

# briefing notes - road safety issues

## Coastal Otago 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 Coastal Otago 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 Coastal Otago 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 on highways in the Network Management Area (NMA).

We encourage Coastal Otago 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		2009 road trauma	
		Coastal Otago highways	
Intersections	Note Issues are not in any order	Casualties	4
Young drivers		Serious casualties	56
Road factors and roadside hazards		Minor casualties	239
Bend - loss of control or head on			
Nationally		Coastal Otago highways	
Speed		Crashes	
Alcohol / Drugs		Fatal crashes	4
Young Drivers		Serious injury crashes	44
Roads and Roadsides		Minor injury crashes	158
Motorcyclists		Non-injury crashes	1047

## 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
<b>Areas of high concern</b>				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
<b>Areas of medium concern</b>				
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		✓	✓	✓
<b>Areas of continued and emerging focus</b>				
Increasing the level of restraint use			✓	✓
Increasing the safety of older New Zealanders	✓	✓	✓	✓

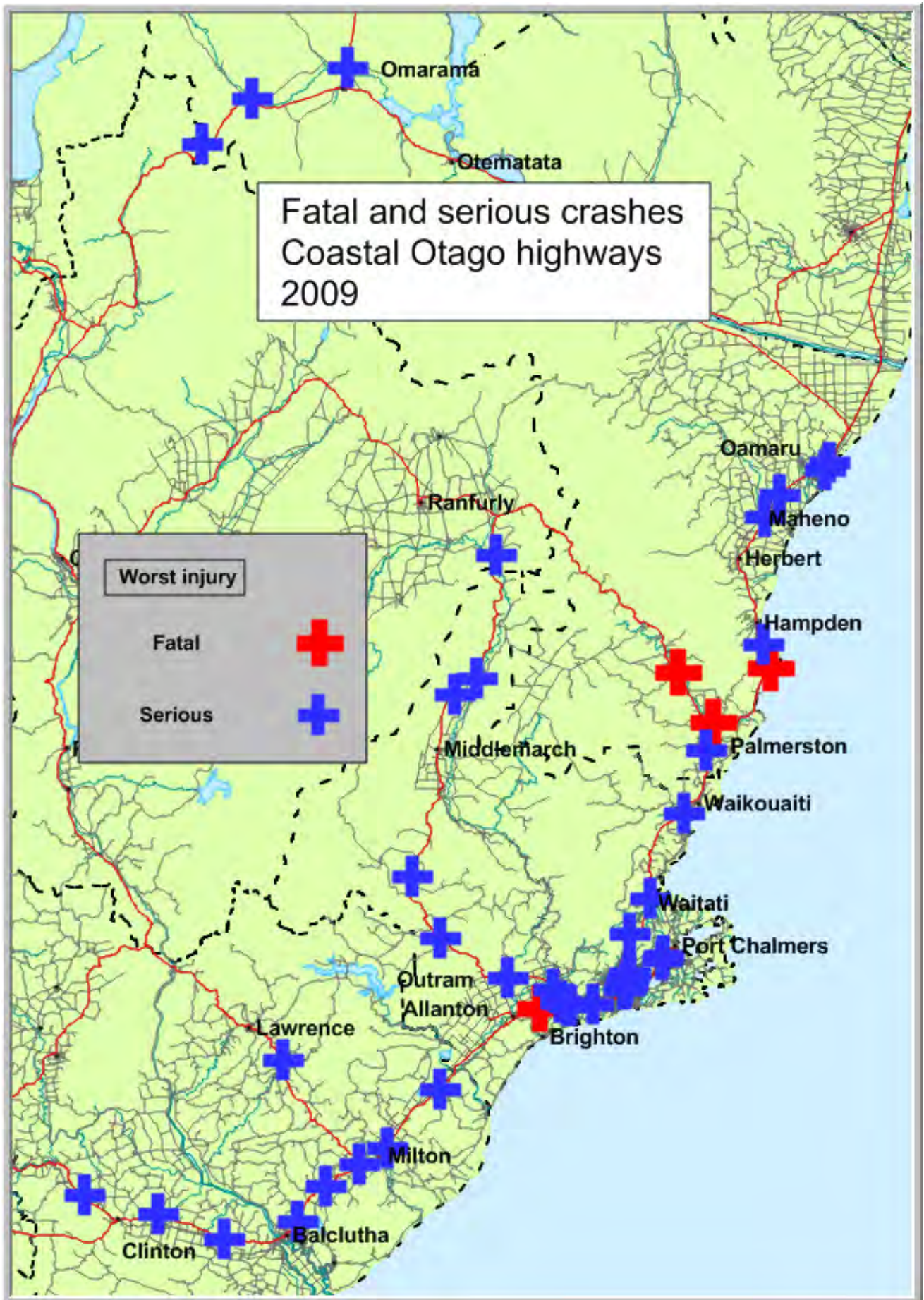
For some priorities (eg motorcycling), complementary action will be taken across all four areas of the Safe System. For others (eg reducing the impact of drink driving or safe roads), more effort would be focussed on one or two of the four Safe System areas.

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 State highways in Coastal Otago NMA there were 208 reported injury crashes, of which 48 were fatal or serious.

The table below shows the number of casualties resulting from the 301 injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties 2009 Coastal Otago highways				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	3	37	145	185
Urban	1	19	96	116
Total	4	56	241	301

Three quarters of the deaths, two thirds of the serious injuries, and 60 percent of the minor injuries were sustained in crashes on rural highways in the area.

From 2001 to 2006 the number of fatal and serious casualties fluctuated between 62 and 80. In 2007 the number dropped to 49, and has remained below this number since. Overall the total number of casualties from crashes on highways in the area in 2009 is the second lowest in the last nine years.

Crash trends in Coastal Otago highways				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	4	38	60	102
2001	8	63	153	224
2002	4	66	210	280
2003	8	72	171	251
2004	6	58	203	267
2005	5	53	207	265
2006	9	62	184	255
2007	7	42	203	252
2008	2	38	186	226
2009	4	44	160	208

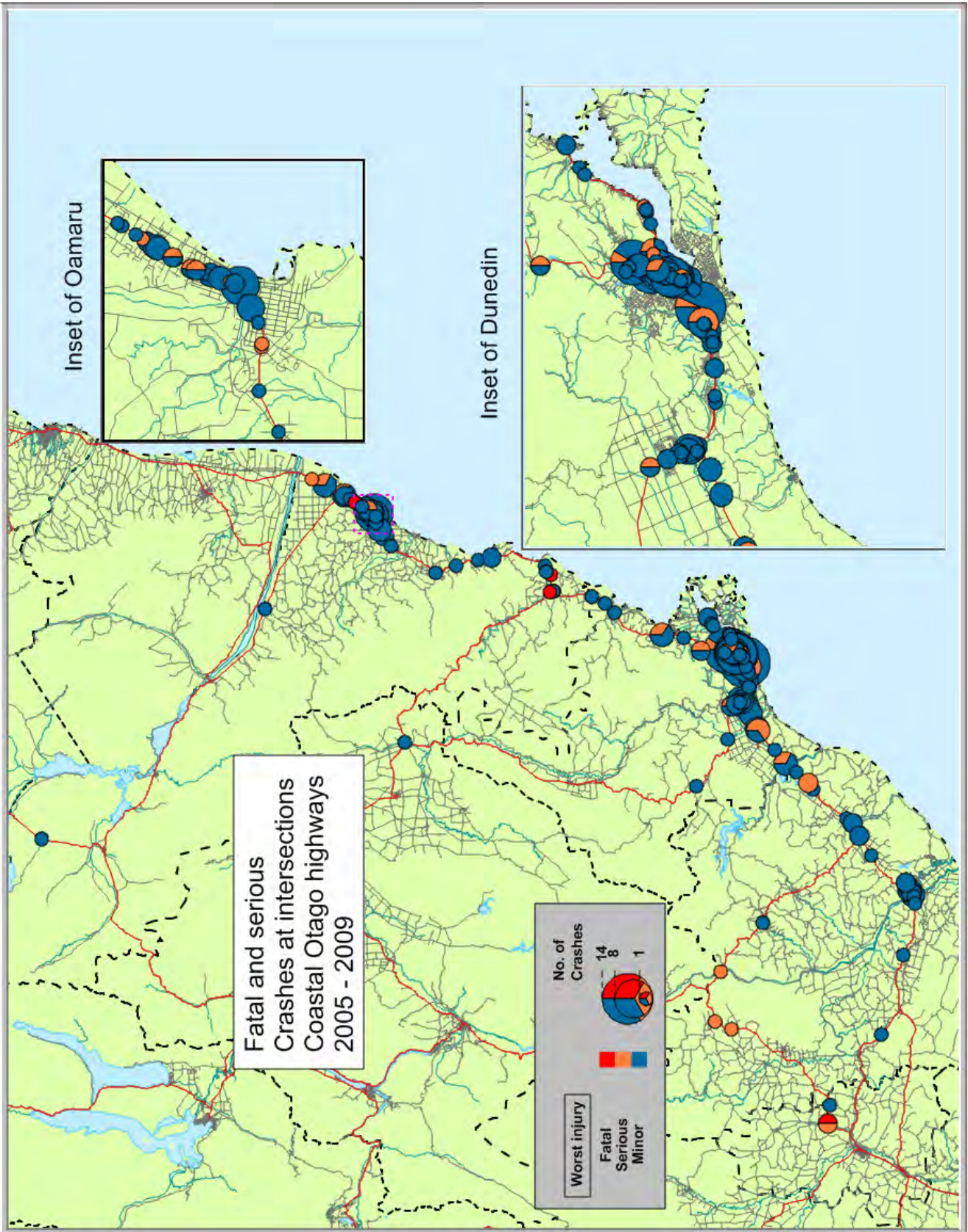
The following table illustrates where the issues considered for this report fit within the Safer Journeys priority. The numbers and percentages give an indication of how they fit in the priorities for Coastal Otago NMA.

Crash characteristics (2005 to 2009) Coastal Otago highways				
Crash type or contributory cause	Percent fatal and serious crashes	Percent all injury crashes	No. of injury crashes	Safer Journeys priority
Alcohol	17	9	105	1
Too fast	14	12	150	1
At bends	41	30	365	1
On straights	21	16	196	1
Intersections	21	33	394	1
Road factors	18	19	230	1
Motorcycling	12	6	78	1
Young drivers	34	32	389	1
Fatigue	17	10	122	2
Distraction	10	8	184	2
Pedestrians	6	6	67	2
Cycling	4	3	42	2
Heavy vehicles	6	11	134	2
Older road users	7	8	100	3
Overseas drivers	5	6	74	-

Further information about the 1206 injury crashes on State Highways in Coastal Otago highways, 2005 to 2009:

- 31 deaths, 303 serious injuries and 1504 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 \$61.10 m





## Intersections

Between 2005 and 2009, on highways in Coastal Otago NMA, there were a total of 394 fatal and injury crashes at intersections.

Casualties in crashes at Intersections Coastal Otago highways (2005 - 2009)					
	2005	2006	2007	2008	2009
Deaths	0	2	0	1	1
Serious injury	8	14	9	14	12
Minor injury	104	89	101	132	80
Total	112	105	110	147	93

In 2008 the total number of casualties from these crashes rose by over 30 percent, but dropped again in 2009. This was primarily due to a rise in minor injuries. For fatal and serious injuries only there is no obvious trend

Eighty percent of crashes at intersections were at intersections in urban areas of the district.

Ages of at fault drivers in intersection related crashes 2005 to 2009			
Ages	Male	Female	Total
15 to 19	36	14	50
20 to 24	35	23	58
25 to 29	22	14	36
30 to 39	40	21	61
40 to 49	28	25	53
50 to 59	28	16	44
60 to 69	17	10	27
70 and over	27	28	55
Total	233	151	384

### Main characteristics of injury Intersection crashes Coastal Otago highways (2005-2009)

Crash characteristic	Percentage of crashes
Alcohol	4%
Excessive speed for the conditions	6%
Failed to stop or give way	52%
Poor observation	70%
Poor judgement	15%

The most common crash types at intersections were when a driver travelling straight through is struck on the right by a through vehicle from the right, a right angle collision, and when a driver turned right across the path of a through vehicle from the opposite direction. Rear end crashes were also common.

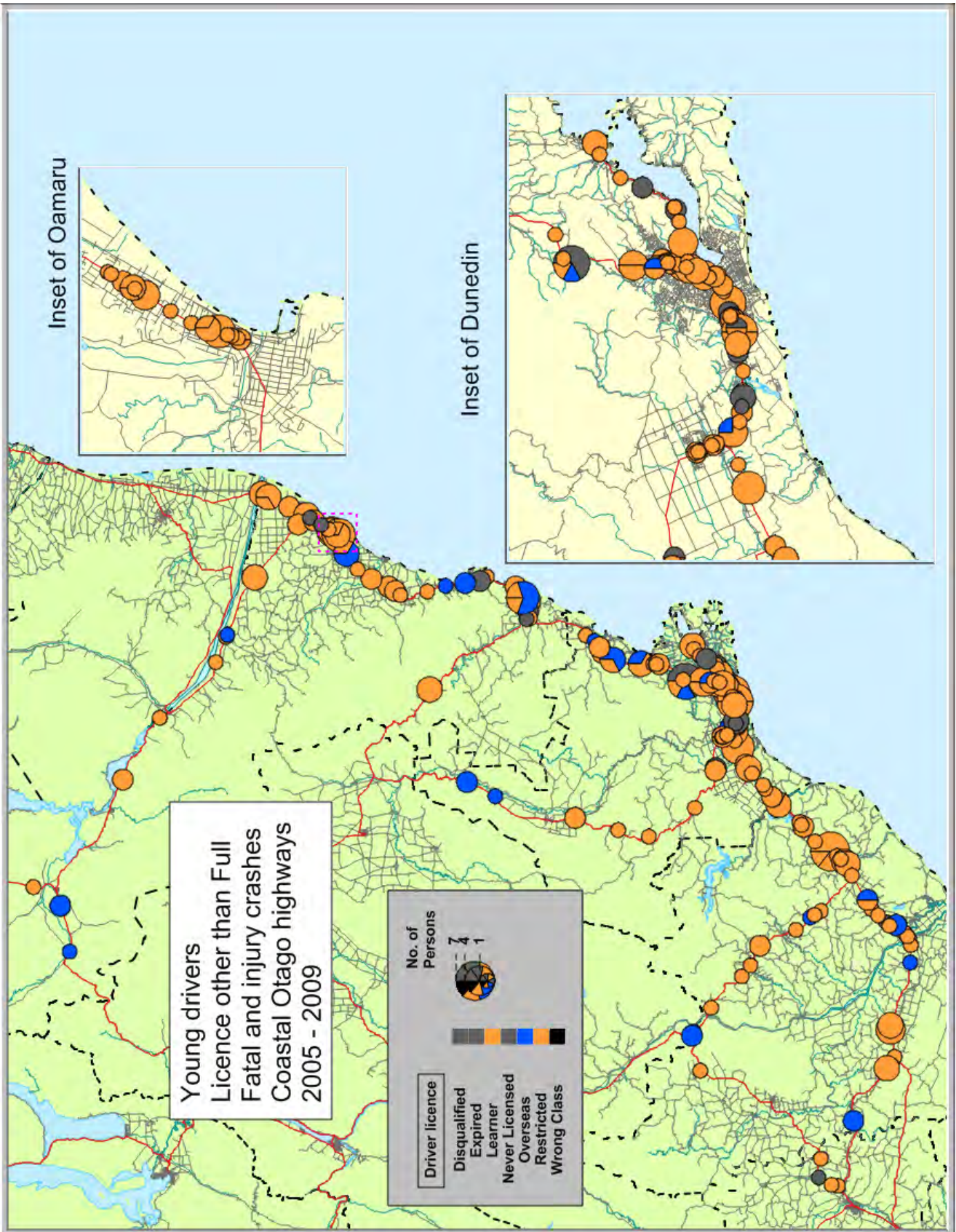
On highways in Coastal Otago NMA there were 48 intersection sites which have had 3 or more injury crashes in the last five years, including 10 sites with 7 or more injury crashes in the past five years.

It is possible that some of these sites may have had improvement work done in recent years

Further information about the 394 injury crashes at intersections on State Highways on Coastal Otago highways 2005 to 2009:

- 4 deaths, 57 serious injuries and 506 minor injuries
- 18 percent wet or icy roads
- 24 percent night time
- Worst month May
- Worst day of week Thursday
- Worst time 3 pm till 6 pm







## Young drivers

Young drivers are those aged less than 25 years. This analysis is based on injury crashes only as driver age is not recorded in non-injury crashes.

In Coastal Otago highways between 2005 and 2009, 32 percent of injury crashes involved young drivers. These crashes resulted in 13 deaths, 117 serious injuries and 625 minor injuries.

The total number of casualties from injury crashes involving young drivers has generally reduced since 2005.

### Casualties from crashes involving young drivers Coastal Otago highways

	Fatal	Serious	Minor	Total
2005	4	27	151	182
2006	4	33	107	144
2007	4	25	146	175
2008	0	12	122	134
2009	1	20	99	120
Total	13	117	625	755

Forty three percent of the 512 young drivers in these crashes had a learner or restricted licence. Nearly seventy percent of these 296 drivers were males. Overall males represented 64 percent of at fault young drivers.

Most of the young drivers were local residents.

### Young drivers at fault in injury crashes Coastal Otago highways (2005 - 2009)

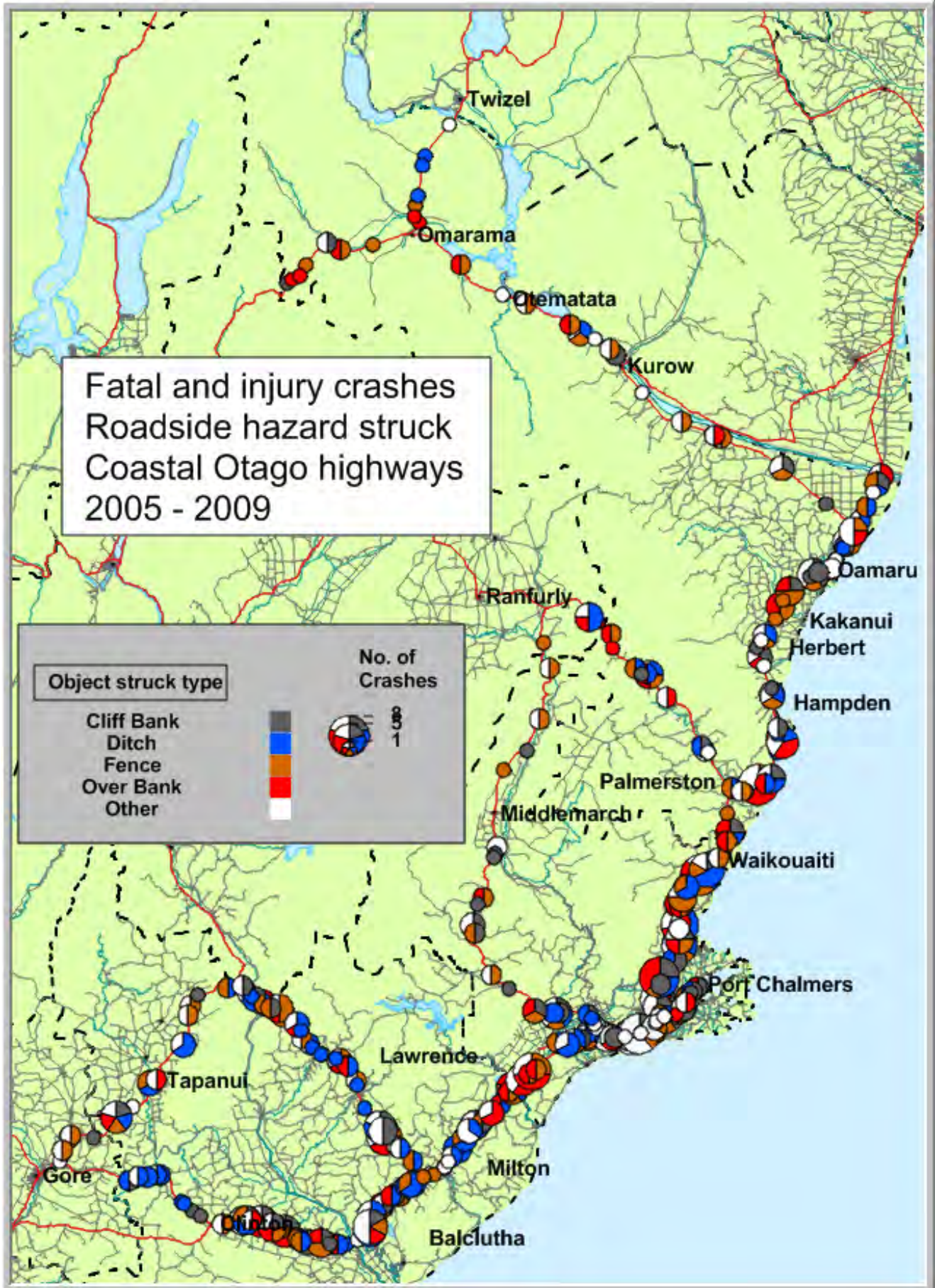
Licence type	Female	Male	Total
Full	76	161	237
Learner	18	41	59
Restricted	65	97	162
Overseas	15	13	28
Never licensed	4	6	10
Disqualified	2	6	8
Other (unknown, wrong class)	3	5	8
Total	183	329	512

### Injury crashes involving young drivers Coastal Otago highways (2005 - 2009)

Crash type or contributory cause	Urban roads	Rural roads
Alcohol	12	29
Speed	27	69
Failed to stop/Give way	88	15
Poor handling	27	101
Poor judgement	40	72
Poor observation	187	99
Road factors	17	74
Lost control - straight	12	61
Lost control - bend	22	107
Rear end / obstruction	75	42
Crossing / turning	85	18

Further information about the 468 injury crashes involving young drivers on State highways in Coastal Otago NMA 2005 to 2009:

- 13 deaths, 117 serious injuries 625 minor injuries
- 38 percent were single vehicle crashes
- 46 percent were on urban roads
- 35 percent at intersections
- 35 percent at night
- 28 percent on wet or icy roads
- Worst month March, May
- Worst day of week Sunday
- Worst time 3 pm to 6 pm



## Road Factors - including roadside hazards

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

In 2009 in Coastal Otago highways, "road factors" were a contributing factor in 19 percent of fatal and injury crashes.

Road factor related injury crashes Coastal Otago highways					
Road type	2005	2006	2007	2008	2009
Urban	7	8	6	4	6
Rural	34	48	56	34	27
Total	41	56	62	38	33

Types of road factors in injury crashes Coastal Otago highways (2005-2009)	
Road factor type 2005 to 2009	Number reported
Slippery road *	212
Road surface in poor condition	20
Road obstructed	4
Visibility limited	20
Signs or signals (needed or faulty)	6
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, in Coastal Otago highways, 45 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 Coastal Otago highways where a roadside hazard was struck, 18 people died, 159 received serious injuries and 640 minor injuries.

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

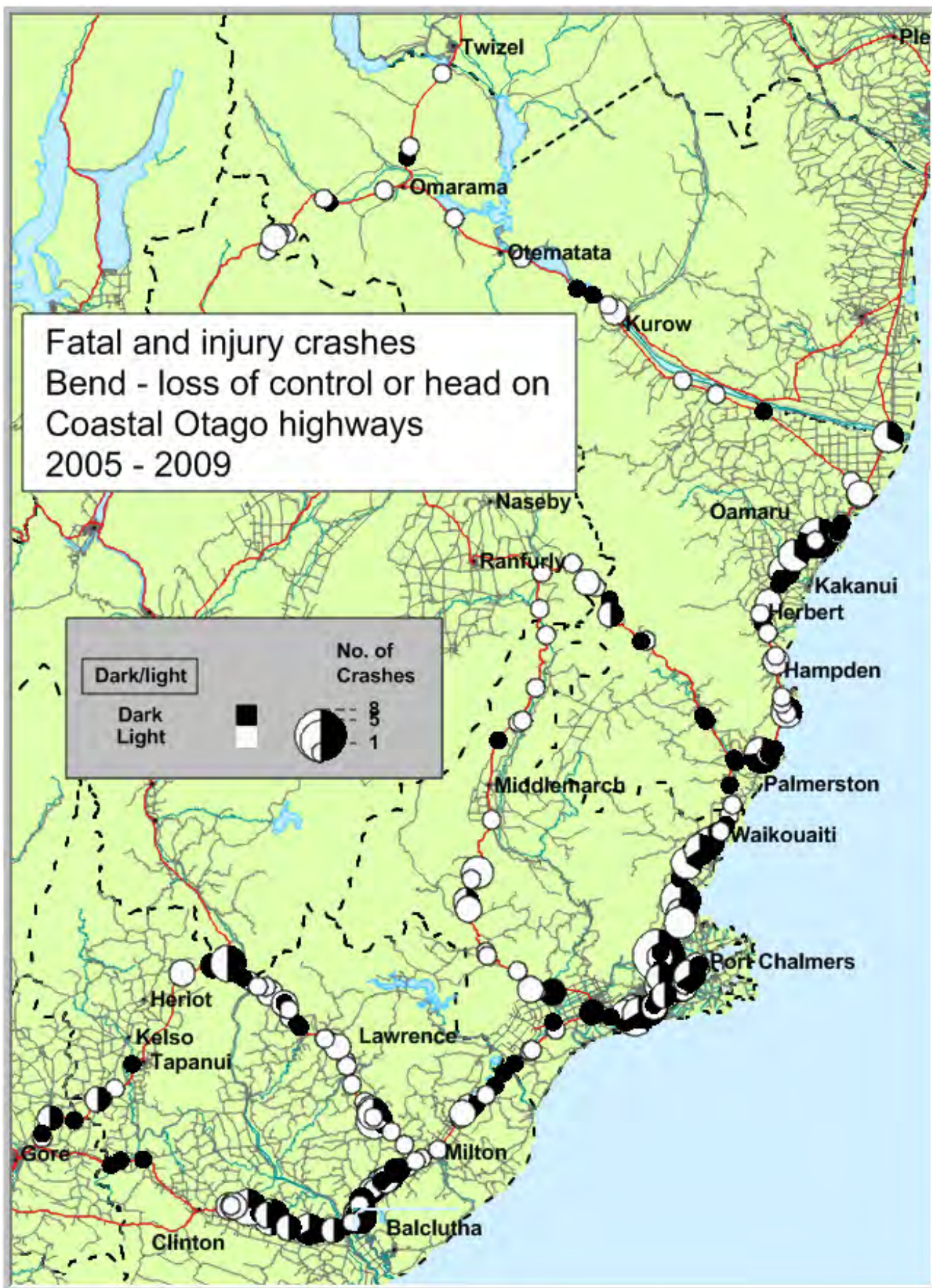
### Most common types of hazard struck (Injury crashes in Coastal Otago highways 2005 - 2009)

Type of hazard	Number of times hazard struck
Fence	148
Ditch	136
Cliff / bank	129
Over bank	98
Tree	62
Post or pole	53

Further information about the 230 road factor related injury crashes on Coastal Otago highways (2005 to 2009):

- 4 deaths, 61 serious injuries and 295 minor injuries
- Most common crash type, bend - loss of control or head on
- 13 percent at intersections
- 13 percent urban
- 86 percent wet or icy road
- 43 percent night time
- Worst month June
- Worst day of week Friday





Fatal and injury crashes  
Bend - loss of control or head on  
Coastal Otago highways  
2005 - 2009

<b>Dark/light</b>	<b>No. of Crashes</b>
Dark	3
Light	1

## Bend - loss of control or head on

Between 2005 and 2009, 30 percent of all injury crashes in Coastal Otago highways were bend - loss of control or head on crashes. These crashes resulted in 17 deaths, 117 serious injuries and 423 minor injuries.

In the last two years, the number of fatal and serious crashes were lower than the previous years.

Bend - loss of control or head on crashes Coastal Otago highways (2005 - 2009)				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	2	24	62	88
2006	6	29	51	86
2007	4	14	58	76
2008	1	13	45	59
2009	2	13	41	56
Total	15	93	257	365

Overall males accounted for 68 percent of at fault drivers.

Young drivers, those aged 15 to 24 years, represented 35 percent of at fault drivers. Within this age group, males made up 82 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	40	21	61
20 to 24	47	17	64
25 to 29	25	13	38
30 to 39	46	14	60
40 to 49	43	17	60
50 to 59	29	18	47
60 to 69	10	7	17
70 and over	6	6	12
Total	246	113	359

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 in Coastal Otago highways were fence (91), cliff or bank (80), ditch (70), over bank (64) and tree (41) from a total of 458 objects struck.

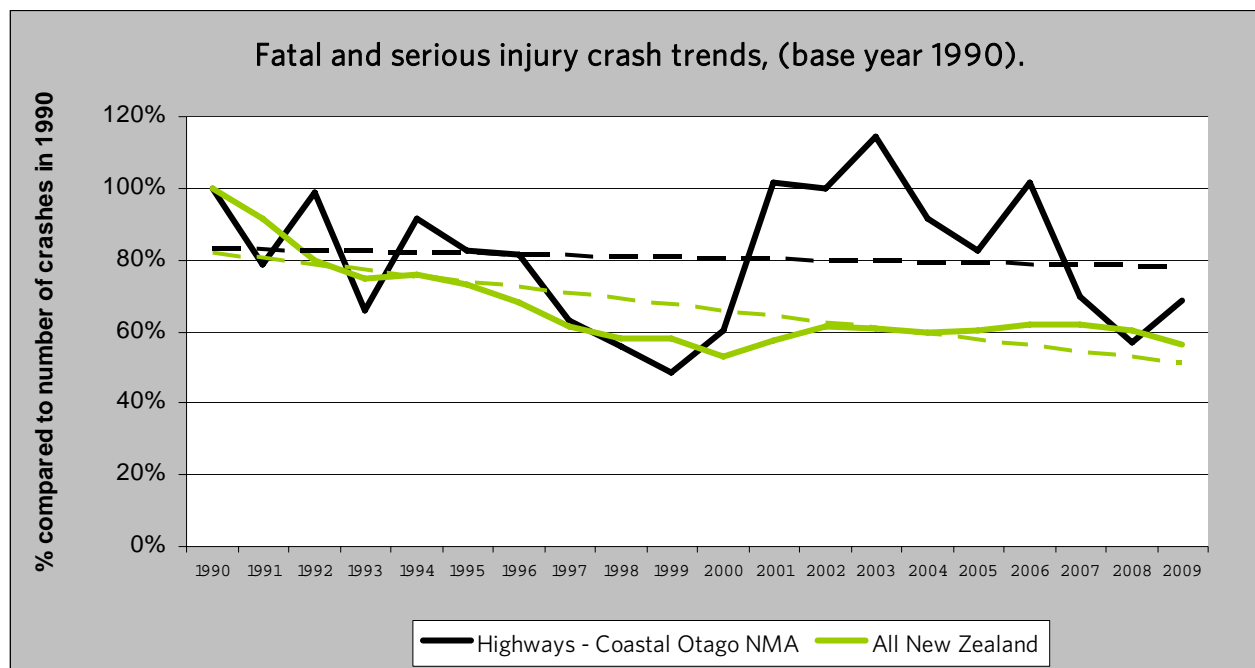
A roadside hazard was struck in 81 percent of bend - loss of control or head on crashes on highways in the network management area.

Further information about the 365 injury bend - loss of control or head on crashes on State Highways in Coastal Otago NMA, (2005 to 2009):

- 15 percent of crashes involved alcohol
- 28 percent of crashes involved speed too fast for the conditions
- 33 percent involved road factors
- 56 percent involved poor handling
- 89 percent were on rural roads
- 45 percent were on wet or icy roads
- 41 percent were at night
- Worst month June
- Worst day of week Saturday
- Worst time period 3 pm till 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 Coastal Otago highways and for the country as a whole.



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