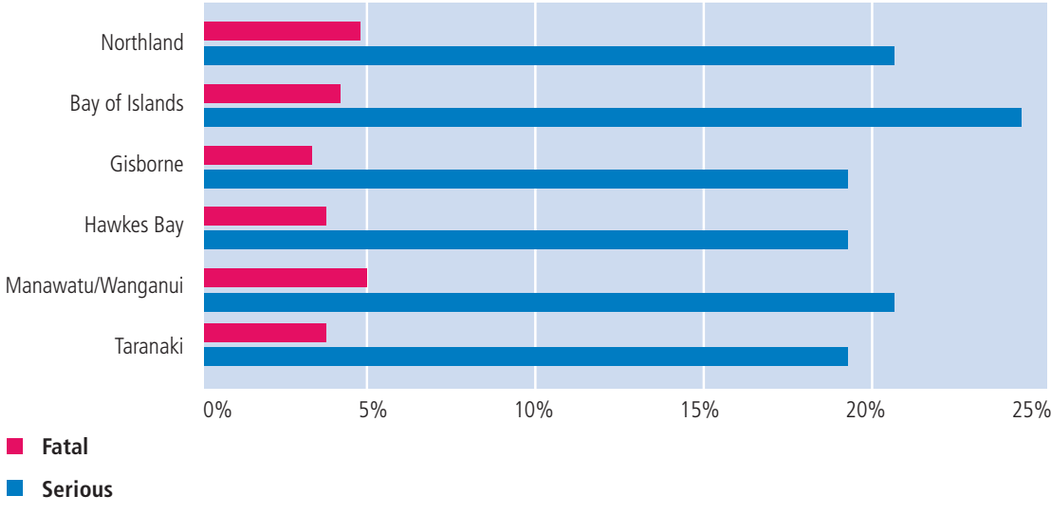
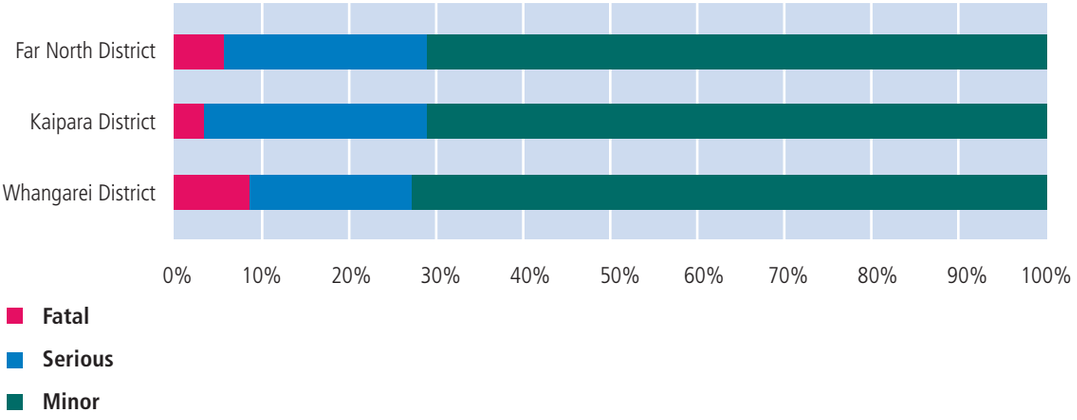


Figure 4 – Proportions of injury severity in each district



2.4.4 Issue 4 – Drivers aged 45 to 64 & Issue 8 Drivers 15 to 19

Figure 5, below shows the proportions of injury crashes in Northland by the age of the at-fault driver. The graph shows that while at-fault drivers are most commonly in the 15 – 24 age group, this is consistent with the peer group average and might be expected. However, the proportion of at-fault drivers in the 45 – 65 age groups is consistently higher than the peer group average and also warrants some attention. In order to assist in targeting driver education programmes, Figure 6 identifies how those proportions break down into male and female drivers.

Figure 5 – Proportion of at-fault drivers in injury crashes for each age-group

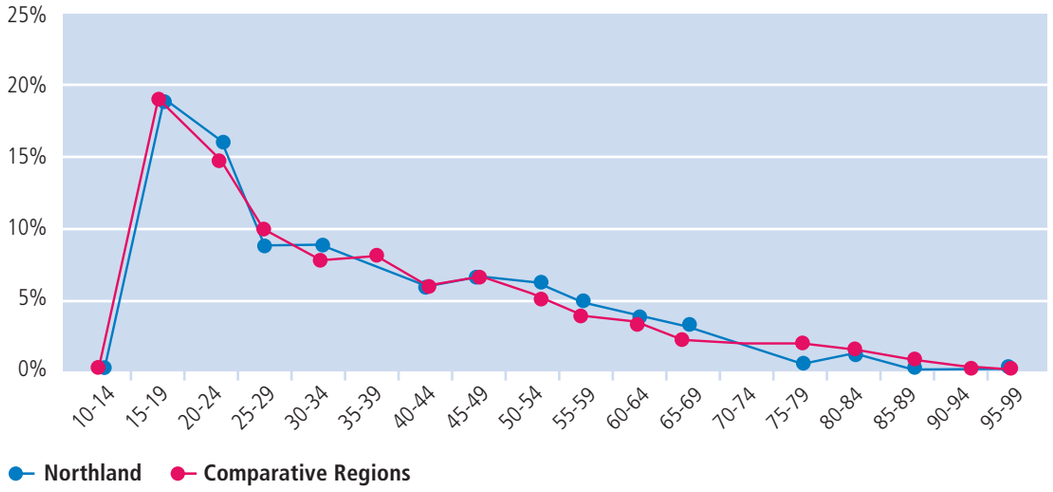
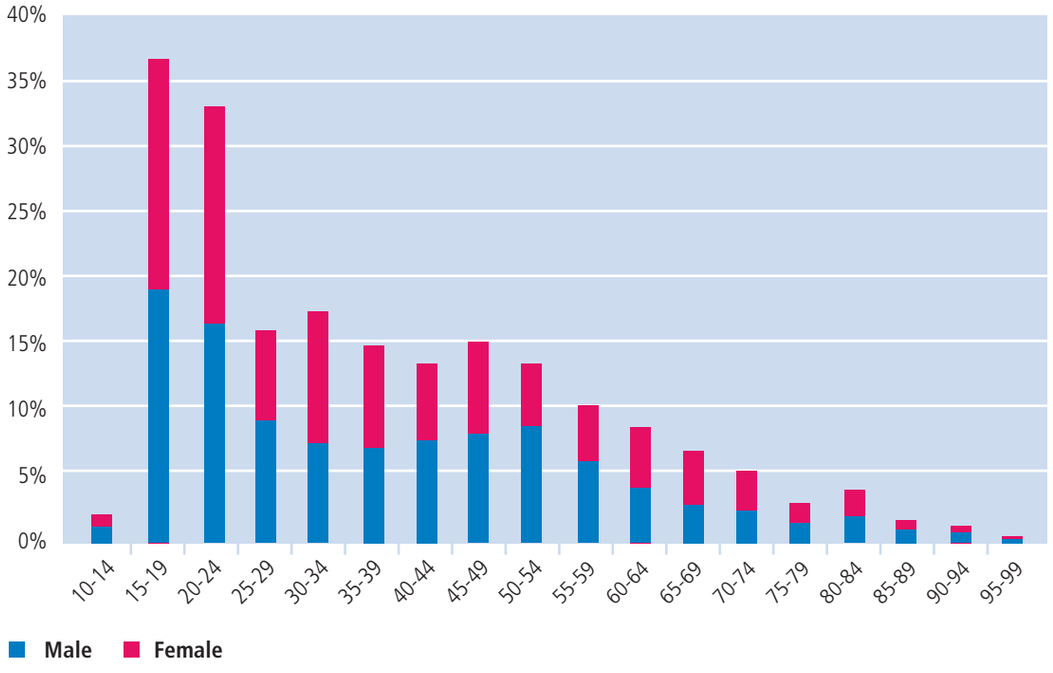


Figure 6 – Proportion of at-fault drivers in injury crashes by age-group and sex



2.4.5 Issue 5 – Driving too fast for the conditions

Figure 7, shows the contributing factors reported for each injury crash in Northland over the last 5 years as a proportion of the total number of injury crashes with a comparison against the peer group average. Table 1 shows that speed is one of the top five contributing factors in Northland and outstrips the peer group average.

Figure 7 – Contributing factors reported in injury crashes

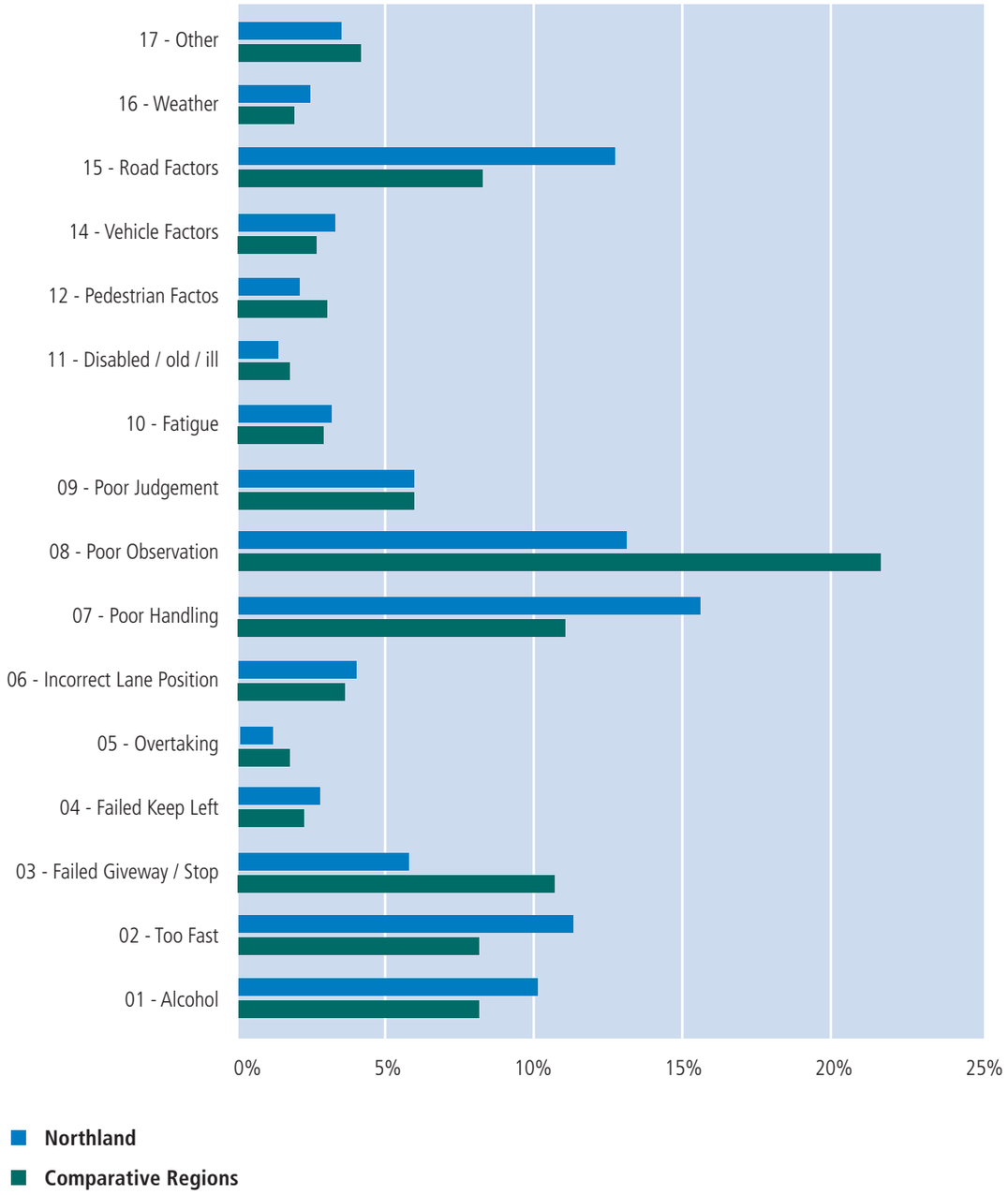
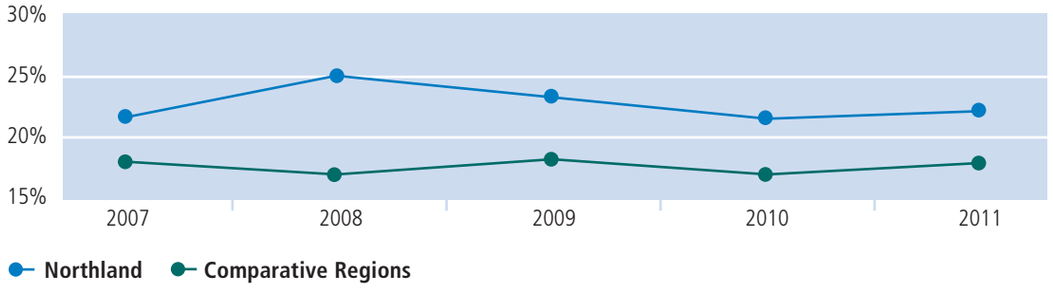


Figure 8, below shows how the proportion of injury crashes in Northland where "too fast for the conditions" was reported as a contributing factor has tracked over the last five years compared to the peer group average. This shows that although the proportion of speed related crashes in Northland may have dropped it is still consistently higher than the peer group average.

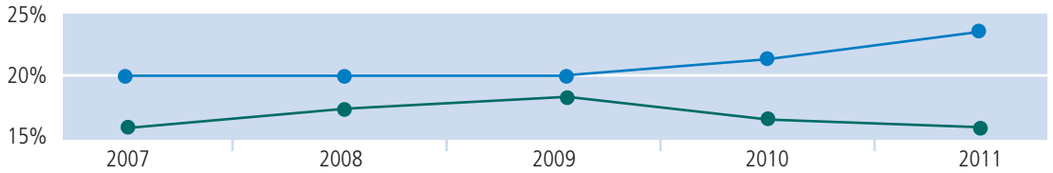
Figure 8 – Proportions of crashes involving "too fast for the conditions"



2.4.6 Issue 6
Driving with excess alcohol

Figure 7, also shows the contributing factors reported for each injury crash in Northland over the last 5 years as a proportion of the total number of injury crashes with a comparison against the peer group average. The graph shows that alcohol is one of the top five contributing factors in Northland and outstrips the peer group average. Figure 9, below shows how the proportion of alcohol related crashes in Northland has tracked over the last five years in comparison to the peer group average. This indicates that although the proportion of injury crashes was steady between 2007 and 2009, it has now starting to rise again in a trend which is the reverse of what is happening in the peer group.

Figure 9 – Proportion of injury crashes involving alcohol/drugs

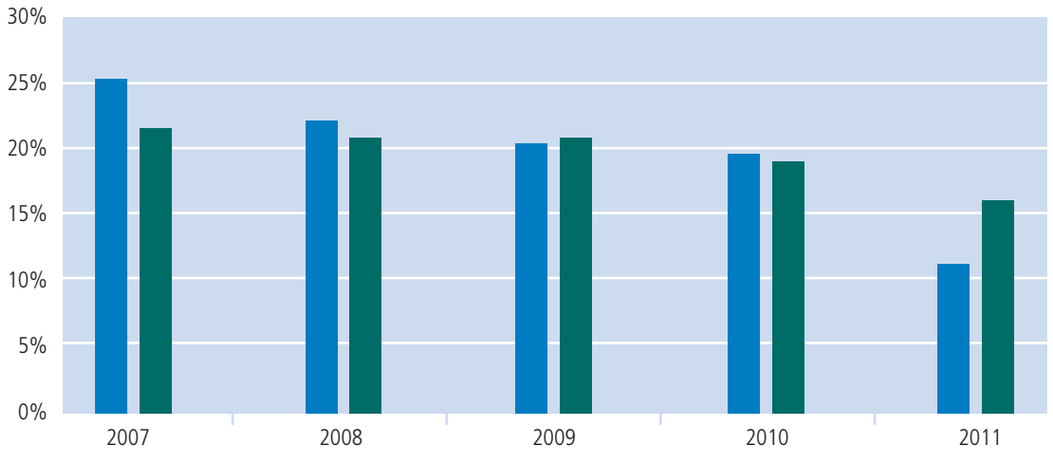


2.4.7 Issue 7 – Hitting roadside objects

Collision with a roadside object can significantly increase the level of injury sustained in a crash. Figure 10, below shows the proportion of injury crashes in which one or more vehicles went on to hit a ditch, bank or tree over the last five years and how that compares to the proportions within the peer group.

In Northland, there has been a consistent reduction in the proportion of crashes where a vehicle has hit a roadside object over the five year period and in 2011, the proportion was almost a third less than the peer group average. Although very positive there still needs to be on-going attention to these issues.

Figure 10 – Proportion of injury crashes where vehicle hit a ditch, bank or tree



2.4.8 Issue 8 – Driver fatigue and observation factors

Figure 7, also shows the contributing factors reported for each injury crash in Northland over the last 5 years as a proportion of the total number of injury crashes with a comparison against the peer group average. Although this shows that poor observation factors are lower in Northland that for the peer group, between them, poor observation and fatigue are factors in almost 20% of Northland injury crashes.

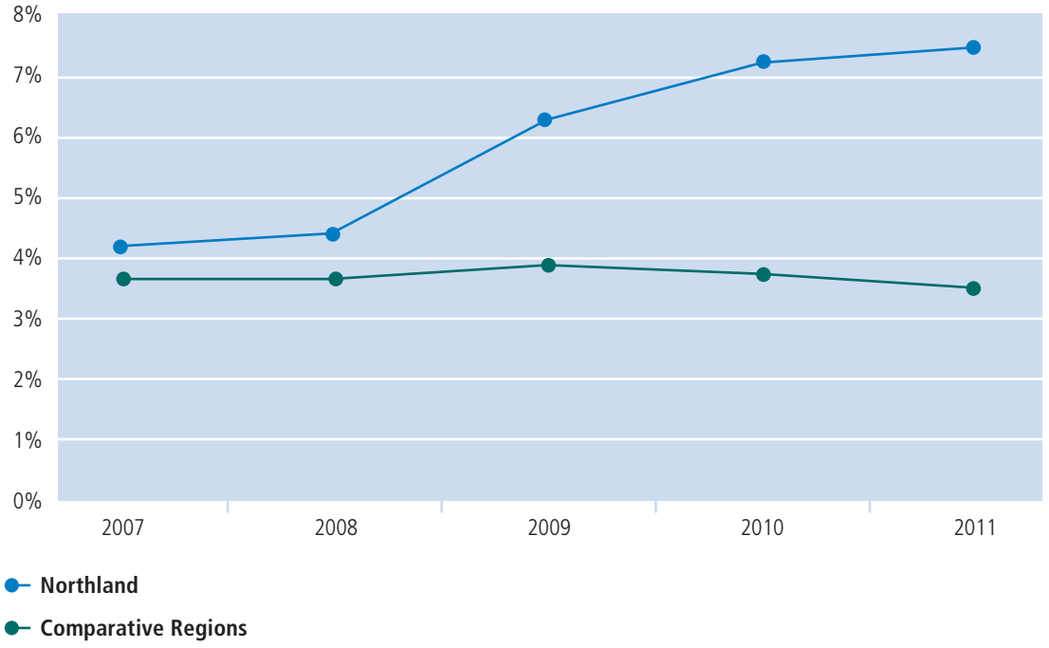
2.4.9 Issue 9 – Road and weather factors

Figure 7, also shows the contributing factors reported for each injury crash in Northland over the last 5 years as a proportion of the total number of injury crashes with a comparison against the peer group average. Road and weather factors are often related and in Northland the combined factors are reported in around 15% of crashes. Both factor groups are higher than the peer group average and could be significant.

2.4.10 Issue 10 – Restraints

Figure 11, below shows how the proportion of injury crashes where the occupants were not wearing a seatbelt in Northland has tracked over the last five years in comparison to the peer group average. This shows that while Northland has consistently been slightly higher than the peer group average (within a percentage point in 2007 and 2008), between 2009 and 2011 the proportion of injured occupants not wearing a seatbelt has continually increased and Northland is now almost four percentage points higher than the peer group average.

Figure 11 - Proportion of occupants in injury crashes not wearing a seatbelt



3. Interventions Toolkit

3.1 Introduction

A toolbox of interventions (see Table 2) will gradually be filled with a range of tools that can be used for various problems. Some problems are small and local, requiring a small and specific tool. Other problems are large and region wide, requiring a bigger tool and a different approach. This RSAP will collect and build a list of projects that have been used and which have proven to work. This list will be sourced from councils, police, road safety coordinators, other stakeholder groups and NZTA.

The mechanism for using these tools is through the district council and state highway action plans which will direct and programme work onto roads under their control. Results and successes will be collected and reported to the Regional Transport Committee (RTC).

3.2 District RSAP

There is a road safety action plan for each of the three district councils in Northland and for the state highways. District issues are outlined in each of their road safety action plans. (They take the regional issues and add local issues, exploring in more detail the type of problems and on specific roads, user types or geographical areas).

The district road safety action plans put into place programmes and interventions to address their specific issues. This results in a list of interventions of various types that could be shared across all areas. This will be included in the toolbox of interventions described below.

3.3 Evaluation of interventions

The toolbox items will be rated through the Road Safety Action Planning process for effectiveness on a simple 1 to 5 scale and scored by a team of three.

Table 2 - Northland's road safety interventions

Issue No	Action	Safer System	Type	Application
1	Widen Lanes Or Shoulders	Safe Roads & Roadsides	Physical Works	Local
11	Vehicle Checks	Safe Vehicles	Enforcement Targeted	Local
5	Urban Speed Enforcement	Safe Speeds	Enforcement Targeted	Local
5	Traffic Calming	Safe Speeds	Physical Works	Local
	Street Lighting		Physical Works	Local
5	Speed Limit	Safe Speeds	Legislation Local	
5	Speed	Safe Speeds	Enforcement Campaign	Regional
11	Specific Vehicle Type Enforcement	Safe Vehicles	Enforcement Campaign	Local
	Specific Road User Type Enforcement	Safe Speeds	Enforcement Campaign	Local
All	School Roadshow	All	School Education	Regional
	School Project		School Education	Local
5	Rural Speed Enforcement	Safe Speeds	Enforcement Targeted	Local
7	Roadside Protection	Safe Road Use	Physical Works	Local
8	Roadmarking	Safe Road Use	Signs And Marking	Local
9	Road Surface Improvements	Safe Road Use	Physical Works	Local
10	Restraints	Safe Vehicles	Enforcement Campaign	Regional
10	Restraint Checks	Safe Vehicles	Enforcement Targeted	Local
8	Regulatory Signs	Safe Roads & Roadsides	Signs And Marking	Local
5	Pedestrian Facilities	Safe Speeds	Physical Works	Local
	Parking Restrictions		Legislation	Local
	License Checks		Enforcement Targeted	Local
	Intersection Improvements		Physical Works	Local
	Intersection Enforcement		Enforcement Targeted	Local
	Intersection Control		Physical Works	Local
	Fatigue Stop		Community Campaign	Local
	Fatigue Driving		Enforcement Targeted	Regional
	Fatigue		Enforcement Campaign	Regional
	Cyclist Enforcement		Enforcement Targeted	Local
	Cycle Facilities		Physical Works	Local
	Coffee Brake Subsidy		Fatigue Campaign	Regional
	Bridges		Physical Works	Local
	Billboards		Community Campaign	Local
	Billboards		Regional Campaign	Regional
	Alcohol/Drugs Checks		Enforcement Targeted	Local
	Alcohol/Drugs		Enforcement Campaign	Regional
	Advisory Signs		Signs And Marking	Local
	Recidivist Drink Driving Interventions		Community / Education Campaign	Local

Appendix A

Guide to Updating CAS Data

The Graphs

The 10 graphs are based on data fields as shown in Table 3, below.

Table 3 Graph data fields

Graph	Date Series 1	Data Series 2
1	% of fatal & serious crashes	by year
2	% of open road injury crashes	by year
3	% of injury crashes of each movement	by movement type
4	% of injury crashes hitting roadside objects ditch, bank or tree	by year
5	proportions of injury severity in each district	by district council
6	contributing factors in injury crashes	by factor type
7	% of injury crashes involving alcohol /drugs	by year
8	% of injury crashes involving too fast for conditions	by year
9	% of age groups for at-fault drivers in injury crashes	by driver age
10	proportion of male & female drivers in Northland injury crashes	by age

The Data

At present we will be using the NZTA crash analysis database (CAS) to analyse crashes.

Data Extraction

Use CAS to produce two files:

File 1 Northland crashes
injury crashes
Northland
2007-2011

File 2 Comparative regions crashes
Injury crashes
Bay of Plenty, Gisborne, Hawkes Bay, Manawatu/ Wanganui, Taranaki Regions
2007-2011

- Use this to create tabulations, spreadsheet export for
- Northland (A to F) and
- Comparative regions (Peer group A to F):
- Save spreadsheets as xlsx files

Table 4 CAS fields to choose when selecting data

CAS Field to choose	Notes	Northland data						Comparative Regions data					
		A	B	C	D	E	F	A	B	C	D	E	F
Territorial Authority		•	•	•	•	•	•						
Local Government Region								•	•	•	•	•	•
Severity F / S / M / N		•	•	•	•	•	•	•	•	•	•	•	•
Year		•	•	•	•		•	•	•	•	•		•
Movement Category		•						•					
Urban / Open Road		•						•					
Objects Struck	(choose "no" when asked for crashes with no objects struck)		•						•				
RSR Factor Groups				•						•			
DRIVER Speed					•						•		
DRIVER Alcohol / Drugs					•						•		
Drivers At Fault						•						•	
DRIVER Sex						•						•	
DRIVER Age 5 Years	(choose "no" when asked to exclude uninjured people)					•						•	
Seatbelt Worn							•						•
Drivers / Passenger / Other	(choose "no" when asked to exclude uninjured people)						•						•

- Retrieve save spreadsheet files and copy all sheets into one spreadsheet
- Within spreadsheet tabs, create pivot tables
- From pivot tables create graphs
- Copy the graphs to MS Powerpoint (linked to the xlsx spreadsheet tabs)

Table 5 - Graph types to use

Graph	Date Series 1	Data Series 2	Source From Sheet
1	% of fatal & serious crashes	by year	A
2	% of open road injury crashes	by year	A
3	% of injury crashes of each movement	by movement type	A
4	% of injury crashes hitting roadside objects ditch, bank or tree	by year	B
5	proportions of injury severity in each district	by district council	B
6	contributing factors in injury crashes	by factor type	C
7	% of injury crashes involving alcohol /drugs	by year	D
8	% of injury crashes involving too fast for conditions	by year	D
9	% of age groups for at-fault drivers in injury crashes	by driver age	E
10	proportion of male & female drivers in Northland injury crashes	by age	E
11	% of occupants in injury crashes not wearing seatbelts	by year	F

Notes

Northland Region Road Safety Action Plan (RSAP) Identified Issues

The Vision

All road users are safe on Northland's roads.

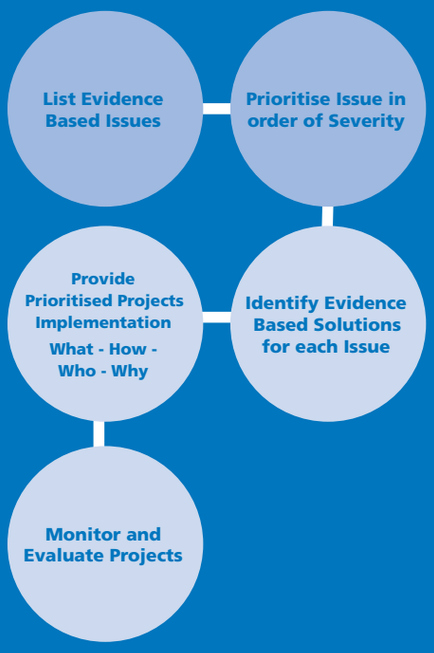
The Issues

The table below highlights ranked issues and this will drive Northland's RSAP.

The Mission

The Northland Roading Network continues to improve in order to create a safe environment for all road users in Northland and where safety is embedded in the thinking of all road users.

The Process



Rank	Issue	% of injury crashes Northland
1	Open road crashes	69.8%
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6	Driving with excess alcohol	20.7%
7	Hitting roadside objects (ditch cliff/bank, tree)	20.0%
8	Young Drivers (15 to 19)	18.5%
9	Driver and fatigue observation factors	16.8%
10	Road and weather factors	15.1%
11	Not using restraints	5.8%
12	Vehicle factors	3.6%

Twelve road safety issues have been identified for Northland, which form the basis of this Northland Region Road Safety Action Plan. These issues have been identified and collated from three sources:

- NZTA's Transport Data – includes 'Trend' reports outlined in Safer Journeys, 'Statistical Statements' and 'Briefing Notes' documents'
- The previous Northland Regional Road Safety Plan 2009-2012
- Road Safety Co-ordinators

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

Look for more information at www.nrc.govt.nz/Transport/Road-safety/ and www.nzta.govt.nz/resources/road-deaths/toll.html

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