NZ TRANSPORT AGENCY WAKA KOTAHI

New Zealand Government

Safer Journeys

briefing notes crash analysis

a Safe System approach

Canterbury Region

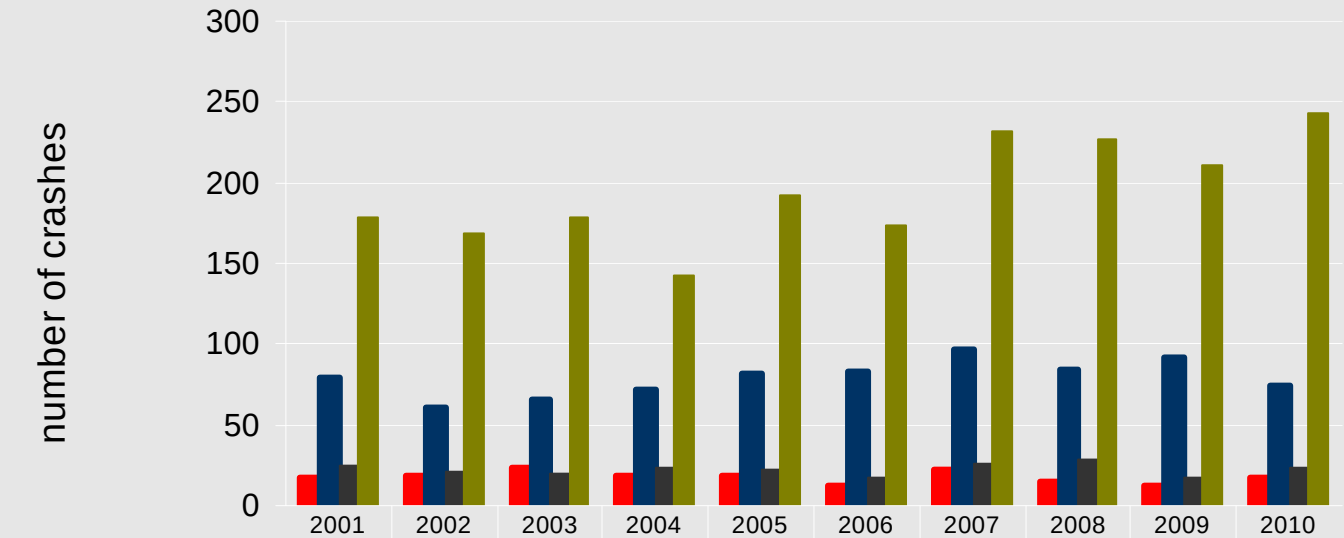
This report provides a snapshot of the Canterbury Region road safety region's traffic crash data for the period of 2006 to 2010. This is the 12th year we have produced a set of briefing notes reporting on traffic crash data and addressing road safety issues across all territorial local authorities (TLA).

Safer Journeys (NZ's Road Safety Strategy 2020) is built upon a safe system approach to road safety, where the emphasis is on reducing the effects of crashes as much as the numbers, and most importantly on reducing fatal and serious casualties on our roads. A crash is a single event that may involve multiple parties, many contributing factors and various casualties.

We have focused on the areas of high, medium and emerging concern set out in Safer Journeys, which are a strategic priority when compared nationally. The significance of each area of concern is calculated locally and regionally by assessing the individual road user's risk of a fatal or a serious injury.

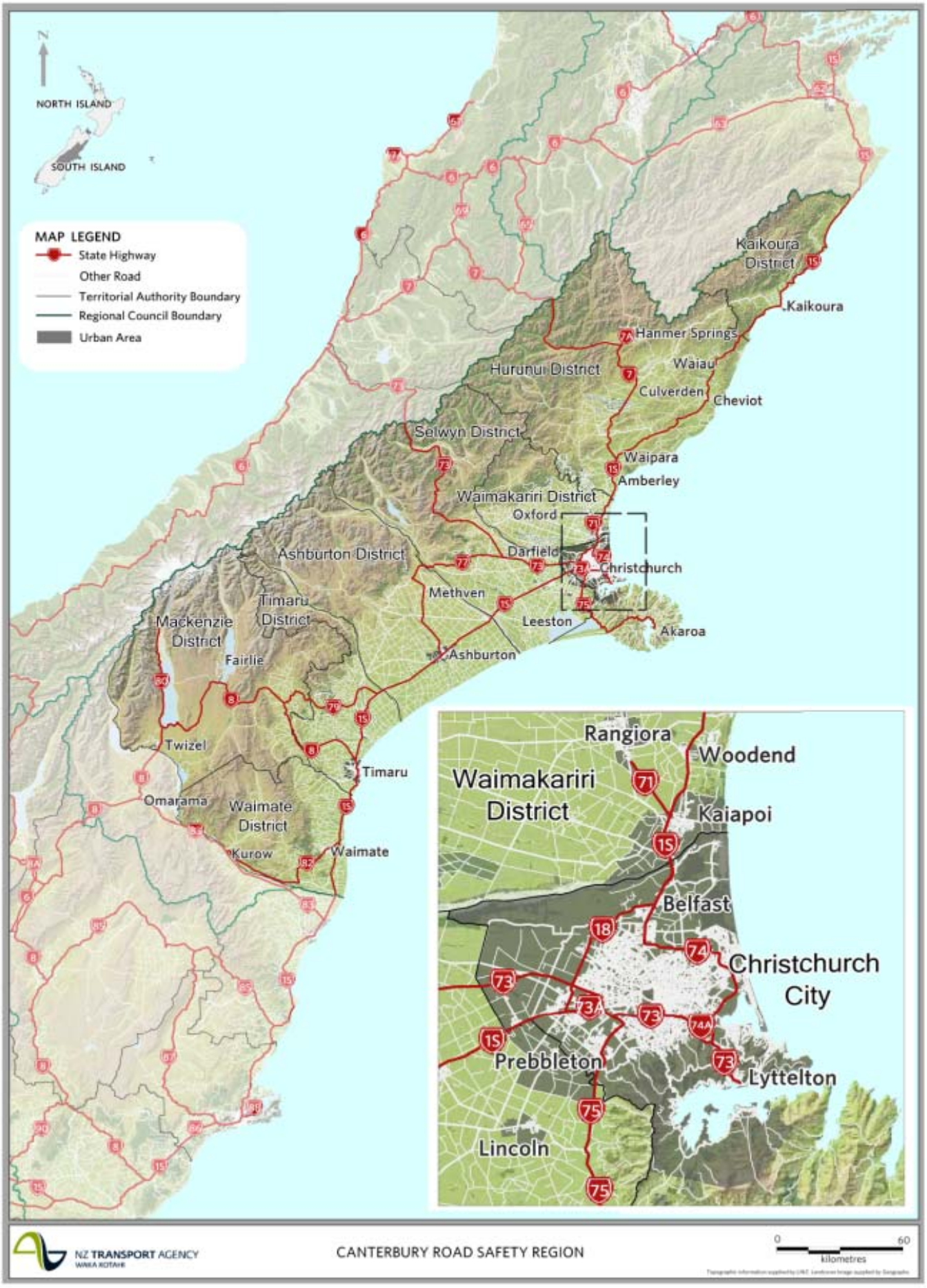
We present 2010 overviews of the region and its local bodies based upon reported crash data, and the latest trends and crash characteristics for the 2006–2010 period. The identified regional issues are discussed in more detail. The information in this report covers both local roads (council owned roads) and state highways. Injury crash data is used throughout the report in charts, tables and maps, unless otherwise stated.

Fatal and serious injury crash trends



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
State highway fatal	17	19	23	18	18	12	22	15	12	17
State highway serious	79	61	66	72	82	83	97	84	92	74
Local road fatal	25	21	20	23	22	17	26	29	17	24
Local road serious	178	169	178	143	192	173	232	227	211	243

The region


N
NORTH ISLAND
SOUTH ISLAND
MAP LEGEND
State Highway
Other Road
Territorial Authority Boundary
Regional Council Boundary
Urban Area
Kaikoura District
Kaikoura
Hanmer Springs
Waiau
Hurunui District
Culverden
Cheviot
Selwyn District
Waipara
Amberley
Waimakariri District
Oxford
Darfield
Christchurch
Ashburton District
Methven
Timaru District
Mackenzie District
Leeston
Akaroa
Fairlie
Ashburton
Twizel
Timaru
Omarama
Waimate District
Kurow
Waimate
Rangiora
Woodend
Waimakariri District
Kaiapoi
Belfast
Christchurch City
Prebbleton
Lyttelton
Lincoln
NZ TRANSPORT AGENCY
WAKA KOTAHI
CANTERBURY ROAD SAFETY REGION
0
60
kilometres

A Safe System approach

Safer Journeys, New Zealand's Road Safety Strategy 2010–2020, envisions a safe road system increasingly free of death and serious injury and introduces the Safe System approach to New Zealand.

This approach represents a fundamental shift in the way we think about road safety. A Safe System approach is about acknowledging that:

- Human beings make mistakes and crashes are inevitable
- The human body has a limited ability to withstand crash forces
- System designers and users must all share responsibility for managing crash forces to a level that does not result in death or serious injury
- It will take a whole-of-system approach to implement the Safe System approach in New Zealand

Taking a Safe System approach - a case study

The following case study is an example of what can go wrong while driving a vehicle on a public road. The parents of the crash victims referred to in the case study have expressed the wish that their tragic story will contribute to safer journeys for all New Zealanders in the future.

It was late afternoon one day In January 2007 when two teenage sisters aged 18 and 15 were tragically killed as a result of a crash. They were on an over bridge when their car slid sideways, crossed the centreline and hit an oncoming truck. They were killed instantly.

The coroner's report identified a number of factors which contributed to the crash. These factors included the tyres fitted to the vehicle, and also the possibility that the driver was texting while driving and may have been distracted.

In a safe road system we are encouraged to look at all aspects around crashes on the roads as we work to have a road network increasingly free from death and serious injury.

This incident demonstrates the many factors typically involved in a crash. To avoid similar fatalities we need to look beyond driver blame and work on strengthening all parts of the system: the roads and roadsides, the speed, the vehicle and the road use. The response to a problem may lie in more than one of these four cornerstones of a safe road system. For instance, in future, better management of both speed and loss of control may lie in vehicle technology.

Using the principles of a Safe System approach in this case, the following has been observed:

- **Safe roads and roadsides**: This section of State Highway 1 has a 100km/h speed limit and is rated a 'two star' road using the KiwiRAP* system for rating roads. The bridge where the crash occurred had a moderate right hand curve and a speed advisory of 85km/h. Records indicate that there had been five injury crashes reported in the immediate vicinity of the bridge. These included four lost control crashes, one of which resulted in a head-on crash.

  * KiwiRAP rates roads from one to five stars according to their safety features.

- **Safe vehicles**: The vehicle driven by the sisters was a 1998 Japanese imported Toyota Trueno, which was unrated in the ANCAP* system. The vehicle had a current warrant of fitness at the time of the crash, but it was found that the tyres were not matched and the rear ones were both low in tread, and designed for cold/snow conditions. If the vehicle involved in this crash had been a five star ANCAP rated vehicle, the chances of fatality would have been reduced. Evidence suggests that this vehicle had lost control on more than one occasion previously due to driver input and had previously been involved in a crash and subsequently repaired.

  * The Australasian New Car Assessment Programme (ANCAP) tests the protection provided to front seat occupants in serious head-on and side-impact crashes. These ratings allows comparison of the crash protection offered in a serious crash by different vehicles of similar weight.

- **Safe road use**: The driver of the car was an 18 year old who held a restricted drivers licence and had been driving for about two years. Evidence indicates that she may have been texting while driving and may have been distracted. In 2010 the law changed making cell phone use while driving illegal.

- **Safe speeds**: Since the crash the advisory speed has been reduced to 75km/h, and the sign is highlighted by a large white background. The Police investigation established that this vehicle was likely to have lost control due to fast steering input and that excessive speed could not be supported as a cause of the crash.

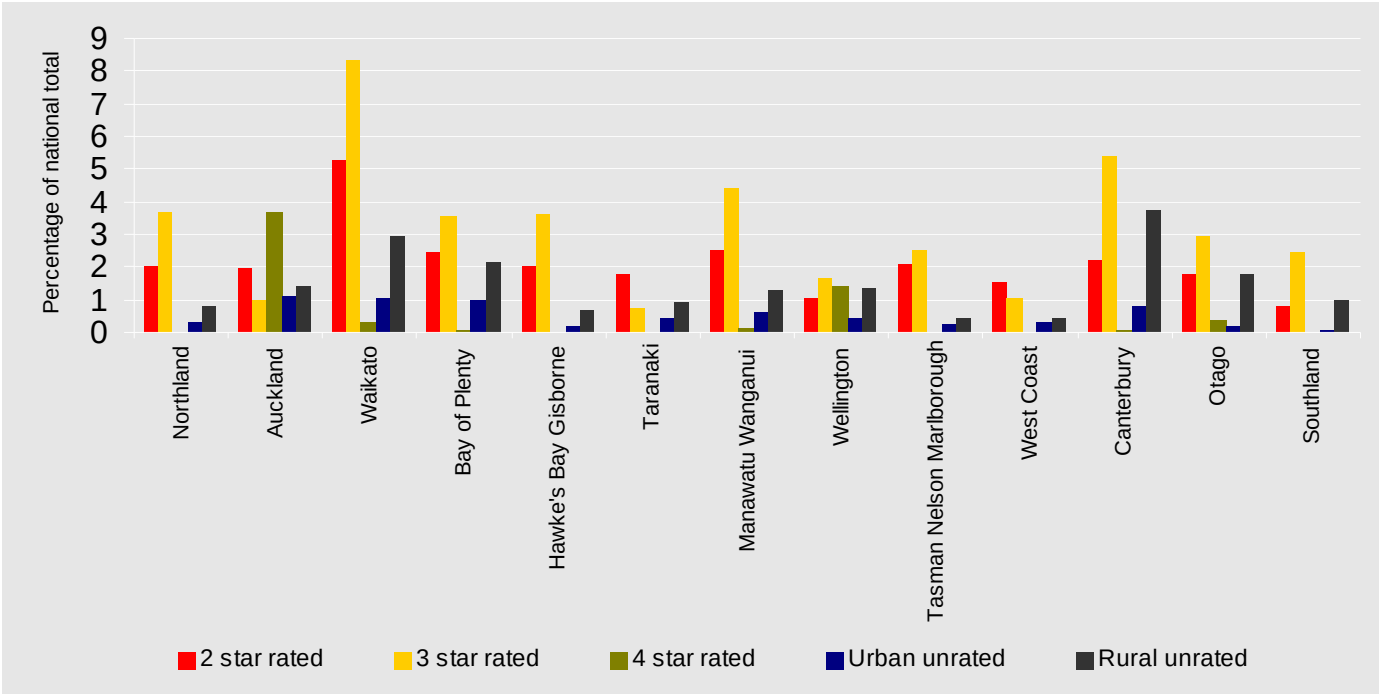
While this tragic crash is still fresh in the memory of these teenagers' loved ones, the lessons we can learn from a Safe System approach are of immense value. Road controlling authorities are encouraged to apply the Safe System approach in all their planning. Together we can achieve safer journeys for all New Zealanders.

Safer Journeys

A view across the Safe System approach

Safe roads and roadsides

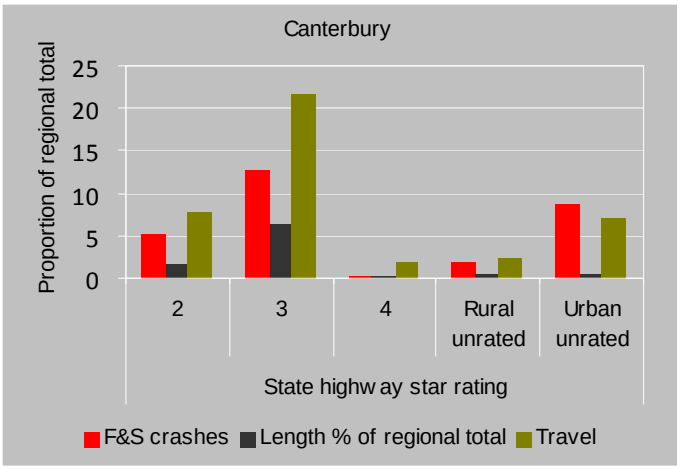
Regional distribution crashes state highway star rating (2008-2010 fatal and serious crashes)

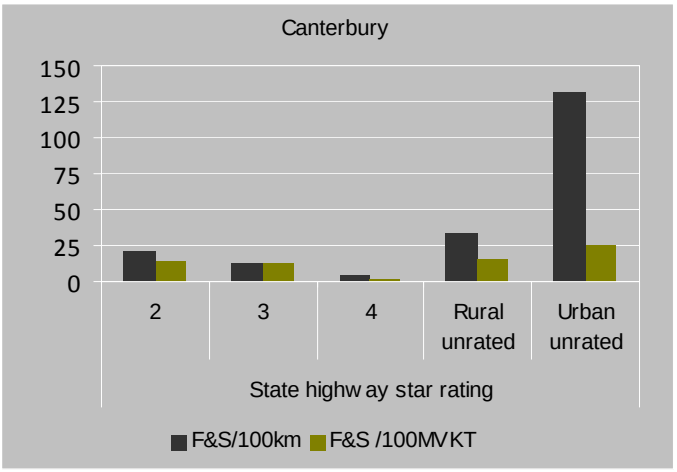


These three charts show the distribution of fatal and serious crashes on our state highway network. The chart above shows the regional distribution of all New Zealand fatal and serious crashes on our state highway network according to the star rating of that section of road where they occur.

The chart below left shows the distribution of fatal and serious crashes in Canterbury road safety region on the regions state highway network according to the star rating of that section of road where they occur. This is compared to the regional total length of and the distribution of regional travel on those star rated roads sections.

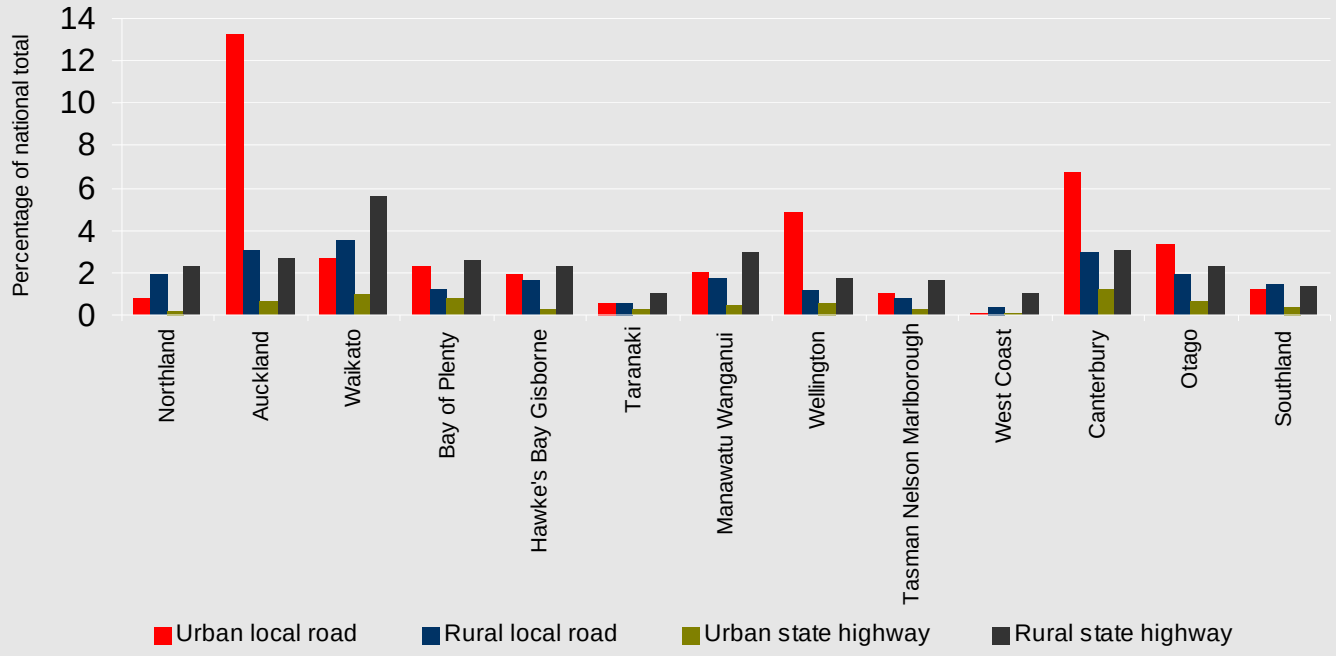
The chart below right shows the risk of a fatal and serious crash in Canterbury road safety region on the regions state highway network by both road length and individual use according to the star rating of that section of road where they occur.





Safe speeds

Regional distribution of speed-related crashes (2006 to 2010 fatal and serious crashes)

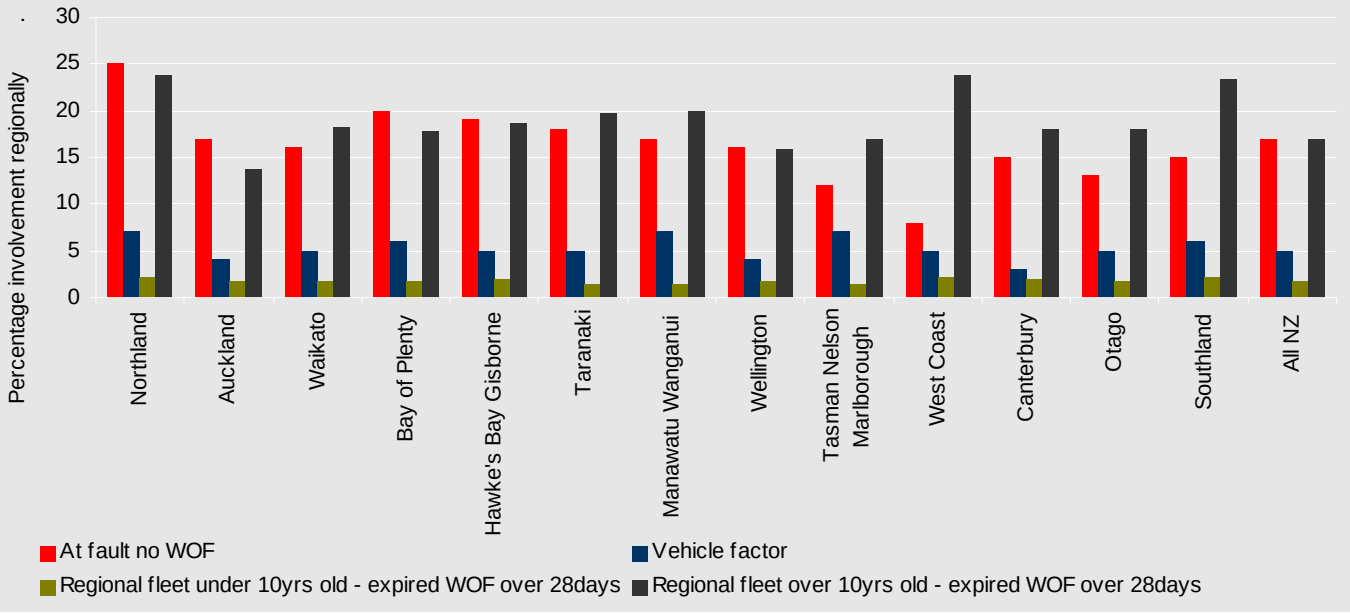


These two charts show the distribution of fatal and serious crashes across the road safety regions. The chart above shows speed-related crashes, split to show rural and urban speed zoning and local roads and state highways.

The chart below shows the involvement of light vehicles at fault with no current WOF and those with a vehicle fault in fatal or serious crashes. Also the regional proportion of light vehicles, showing both under and over 10 year old vehicles, that have an expired WOF of over 28 days.

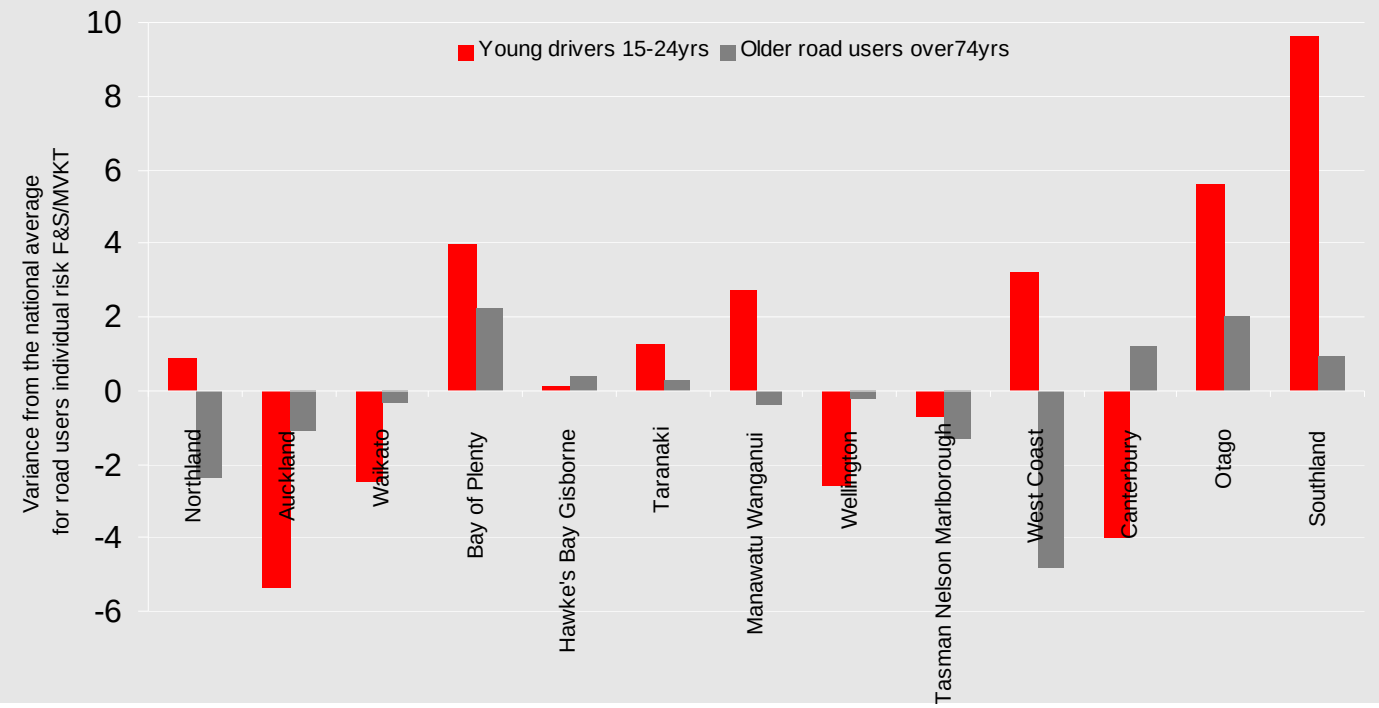
Safe vehicles

Regional light vehicle safety measures (2006 to 2010 fatal and serious crashes)



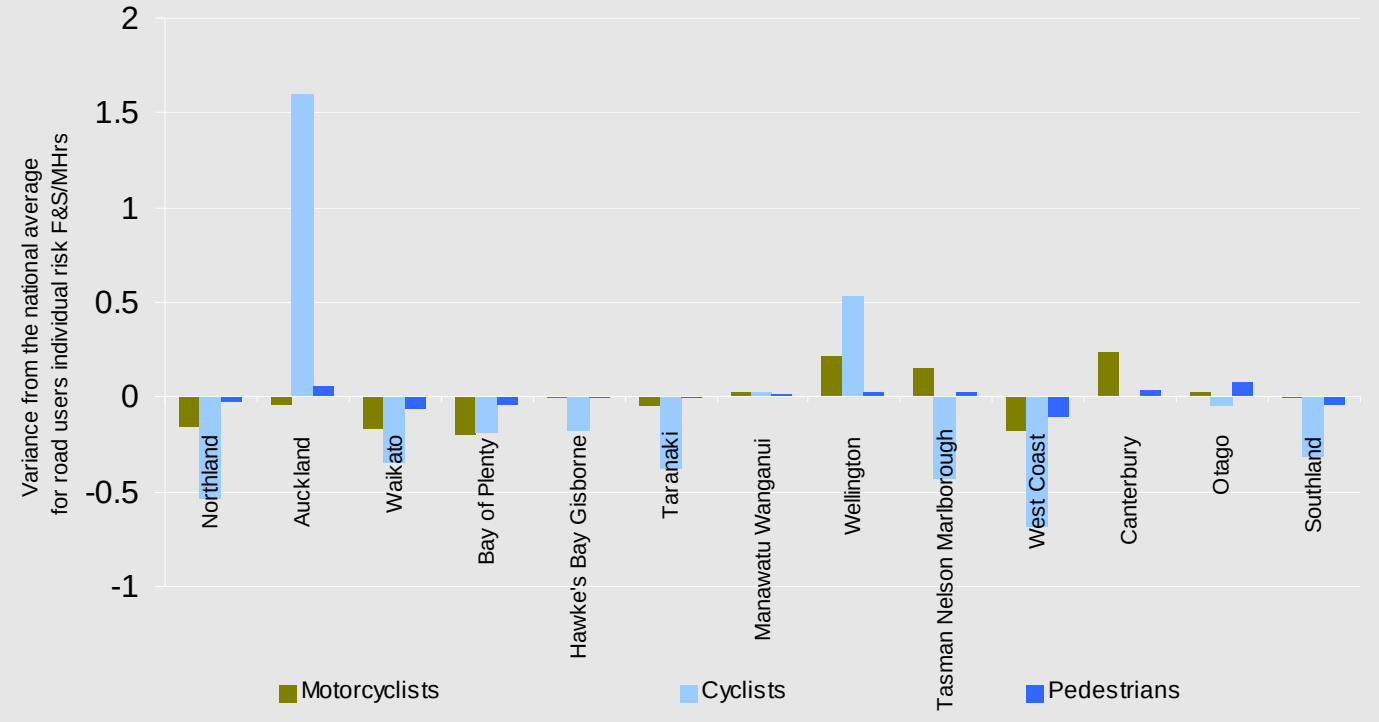
Safe road use

Regional variance of individual risk (2006 to 2010 fatal and serious casualties)



These two charts show the variance of individual risk to specific road users across the road safety regions. The chart above shows young drivers of light vehicles, that is those aged 15-24 years, compared with older road users, those persons aged over 74 years. The chart below shows and compares the individual risk to vulnerable road users, these are motorcyclists, cyclists and pedestrians. This measure of risk has been used in this series of reports to select specific issue to be discussed at a regional level.

Regional variance of individual risk (2006 to 2010 fatal and serious casualties)



Risk levels across safer journeys areas of concern

Canterbury road safety region selected areas of concern											
Canterbury	Safer Journeys areas of concern		Kaikoura District	Hurunui District	Selwyn District	Waimakariri District	Christchurch City	Ashburton District	Timaru District	Mackenzie District	Waimate District
	Young drivers	Safer Journeys areas of high concern									
	Alcohol and drugs										
	Roads and roadsides: Rural roads										
	Roads and roadsides: Urban intersections										
	Speed										
	Motorcyclists										
	Cyclists	Areas of medium concern									
	Pedestrians										
	Distraction										
	Fatigue										
	Older road users	Emerging									

Each area of concern is assessed locally and regionally by calculating the individual road user's risk of a fatal or serious injury. The degree of risk for each issue has been ranked nationally and the significance of this is shown above. For further information - http://www.nzta.govt.nz/resources/communities-at-risk-register/

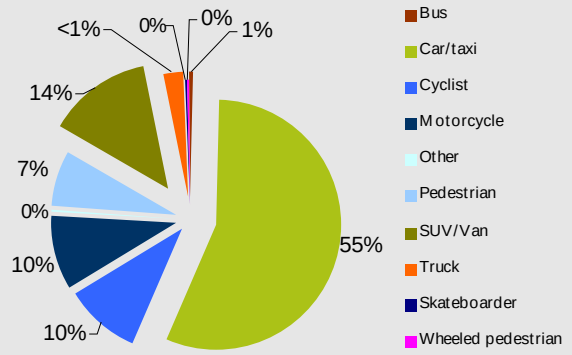
Key:		
	Red	High individual risk
	Amber	Medium-high individual risk
	Green	Above average individual risk

2010 regional overview

2010 road trauma

Casualties	Canterbury Region
Death	47
Serious injury	364
Minor injury	1320
Total casualties	**1731**

Casualties by road user type in 2010



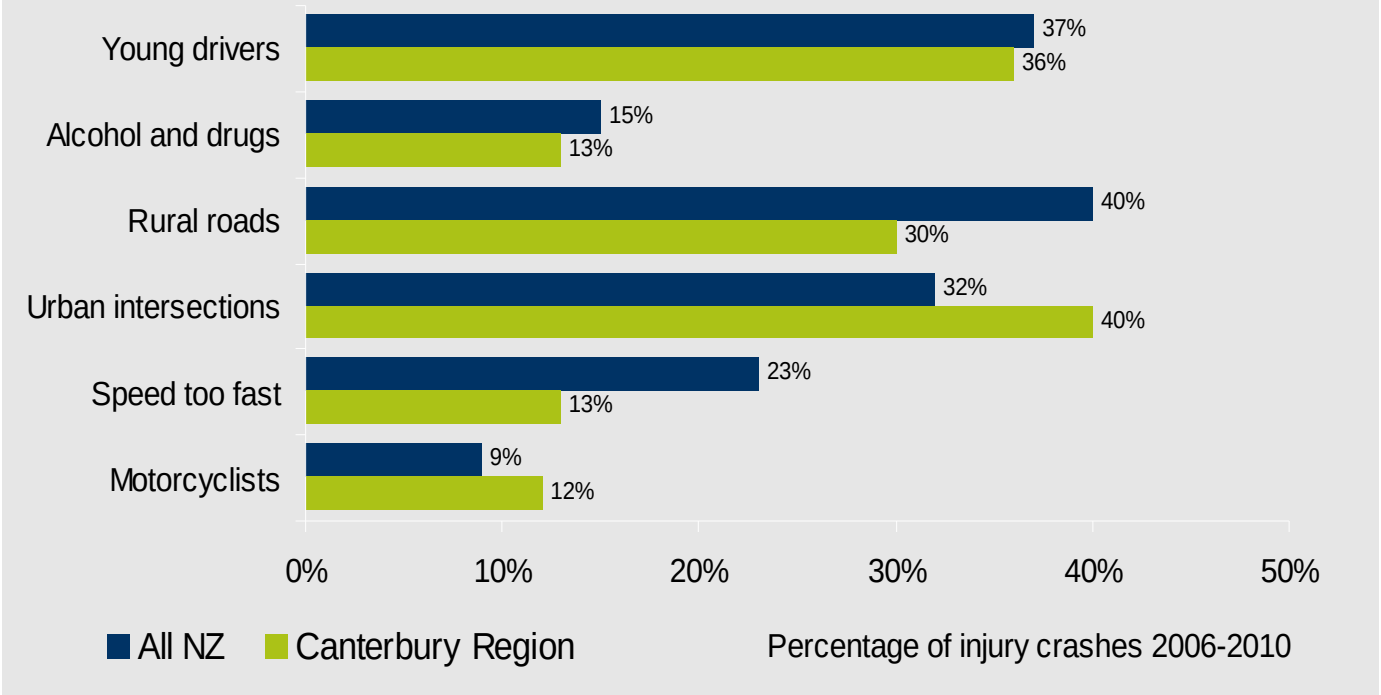
Police reported crashes	Canterbury Region
Fatal crashes	41
Serious injury crashes	317
Minor injury crashes	956
Total injury crashes	**1314**
Non-injury crashes	2132

2010 MoT calculation social cost of all crashes

Local roads	$ 363.92M
State highways	$ 162.94M
Total	**$ 526.86M**

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Safer Journeys areas of high concern



Regional local roads

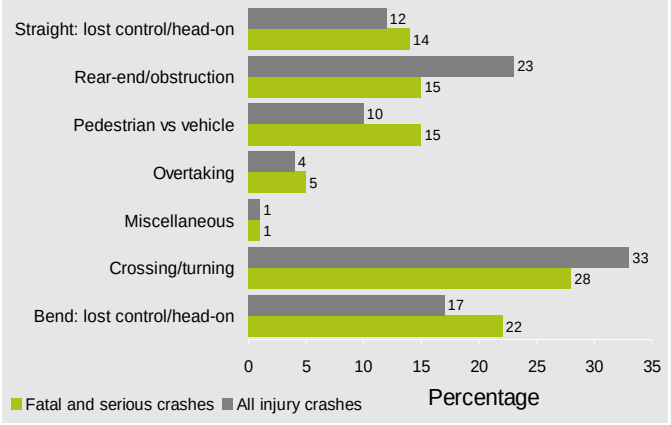
Between 2006 and 2010 in the Canterbury Region, there were 5323 injury crashes on local roads.
The table below shows the number of injuries resulting from these crashes by rural or urban areas, (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by urban/rural 2006 to 2010

	Fatalities	Serious injuries	Minor injuries	Total
Rural	76	357	1038	1471
Urban	52	842	4449	5343
Total	128	1199	5487	6814

The chart below shows the types of crashes reported.
Note that although CAS is able to identify 87 different crash movements it can also group them into similar crash types.
The three most common types of crashes are: 'When a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (706 crashes), followed by 'a vehicle making a right turn at an intersection or into a driveway is struck on the left by a vehicle going straight through' (592 crashes) and a 'loss of control turning right at a bend' (442 crashes).

Crash characteristics 2006 to 2010



There are almost 400 contributory crash factors that can be used to describe crash causes.
However it needs to be noted that these 'factors' are not necessarily an 'illegal' act.
For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged as a contributor.
As with the crash movements, CAS is also able to group these, as in the following table.
Most crashes have more than one factor attributed to it and as a result the percentages below will not add to 100.

Factors contributing to crashes Local roads 2006 to 2010

Crash factor	Percentage **fatal** and **serious** crashes	Percentage **all injury** crashes
Alcohol	17	14
Too fast (for the conditions—not over the speed limit necessarily)	16	12
Failed to give way or stop	31	34
Failed to keep left	3	2
Overtaking	2	2
Incorrect lane or position	10	14
Poor handling (for example losing control while braking)	23	18
Poor observation (not checking properly)	43	50
Poor judgement (for example misjudging speed of others)	13	14
Fatigue	4	3
Disabled / ill	5	4
Pedestrian factors	10	6
Vehicle factors	3	2
Other (misc)	8	7
Road factors	9	8
Weather	4	4

Further information about the 5323 injury crashes on local roads 2006 to 2010

- 16 percent on wet roads
- 51 percent at intersections
- 2151 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (19 percent of at fault drivers)
- 12 percent of crashes involved motorcycles
- Local road social cost of crashes $1610.25m

Regional state highways

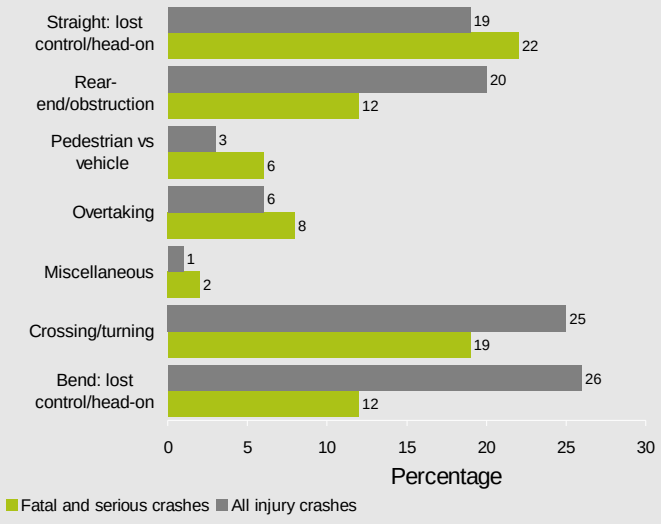
Between 2006 and 2010 in the Canterbury Region, there were 1941 injury crashes on state highways.
The table below shows the number of injuries resulting from these crashes by rural or urban areas, (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by urban/rural 2006 to 2010

	Fatalities	Serious injuries	Minor injuries	Total
Rural	76	369	1215	1660
Urban	13	167	843	1023
Total	89	536	2058	2683

Thirty-nine percent of crashes on state highways in the Canterbury Region were single party crashes. Of these single party crashes, there were 31 fatalities, 206 serious injuries and 707 minor injuries.
The chart below shows the types of crashes reported.
As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.
The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (256 crashes), followed by 'a vehicle making a right turn at an intersection or into a driveway is struck on the left by a vehicle going straight through' (188 crashes) and a 'loss of control turning left at a bend' (183 crashes).

Crash characteristics 2006 to 2010



A previously on local roads the following table shows the contributory crash causes by either fatal and serious or all injury crashes.

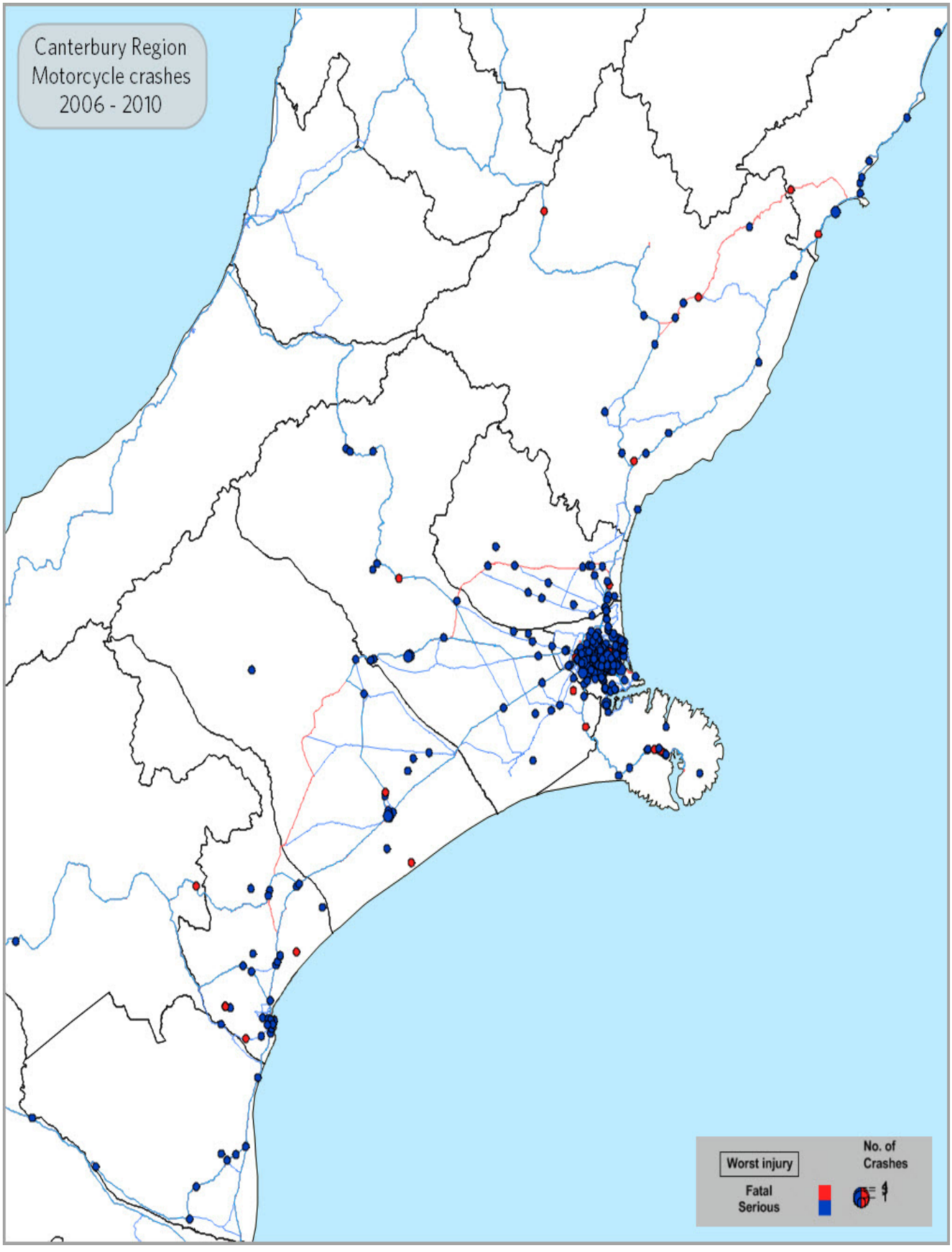
Factors contributing to crashes State highways 2006 to 2010

Crash factor	Percentage **fatal** and **serious** crashes	Percentage **all injury** crashes
Alcohol	17	10
Too fast (for the conditions—not over the speed limit necessarily)	18	15
Failed to give way or stop	19	24
Failed to keep left	4	2
Overtaking	3	3
Incorrect lane or position	12	15
Poor handling (for example losing control while braking)	31	29
Poor observation (not checking properly)	33	42
Poor judgement (for example misjudging speed of others)	15	17
Fatigue	11	11
Disabled / ill	6	4
Pedestrian factors	5	2
Vehicle factors	6	6
Other (misc)	10	8
Road factors	12	12
Weather	5	5

Further information about the 1941 injury crashes on state highways in 2006 to 2010:

- 17 percent on wet roads
- 38 percent at intersections
- 969 roadside objects struck
- Most represented five year age groups in at fault drivers in injury crashes, 15 to 19 years and 20 to 24 years (both equal) (14 percent of at fault drivers each)
- 11 percent of crashes involved motorcycles
- Local road social cost of crashes $786.43m

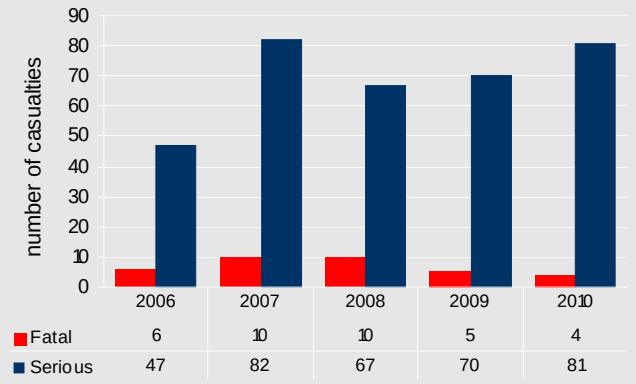
Regional motorcycle fatal and serious crashes



Motorcyclists

In the Canterbury Region, 21 percent of all fatal and serious crashes involve a motorcyclist or moped.

Fatal and serious casualty trends

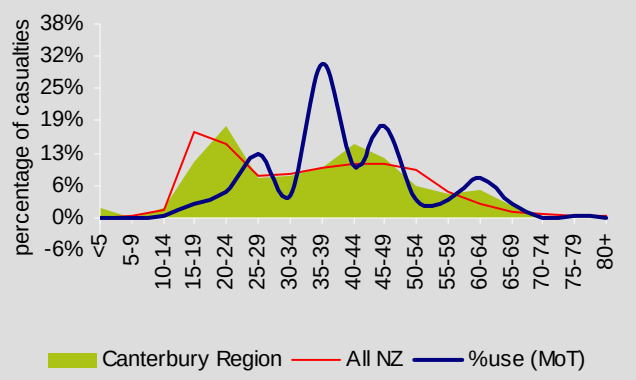


The chart below illustrates age of at fault riders in crashes for Canterbury Region as well as all of New Zealand. In addition there is national distance ridden information taken form the MoT's Household travel survey. It shows that young riders are highly over-represented.

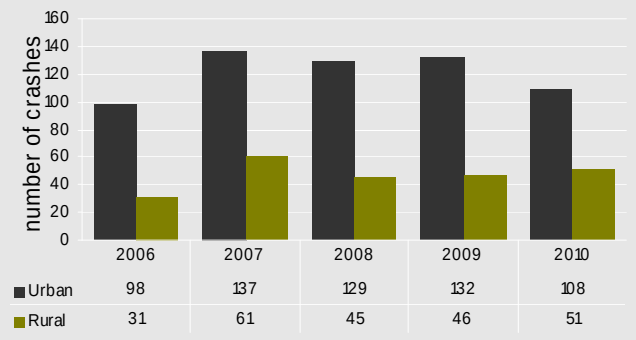
The under 24 age group rides 8 percent of the kilometres but represents 34 percent of at fault riders nationally.

This reinforces the 'young driver' thrust in Safer Journeys. Unfortunately the sample sizes are too small to make this comparison easily across all regions.

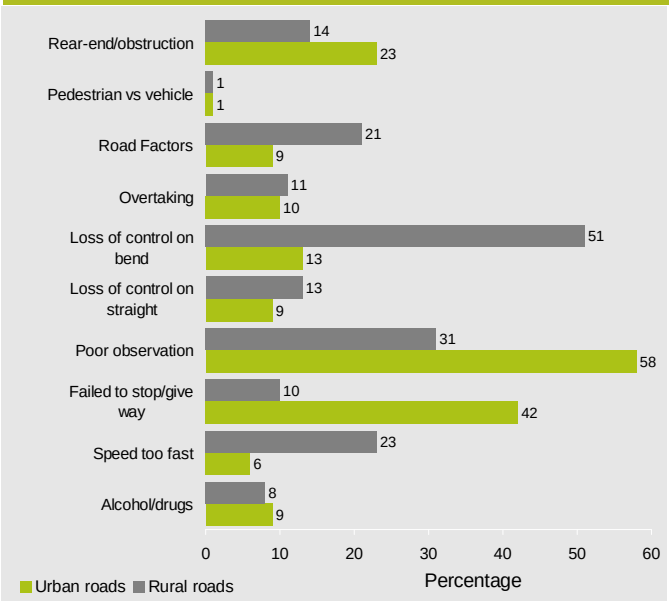
Age of at fault riders 2006 to 2010



Injury crash trends urban/rural



Crash characteristics 2006 to 2010



Further information about motorcycle and moped injury crashes in the Canterbury Region 2006 to 2010:

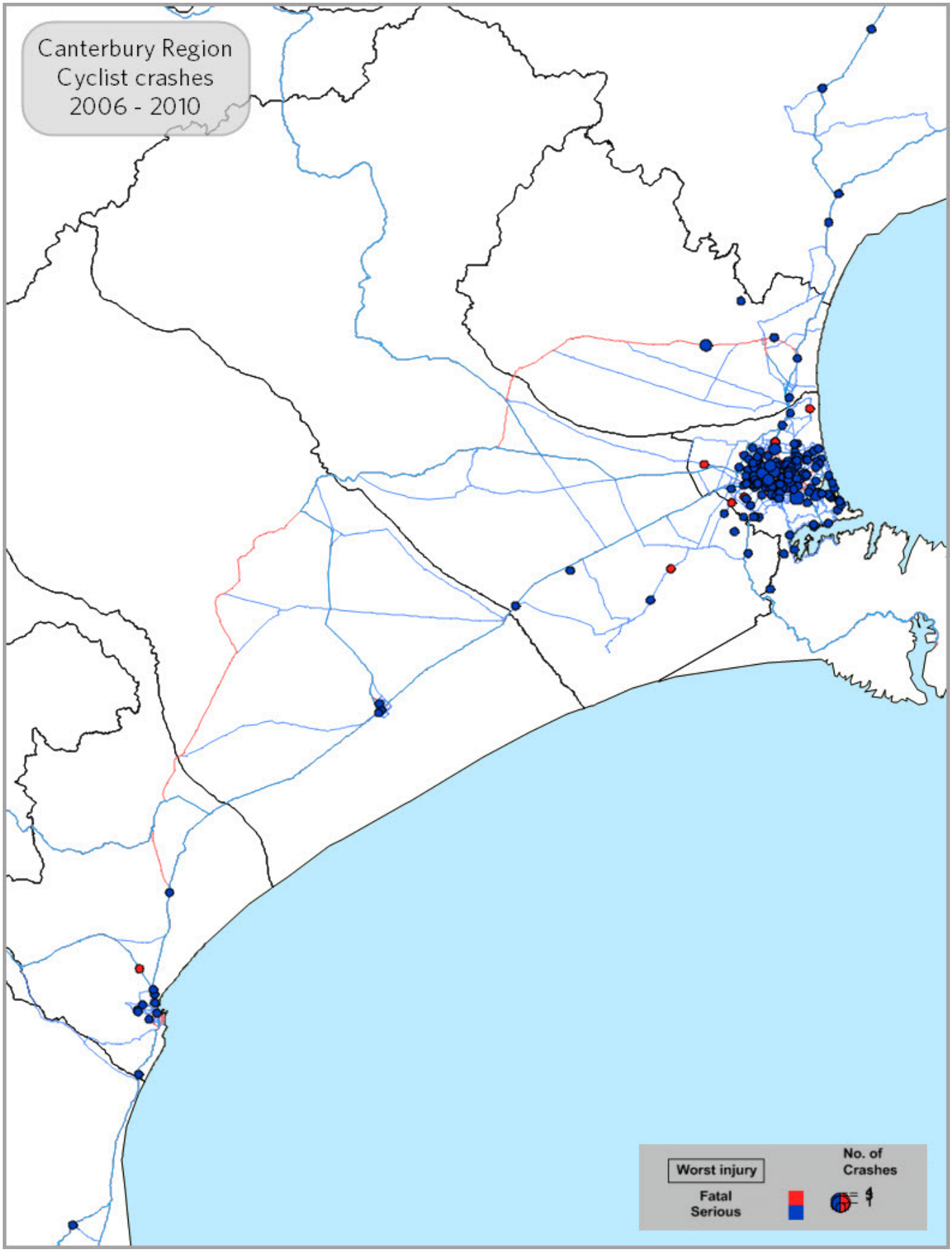
Local roads

- In 618 crashes, 15 motorcyclists died, 240 received serious injuries and 400 minor injuries
- 9 percent involved 'speed too fast for the conditions'
- Most common crash type was 'a vehicle or motorcyclist making a right turn at an intersection or into a driveway is struck on the left by a vehicle or motorcyclist going straight through' (121 crashes)
- 26 percent at night
- 11 percent of crashes involved a road related factor, the most common of which was 'Slippery road due to rain'
- Worst month March, best July
- Worst day Thursday, best Sunday

State highways

- In 220 crashes, 19 motorcyclists died, 100 received serious injuries and 124 minor injuries
- 16 percent involved 'speed, too fast for the conditions'
- Most common crash type was a 'loss of control turning right at a bend' (39 crashes)
- 15 percent at night
- 15 percent of crashes involved a road related factor the most common of which was 'slippery road due to loose material on seal '
- Worst month March, best August
- Worst day Sunday, best Monday

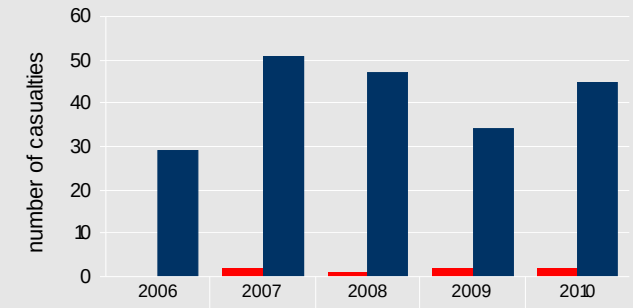
Regional cyclist fatal and serious crashes



Cyclists

In the Canterbury Region between 2006 and 2010, cyclists represent 12 percent of all injury crashes and 12 percent of fatal and serious crashes.
Cycling is an area of medium concern in Safer Journeys.
The goal for 2020 is to reduce the risk for cyclists as well as encouraging an increased use of this mode through safer roading infrastructure.

Fatal and serious casualty trends



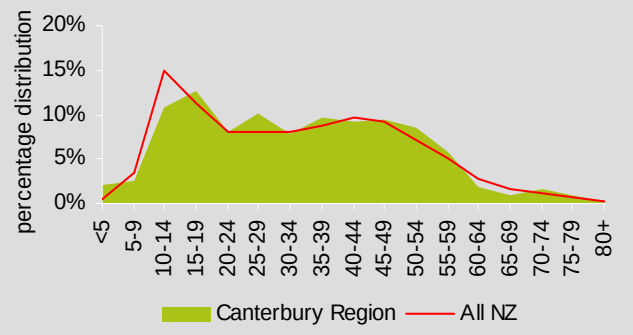
	2006	2007	2008	2009	2010
Fatal	0	2	1	2	2
Serious	29	51	47	34	45

Cycling crashes are largely spread over the Region but the following locations stand out.

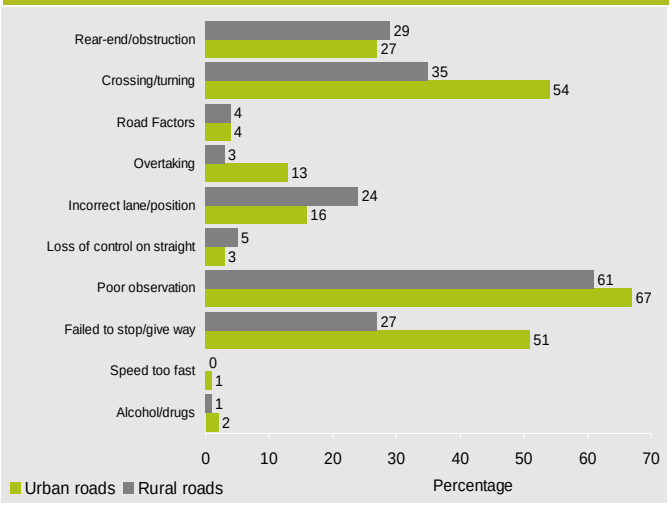
Locations with most injury cycle crashes in the last five years are listed in order below:

- at the intersection of Centaurus Road and Aynsley Terrace (5 crashes)
- at the intersection of Blenheim Road and Annex Road (4 crashes)
- at the intersection of Riccarton Road and Clarence St (4 crashes)
- at the intersection of SH 73 (Yaldhurst Road) and Racecourse Road (4 crashes)
- at the intersection of Riccarton Road and Hansons Lane (4 crashes)
- at the intersection of Strowan Road and Glandovey Road (4 crashes)
- at the intersection of Bower Avenue and Rookwood Avenue (4 crashes)

Age of cyclist casualties 2006 to 2010



Crash characteristics 2006 to 2010



The three most common types of crashes that cyclists have in Canterbury Region are :

- When a vehicle or cyclist making a right turn at an intersection or into a driveway is struck on the left by a vehicle or cyclist going straight through (164 crashes)
- When a vehicle or cyclist travelling straight through is struck on the right by another vehicle or cyclist also travelling straight through at right angles to each other, commonly at 'X' junctions (96 crashes)
- When a cyclist is passing a parked or stationary vehicle and the vehicle has opened its door into the path of the cyclist. (84 crashes)

Further information about injury cycle crashes in Canterbury Region 2006 to 2010:

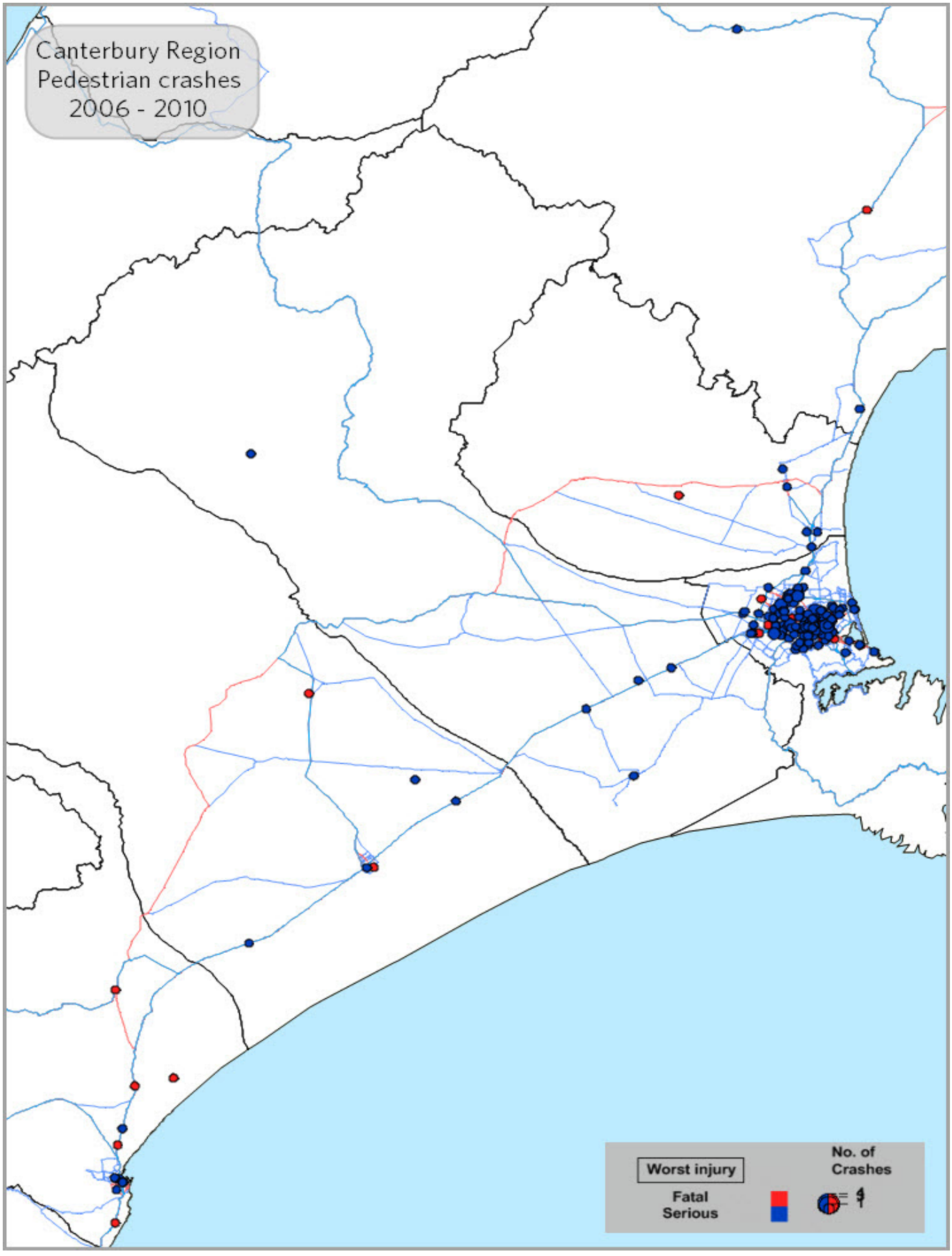
Local roads

- In 750 crashes, 5 cyclists died, 170 received serious injuries and 585 minor injuries
- 58 percent at intersections
- 15 percent at night
- Worst month March, best December
- Worst day Wednesday, best Sunday
- Worst three hour time period 3pm till 6pm

State highways

- In 105 crashes, 2 cyclists died, 33 received serious injuries and 73 minor injuries
- 64 percent at intersections
- 20 percent at night
- Worst month June, best February
- Worst day Tuesday, Friday, and Saturday (all equal), best Saturday and Sunday (all equal)
- Worst three hour time period 3pm till 6pm

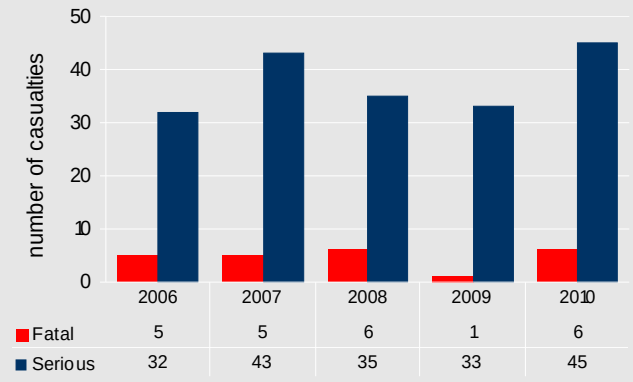
Regional pedestrian fatal and serious crashes



Pedestrians

In the last five years in the Canterbury Region, 12 percent of fatal and serious crashes and 8 percent of all injury crashes involved a pedestrian.

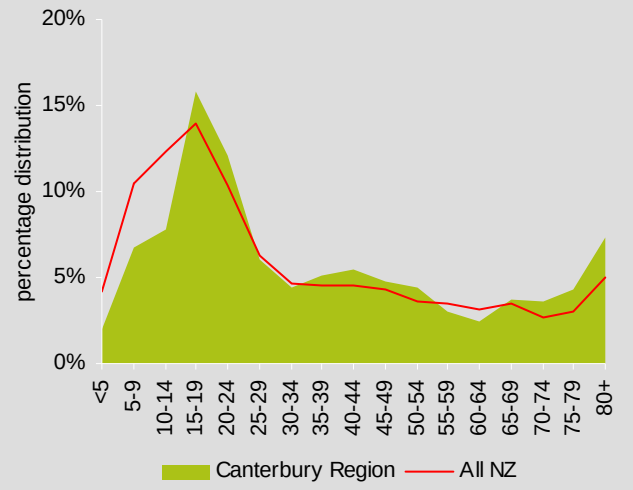
Fatal and serious casualty trends



Over time, nationally there has been a change in the age distribution of pedestrians being injured in New Zealand.
In Canterbury Region between 1980 and 1984 (the earliest years we can report from CAS) 4 percent of injury crashes involved pedestrians aged 19 or less.
In the last five years 3 percent of injured pedestrians were in this age range.
A compounding factor here is the national drop in the number of young people walking to school.

The Ministry of Transport's (MoT's) Household Travel survey shows that nationally twenty years ago 42 percent of children walked to school. Four years ago this had dropped to 25 percent. The implications of this are a need to target actions more towards an older group than the past.
The chart below show the age distribution of injured pedestrians in Canterbury Region compared to the national average.

Age of pedestrian casualties 2006 to 2010



Top ten locations for injury pedestrian crashes in the last five years - including at least one crash in 2010

Location	Number of crashes 2006 to 2010	2010
Colombo St/Lichfield St	9	1
Manchester St/Cashel St	7	2
Colombo St/Cashel St	7	1
Hereford St/Colombo St	6	1
Marshland Road, 70 m north of New Brighton Road	4	1
Gloucester St/Stanmore Road	4	2
Shirley Road, 20m north of North Parade	4	1
SH 1S, 100m south of Richill St	3	1
Ferry Road, 30m west Ensors Road	3	1
Fitzgerald Avenue, 20m south Bealey Avenue	3	1

Further information about injury pedestrian crashes in Canterbury Region 2006 to 2010:

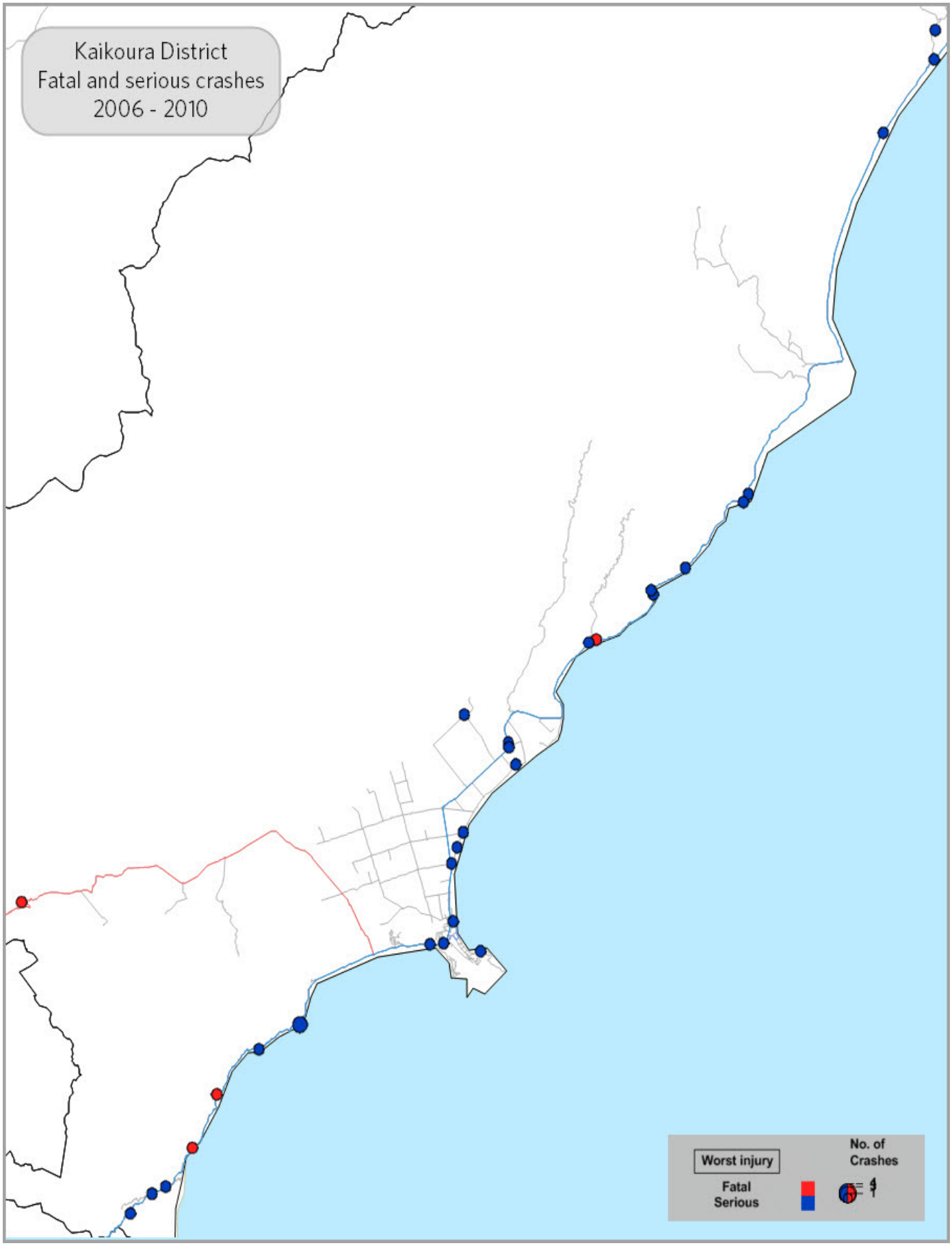
Local roads

- In 514 injury crashes there were 18 deaths, 160 serious injuries and 372 minor injuries
- The most common crash type is when 'a pedestrian is crossing the road and is hit by a vehicle approaching from their right' (187 crashes).
- Worst three hour time period 3pm to 6pm
- 24 percent at night
- 43 percent at intersections
- Most common age block of at fault drivers 15 to 19 years

State highways

- In 63 injury crashes there were 5 deaths, 28 serious injuries and 36 minor injuries
- The most common crash type is when 'a pedestrian is crossing the road and is hit by a vehicle approaching from their right' (23 crashes).
- Worst three hour time period 9am to midday and 3pm to 6pm (both equal)
- 29 percent at night
- 33 percent at intersections
- Most common age block of at fault drivers 20 to 24 years

Kaikoura District fatal and serious crashes

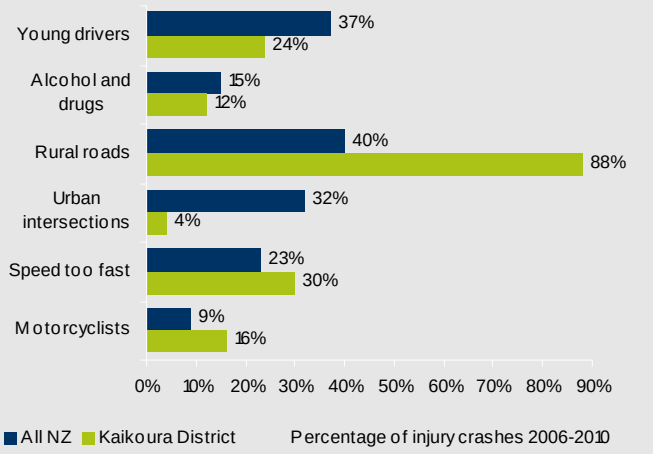


Kaikoura District 2010 overview

2010 road trauma	
Casualties	Kaikoura District
Death	0
Serious injury	0
Minor injury	18
Total casualties	18

Police reported crashes	Kaikoura District
Fatal crashes	0
Serious injury crashes	0
Minor injury crashes	15
Total injury crashes	15
Non-injury crashes	45

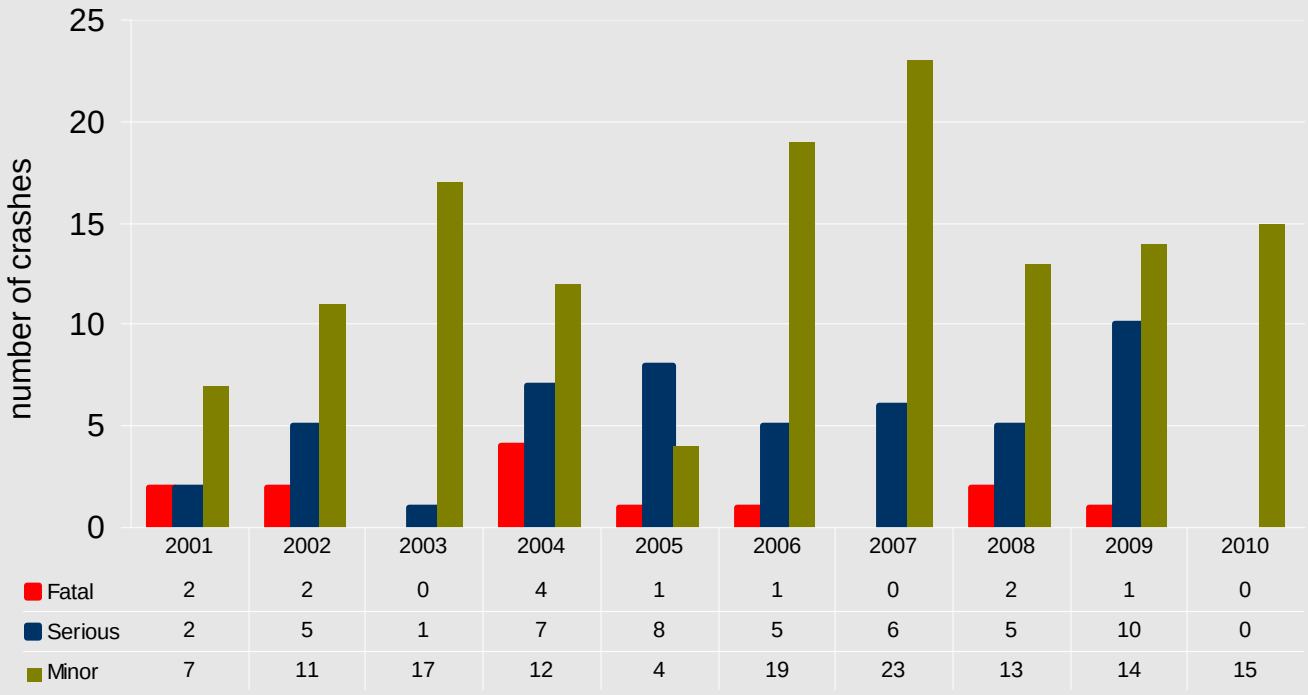
Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 0.59M
State highways	$ 1.98M
Total	$ 2.57M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



Kaikoura District local roads

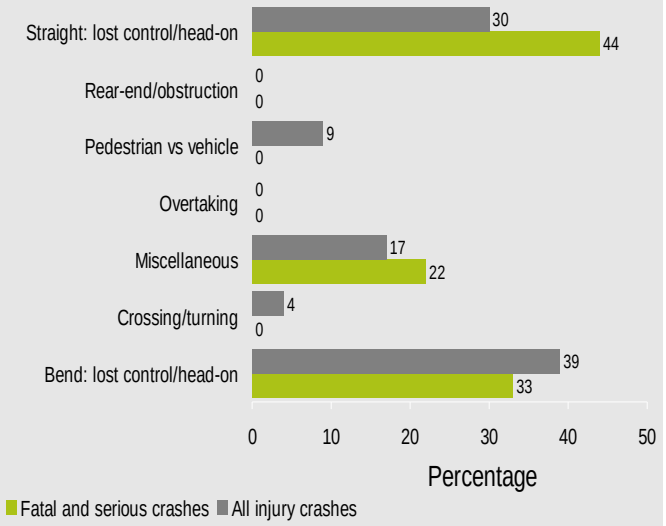
Between 2006 and 2010 in Kaikoura District, there were 23 injury crashes on local roads.
The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 Local roads

	Fatalities	Serious injuries	Minor injuries	Total
Rural	2	7	13	22
Urban	0	2	7	9
Total	2	9	20	31

The chart below shows the types of injury crashes reported by the NZ Police.
CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.
The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (5 crashes), followed by 'a vehicle crossing a railway track and being hit by a train' (4 crashes) and a 'loss of control towards the right on a straight road' (3 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.
However these 'factors' are not necessarily an 'illegal' act—simply a contributor.
For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	26	22	31
Too fast (for the conditions—not over the speed limit necessarily)	35	22	30
Failed to give way or stop	9	22	8
Failed to keep left	4	11	9
Overtaking	0	0	2
Incorrect lane or position	9	11	6
Poor handling (for example losing control while braking)	39	33	38
Poor observation (not checking properly)	39	11	22
Poor judgement (for example misjudging speed of others)	35	44	19
Fatigue	4	0	5
Disabled / ill	4	11	3
Pedestrian factors	4	0	5
Vehicle factors	0	0	8
Other (misc)	9	22	12
Road factors	13	0	21
Weather	4	0	4

Further information about the 23 injury crashes on local roads in the Kaikoura District 2006 to 2010:

- 13 percent on wet roads
- 17 percent at intersections
- 18 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (29 percent of at fault drivers)
- 21 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $15.29m

Kaikoura District state highways

Between 2006 and 2010 in Kaikoura District, there were 91 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	2	26	81	109
Urban	0	0	7	7
Total	2	26	88	116

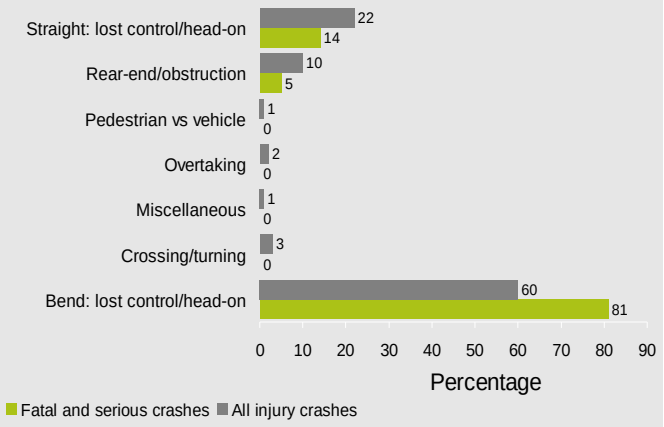
Sixty-five percent of crashes on state highways in the Kaikoura District were single party crashes. Of these, there was 1 fatality, 11 serious injuries and 54 minor injuries. There were more minor injuries from single party crashes than multiple party crashes.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When there is a 'loss of control turning left at a bend' (23 crashes), followed by a 'loss of control turning right at a bend' (21 crashes) and a 'loss of control towards the left on a straight road' (7 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

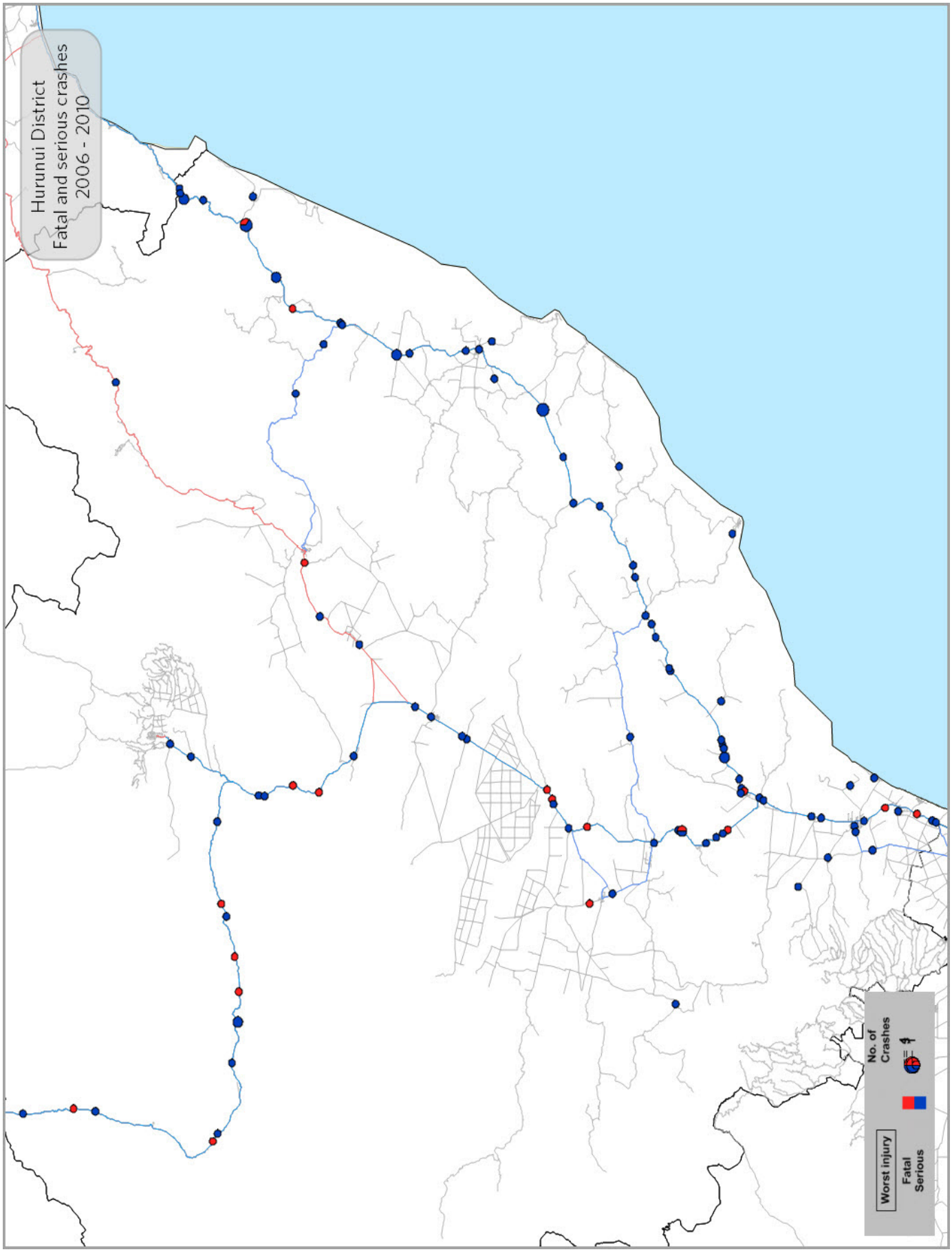
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	9	14	21
Too fast (for the conditions—not over the speed limit necessarily)	29	43	22
Failed to give way or stop	1	0	7
Failed to keep left	10	19	10
Overtaking	3	0	4
Incorrect lane or position	5	5	8
Poor handling (for example losing control while braking)	54	67	38
Poor observation (not checking properly)	31	24	23
Poor judgement (for example misjudging speed of others)	26	24	15
Fatigue	15	5	18
Disabled / ill	3	5	4
Pedestrian factors	1	0	3
Vehicle factors	9	14	8
Other (misc)	3	5	9
Road factors	23	10	18
Weather	4	5	5

Further information about the 91 injury crashes on state highways in Kaikoura District 2006 to 2010:

- 26 percent on wet roads
- 10 percent at intersections
- 62 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (12 percent of at fault drivers)
- 14 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $29.95m

Hurunui District fatal and serious crashes

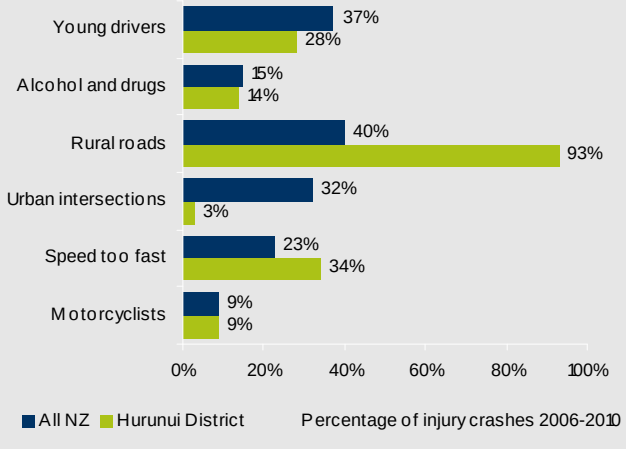


Hurunui District 2010 overview

2010 road trauma	
Casualties	Hurunui District
Death	3
Serious injury	18
Minor injury	65
Total casualties	86

Police reported crashes	Hurunui District
Fatal crashes	3
Serious injury crashes	14
Minor injury crashes	45
Total injury crashes	62
Non-injury crashes	90

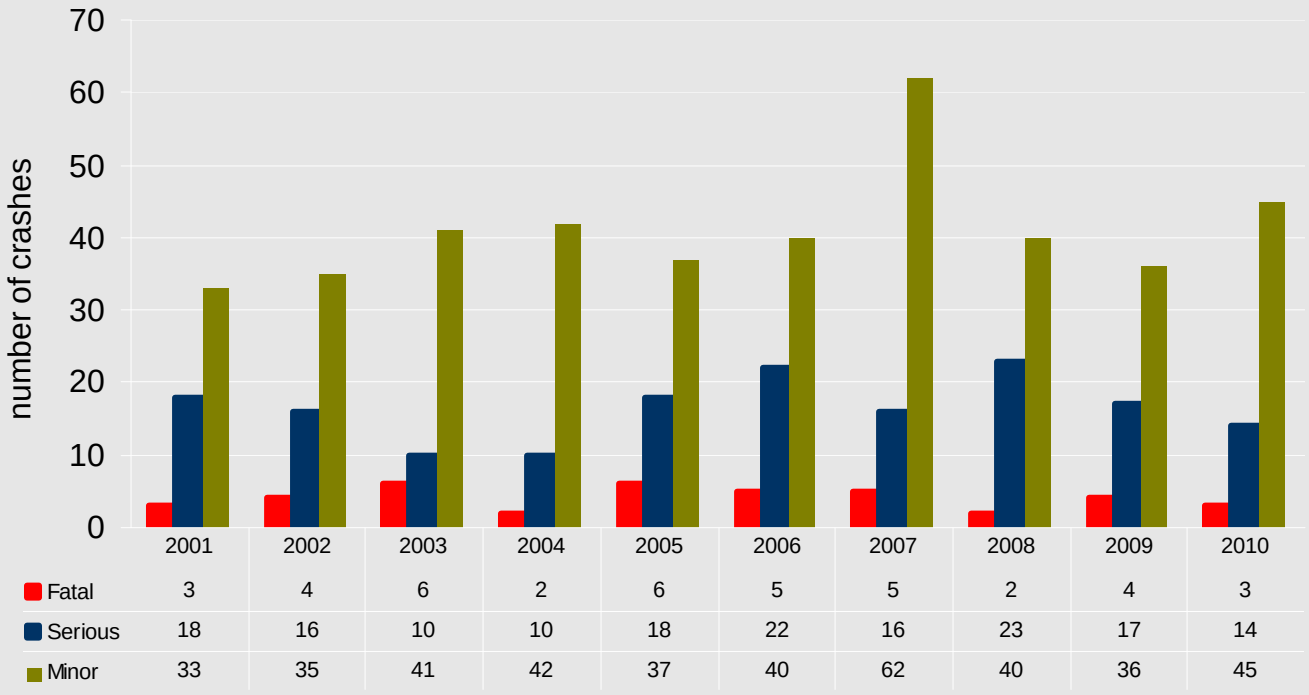
Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 10.39M
State highways	$ 19.98M
Total	$ 30.37M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal	3	4	6	2	6	5	5	2	4	3
Serious	18	16	10	10	18	22	16	23	17	14
Minor	33	35	41	42	37	40	62	40	36	45

Hurunui District local roads

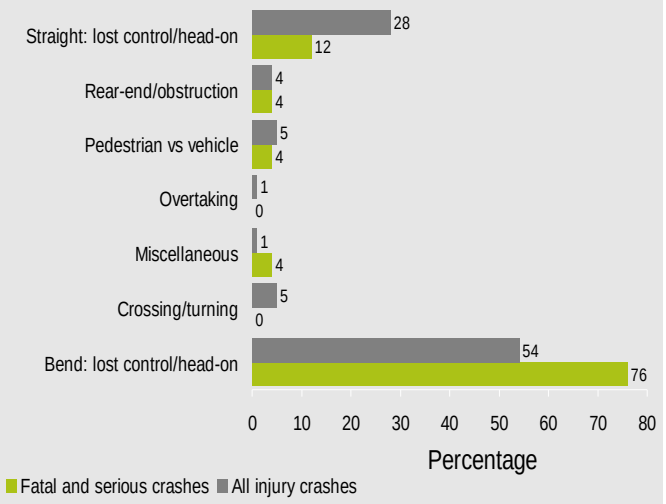
Between 2006 and 2010 in Hurunui District, there were 74 injury crashes on local roads.
The table below shows the number of injuries resulting from these crashes by rural or urban areas Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 Local roads

	Fatalities	Serious injuries	Minor injuries	Total
Rural	2	23	68	93
Urban	0	3	9	12
Total	2	26	77	105

The chart below shows the types of injury crashes reported by the NZ Police.
CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.
The three most common types of crashes are: When there is a 'loss of control turning left at a bend' (21 crashes), followed by a 'loss of control turning right at a bend' (13 crashes) and a 'loss of control towards the left on a straight road' (10 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.
However these 'factors' are not necessarily an 'illegal' act—simply a contributor.
For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	30	36	31
Too fast (for the conditions—not over the speed limit necessarily)	31	44	30
Failed to give way or stop	5	0	8
Failed to keep left	5	4	9
Overtaking	1	0	2
Incorrect lane or position	5	8	6
Poor handling (for example losing control while braking)	47	40	38
Poor observation (not checking properly)	20	12	22
Poor judgement (for example misjudging speed of others)	20	16	19
Fatigue	9	8	5
Disabled / ill	1	4	3
Pedestrian factors	3	4	5
Vehicle factors	3	8	8
Other (misc)	18	24	12
Road factors	24	24	21
Weather	5	4	4

Further information about the 74 injury crashes on local roads in the Hurunui District 2006 to 2010:

- 22 percent on wet roads
- 14 percent at intersections
- 62 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (25 percent of at fault drivers)
- 10 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $30.95m

Hurunui District state highways

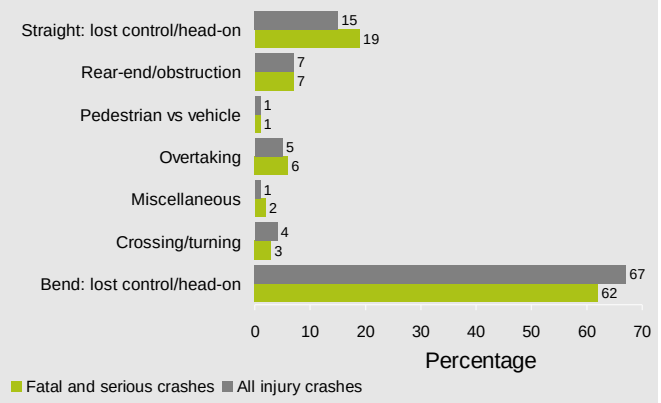
Between 2006 and 2010 in Hurunui District, there were 260 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas.
Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	18	89	264	371
Urban	0	5	11	16
Total	18	94	275	387

Seventy-one percent of crashes on state highways in the Hurunui District were single party crashes. Of these, there were 9 fatalities, 50 serious injuries and 179 minor injuries. There were more serious and minor injuries in single party crashes than multiple party crashes.
The chart below shows the types of crashes reported.
As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.
The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (89 crashes), followed by a 'loss of control turning left at a bend' (66 crashes) and a 'loss of control towards the left on a straight road' (21 crashes).

Crash characteristics 2006 to 2010



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For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

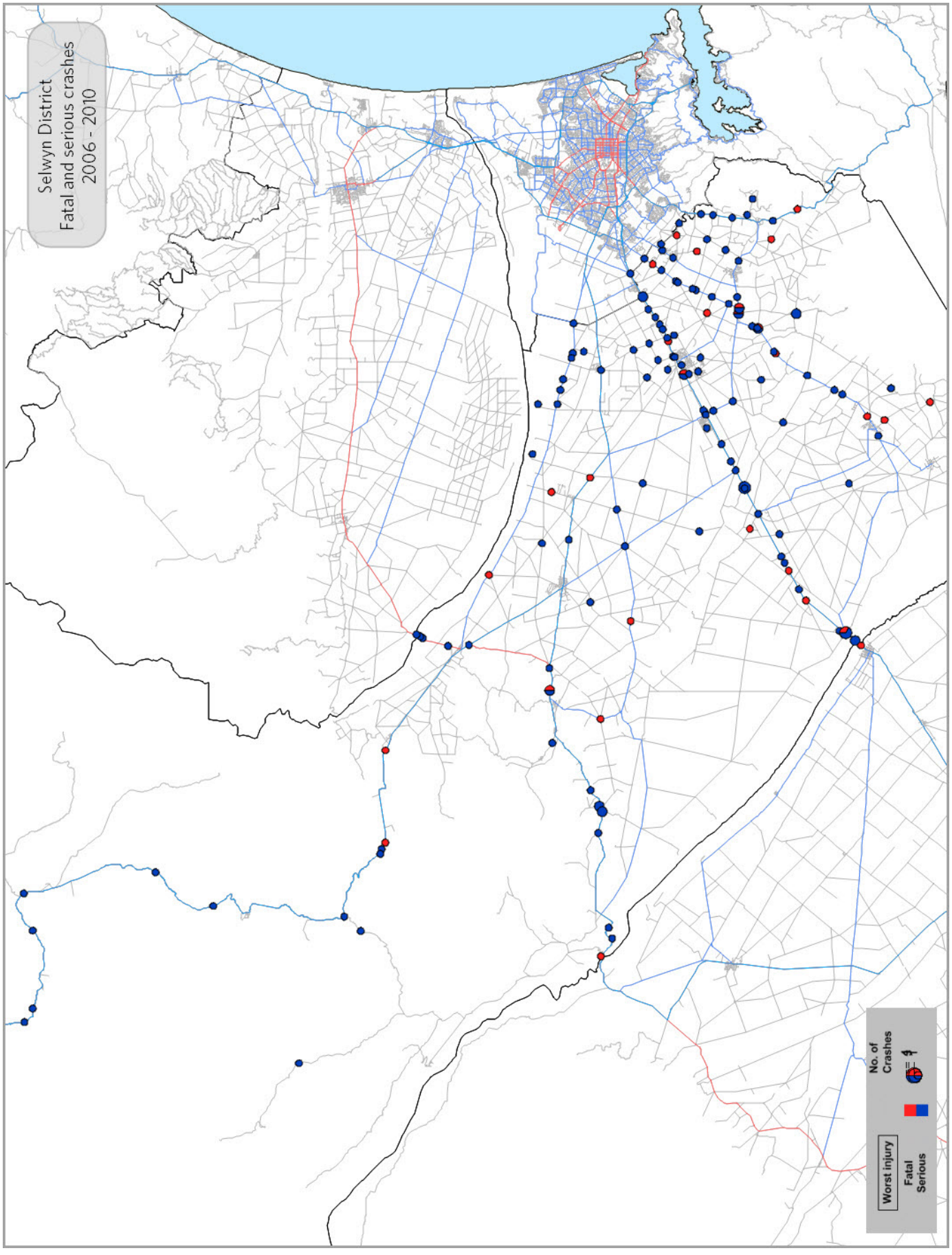
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	10	15	21
Too fast (for the conditions—not over the speed limit necessarily)	35	34	22
Failed to give way or stop	5	5	7
Failed to keep left	2	3	10
Overtaking	2	0	4
Incorrect lane or position	8	10	8
Poor handling (for example losing control while braking)	66	60	38
Poor observation (not checking properly)	25	17	23
Poor judgement (for example misjudging speed of others)	25	20	15
Fatigue	18	16	18
Disabled / ill	4	7	4
Pedestrian factors	1	2	3
Vehicle factors	8	7	8
Other (misc)	6	8	9
Road factors	23	16	18
Weather	4	3	5

Further information about the 260 injury crashes on state highways in Hurunui District 2006 to 2010:

- 25 percent on wet roads
- 8 percent at intersections
- 237 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 20 to 24 years (14 percent of at fault drivers)
- 8 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $144.72m

Selwyn District fatal and serious crashes

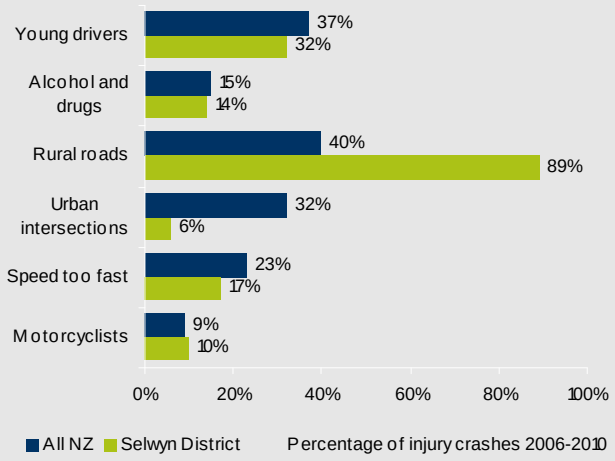


Selwyn District 2010 overview

2010 road trauma	
Casualties	Selwyn District
Death	4
Serious injury	39
Minor injury	103
Total casualties	146

Police reported crashes	Selwyn District
Fatal crashes	4
Serious injury crashes	32
Minor injury crashes	63
Total injury crashes	99
Non-injury crashes	146

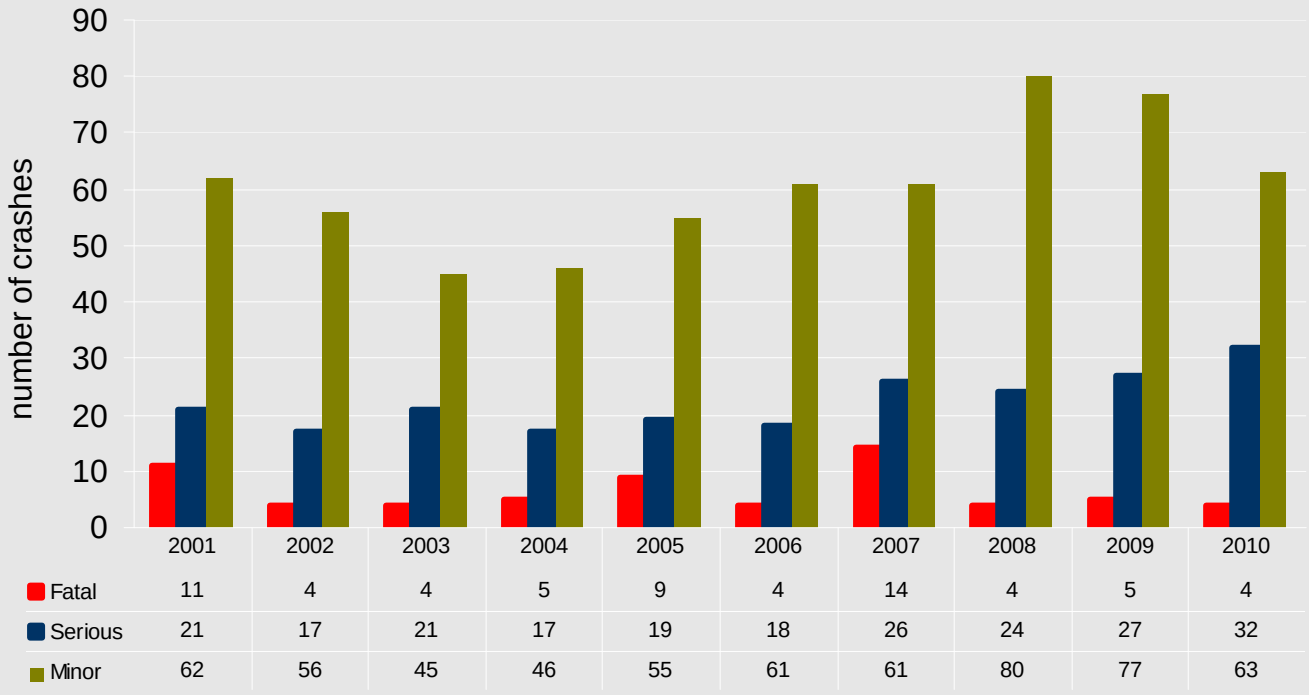
Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 33.59M
State highways	$ 18.08M
Total	$ 51.67M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal	11	4	4	5	9	4	14	4	5	4
Serious	21	17	21	17	19	18	26	24	27	32
Minor	62	56	45	46	55	61	61	80	77	63

Selwyn District local roads

Between 2006 and 2010 in Selwyn District, there were 271 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

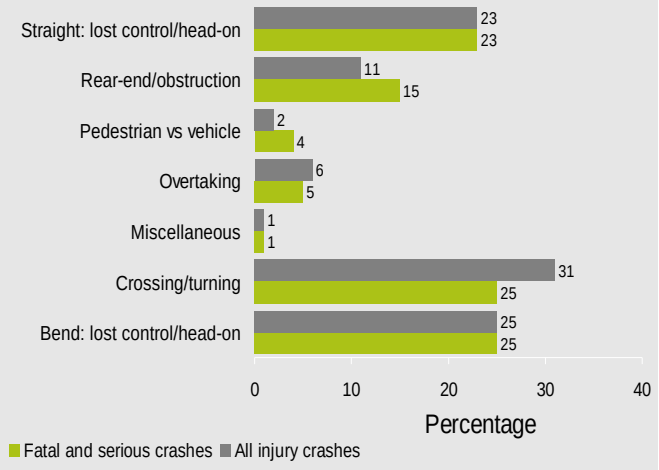
Casualties by urban / rural 2006 to 2010 Local roads				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	21	75	236	332
Urban	0	13	35	48
Total	21	88	271	380

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The three most common types of crashes are: 'When a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (66 crashes), followed by a 'loss of control towards the left on a straight road' (32 crashes) and a 'loss of control towards the right on a straight road' (25 crashes).

Crash characteristics 2006 to 2010



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For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010			
Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	17	26	29
Too fast (for the conditions—not over the speed limit necessarily)	20	18	28
Failed to give way or stop	33	25	15
Failed to keep left	2	3	7
Overtaking	2	2	3
Incorrect lane or position	8	11	8
Poor handling (for example losing control while braking)	27	26	35
Poor observation (not checking properly)	44	43	28
Poor judgement (for example misjudging speed of others)	13	4	15
Fatigue	8	12	7
Disabled / ill	4	4	4
Pedestrian factors	2	4	4
Vehicle factors	4	5	7
Other (misc)	14	10	11
Road factors	7	12	17
Weather	11	4	6

Further information about the 271 injury crashes on local roads in the Selwyn District 2006 to 2010:

- 23 percent on wet roads
- 47 percent at intersections
- 180 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (17 percent of at fault drivers)
- 9 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $147.96m

Selwyn District state highways

Between 2006 and 2010 in Selwyn District, there were 229 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

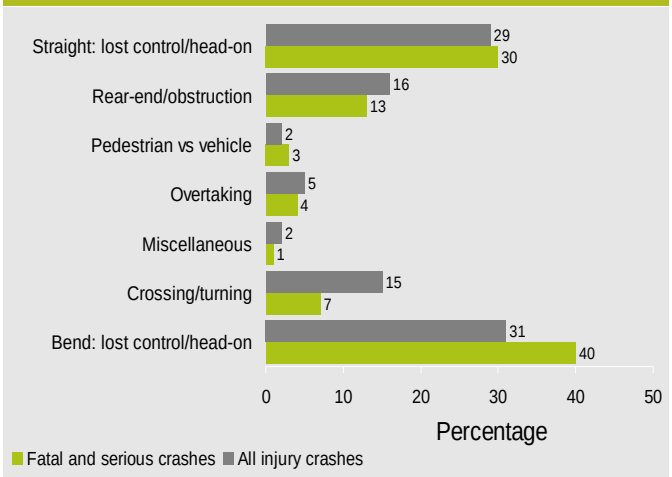
	Fatalities	Serious injuries	Minor injuries	Total
Rural	17	64	223	304
Urban	0	3	21	24
Total	17	67	244	328

Forty-eight percent of crashes on state highways in the Selwyn District were single party crashes. Of these, there were 6 fatalities, 28 serious injuries and 109 minor injuries. The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (32 crashes), followed by a 'loss of control turning left at a bend' (24 crashes) and a 'loss of control towards the left on a straight road' (23 crashes).

Crash characteristics 2006 to 2010



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As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

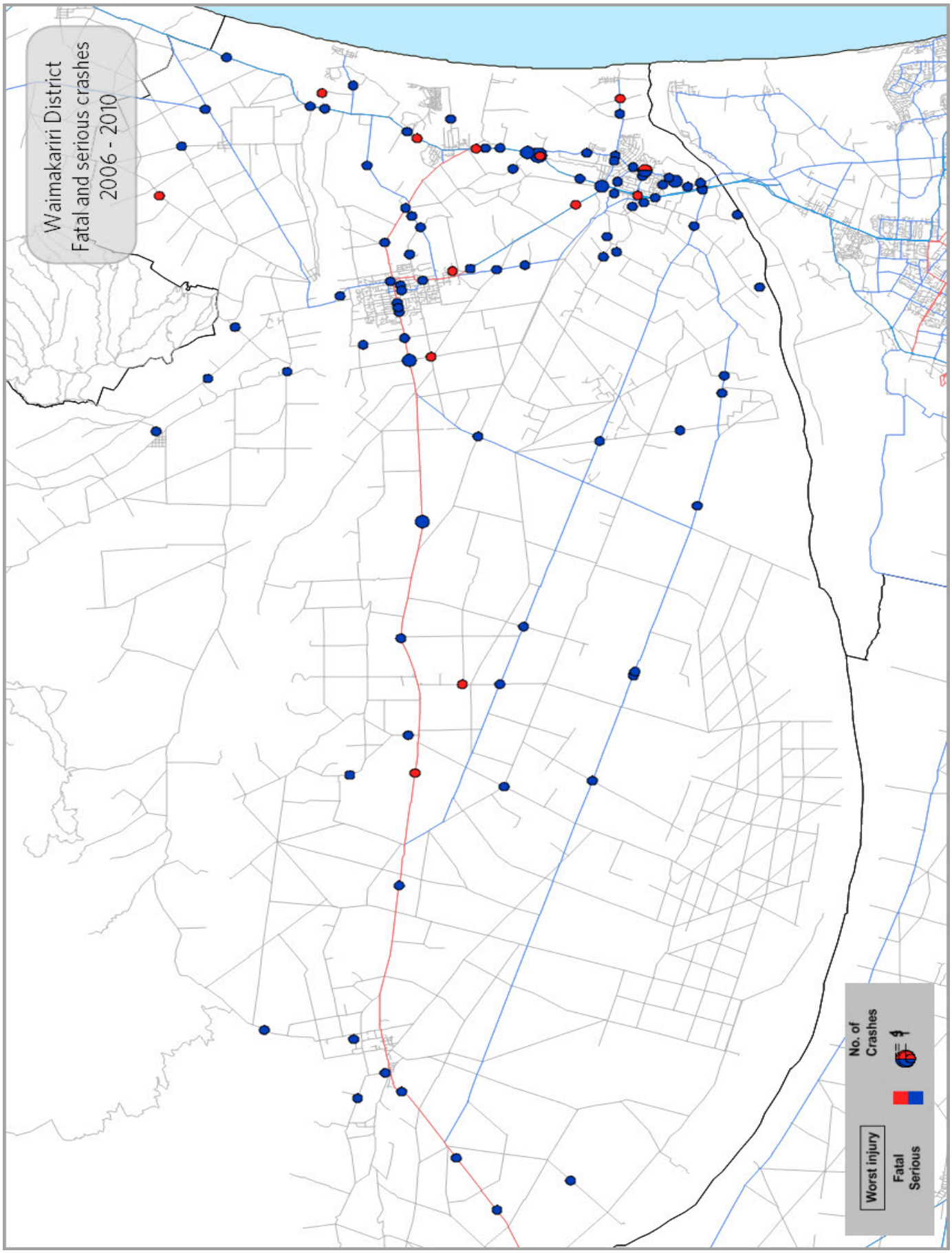
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious on similar state highways
Alcohol	10	18	23
Too fast (for the conditions—not over the speed limit	13	13	21
Failed to give way	13	9	14
Failed to keep left	2	3	10
Overtaking	3	1	5
Incorrect lane or position	17	16	9
Poor handling (for example losing control while braking)	30	33	30
Poor observation (not checking properly)	35	33	27
Poor judgement (for example misjudging speed of others)	16	9	13
Fatigue	11	4	14
Disabled / ill	5	10	5
Pedestrian factors	2	3	5
Vehicle factors	10	10	8
Other (misc)	15	10	8
Road factors	7	21	16
Weather	8	7	5

Further information about the 229 injury crashes on state highways in Selwyn District 2006 to 2010:

- 18 percent on wet roads
- 21 percent at intersections
- 146 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (11 percent of at fault drivers)
- 11 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $117.30m

Waimakariri District fatal and serious crashes

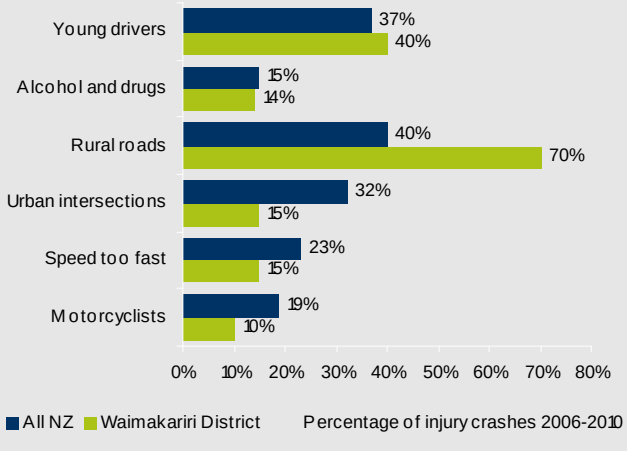


Waimakariri District 2010 overview

2010 road trauma	
Casualties	Waimakariri District
Death	5
Serious injury	24
Minor injury	86
Total casualties	115

Police reported crashes	Waimakariri District
Fatal crashes	3
Serious injury crashes	20
Minor injury crashes	51
Total injury crashes	74
Non-injury crashes	128

Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 27.06M
State highways	$ 8.64M
Total	$ 35.70M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends

Waimakariri District local roads

Between 2006 and 2010 in Waimakariri District, there were 333 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

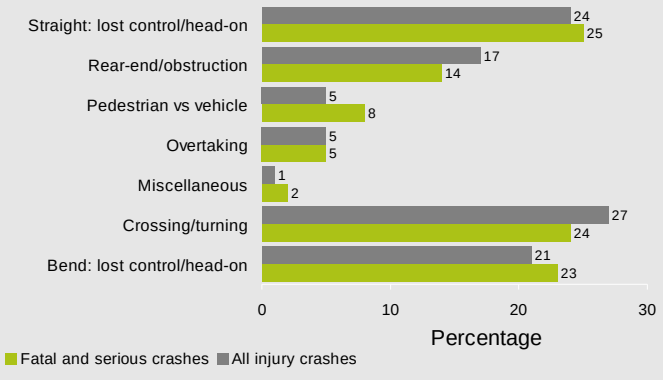
Casualties by urban / rural 2006 to 2010 Local roads				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	7	74	223	304
Urban	2	17	140	159

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The most common types of crashes are: When there is a 'loss of control towards the left on a straight road' and 'when a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (both equal) (40 crashes each), followed by a 'loss of control turning right at a bend' (32 crashes) and lastly a 'loss of control towards the right on a straight road' (31 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010			
Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	13	18	29
Too fast (for the conditions—not over the speed limit necessarily)	17	18	28
Failed to give way or stop	26	26	15
Failed to keep left	2	1	7
Overtaking	2	2	3
Incorrect lane or position	12	10	8
Poor handling (for example losing control while braking)	25	33	35
Poor observation (not checking properly)	47	36	28
Poor judgement (for example misjudging speed of others)	19	16	15
Fatigue	5	6	7
Disabled / ill	6	9	4
Pedestrian factors	3	6	4
Vehicle factors	5	8	7
Other (misc)	8	6	11
Road factors	13	9	17
Weather	5	8	6

Further information about the 333 injury crashes on local roads in Waimakariri District 2006 to 2010:

- 16 percent on wet roads
- 38 percent at intersections
- 197 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (26 percent of at fault drivers)
- 10 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $117.19m

Waimakariri District state highways

Between 2006 and 2010 in Waimakariri District, there were 71 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	7	27	69	103
Urban	0	0	7	7
Total	7	27	76	110

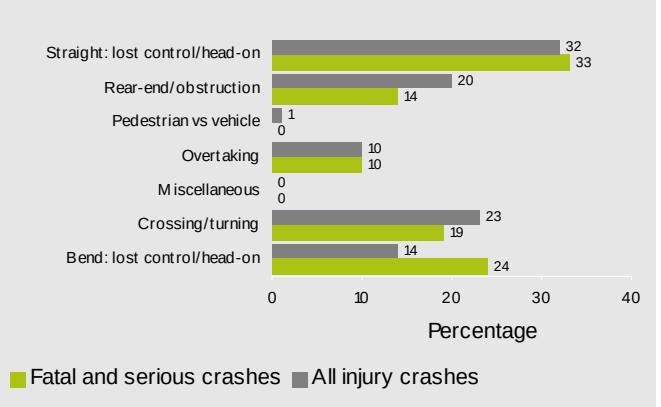
Thirty-two percent of crashes on state highways in the Waimakariri District were single party crashes. Of these, there was 1 fatality, 11 serious injuries and 16 minor injuries.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When 'a vehicle turning right out of a driveway or intersection is struck on the right by a vehicle travelling straight ahead' (13 crashes), followed by a 'loss of control towards the left on a straight road' (9 crashes) and a 'loss of control turning left at a bend' and 'when a vehicle is hit in the rear when in a queue' (both equal) (5 crashes each).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

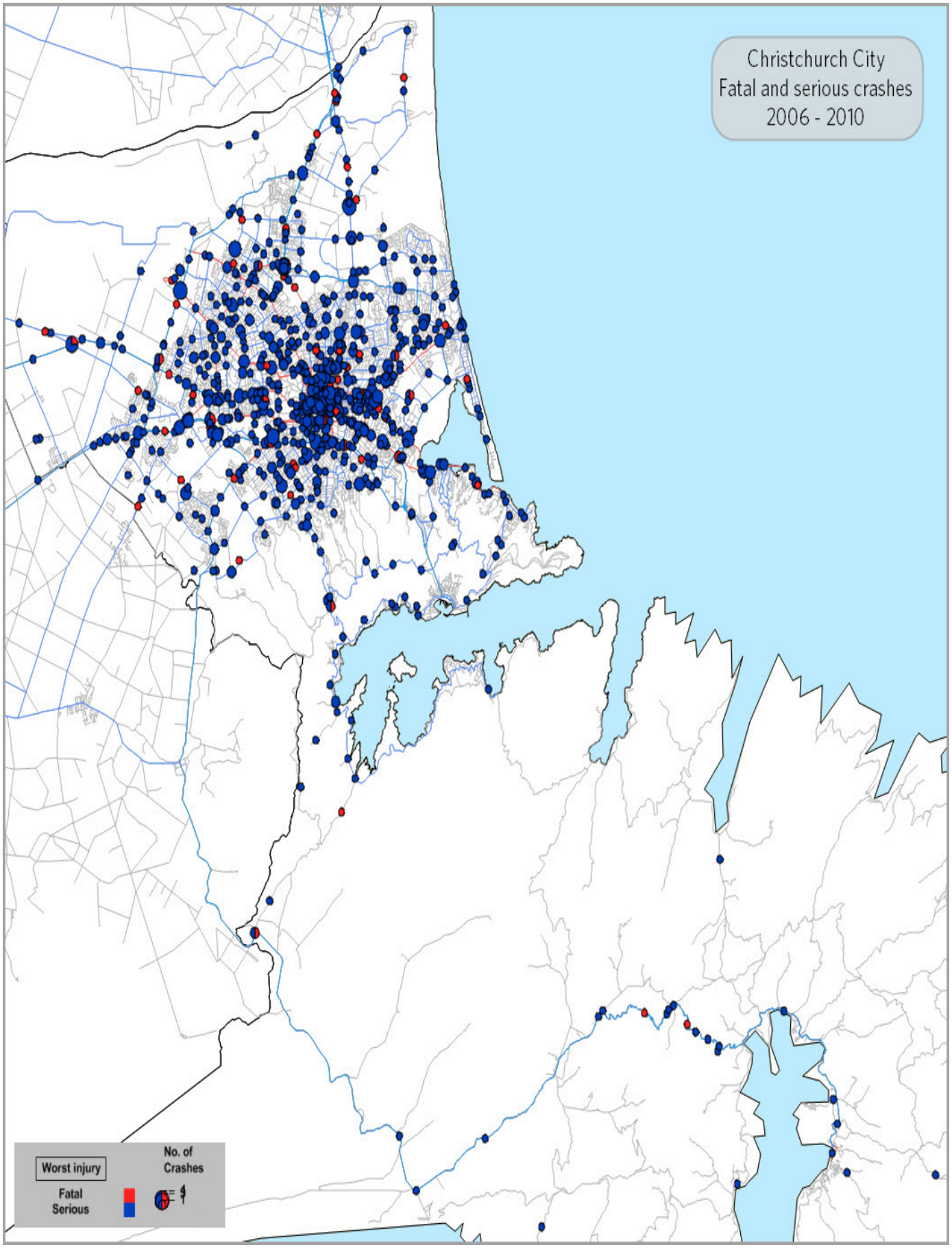
As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

State highway crash characteristics 2006 to 2010			
Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes (sample size = 21 crashes)	Percentage fatal and serious in similar local bodies
Alcohol	15	29	23
Too fast (for the conditions—not over the speed limit	7	10	21
Failed to give way	18	19	14
Failed to keep left	0	0	10
Overtaking	3	5	5
Incorrect lane or position	15	19	9
Poor handling (for example losing control while braking)	14	10	30
Poor observation (not checking properly)	41	48	27
Poor judgement (for example misjudging speed of others)	14	10	13
Fatigue	15	14	14
Disabled / ill	3	0	5
Pedestrian factors	1	0	5
Vehicle factors	6	5	8
Other (misc)	17	14	8
Road factors	4	5	16
Weather	0	0	5

Further information about the 71 injury crashes on state highways in Waimakariri District 2006 to 2010:

- 13 percent on wet roads
- 28 percent at intersections
- 40 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (22 percent of at fault drivers)
- 10 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $39.10m

Christchurch City fatal and serious crashes

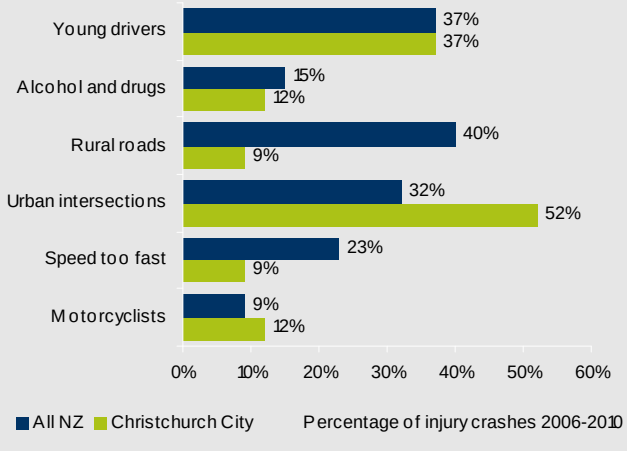


Christchurch City 2010 overview

2010 road trauma	
Casualties	Christchurch City
Death	19
Serious injury	226
Minor injury	822
Total casualties	1067

Police reported crashes	Christchurch City
Fatal crashes	15
Serious injury crashes	207
Minor injury crashes	633
Total injury crashes	855
Non-injury crashes	1353

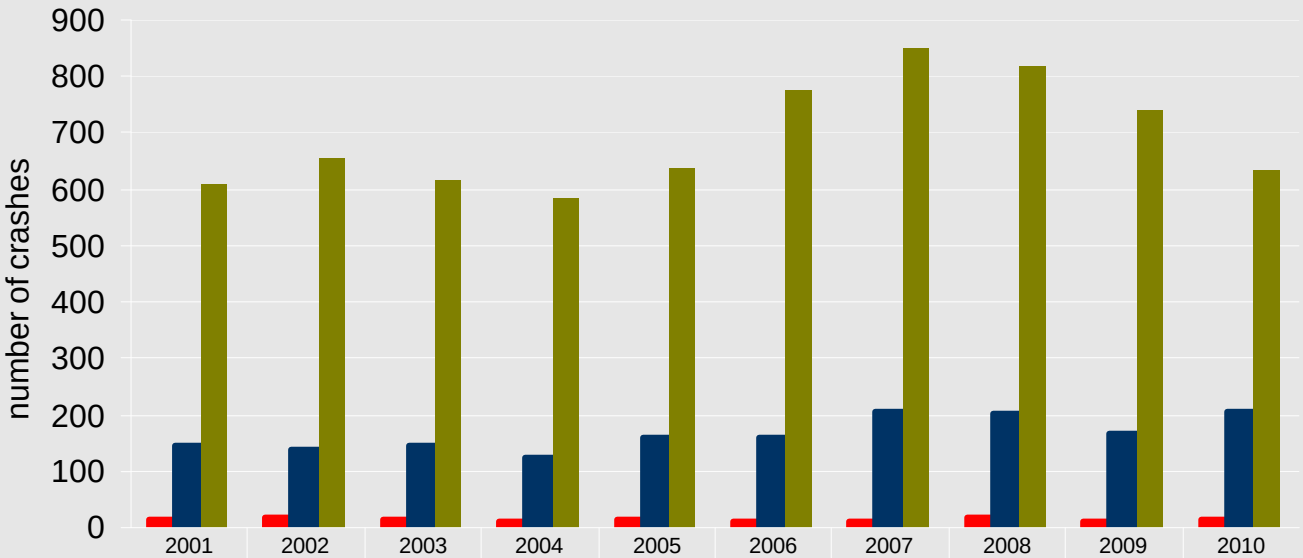
Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 234.37M
State highways	$ 50.66M
Total	$ 285.03M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal	14	16	14	10	14	10	12	16	11	15
Serious	146	137	147	125	160	159	205	202	165	207
Minor	608	654	616	585	639	777	852	820	739	633

Christchurch City local roads

Between 2006 and 2010 in Christchurch City, there were 4031 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 Local roads

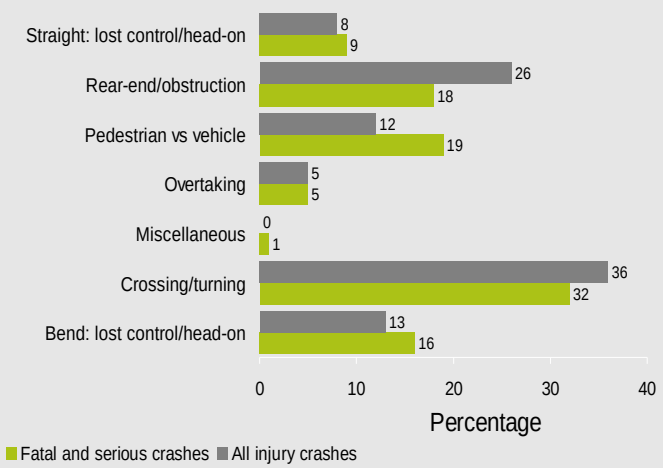
	Fatalities	Serious injuries	Minor injuries	Total
Rural	10	81	226	317
Urban	43	759	3923	4725
Total	53	840	4149	5042

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The most common types of crashes are: 'When a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (514 crashes) followed by 'when a vehicle is hit in the rear when in a queue' (283 crashes) and lastly a 'loss of control turning right at a bend' (271 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	12	14	22
Too fast (for the conditions—not over the speed limit necessarily)	9	12	17
Failed to give way or stop	37	35	28
Failed to keep left	2	3	4
Overtaking	2	2	2
Incorrect lane or position	15	10	7
Poor handling (for example losing control while braking)	14	17	19
Poor observation (not checking properly)	53	46	38
Poor judgement (for example misjudging speed of others)	13	13	11
Fatigue	2	2	3
Disabled / ill	3	4	4
Pedestrian factors	8	12	15
Vehicle factors	2	2	3
Other (misc)	6	7	8
Road factors	6	6	9
Weather	3	3	4

Further information about the 4031 injury crashes on local roads in the Christchurch City 2006 to 2010:

- 17 percent on wet roads
- 55 percent at intersections
- 1357 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (18 percent of at fault drivers)
- 12 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $1010.83m

Christchurch City state highways

Between 2006 and 2010 in Christchurch City, there were 792 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	6	54	221	281
Urban	12	126	615	753
Total	18	180	836	1034

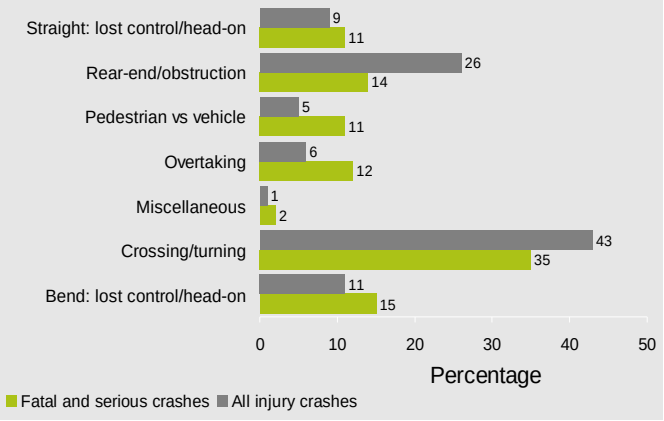
Twenty percent of crashes on state highways in Christchurch City were single party crashes. Of these, there were 5 fatalities, 47 serious injuries and 131 minor injuries.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When 'a vehicle making a right turn at an intersection or into a driveway is hit on the left by a vehicle going straight through' (154 crashes), followed by 'when a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (86 crashes) and 'when a vehicle is hit in the rear when in a queue' (76 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

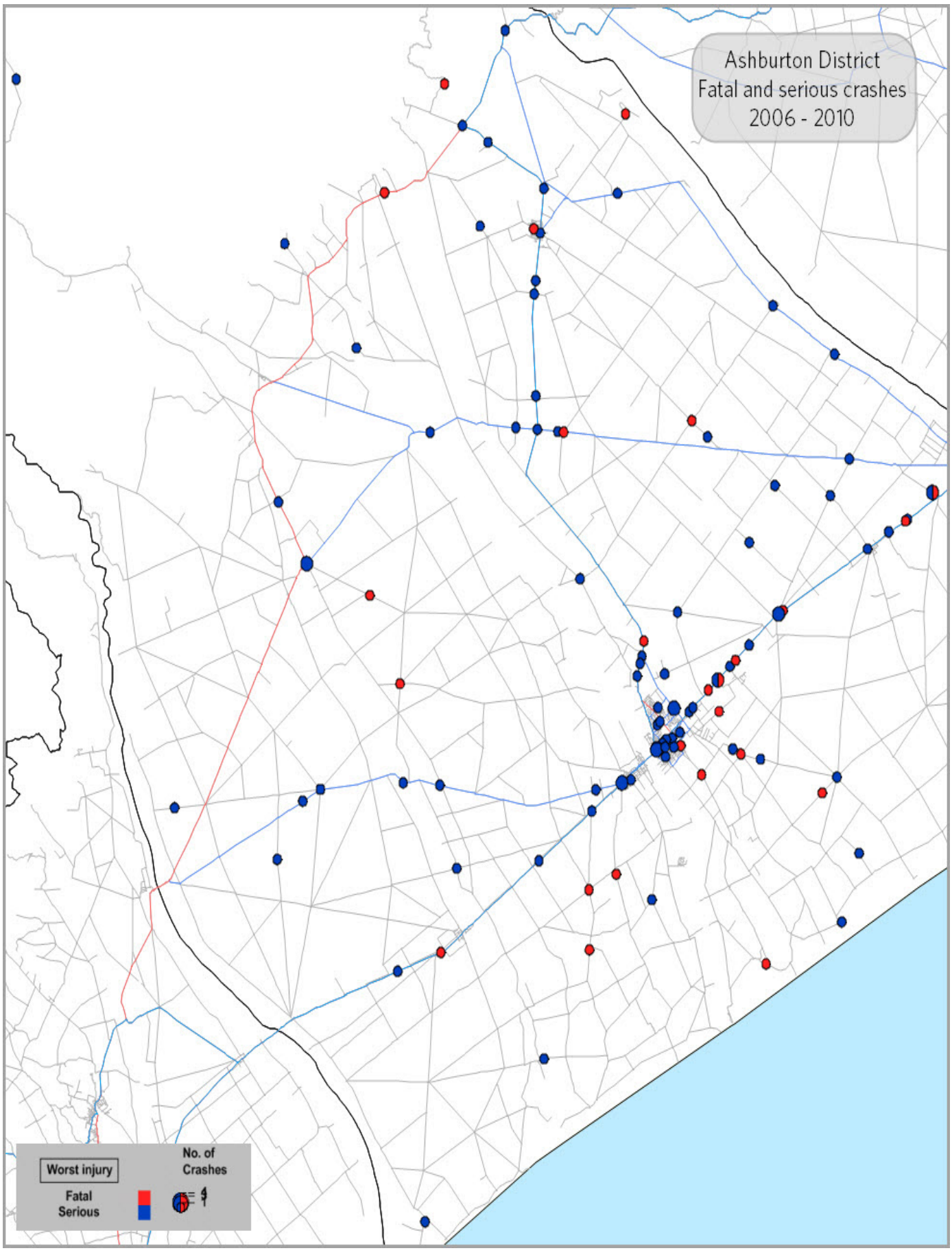
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	9	15	23
Too fast (for the conditions—not over the speed limit	9	16	18
Failed to give way	42	35	22
Failed to keep left	1	2	3
Overtaking	3	6	4
Incorrect lane or position	20	11	14
Poor handling (for example losing control while braking)	13	17	21
Poor observation (not checking properly)	52	39	36
Poor judgement (for example misjudging speed of others)	13	11	10
Fatigue	3	3	6
Disabled / ill	4	5	6
Pedestrian factors	3	8	5
Vehicle factors	3	2	4
Other (misc)	7	11	11
Road factors	6	9	10
Weather	4	3	5

Further information about the 792 injury crashes on state highways in Christchurch City 2006 to 2010:

- 17 percent on wet roads
- 61 percent at intersections
- 223 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 20 to 24 years (15 percent of at fault drivers)
- 13 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $237.52m

Ashburton District fatal and serious crashes

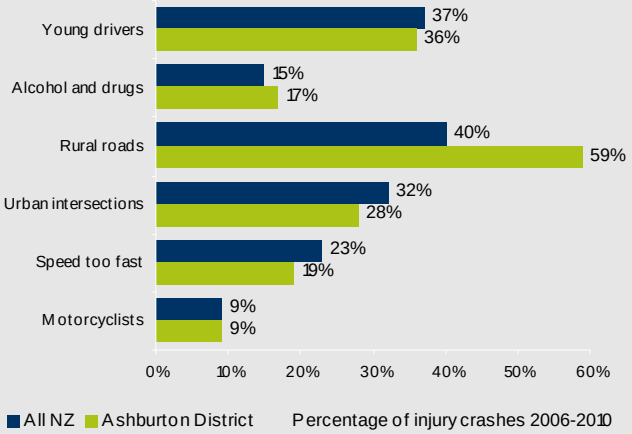


Ashburton District 2010 overview

2010 road trauma	
Casualties	Ashburton District
Death	7
Serious injury	24
Minor injury	62
Total casualties	93

Police reported crashes	Ashburton District
Fatal crashes	7
Serious injury crashes	18
Minor injury crashes	36
Total injury crashes	61
Non-injury crashes	89

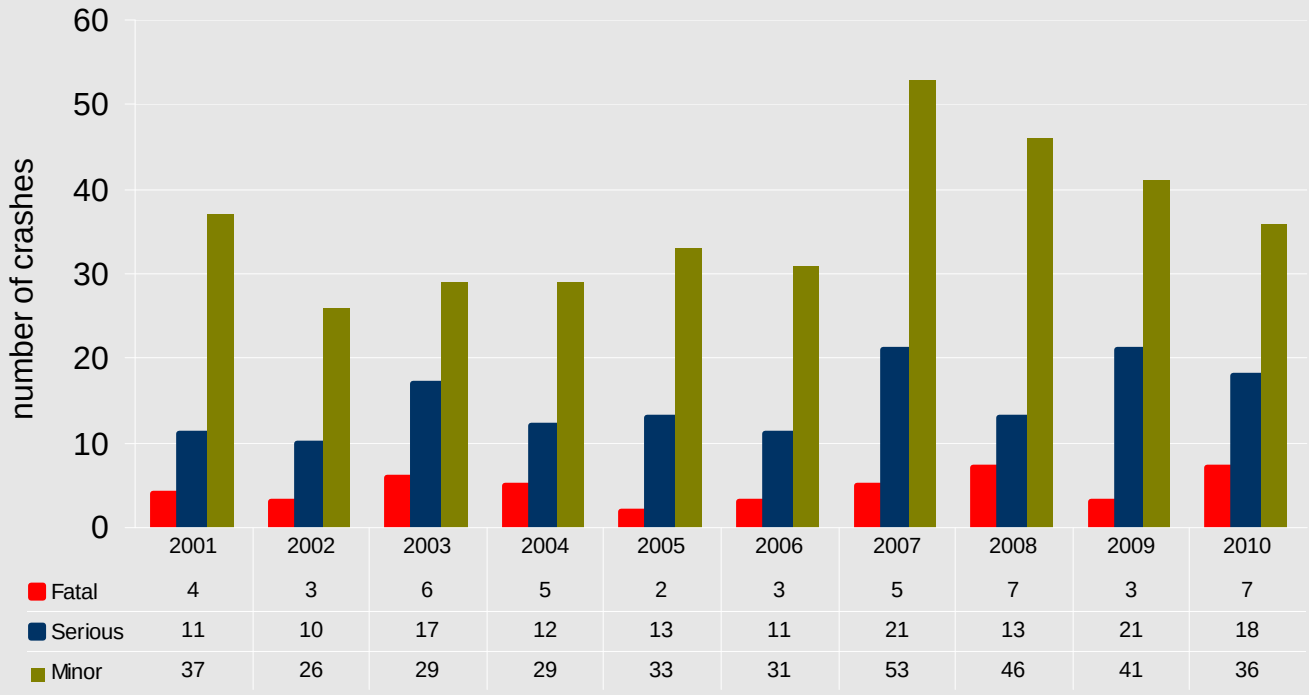
Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 26.51M
State highways	$ 21.62M
Total	$ 48.13M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal	4	3	6	5	2	3	5	7	3	7
Serious	11	10	17	12	13	11	21	13	21	18
Minor	37	26	29	29	33	31	53	46	41	36

Ashburton District local roads

Between 2006 and 2010 in Ashburton District, there were 206 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

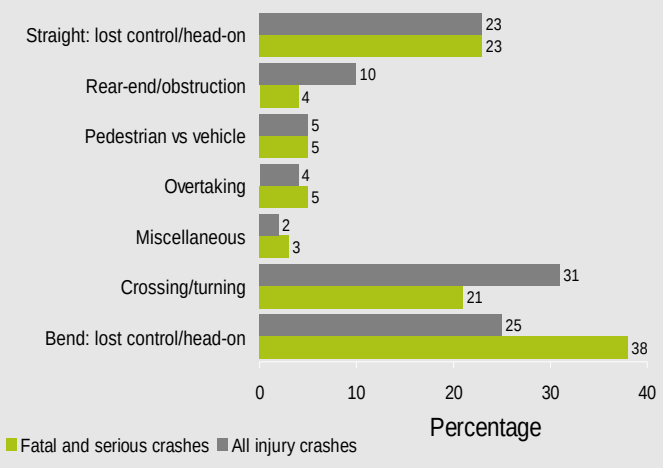
Casualties by urban / rural 2006 to 2010 Local roads				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	17	49	100	166
Urban	3	16	96	115
Total	20	65	196	281

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The three most common types of crashes are: 'When a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (42 crashes), followed by a 'loss of control turning right at a bend' (27 crashes) and a 'loss of control towards the right on a straight road' (19 crashes).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010			
Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	18	27	29
Too fast (for the conditions—not over the speed limit necessarily)	20	30	28
Failed to give way or stop	30	23	15
Failed to keep left	3	5	7
Overtaking	2	3	3
Incorrect lane or position	9	5	8
Poor handling (for example losing control while braking)	31	42	35
Poor observation (not checking properly)	44	36	28
Poor judgement (for example misjudging speed of others)	16	12	15
Fatigue	3	5	7
Disabled / ill	5	4	4
Pedestrian factors	2	3	4
Vehicle factors	5	7	7
Other (misc)	8	10	11
Road factors	16	23	17
Weather	7	11	6

Further information about the 206 injury crashes on local roads in the Ashburton District 2006 to 2010:

- 13 percent on wet roads
- 44 percent at intersections
- 113 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (19 percent of at fault drivers)
- 7 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $130.43m

Ashburton District state highways

Between 2006 and 2010 in Ashburton District, there were 110 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	8	32	62	102
Urban	0	5	53	58
Total	8	37	115	160

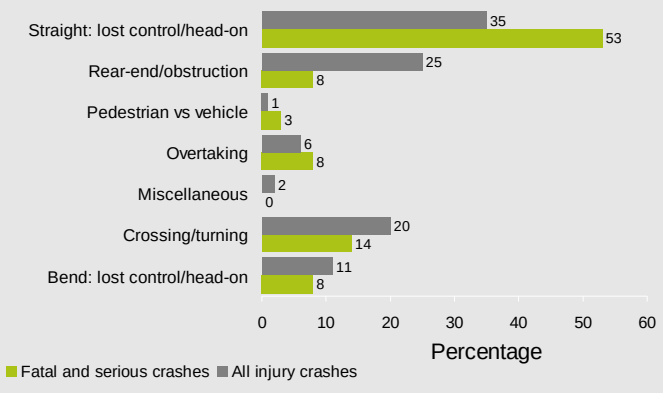
Twenty percent of crashes on state highways in the Ashburton District were single party crashes. Of these, there were 2 fatalities, 17 serious injuries and 115 minor injuries.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When there is a 'loss of control towards the left on a straight road' (15 crashes), followed by 'when a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (10 crashes) and 'when a vehicle is hit in the rear when in a queue' and a 'loss of control towards the right on a straight road' (both equal) (9 crashes each).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

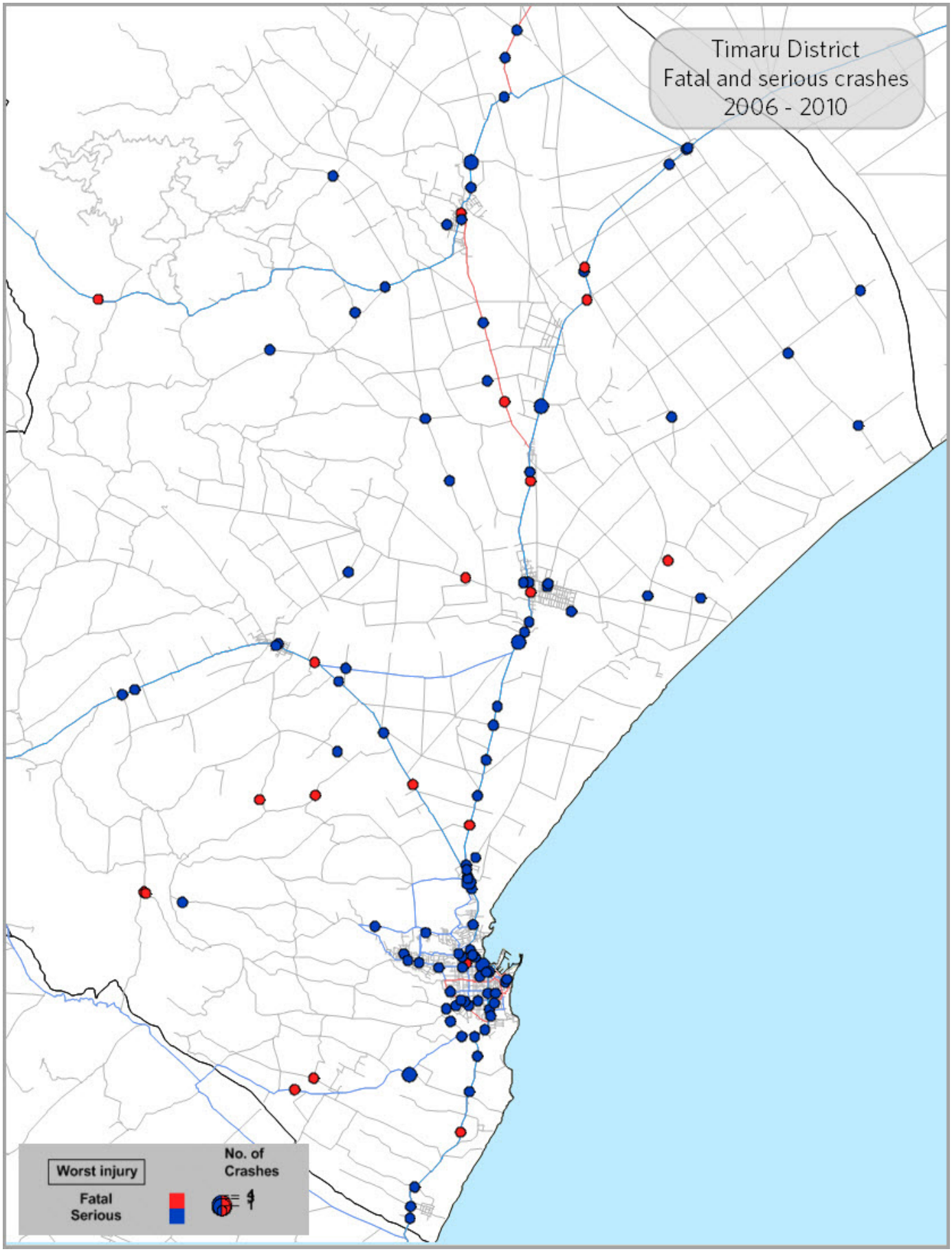
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious on similar local bodies
Alcohol	15	25	23
Too fast (for the conditions—not over the speed limit necessarily)	17	19	21
Failed to give way or stop	17	11	14
Failed to keep left	5	8	10
Overtaking	4	3	5
Incorrect lane or position	13	8	9
Poor handling (for example losing control while braking)	29	36	30
Poor observation (not checking properly)	43	22	27
Poor judgement (for example misjudging speed of others)	15	11	13
Fatigue	15	17	14
Disabled / ill	5	8	5
Pedestrian factors	1	3	5
Vehicle factors	11	14	8
Other (misc)	12	8	8
Road factors	13	17	16
Weather	5	0	5

Further information about the 110 injury crashes on state highways in Ashburton District 2006 to 2010:

- 16 percent on wet roads
- 35 percent at intersections
- 57 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 20 to 24 years (20 percent of at fault drivers)
- 12 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $59.09m

Timaru District fatal and serious crashes

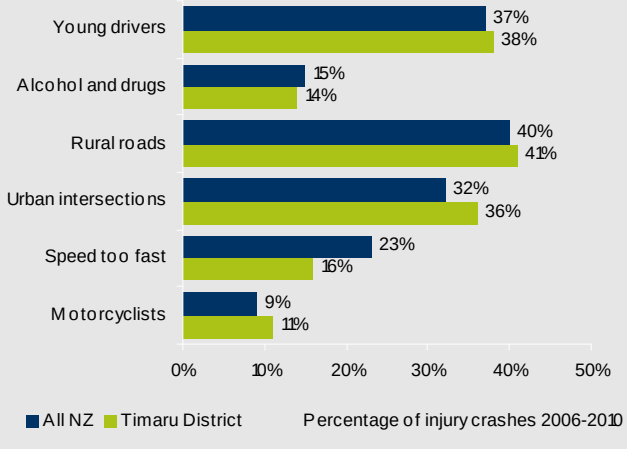


Timaru District 2010 overview

2010 road trauma	
Casualties	Timaru District
Death	6
Serious injury	20
Minor injury	100
Total casualties	126

Police reported crashes	Timaru District
Fatal crashes	6
Serious injury crashes	17
Minor injury crashes	69
Total injury crashes	92
Non-injury crashes	220

Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 23.47M
State highways	$ 24.66M
Total	$ 48.13M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends

Timaru District local roads

Between 2006 and 2010 in Timaru District, there were 310 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 Local roads

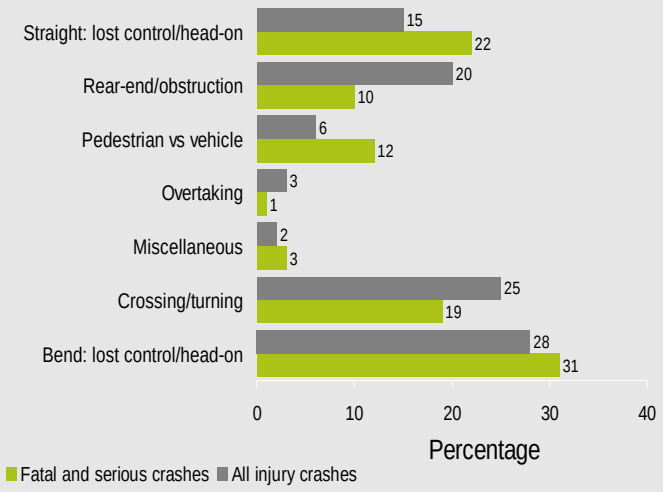
	Fatalities	Serious injuries	Minor injuries	Total
Rural	11	38	113	162
Urban	3	29	217	249
Total	14	67	330	411

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (41 crashes), followed by 'when a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (35 crashes) and a 'loss of control turning left at a bend' (26 crashes).

Crash characteristics 2006 to 2010



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However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious in similar local bodies
Alcohol	16	27	27
Too fast (for the conditions—not over the speed limit necessarily)	23	28	26
Failed to give way or stop	24	21	19
Failed to keep left	5	9	7
Overtaking	1	0	2
Incorrect lane or position	8	1	6
Poor handling (for example losing control while braking)	30	37	24
Poor observation (not checking properly)	46	40	30
Poor judgement (for example misjudging speed of others)	21	22	16
Fatigue	5	6	5
Disabled / ill	6	1	5
Pedestrian factors	4	4	8
Vehicle factors	5	9	5
Other (misc)	13	13	11
Road factors	10	7	11
Weather	4	6	3

Further information about the 310 injury crashes on local roads in the Timaru District 2006 to 2010:

- 10 percent on wet roads
- 50 percent at intersections
- 172 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (27 percent of at fault drivers)
- 12 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $113.01m

Timaru District state highways

Between 2006 and 2010 in Timaru District, there were 211 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	8	30	107	145
Urban	0	24	118	142
Total	8	54	225	287

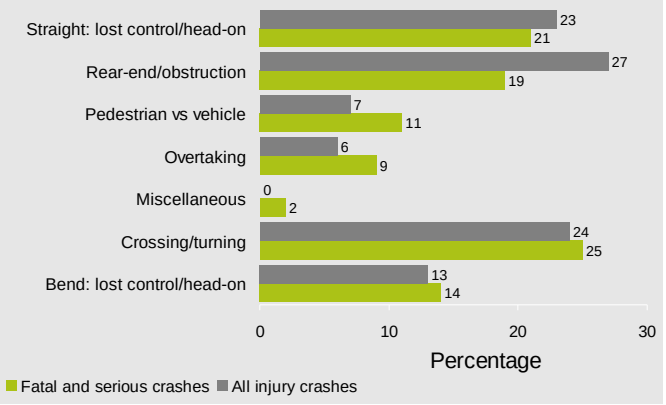
Thirty percent of crashes on state highways in the Timaru District were single party crashes. Of these, there were 2 fatalities, 11 serious injuries and 57minor injuries.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When there is a 'loss of control towards the left on a straight road' (21 crashes), followed by 'a vehicle making a right turn at an intersection or into a driveway is hit on the left by a vehicle going straight through' (16 crashes) and 'a vehicle turning right out of a driveway or intersection is struck on the right by a vehicle travelling straight ahead' and when 'a vehicle is hit in the rear when in a queue' (both equal) (14 crashes each).

Crash characteristics 2006 to 2010



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However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

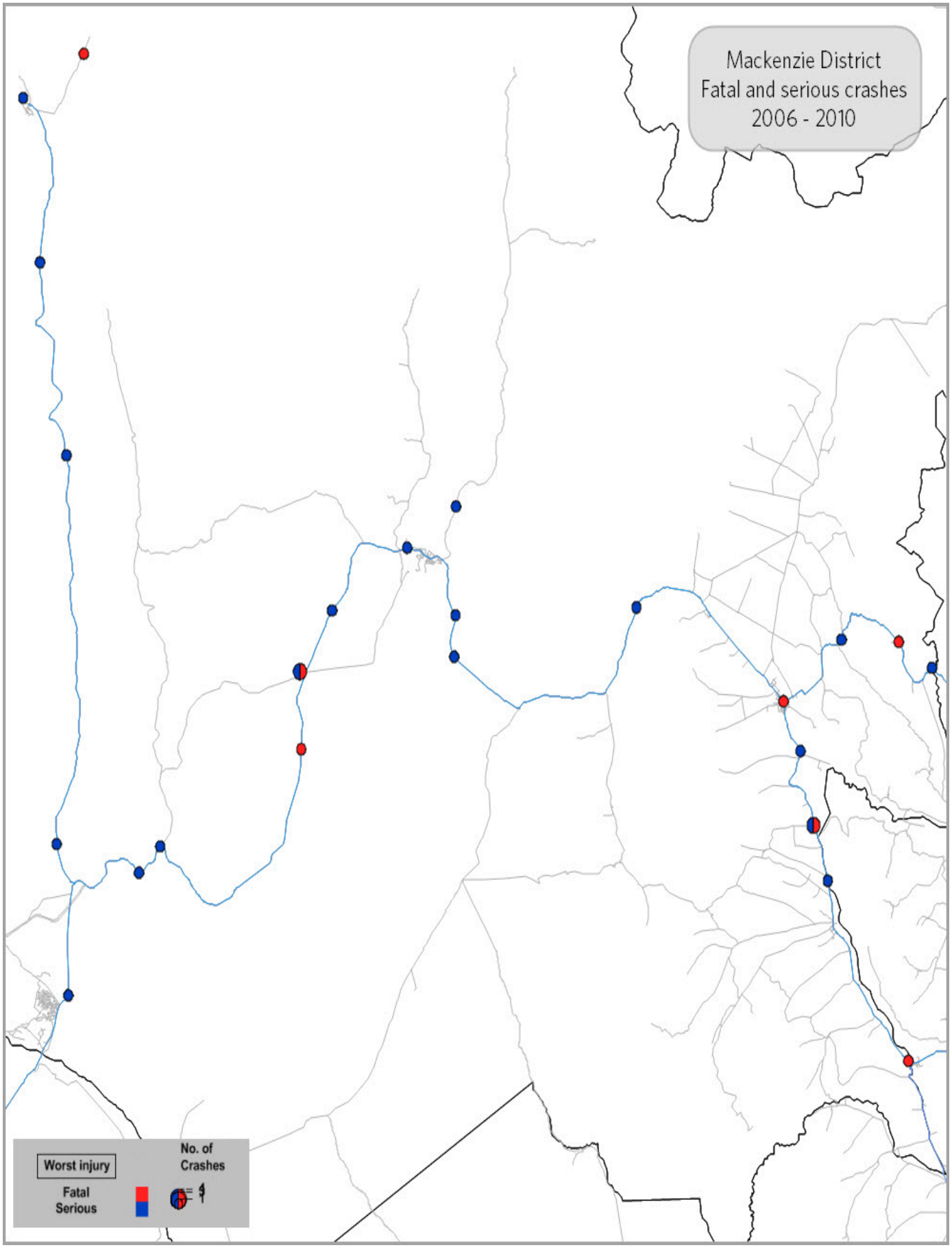
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious on similar local bodies
Alcohol	10	16	19
Too fast (for the conditions—not over the speed limit	6	0	18
Failed to give way	23	25	17
Failed to keep left	3	5	10
Overtaking	2	4	4
Incorrect lane or position	14	11	48
Poor handling (for example losing control while braking)	24	19	24
Poor observation (not checking properly)	48	47	32
Poor judgement (for example misjudging speed of others)	14	18	11
Fatigue	11	16	15
Disabled / ill	5	7	6
Pedestrian factors	4	11	6
Vehicle factors	3	0	6
Other (misc)	11	11	8
Road factors	6	4	11
Weather	5	5	4

Further information about the 211 injury crashes on state highways in Timaru District 2006 to 2010:

- 12 percent on wet roads
- 45 percent at intersections
- 85 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (21 percent of at fault drivers)
- 10 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $84.74m

Mackenzie District fatal and serious crashes

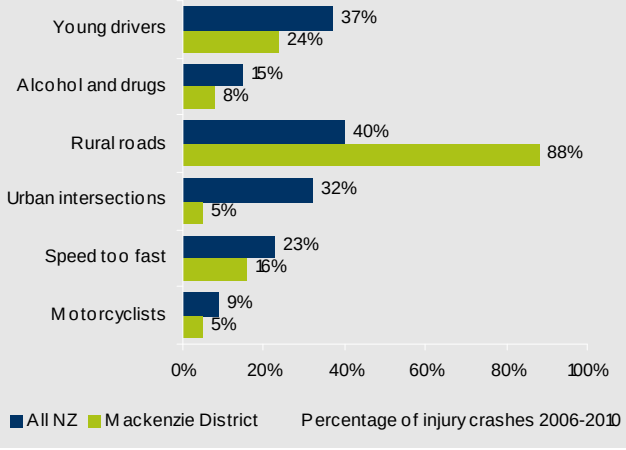


Mackenzie District 2010 overview

2010 road trauma

Casualties	Mackenzie District
Death	1
Serious injury	8
Minor injury	35
Total casualties	44

Safer Journeys areas of high concern



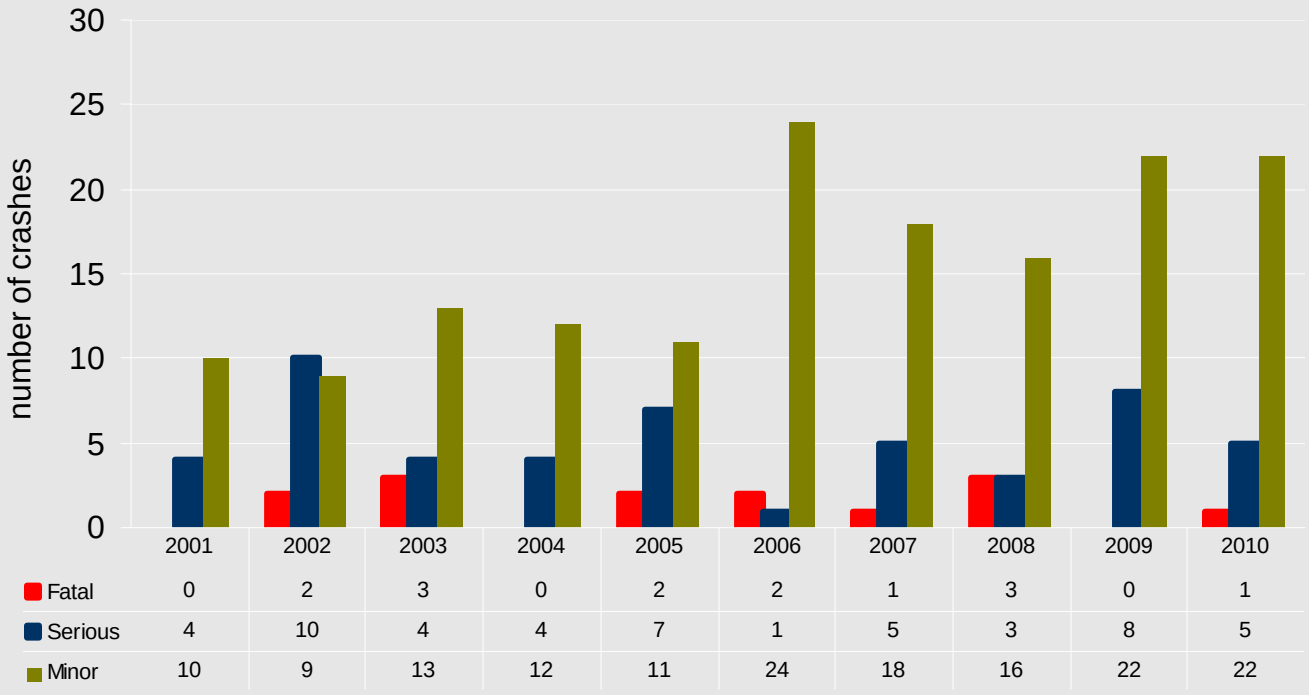
Police reported crashes	Mackenzie District
Fatal crashes	1
Serious injury crashes	5
Minor injury crashes	22
Total injury crashes	28
Non-injury crashes	36

2010 MoT calculation social cost of all crashes

Local roads	$ 1.36M
State highways	$ 9.89M
Total	$ 11.25M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



Mackenzie District local roads

Between 2006 and 2010 in Mackenzie District, there were 33 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 Local roads

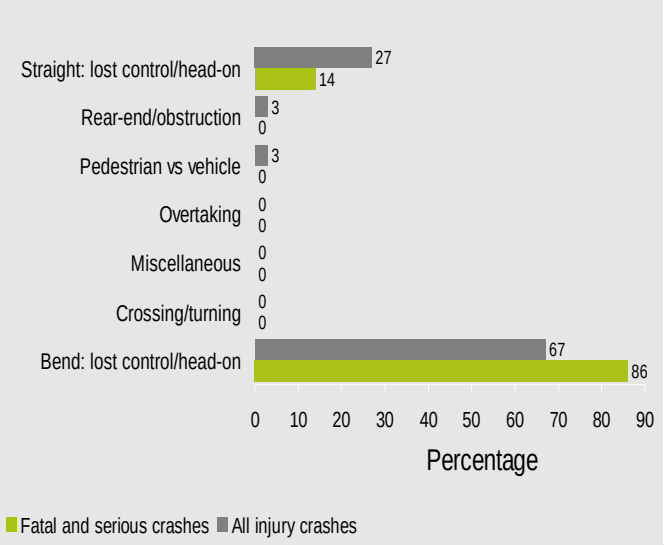
	Fatalities	Serious injuries	Minor injuries	Total
Rural	2	2	28	32
Urban	0	3	10	13
Total	2	5	38	45

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (12 crashes), followed by a 'loss of control turning left at a bend' (7 crashes) and a 'loss of control towards the left on a straight road' and a 'loss of control towards the right on a straight road' (both equal) (4 crashes each).

Crash characteristics 2006 to 2010



CAS has almost 400 contributory crash factors available for selection, based on what the NZ Police report in the Traffic Crash reports.

However these 'factors' are not necessarily an 'illegal' act—simply a contributor.

For example if a pedestrian is 'wearing dark clothing' at night it may be recorded as a crash contributor, in the same way that 'poor street lighting' can be tagged.

As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes (Sample size = 7)	Percentage fatal and serious in similar local bodies
Alcohol	21	0	31
Too fast (for the conditions—not over the speed limit necessarily)	24	29	30
Failed to give way or stop	0	0	8
Failed to keep left	6	0	9
Overtaking	0	0	2
Incorrect lane or position	6	14	6
Poor handling (for example losing control while braking)	79	100	38
Poor observation (not checking properly)	21	14	22
Poor judgement (for example misjudging speed of others)	48	29	19
Fatigue	15	14	5
Disabled / ill	3	0	3
Pedestrian factors	0	0	5
Vehicle factors	9	29	8
Other (misc)	6	0	12
Road factors	21	14	21
Weather	3	14	4

Further information about the 33 injury crashes on local roads in the Mackenzie District 2006 to 2010:

- 3 percent on wet roads
- 6 percent at intersections
- 21 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 20 to 24 and 25 to 29 years (both equal) (18 percent of at fault drivers each)
- 12 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $14.64m

Mackenzie District state highways

Between 2006 and 2010 in Mackenzie District, there were 98 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	7	26	118	151
Urban	1	1	3	5
Total	8	27	121	156

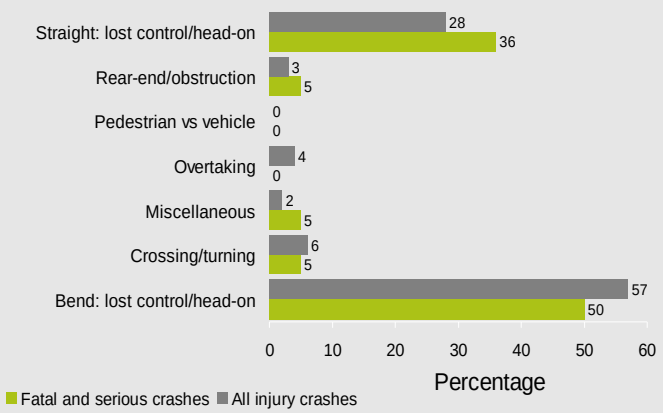
Seventy-four percent of crashes on state highways in the Mackenzie District were single party crashes. Of these, there were 3 fatalities, 16 serious injuries and 88 minor injuries. There were more serious and minor injuries from single party crashes than multiple party crashes.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (28 crashes), followed by a 'loss of control turning left at a bend' (23 crashes) and a 'loss of control towards the left on a straight road' (16 crashes).

Crash characteristics 2006 to 2010



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As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

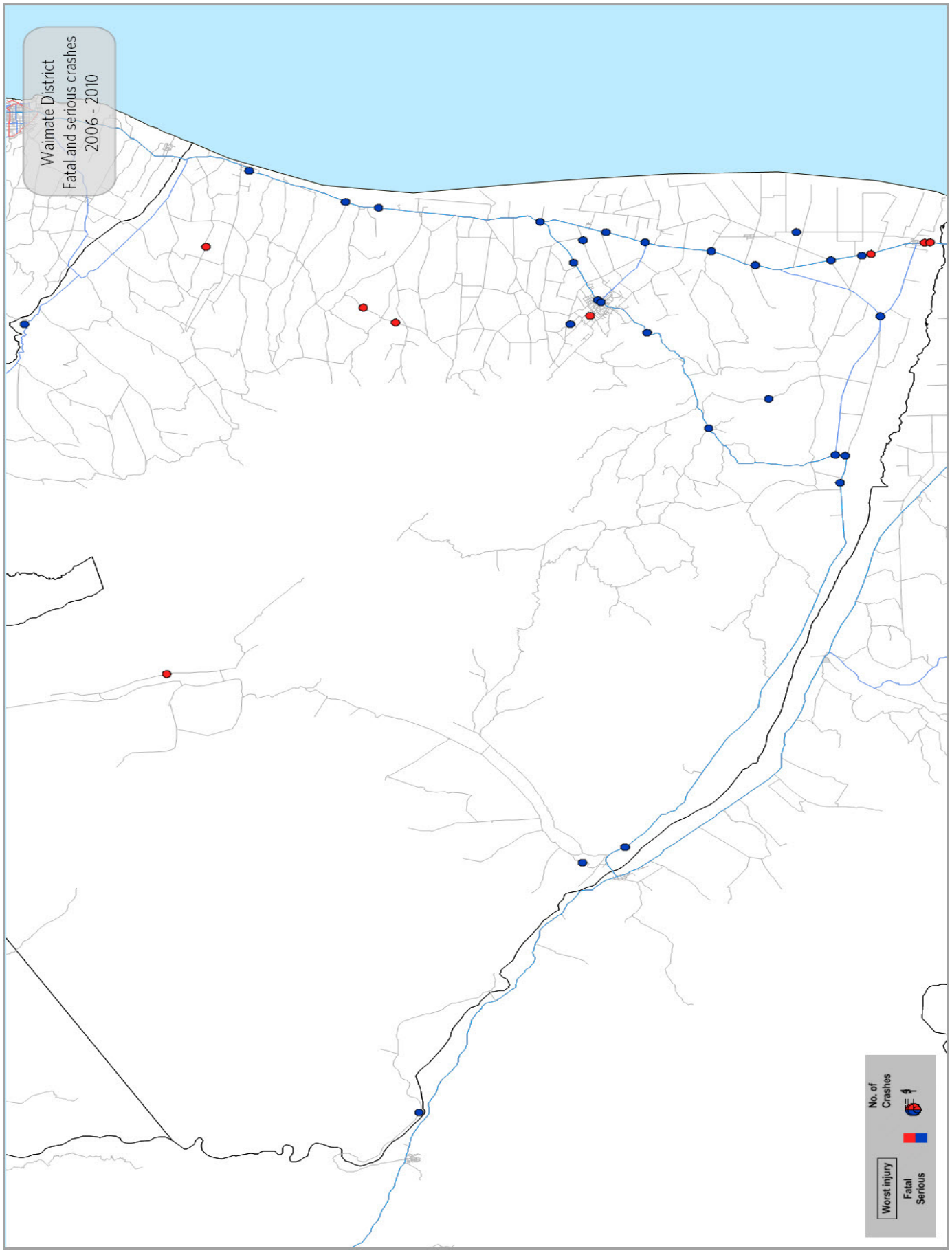
State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes	Percentage fatal and serious on similar local bodies
Alcohol	4	5	21
Too fast (for the conditions—not over the speed limit	13	5	22
Failed to give way	6	5	7
Failed to keep left	6	9	10
Overtaking	3	5	4
Incorrect lane or position	7	14	8
Poor handling (for example losing control while braking)	53	45	38
Poor observation (not checking properly)	34	27	23
Poor judgement (for example misjudging speed of others)	27	41	15
Fatigue	22	36	18
Disabled / ill	3	5	4
Pedestrian factors	0	0	3
Vehicle factors	5	9	8
Other (misc)	6	9	9
Road factors	23	18	18
Weather	11	23	5

Further information about the 98 injury crashes on state highways in Mackenzie District 2006 to 2010:

- 10 percent on wet roads
- 13 percent at intersections
- 61 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 20 to 24years (17 percent of at fault drivers)
- 3 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $41.22m

Waimate District fatal and serious crashes

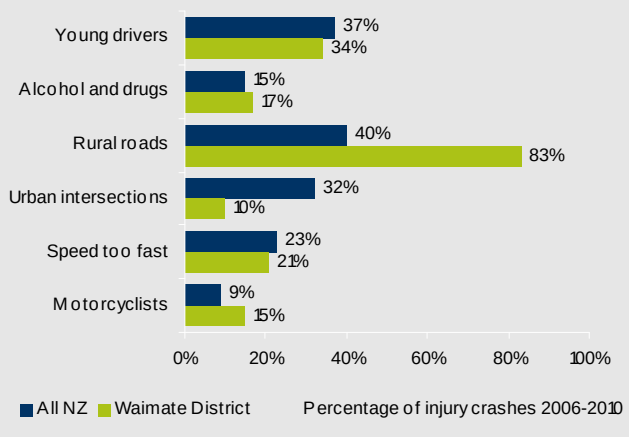


Waimate District 2010 overview

2010 road trauma	
Casualties	Waimate District
Death	2
Serious injury	5
Minor injury	29
Total casualties	36

Police reported crashes	Waimate District
Fatal crashes	2
Serious injury crashes	4
Minor injury crashes	22
Total injury crashes	28
Non-injury crashes	38

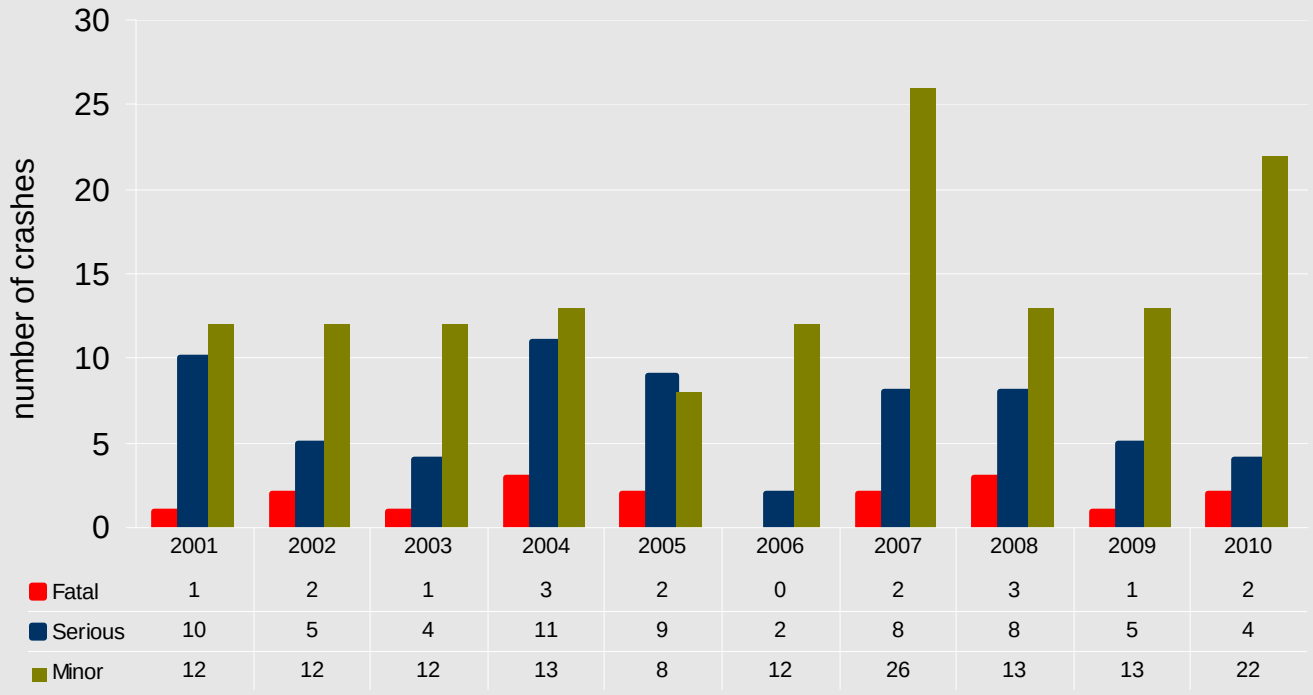
Safer Journeys areas of high concern



2010 MoT calculation social cost of all crashes	
Local roads	$ 6.62M
State highways	$ 7.78M
Total	$ 14.40M

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs and property damage.

Injury crash trends



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fatal	1	2	1	3	2	0	2	3	1	2
Serious	10	5	4	11	9	2	8	8	5	4
Minor	12	12	12	13	8	12	26	13	13	22

Waimate District local roads

Between 2006 and 2010 in Waimate District, there were 42 injury crashes on local roads. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

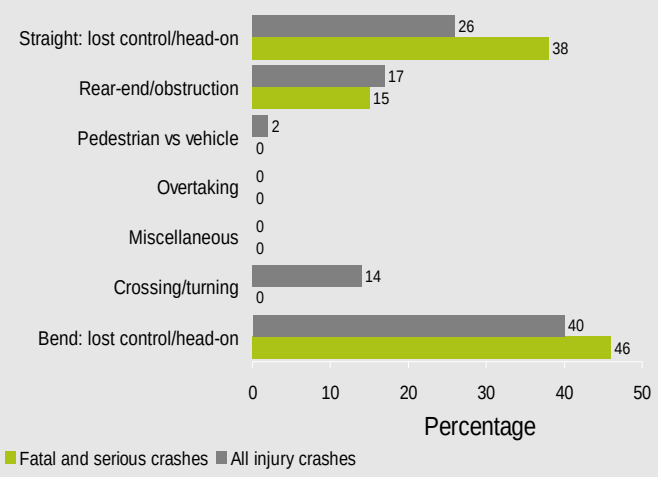
Casualties by urban / rural 2006 to 2010 Local roads				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	4	8	31	43
Urban	1	0	12	13
Total	5	8	43	56

The chart below shows the types of injury crashes reported by the NZ Police.

CAS is able to identify 87 different crash movements. It can also group them into similar crash types and these are shown in the chart below.

The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (9 crashes), followed by a 'loss of control towards the left on a straight road' and 'when a vehicle travelling straight through is struck on the right by another vehicle also travelling straight through at right angles to each other, commonly at 'X' junctions' (both equal) (6 crashes each) and a 'loss of control turning left at a bend' (4 crashes).

Crash characteristics 2006 to 2010



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As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

Local road crash characteristics 2006 to 2010			
Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes (Sample size = 13)	Percentage fatal and serious in similar local bodies
Alcohol	19	23	31
Too fast (for the conditions—not over the speed limit necessarily)	29	46	30
Failed to give way or stop	14	0	8
Failed to keep left	12	15	9
Overtaking	0	0	2
Incorrect lane or position	10	8	6
Poor handling (for example losing control while braking)	38	38	38
Poor observation (not checking properly)	43	38	22
Poor judgement (for example misjudging speed of others)	33	38	19
Fatigue	2	0	5
Disabled / ill	5	0	3
Pedestrian factors	0	0	5
Vehicle factors	2	0	8
Other (misc)	24	23	12
Road factors	26	54	21
Weather	2	0	4

Further information about the 42 injury crashes on local roads in the Waimate District 2006 to 2010:

- 5 percent on wet roads
- 29 percent at intersections
- 31 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 years (29 percent of at fault drivers)
- 16 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $29.95m

Waimate District state highways

Between 2006 and 2010 in Waimate District there were 79 injury crashes on state highways. The table below shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more.

Casualties by urban / rural 2006 to 2010 State highways

	Fatalities	Serious injuries	Minor injuries	Total
Rural	3	21	70	94
Urban	0	3	8	11
Total	3	24	78	105

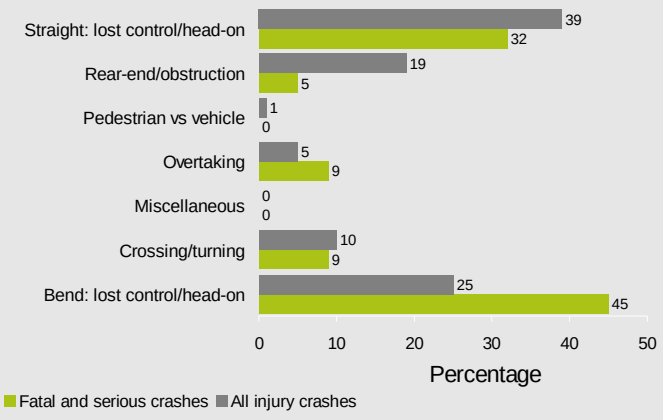
Fifty-nine percent of crashes on state highways in the Waimate District were single party crashes. Of these, there were 2 fatalities, 15 serious injuries and 45 minor injuries. Overall, there were more injuries from single party crashes than multiple party crashes.

The chart below shows the types of crashes reported.

As previously noted that although CAS is able to identify 87 different crash movements, it can also group them into similar crash types.

The three most common types of crashes are: When 'loss of control towards the left on a straight road' (15 crashes), followed by 'loss of control turning right at a bend' (10 crashes) and 'loss of control turning left at a bend' (9 crashes).

Crash characteristics 2006 to 2010



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As with the crash movements, CAS is also able to group these, as in the following table. Most crashes have more than one factor attributed to them and as a result the percentages below will not add to 100.

State highway crash characteristics 2006 to 2010

Crash factor	Percentage **all injury** crashes	Percentage **fatal** and **serious** crashes (Sample size = 22)	Percentage fatal and serious on similar local bodies
Alcohol	15	36	21
Too fast (for the conditions—not over the speed limit necessarily)	18	18	22
Failed to give way or stop	9	9	7
Failed to keep left	0	0	10
Overtaking	3	5	4
Incorrect lane or position	14	9	8
Poor handling (for example losing control while braking)	34	23	38
Poor observation (not checking properly)	33	32	23
Poor judgement (for example misjudging speed of others)	22	18	15
Fatigue	28	27	18
Disabled / ill	3	0	4
Pedestrian factors	0	0	3
Vehicle factors	8	9	8
Other (misc)	16	9	9
Road factors	13	9	18
Weather	5	5	5

Further information about the 79 injury crashes on state highways in Waimate District 2006 to 2010:

- 14 percent on wet roads
- 18 percent at intersections
- 58 roadside objects struck
- Most represented five year age group in at fault drivers in injury crashes, 15 to 19 and 20 to 24years (both equal) (12 percent of at fault drivers each)
- 14 percent of crashes involved motorcycles or mopeds
- Social cost of crashes $32.79m

Contacts

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Further information

This report has been prepared by the Crash Analysis team at NZ Transport Agency. The intent of this report is to highlight road safety issues and assist in identifying possible ways to reduce the number of road deaths and injuries. It has been prepared using data from the NZTA and Ministry of Transport's Crash Analysis System (CAS) database. The Briefing Notes present information derived from pertinent statistics to be used for decision support.

More detailed information may be obtained from either the local council (local roads), regional council or NZ Transport Agency.

NZ Transport Agency encourages local bodies, regional councils and NZ Police to study the briefing notes reports. There will be road safety issues beyond those covered in this Road Safety Issues Report and we encourage our partners to use their access to the Crash Analysis System to identify and examine these further.

Useful web-links

- http://www.nzta.govt.nz/
- http://www.smartmovez.org.nz/
- http://www.localgovt.co.nz/
- http://www.transport.govt.nz/
- http://www.decadeofaction.org/