

briefing notes - road safety issues

North Canterbury 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 North Canterbury 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 North Canterbury 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 State highways in the network Management Area (NMA).

We encourage the managers of North Canterbury 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	
	Note Issues are not in any order	Casualties	North Canterbury highways
North Canterbury highways			
Intersections		Deaths	12
Bend - loss of control or head-on		Serious casualties	84
Speed		Minor casualties	264
Nationally		Crashes	North Canterbury highways
Speed		Fatal crashes	12
Alcohol / Drugs		Serious injury crashes	60
Young Drivers		Minor injury crashes	181
Roads and Roadsides		Non-injury crashes	2071
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

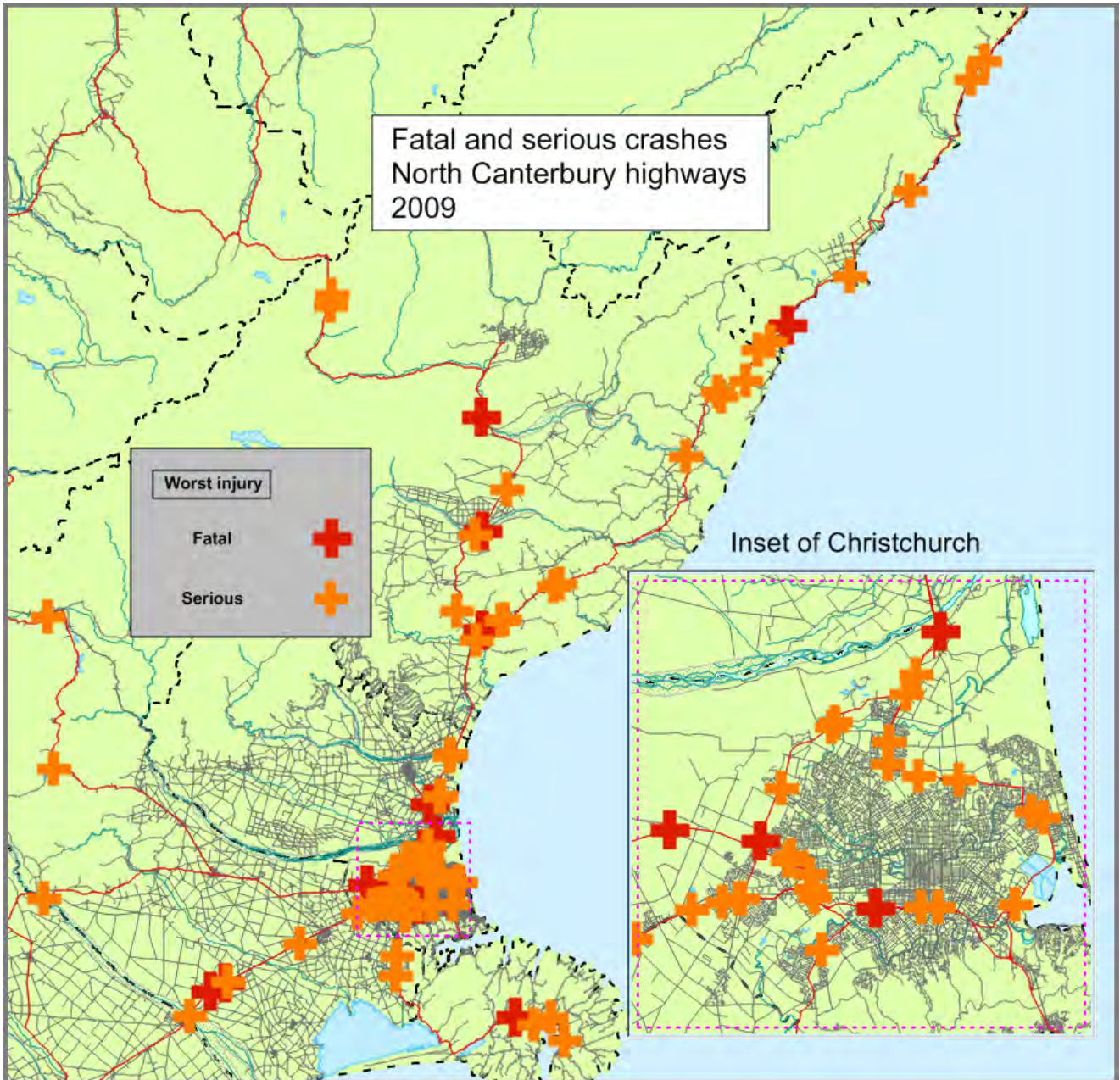
AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROADSIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe 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 - Canterbury / West Coast 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
Buller District	17	26	58	0	32	29
Grey District	20	23	49	1	29	31
Westland District	16	32	56	0	32	22
Kaikoura District	15	24	62	0	38	28
Hurunui District	18	21	64	0	34	16
Waimakariri District	20	32	50	3	17	15
Christchurch City	16	34	31	83	15	22
Selwyn District	20	26	45	5	16	17
Ashburton District	21	28	45	2	25	16
Timaru District	18	35	36	2	17	27
Mackenzie District	6	23	63	0	13	3
Waimate District	30	36	45	0	23	23
Chatham Islands	38	17	75	0	25	38
West Coast Region	17	34	55	1	31	27
Canterbury Region	17	31	39	95	18	20
New Zealand	23	34	45	446	23	18



Overview

In 2009 on North Canterbury highways there were 253 reported injury crashes, of which 72 were fatal or serious.

The table below shows the number of casualties resulting from the 253 injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties 2009 North Canterbury highways				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	11	65	153	229
Urban	1	19	111	131
Total	12	84	264	360

Over 90 percent of fatalities, 77 percent of serious injuries and 58 percent of minor injuries were sustained in crashes on highways in rural areas.

Over the last ten years, the number of fatal and serious crashes on highways in the North Canterbury NMA has fluctuated between a low of 53 in 2002 and a high of 82 in 2006. In each of the last three years the number has dropped.

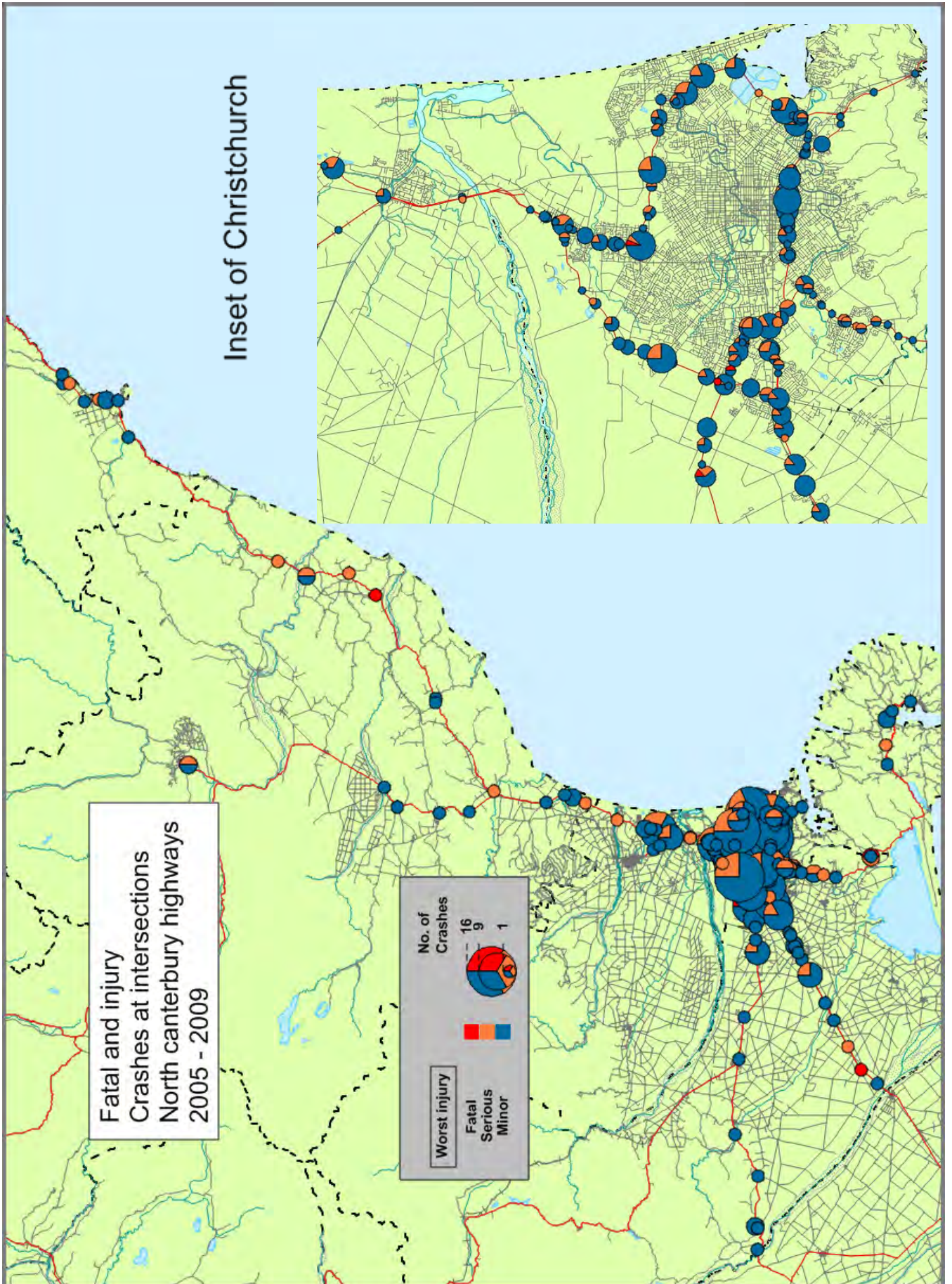
Crash trends in North Canterbury highways				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	13	59	162	234
2001	12	56	146	214
2002	14	39	158	211
2003	14	47	167	228
2004	12	52	164	228
2005	13	62	175	250
2006	10	72	233	315
2007	17	62	253	332
2008	10	65	224	299
2009	12	60	181	253

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 North Canterbury highways.

Crash characteristics (2005 to 2009) North Canterbury highways				
Crash type or contributory cause	Percent fatal and serious crashes	Percent all injury crashes	No. of injury crashes	Safer Journeys priority
Alcohol	15	10	146	1
Too fast	22	17	242	1
At bends	38	29	416	1
On straights	19	16	229	1
Intersections	30	40	578	1
Road factors	13	11	153	1
Motorcycling	21	12	176	1
Young drivers	26	28	416	1
Fatigue	9	9	130	2
Distraction	8	4	70	2
Pedestrians	5	3	42	2
Cycling	7	6	85	2
Heavy vehicles	16	4	218	2
Older road users	10	10	143	3
Overseas drivers	6	4	68	-

Further information about the 1449 injury crashes on State Highways in North Canterbury, 2005 to 2009:

- 71 deaths, 411 serious injuries and 1524 minor casualties
- Five year age group with most at fault drivers in injury crashes: 15 to 19 years (14 percent of at fault drivers)
- Social cost of crashes in 2009 \$114.47 m



Intersections

During the five year period 2005 to 2009, on highways in North Canterbury NMA, there were a total of 578 fatal and injury crashes at intersections.

Casualties in crashes at Intersections North Canterbury highways (2005 - 2009)					
	2005	2006	2007	2008	2009
Deaths	3	1	2	1	2
Serious injury	28	28	21	23	29
Minor injury	99	151	159	147	98
Total	130	180	182	171	129

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

Almost two thirds of at fault drivers in crashes at intersections were males. The age groups most commonly at fault were 15 to 24 years, (29 percent), and 40 to 49 years (15 percent)

Ages of at fault drivers in intersection related crashes 2005 to 2009			
Ages	Male	Female	Total
15 to 19	68	27	95
20 to 24	56	22	78
25 to 29	31	16	47
30 to 39	58	29	87
40 to 49	52	38	90
50 to 59	41	19	60
60 to 69	29	22	51
70 and over	42	37	79
Total	377	210	587

Main characteristics of injury Intersection crashes North Canterbury highways (2005- 2009)

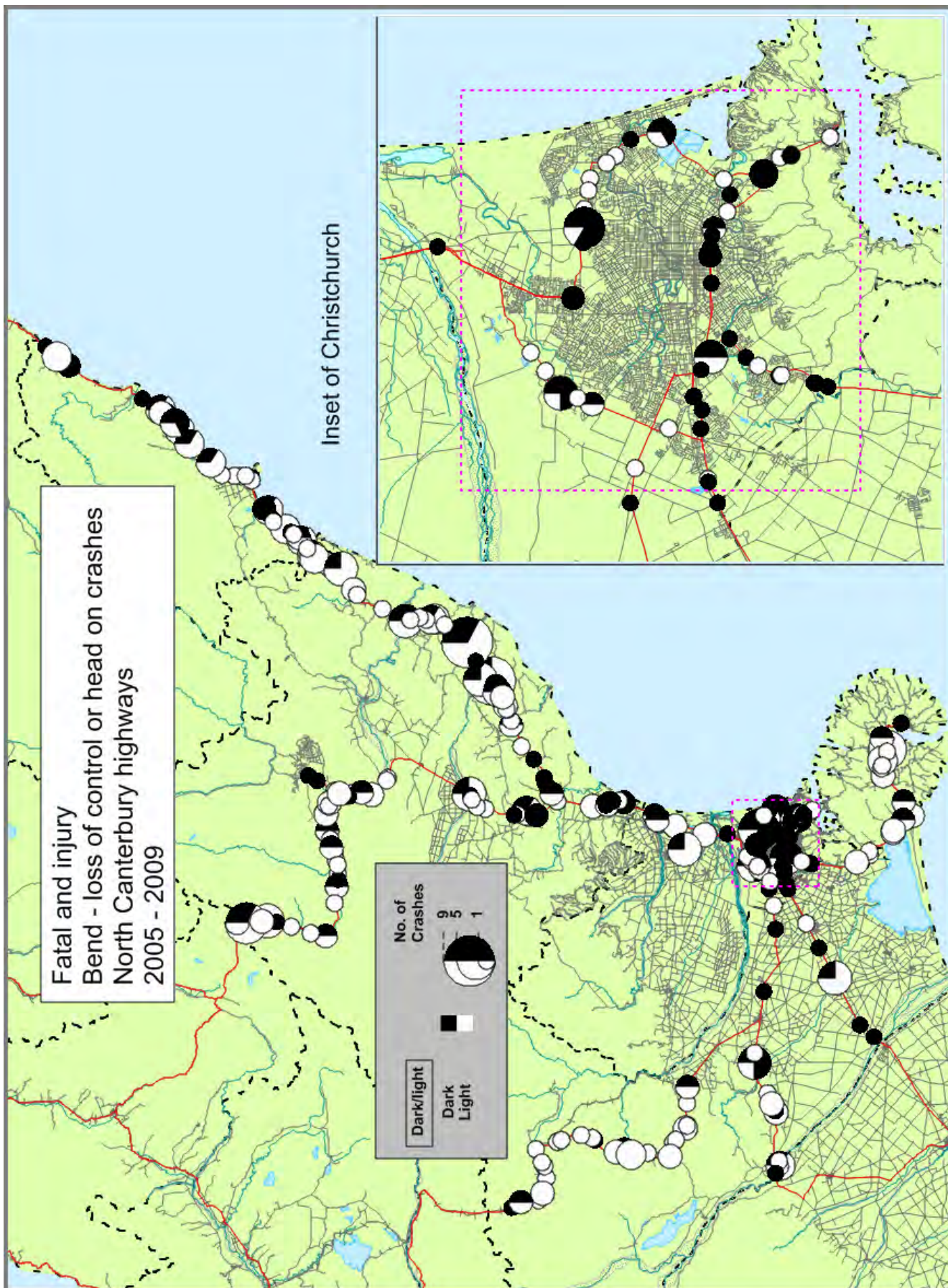
Crash characteristic	Percentage of crashes
Single vehicle	12%
Alcohol	8%
Excessive speed for the conditions	10%
Failed to stop or give way	60%
Poor observation	59%
Poor judgement	13%

The most common crash types at intersections were when a driver turns right and is hit by a vehicle approaching from the opposite direction, and when a driver travelling straight through is struck on the right by another vehicle travelling straight through from the right, (a right angle crash).

In North Canterbury highways there are 62 intersection sites which have had 3 or more injury crashes in the last five years, including 10 sites with 10 or more injury crashes in the past five years.

Further information about the 578 injury crashes at intersections on State Highways in North Canterbury NMA 2005 to 2009:

- 9 deaths, 129 serious injuries and 654 minor injuries
- 13 percent wet or icy roads
- 31 percent night time
- Worst month March
- Worst day of week Friday
- Worst time 3 pm till 6 pm



Bend - loss of control or head on

Between 2005 and 2009, 29 percent of all injury crashes on North Canterbury highways were bend - loss of control or head on crashes. These crashes resulted in 34 deaths, 152 serious injuries and 411 minor injuries.

The number of bend - loss of control or head on crashes in 2009 was the lowest in the last five years. This was due to a decline in both serious and minor crash numbers.

Bend - loss of control or head on crashes North Canterbury highways (2005 - 2009)				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	6	30	52	88
2006	3	20	62	85
2007	8	23	65	96
2008	6	22	46	74
2009	7	21	45	73
Total	30	116	270	416

Young drivers, those aged 15 to 24 years, represented 27 percent of at fault drivers in these crashes. Within this age group males made up almost two thirds of the at faulty drivers. Overall males represented 72 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	38	21	59
20 to 24	32	19	51
25 to 29	28	9	37
30 to 39	70	19	89
40 to 49	66	20	86
50 to 59	29	15	44
60 to 69	14	5	19
70 and over	22	6	28
Total	299	114	413

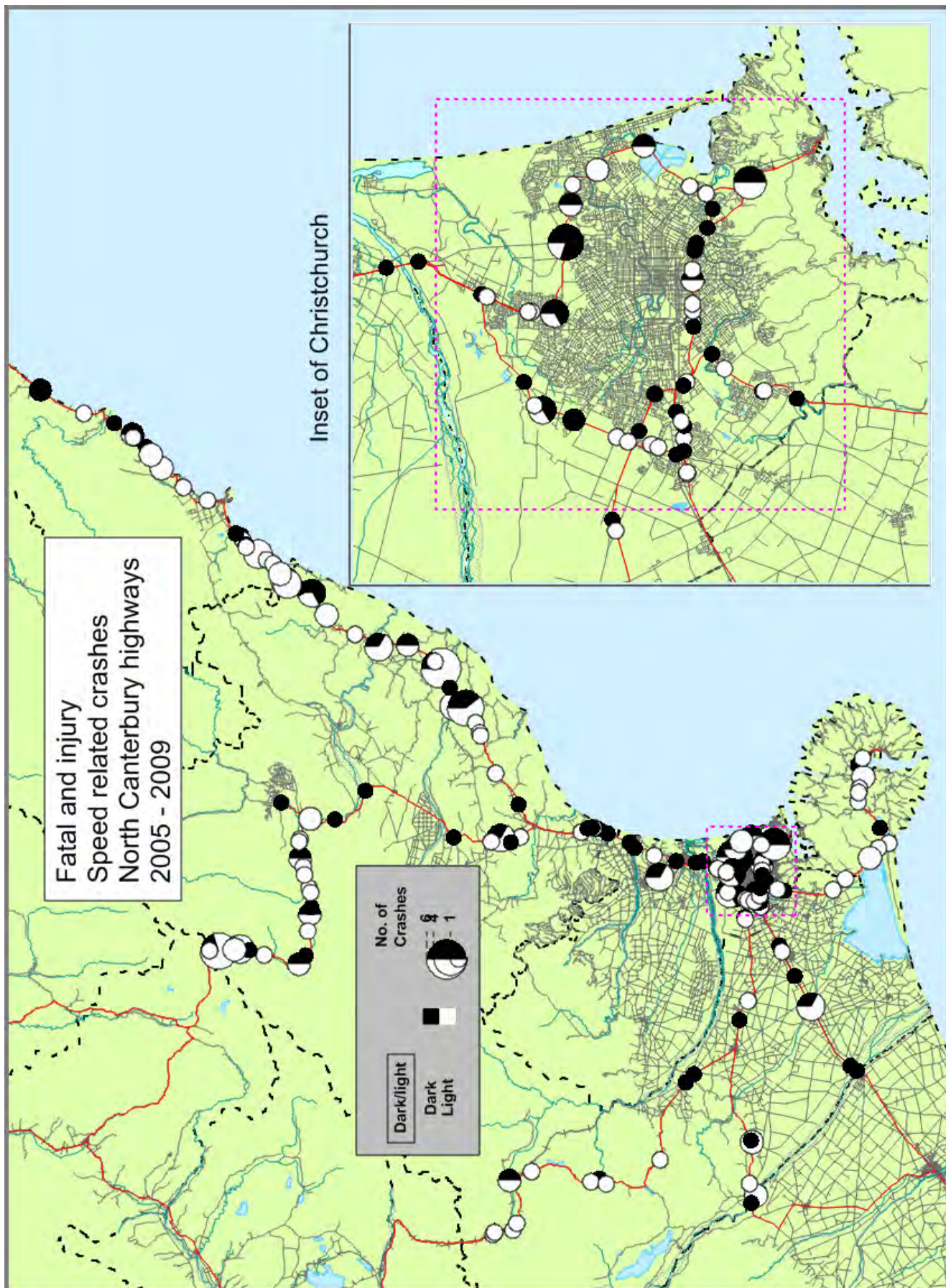
If drivers lose control, their vehicles may crash into roadside hazards such as ditches, banks, poles or trees. Hitting roadside objects can result in a minor off-road event becoming more serious.

The most common roadside hazards struck in injury bend - loss of control or head on crashes on North Canterbury highways were cliffs or banks (75), fence (54), tree (47), posts or poles (33) and over bank (32) from a total of 383 objects struck.

A roadside hazard was struck in 70 percent of bend - loss of control or head on crashes on State highways in North Canterbury.

Further information about the 416 injury bend - loss of control or head on crashes on State Highways in North Canterbury, (2005 to 2009):

- 15 percent of crashes involved alcohol
- 43 percent of crashes involved speed too fast for the conditions
- 21 percent involved road factors
- 58 percent involved poor handling
- 89 percent were on rural roads
- 33 percent were on wet or icy roads
- 36 percent were at night
- Worst month January
- Worst day of week Sunday
- Worst time period midday till 3 pm



Speed

Nationally, speed is one of the major contributing factors to road crashes. Reducing speeds is an important road safety goal. Excessive speed increases the likelihood of a crash occurring by reducing the time available for a driver to react to a situation. It also leads to more severe injuries. Research has shown that a one km/h reduction in average speed can produce a three percent reduction in injury crashes.

Speed related crashes in CAS are not necessarily crashes where the driver was exceeding the posted speed limit but are crashes where in the opinion of the Police Officer reporting the crash the driver was travelling too fast for the prevailing conditions.

Between 2005 and 2009, 17 percent of injury crashes on North Canterbury highways involved travelling too fast for the conditions. These crashes resulted in 20 deaths, 91 serious injuries and 262 minor injuries.

Speed related crashes, North Canterbury highways

Area	2005	2006	2007	2008	2009
Rural	38	39	46	34	36
Urban	10	7	13	12	7
Total	48	46	59	46	43

Crash numbers rose in 2007 and reduced to close to the previous level in 2008. Overall, over 80 percent of these crashes were on highways in rural areas

The other main causes contributing to speed related crashes were:

- Handling errors
- Errors of judgement
- Alcohol

Overall males accounted for 38 percent of at fault drivers in speed related crashes on highways in North Canterbury.

Young drivers, those aged from 15 to 24 years, made up 37 percent of at fault drivers.

Age and gender of at fault drivers in speed related injury crashes. (2009 - 2009) North Canterbury highways

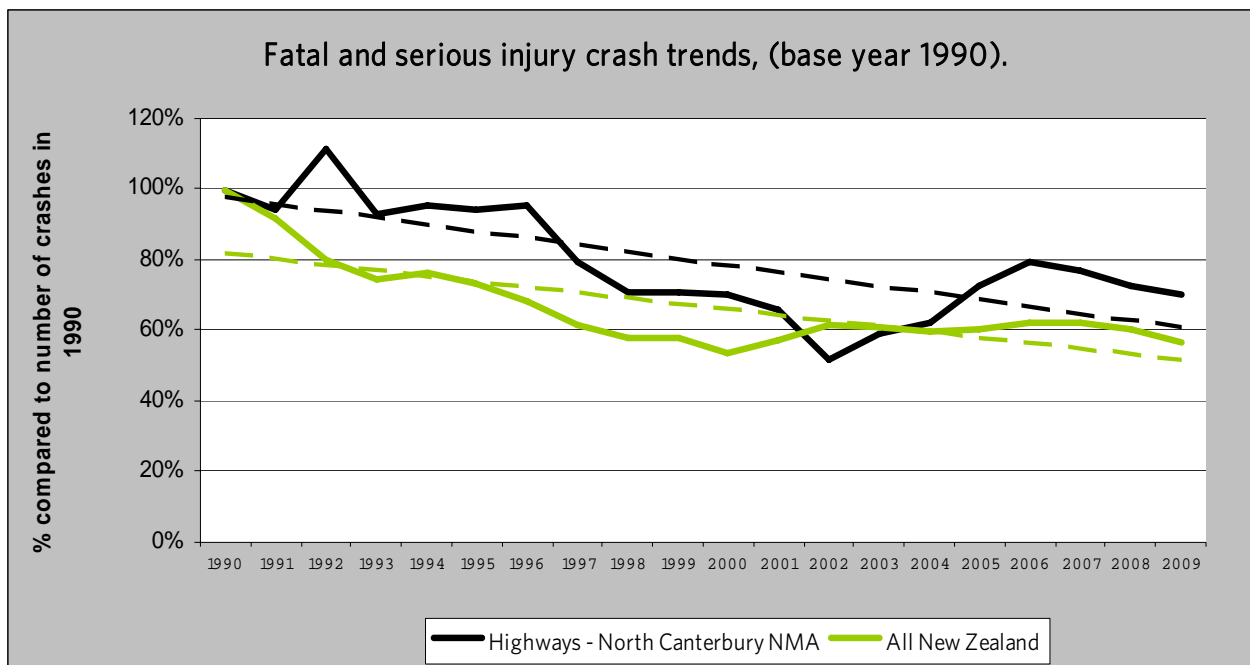
Drivers age *	Male	Female	Total
15-19 years	36	12	48
20 - 24	35	11	46
25 - 29	21	3	24
30 - 39	42	11	53
40 - 49	29	10	39
50 - 59	16	7	23
60 - 69	8	2	10
70+	8	1	9
Total	195	57	252

Further information about the 242 speed related injury crashes in North Canterbury highways on State highways (2005 to 2009):

- Most common crash type Bend - loss of control or head on
- 76 percent mid-block
- 20 percent urban
- 40 percent wet or icy road
- 38 percent night time
- Worst month March
- Worst day of week Sunday
- Worst time 3 pm - 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 North Canterbury highways and for the country as a whole.



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