

briefing notes - road safety issues

Otago Central highways

New Zealand Transport Agency, (NZTA), has prepared this road safety issues report. It is based on reported crash data for the 2005–2009 period. The intent of the report is to highlight the key road safety issues to help identify possible ways to reduce the number of road deaths and injuries in Otago Central highways.

In March 2010 the Government released a new strategy, “Safer Journeys”, to build on the gains made under the Road Safety to 2010 Strategy. The focus of these Issues Reports has changed to reflect the new strategy. Many of the issues reported on in the past fit neatly into the new strategy. An explanation of where things fit is included in this report.

The issues chosen for this report are drawn from: the most common crash types, those that appear over-represented when Otago Central highways is compared to similar local bodies, those with high social cost, (high numbers of fatal and serious crashes), or those that are a priority under Safer Journeys.

We have included a brief overview of crashes in the Network Management Area (NMA).

We encourage Otago Central highways to use its free access to the Ministry of Transport’s Crash Analysis System (CAS), to delve deeper into the highlighted issues and other road safety issues in the district. Also the NZTA Southern Performance Information Team in Christchurch is available to provide further information or assistance if required.

Major road safety issues	Note Issues are not in any order	2009 road trauma	
Otago Central highways		Casualties	Otago Central highways
Bend - loss of control or head-on		Deaths	2
Road factors and roadside hazards		Serious casualties	22
Overseas drivers		Minor casualties	95
Nationally		Crashes	Otago Central highways
Speed		Fatal crashes	2
Alcohol / Drugs		Serious injury crashes	15
Young Drivers		Minor injury crashes	61
Roads and Roadsides		Non-injury crashes	359
Motorcyclists			

Safer Journeys

For the past few years road safety in New Zealand has been directed by the Road Safety to 2010 strategy. This strategy was introduced in 2003 and aimed to reduce deaths and casualties from road crashes.

In March 2010 the Government released a new strategy, "Safer Journeys", to build on the gains made under the Road Safety to 2010 strategy.

Under this new strategy, road safety will be looked at from a system wide approach rather than focusing on the road user. The emphasis will be on improving all the parts road transport system that impact on safety; the road, the vehicle, travel speeds and the road user.

A number of areas were chosen as the areas of focus under the strategy. These areas were assigned a priority, based on research that shows five major areas of concern, five areas of lesser concern, and three areas where continued focus is needed, or concern is emerging.

These divisions are shown in the table opposite. This table is a direct extract from page 12 of the Safer Journeys document, which can be found at:

<http://www.transport.govt.nz/saferjourneys/Documents/SaferJourneyStrategy.pdf>

In this year's Road Safety Issues Briefing Notes changes have been made to the wording, and to the data presented, to better reflect and emphasise the connections to the new strategy.

On the following page we present a table that shows the areas of "high concern" under the Safer Journeys strategy. This table allows some relative comparison of the Safer Journeys priorities across the local bodies and regional authorities in the Otago / Southland Region of the New Zealand Transport Agency.

Table 3 – Safer Journeys' areas of concern and the Safe System

AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
Areas of medium concern				
Improving the safety of the light vehicle fleet			✓	✓
Safe walking and cycling	✓	✓	✓	✓
Improving the safety of heavy vehicles	✓	✓	✓	✓
Reducing the impact of fatigue	✓	✓	✓	✓
Addressing distraction	✓		✓	✓
Reducing the impact of high risk drivers		✓	✓	✓
Areas of continued and emerging focus				
Increasing the level of restraint use			✓	✓
Increasing the safety of older New Zealanders	✓	✓	✓	✓

For some priorities (eg motorcycling), complementary action will be taken across all four areas of the Safe System. For others (eg reducing the impact of drink driving or safe roads), more effort would be focussed on one or two of the four Safe System areas.

Source
 Safer Journeys, Road Safety Strategy 2010-2020
 Ministry of Transport
 March 2010

Status of the areas of "high concern" from Safer Journeys 2020 - Otago / Southland Region
(table is based on 2005 to 2009 fatal and serious crashes - local roads as well as State Highways)

Area of concern	Reducing alcohol and drug impaired driving	Increase the Safety of young drivers	Safer roads and roadsides		Reducing speed related crashes	Increasing the safety of motorcycling
Measure	Percentage of crashes with this factor	Percentage of at fault drivers 24 years or less	Percentage of crashes with an object struck	Number of intersections with two or more fatal or serious casualties in the last five years	Percentage of crashes with this factor	Percentage of crashes involving a motorcyclist
Waitaki District	19	35	52	0	19	16
Central Otago District	18	35	59	3	16	18
Queenstown-Lakes District	20	41	51	2	20	19
Dunedin City	17	44	46	21	21	13
Clutha District	14	36	61	1	22	15
Southland District	20	38	61	1	24	21
Gore District	16	53	46	1	20	18
Invercargill District	15	49	49	19	21	17
Otago Region	17	41	50	27	20	15
Southland Region	18	44	49	21	21	19
New Zealand	23	34	45	446	23	18

Overview

In 2009 on Otago Central State Highways there were 79 reported injury crashes of which 17 were fatal or serious.

The table below shows the number of casualties resulting from these 79 injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties 2009 Otago Central highways				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	2	21	77	100
Urban	0	1	19	20
Total	2	22	96	120

All deaths, all but one serious injury and 80 percent of minor injuries were sustained in crashes on highways in rural areas.

The number of crashes rose to a high of 102 in 2005, and has since reduced to previous levels. The pattern for fatal and serious crashes only is similar, but the number of these crashes in 2009 was the lowest equal with 2007 in the ten year period..

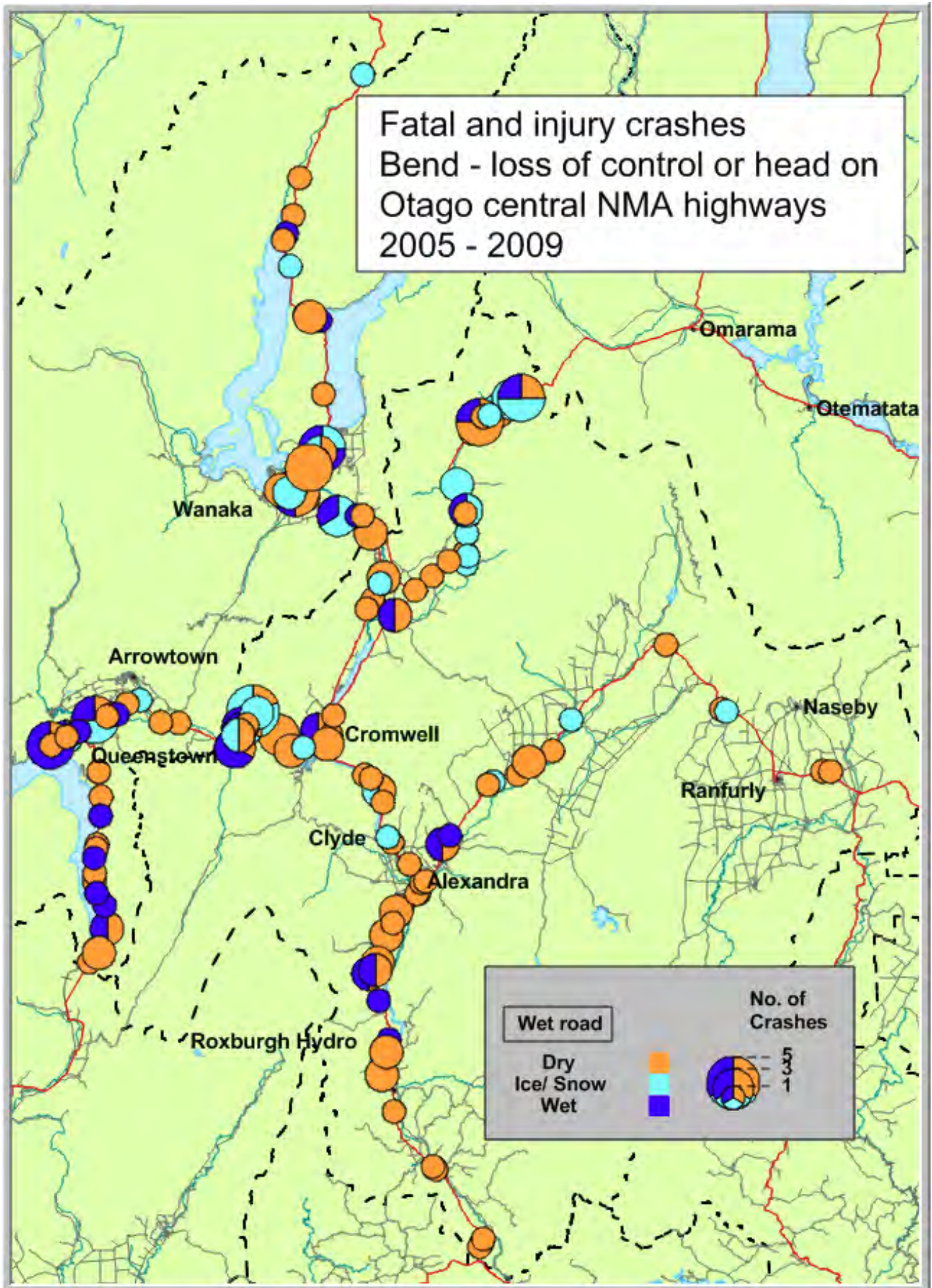
Crash trends in Otago Central highways				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	5	20	30	55
2001	5	18	52	75
2002	1	34	52	87
2003	2	32	54	88
2004	2	28	66	96
2005	4	31	67	102
2006	1	23	72	96
2007	5	12	69	86
2008	4	15	70	89
2009	2	15	62	79

The following table illustrates where the issues considered for this report fit within the Safer Journeys priority. The numbers and percentages give an indication of how they fit in the priorities for Otago Central NMA highways.

Crash characteristics (2005 to 2009) Otago Central highways				
Crash type or contributory cause	Percent fatal and serious crashes	Percent all injury crashes	No. of injury crashes	Safer Journeys priority
Alcohol	13	7	30	1
Too fast	13	12	53	1
At bends	46	45	202	1
On straights	21	18	79	1
Intersections	21	22	99	1
Road factors	19	24	106	1
Motorcycling	13	5	23	1
Young drivers	27	31	142	1
Fatigue	13	10	46	2
Distraction	18	7	64	2
Pedestrians	5	4	16	2
Cycling	4	4	20	2
Heavy vehicles	8	7	31	2
Older road users	10	7	30	3
Overseas drivers	23	23	105	-

Further information about the 452 injury crashes on State Highways in Otago Central NMA, 2005 to 2009:

- 20 deaths, 128 serious injuries and 543 minor casualties
- Five year age group with most at fault drivers in injury crashes: 20 to 24 years (16 percent of at fault drivers)
- Social cost of crashes in 2009 \$24.69 m



Bend - loss of control or head on

Between 2005 and 2009, 454 percent of all injury crashes on Otago Central highways were bend - loss of control or head on crashes. These crashes resulted in 9 deaths, 53 serious injuries and 241 minor injuries.

In 2009 there was a drop in the number of crashes. This was primarily due to a drop in minor injuries. The number of serious crashes has been reducing since 2005.

Bend - loss of control or head on crashes Otago Central highways (2005 - 2009)				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	1	15	40	56
2006	1	14	58	73
2007	3	8	59	70
2008	3	9	51	63
2009	1	7	33	41
Total	9	53	241	303

Young drivers, those aged 15 to 24 years made up 41 percent of at fault drivers. In this age group, males represented 55 percent of the at fault drivers. Overall male accounted for 60 percent of at fault drivers.

At fault drivers in Bend - loss of control or head on crashes 2005 to 2009			
Ages	Male	Female	Total
15 to 19	21	18	39
20 to 24	26	19	45
25 to 29	13	4	17
30 to 39	17	15	32
40 to 49	22	10	32
50 to 59	10	6	16
60 to 69	7	3	10
70 and over	5	5	10
Total	121	80	201

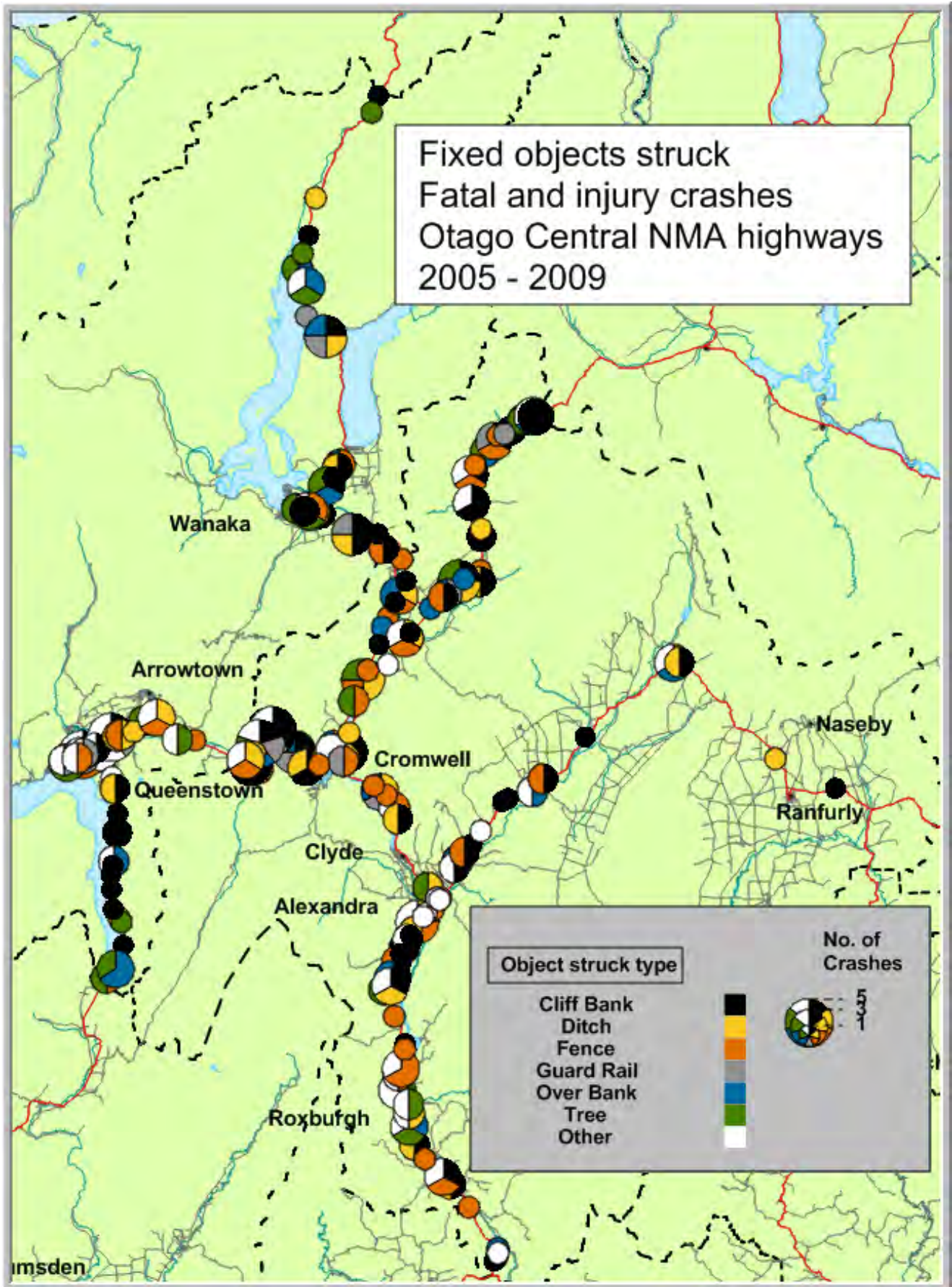
If drivers lose control, their vehicles may crash into roadside hazards such as ditches, banks, poles or trees. Hitting roadside objects can result in a minor off-road event becoming more serious.

The most common roadside hazards struck in injury bend - loss of control or head on crashes on Otago Central highways were cliffs or banks (33), ditch (14), fences (13), and over bank (33) from a total of 215 objects struck.

A roadside hazard was struck in 78 percent of bend - loss of control or head on crashes on State highways in the NMA.

Further information about the 203 injury bend - loss of control or head on crashes on State Highways in Otago Central NMA, (2005 to 2009):

- 10 percent of crashes involved alcohol
- 22 percent of crashes involved speed too fast for the conditions
- 36 percent involved road factors
- 51 percent involved poor handling
- 94 percent were on rural roads
- 40 percent were on wet or icy roads
- 36 percent were at night
- Worst month June
- Worst day of week Thursday
- Worst time period 6 pm till 9 am



Road Factors - including roadside hazards

A safe road has appropriate design standards, good delineation, adequate surface skid resistance and a roadside free of hazards.

From 2005 to 2009 on Otago Central highways, "road factors" were a contributing factor in 24 percent of fatal and injury crashes.

Road factor related injury crashes Otago Central highways					
Road type	2005	2006	2007	2008	2009
Urban	0	5	1	2	2
Rural	16	22	24	17	17
Total	16	27	25	19	19

Types of road factors in injury crashes Otago Central highways (2005-2009)	
Road factor type 2005 to 2009	Number reported
Slippery road *	95
Road surface in poor condition	5
Road obstructed	4
Visibility limited	7
Signs or signals (needed or faulty)	2
Markings (needed or faulty)	1
Street lighting	2

* NZTA does not assume that a wet road is necessarily "slippery". A "slippery" factor is added only if the attending Police Officer specifically mentions "slippery road".

Between 2005 and 2009, on Otago Central NMA highways, 55 percent of all fatal and injury crashes involved roadside hazards being struck.

Roadside hazards may contribute to the overall crash outcome by increasing injury severity, but can in themselves be a contributory factor in a crash. Occupants in an errant vehicle striking a large tree close to the road edge are likely to sustain worse injuries than if the tree were not present. If a similar tree had low branches and was located close to intersection it could contribute to a lack of visibility.

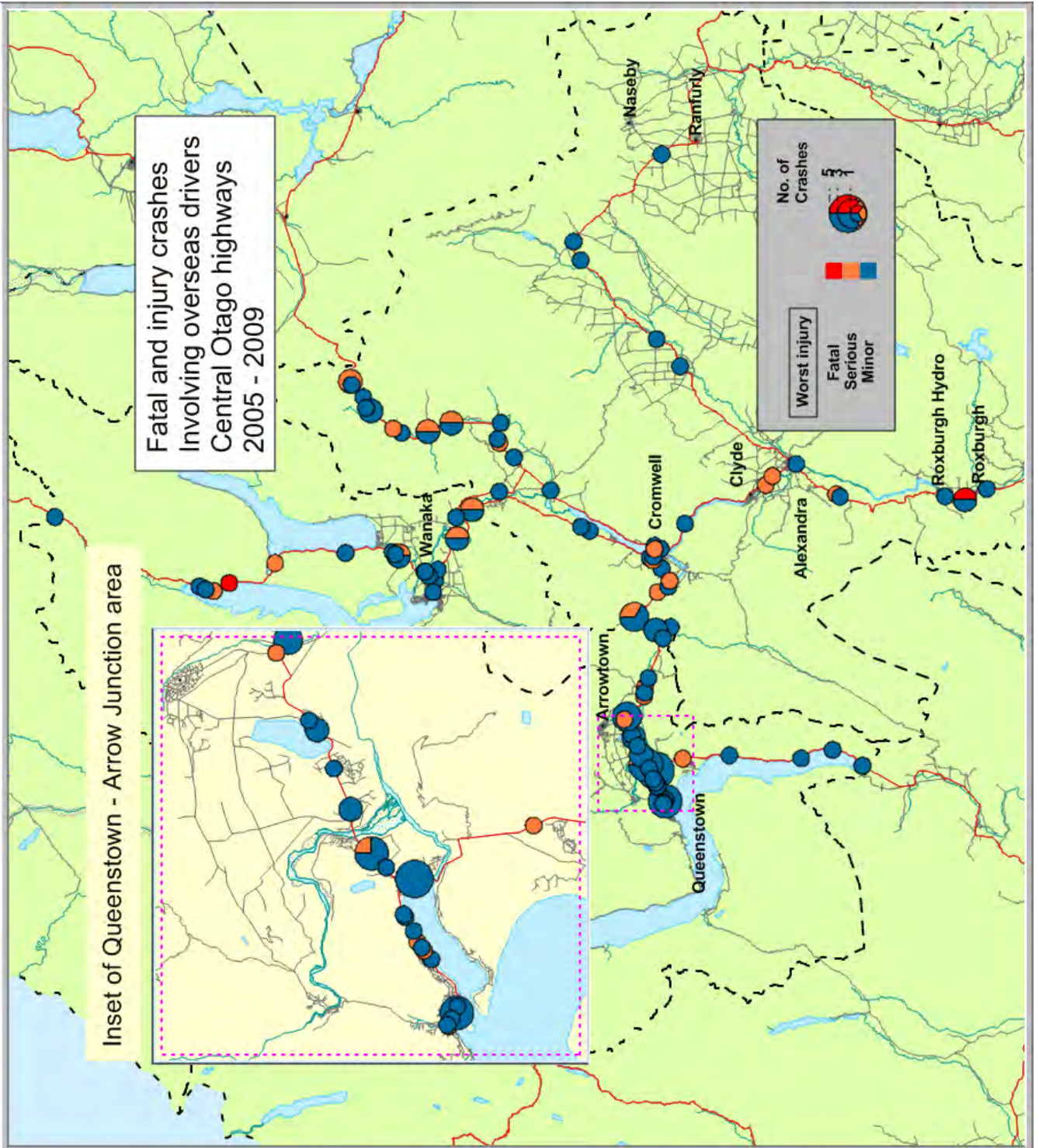
In the injury crashes in Otago Central highways where a roadside hazard was struck, 8 people died, 68 received serious injuries and 299 minor injuries.

The object most commonly struck in injury crashes in Otago Central highways from 2005 to 2009 are shown below.

Most common types of hazard struck (Injury crashes on Otago Central highways 2005 - 2009)	
Type of hazard	Number of times hazard struck
Cliff or bank	100
Fence	52
Ditch	47
Over bank	33
Tree	27
Guard rail	23

Further information about the 106 road factor related injury crashes on Otago Central NMA highways on State Highways (2005 to 2009):

- 1 death, 24 serious injuries and 149 minor injuries
- Most common crash type, Bend - loss of control or head on
- 12 percent at intersections
- 91 percent rural
- 79 percent wet or icy road
- 38 percent night time
- Worst month June
- Worst day of week Friday



Overseas drivers

On highways in Otago Central NMA between 2005 and 2009 23 percent of injury crashes involved overseas drivers. These 122 crashes resulted in 2 deaths, 35 serious injuries and 182 minor injuries. Overseas drivers may include both tourists and New Zealand residents driving on an overseas licence.

Casualties from crashes involving overseas drivers Otago Central highways (2005 - 2009)					
	2005	2006	2007	2008	2009
Fatal	0	1	1	0	0
Serious	7	12	4	3	9
Minor	32	33	48	36	33
Total	39	46	53	39	42

The number of casualties from crashes involving overseas drivers rose to a high of 53 in 2007, but has dropped since. For fatal and serious casualties only 2009 was the second highest in the last five years.

Injury crashes involving Overseas drivers Otago Central highways, (2005 to 2009)		
Highway number	Number of crashes	Social cost of crashes (m)
SH 6	65	\$18.35
SH 6A	15	\$2.95
SH 8	31	\$12.59
SH 8A	2	\$0.20
SH 8B	2	\$0.76
SH 84	2	\$0.19
SH 85	5	\$0.50

Almost nine in every ten crashes in that involved an overseas driver on highways in the area were on rural highways.

On highways in Otago Central NMA, 39 percent of all crashes involving overseas drivers were Bend - loss of control or head-on crashes. Straight road - loss of control or head on crashes accounted a further 20 percent of injury crashes, and crossing turning crashes represented 21 percent of crashes.

Male drivers of all ages made up two thirds of at-fault drivers.

Ages of drivers at fault in crashes involving overseas drivers Otago Central highways (2005-2009)			
Ages (years)*	Female	Male	Total
15 to 19	2	4	6
20 to 24	15	16	31
25 to 29	5	24	29
30 to 39	13	14	27
40 to 49	3	11	14
50 to 59	3	6	9
60 to 69	0	6	6
70 +	0	3	3

The common home locations of the overseas drivers were:

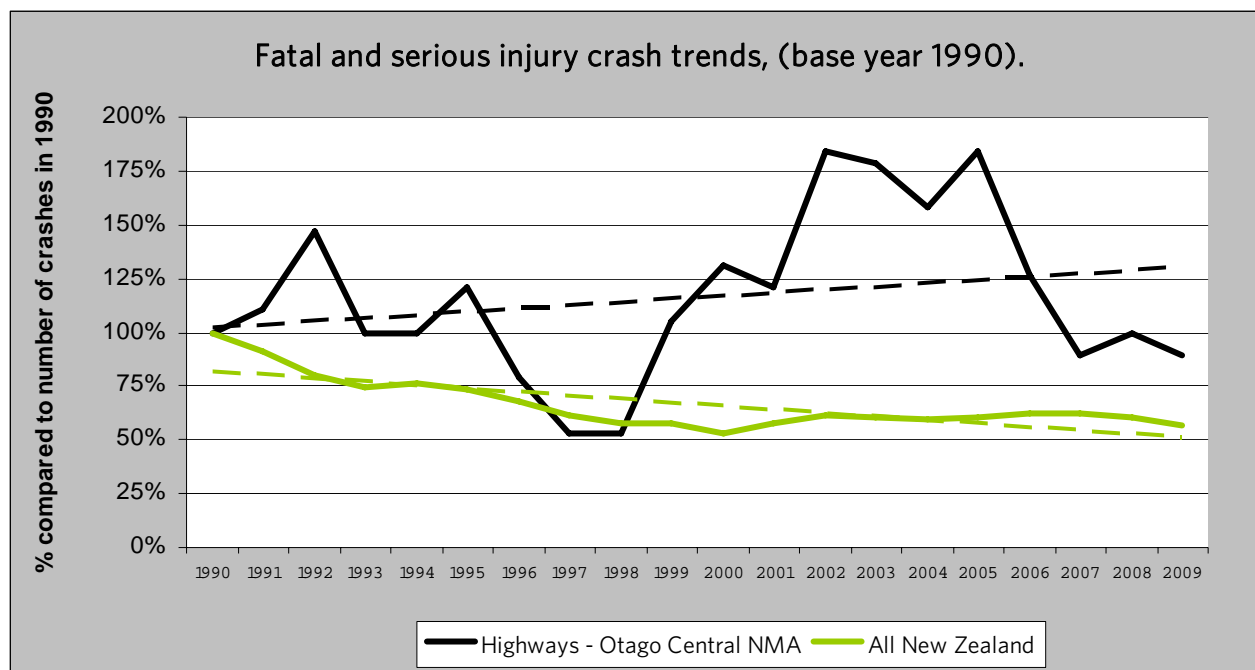
Europe	26
United Kingdom	15
Australia-	15
North America	10
Asia	9

Further information about the 122 injury crashes involving overseas drivers in Otago Central highways 2005 to 2009:

- Most common crash factors were:- Poor observation, Poor handling, Poor judgement and Failure to give way or stop.
- 27 percent of crashes were at intersections
- 18 percent of crashes at night
- 29 percent in of crashes in wet or icy conditions
- Worst month February
- Worst day of week Sunday
- Worst times Midday pm to 6 pm

Looking back - the last two decades.

The vision of the Government’s “Safer Journeys” road safety strategy is “A safe road system that is increasingly free of road deaths and serious injuries”. The chart below illustrates the progress made in reducing fatal and serious casualties since 1990, for both Otago Central highways and for the country as a whole.



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