



briefing notes - road safety issues

Dunedin City

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

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

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

We have included a brief overview of crashes in the city.

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

Major road safety issues

Note
Issues are not in
any order

Dunedin City

Intersection
Bend - loss of control or head-on
Young drivers

2009 road trauma

Casualties

Dunedin City

Deaths 2
Serious casualties 120
Minor casualties 532

Nationally

Speed
Alcohol / Drugs
Young Drivers
Roads and Roadsides
Motorcyclists

Crashes

Dunedin City

Fatal crashes 2
Serious injury crashes 102
Minor injury crashes 363
Non-injury crashes 812

Safer Journeys

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

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

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

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

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

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

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

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

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

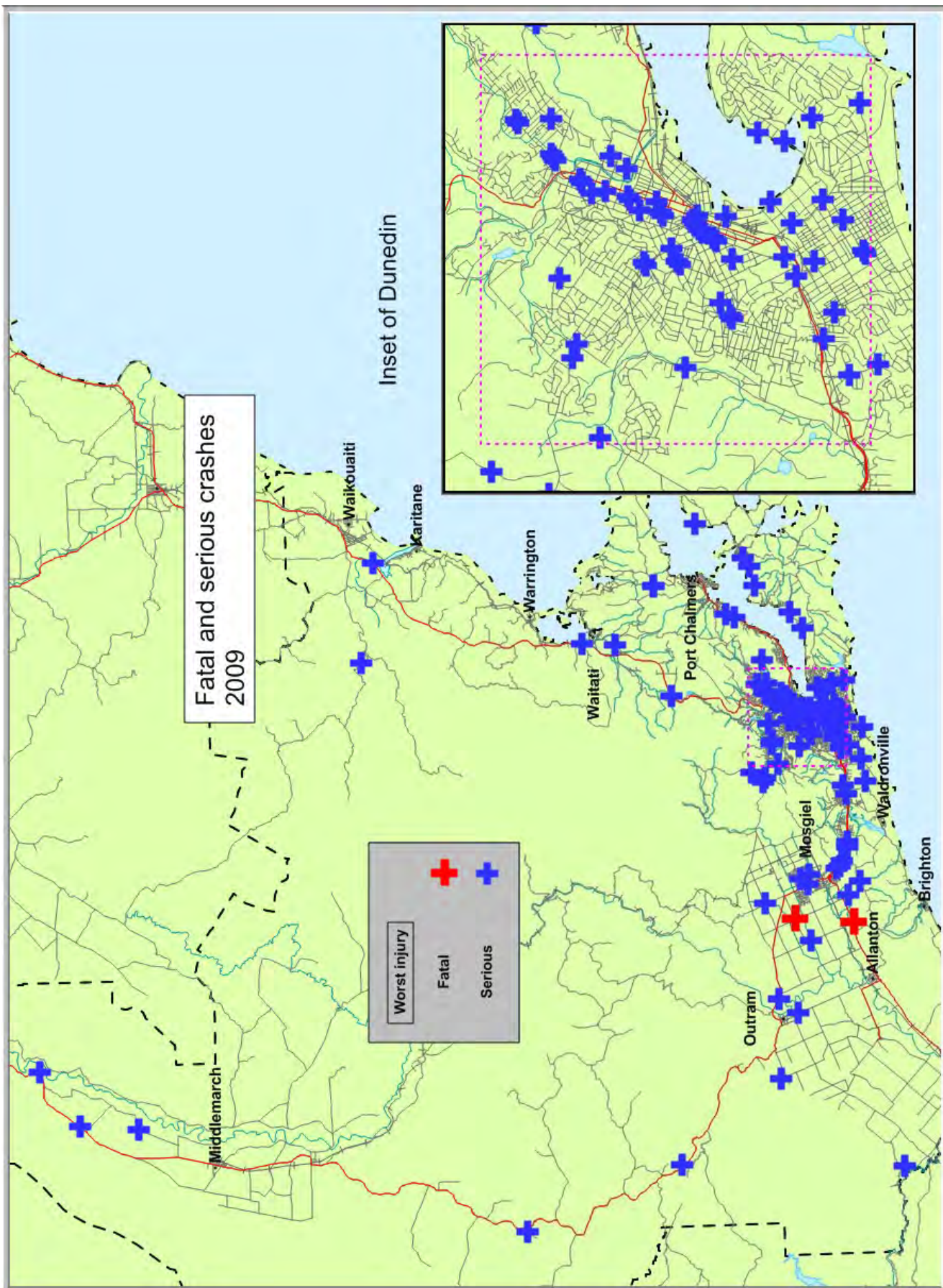
AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe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

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

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

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

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



Overview

In 2009 on Dunedin City local roads there were 362 reported injury crashes, of which 79 were fatal or serious. In addition, on State Highways there were 109 reported injury crashes of which 26 were fatal or serious.

The table below shows the number of casualties resulting from the 658 injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties 2009 Dunedin City				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	2	39	108	149
Urban	0	82	427	509
Total	2	121	535	658

All deaths, 32 percent of serious injuries and 23 percent of minor injuries were from crashes on roads in rural areas of the City.

In 2009 the two fatal crashes was the lowest annual number in the last ten years. The number of serious crashes dropped in 2007, but rose again in 2009.

Crash trends in Dunedin City				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	4	47	109	160
2001	4	117	327	448
2002	4	119	440	563
2003	8	114	391	513
2004	7	120	375	502
2005	3	120	416	539
2006	7	109	366	482
2007	4	84	419	507
2008	4	89	393	486
2009	2	103	366	471

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

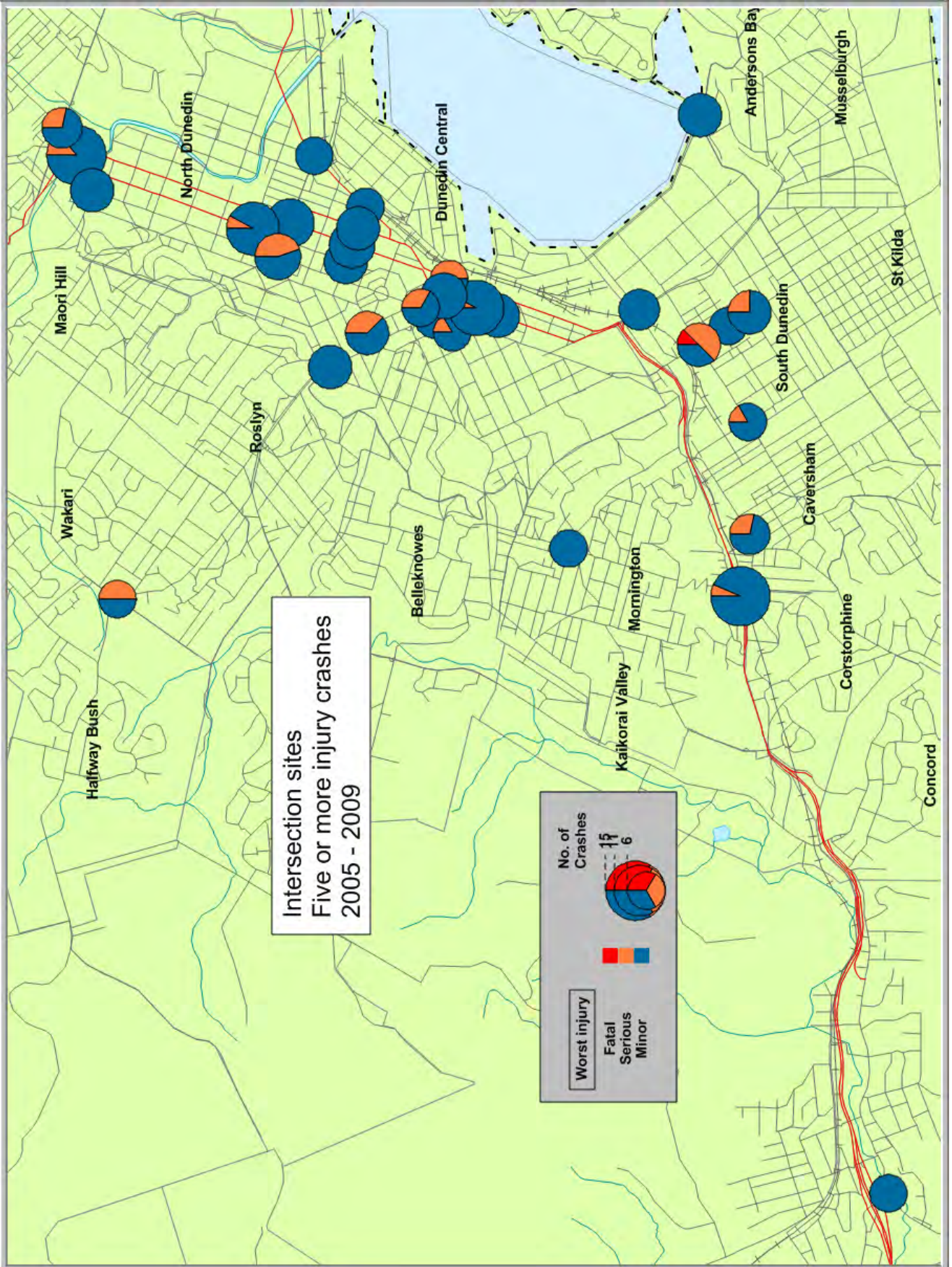
Crash characteristics (2005 to 2009) Dunedin City				
Crash type or contributory cause	Percent fatal and serious crashes	Percent all injury crashes	No. of injury crashes	Safer Journeys priority
Alcohol	17	9	234	1
Too fast	21	15	384	1
At bends	32	26	643	1
On straights	15	11	283	1
Intersections	34	42	1047	1
Road factors	22	22	537	1
Motorcycling	13	8	201	1
Young drivers	44	42	1007	1
Fatigue	4	3	80	2
Distraction	10	5	315	2
Pedestrians	18	10	240	2
Cycling	6	6	147	2
Heavy vehicles	8	6	161	2
Older road users	6	8	184	3
Overseas drivers	2	3	75	-

Further information about the 1837 injury crashes on local roads in Dunedin City, 2005 to 2009:

- 12 deaths, 450 serious injuries and 2132 minor casualties
- Five year age group with most at fault drivers in injury crashes: 15 to 19 years (28 percent of at fault drivers)
- Social cost of crashes in 2009 \$80.16 m

Further information about the 648 injury crashes on State Highways in Dunedin City, 2005 to 2009:

- 10 deaths, 150 serious injuries and 838 minor casualties
- Five year age group with most at fault drivers in injury crashes: 15 to 19 years (18 percent of at fault drivers)
- Social cost of crashes in 2009 \$28.46 m



Intersections

During the five year period 2005 to 2009, on roads in Dunedin City, there were a total of 1047 fatal and injury crashes at intersections.

Casualties in crashes at Intersections Dunedin City (2005 - 2009)					
	2005	2006	2007	2008	2009
Deaths	0	0	1	3	1
Serious injury	40	40	38	35	52
Minor injury	260	229	264	291	270
Total	300	269	303	329	323

In 2009 the number of serious injury crashes at intersections in Dunedin increased sharply, with a corresponding increase in serious casualties.

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

Young drivers accounted for 39 percent of at fault drivers in crashes at intersections. Within this age group, males were 66 percent of drivers. Overall males represented 60 percent of at fault drivers.

Ages of at fault drivers in intersection related crashes 2005 to 2009			
Ages	Male	Female	Total
15 to 19	141	65	206
20 to 24	110	66	176
25 to 29	45	35	80
30 to 39	74	66	140
40 to 49	58	52	110
50 to 59	62	40	102
60 to 69	40	29	69
70 and over	67	43	110
Total	597	396	993

Main characteristics of injury Intersection crashes Dunedin City (2005-2009)

Crash characteristic	Percentage of crashes
Poor observation	67%
Failed to give way	56%
Poor judgement	15%
Poor handling	11%
Incorrect lane / position	10%
Too fast	9%

The most common crash types at intersections were when a through vehicle is struck on the right by a through vehicle from the right, when a vehicle turns right into the path of a through vehicle from the opposite direction and vehicles colliding with pedestrians crossing the road at intersections.

In Dunedin City there were 52 intersection sites which have had five or more injury crashes in the last five years, including 18 sites with eight or more injury crashes in the past five years.

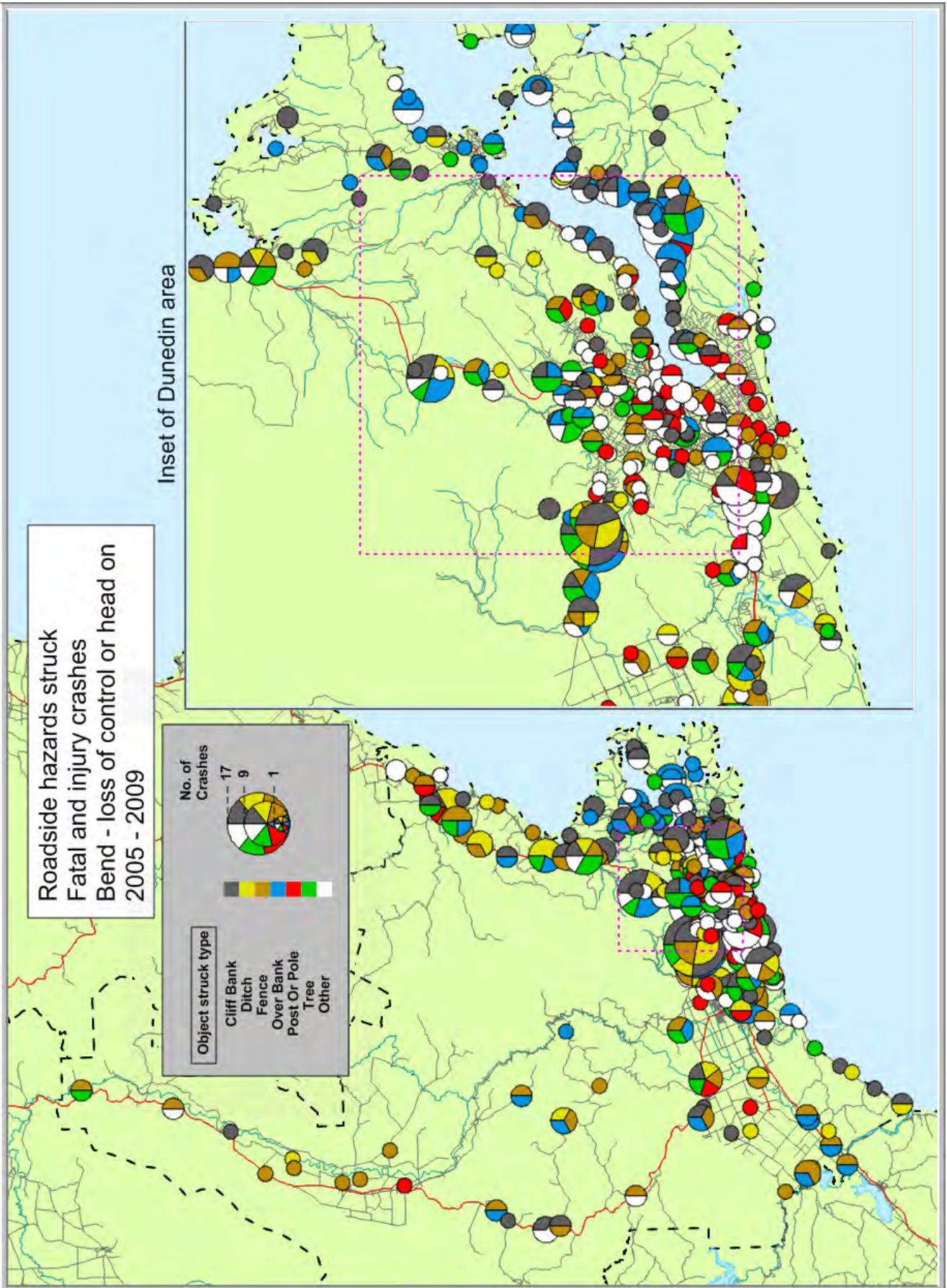
It is possible that work has been done at some of these sites.

Further information about the 778 injury crashes at intersections on local roads in Dunedin City 2005 to 2009:

- 5 deaths, 172 serious injuries and 954 minor injuries
- 26 percent wet or icy roads
- 27 percent night time
- Worst month March
- Worst day of week Friday
- Worst time 3 pm till 6 pm

Further information about the 269 injury crashes at intersections on State Highways in Dunedin City 2005 to 2009:

- 33 serious injuries and 360 minor injuries
- 20 percent wet or icy roads
- 24 percent night time
- Worst month May
- Worst day of week Thursday
- Worst time midday till 3 pm



Bend - loss of control or head on

Between 2005 and 2009 26 percent of all injury crashes in Dunedin City were bend - loss of control or head on crashes. These crashes resulted in 7 deaths, 205 serious injuries and 773 minor injuries.

The number of fatal and serious crashes dropped in 2008 and dropped again in 2009, as there were no fatal crashes that year.

Bend - loss of control or head on crashes Dunedin City (2005 - 2009)				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	1	37	90	128
2006	5	37	99	141
2007	0	30	116	146
2008	0	27	94	121
2009	0	33	77	110
Total	6	164	476	646

In these crashes, young drivers represented 51 percent of at fault drivers. For this age group, males made up 73 percent of at fault drivers. Overall, males made up 66 percent of at fault drivers.

At fault drivers in Bend - loss of control or head on crashes 2005 to 2009			
Ages	Male	Female	Total
15 to 19	148	57	205
20 to 24	89	31	120
25 to 29	38	16	54
30 to 39	53	41	94
40 to 49	41	28	69
50 to 59	31	21	52
60 to 69	15	12	27
70 and over	10	10	20
Total	425	216	641

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

The most common roadside hazards struck in injury bend - loss of control or head on crashes in Dunedin City were cliffs or banks (157), fences (106), over bank (101), tree (67) post or pole (63) and ditch (53) from a total of 745 objects struck.

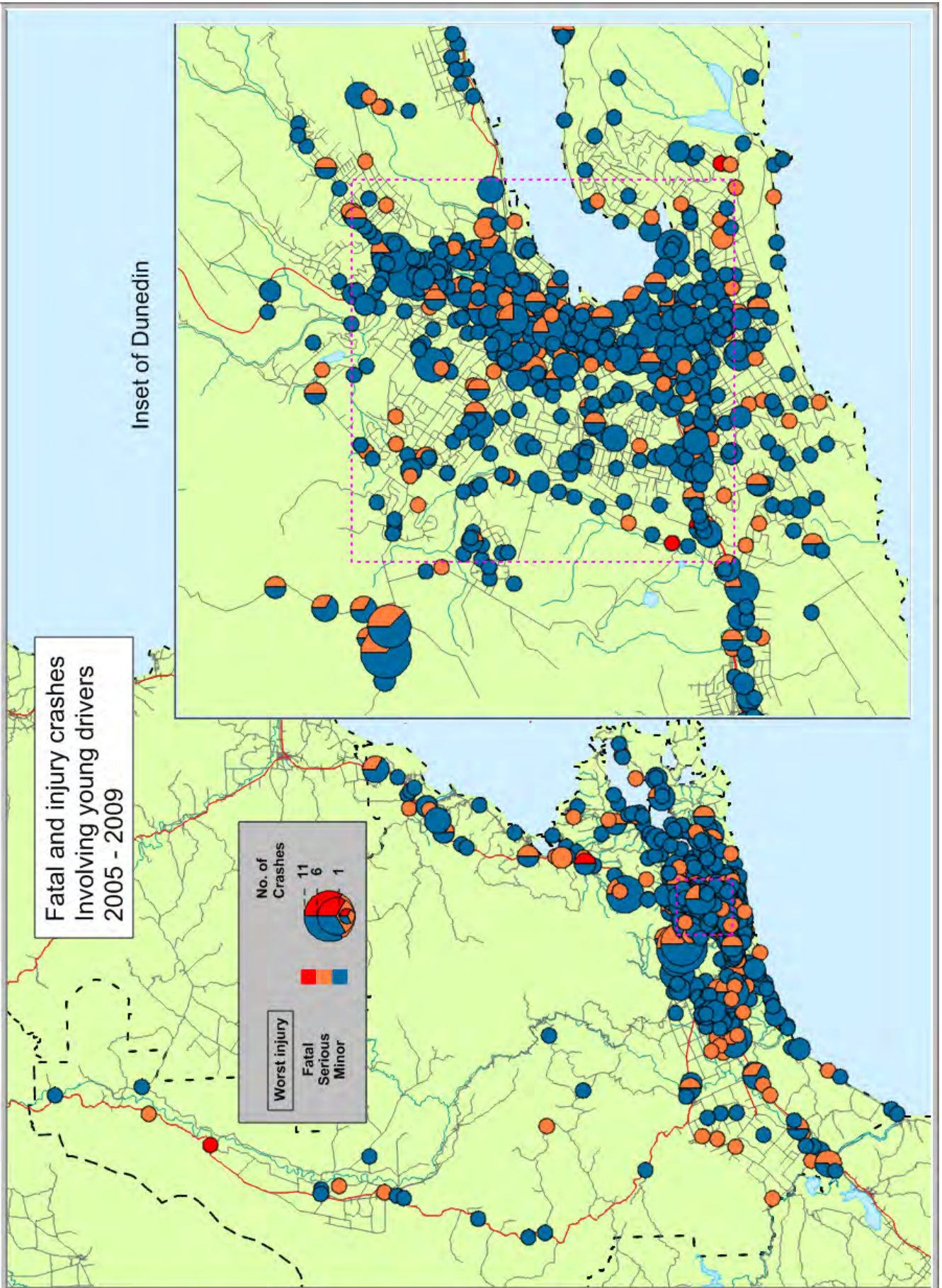
A roadside hazard was struck in 79 percent of bend - loss of control crashes in Dunedin.

Further information about the 509 injury bend - loss of control or head on crashes on local roads in Dunedin City, (2005 to 2009) :

- 3 deaths, 155 serious injuries and 613 minor injuries
- 17 percent of crashes involved alcohol
- 41 percent of crashes involved speed too fast for the conditions
- 49 percent involved road factors
- 62 percent involved poor handling
- 37 percent were on rural roads
- 52 percent were on wet or icy roads
- 43 percent were at night
- Worst month March
- Worst day of week Sunday
- Worst time period 3 pm till 6 pm

Further information about the 137 injury bend - loss of control or head on crashes on State Highways in Dunedin City, (2005 to 2009):

- 4 deaths, 50 serious injuries and 160 minor injuries
- 20 percent of crashes involved alcohol
- 28 percent of crashes involved speed too fast for the conditions
- 28 percent involved road factors
- 51 percent involved poor handling
- 79 percent were on rural roads
- 39 percent were on wet or icy roads
- 44 percent were at night
- Worst month July
- Worst day of week Sunday
- Worst time period midday till 3 pm and 9 pm till midnight



Young drivers

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

In Dunedin City between 2005 and 2009, 42 percent of injury crashes involved young drivers. These crashes resulted in 9 deaths, 286 serious injuries and 1522 minor injuries.

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

Casualties from crashes involving young drivers Dunedin City

	Fatal	Serious	Minor	Total
2005	2	69	360	431
2006	5	69	272	346
2007	0	52	347	399
2008	2	39	286	327
2009	0	57	257	314
Total	9	286	1522	1817

Forty percent of the 1345 young drivers in these crashes had a learner or restricted licence. Fifty five percent of these drivers were males. Overall 65 percent of young drivers involved in crashes were males.

Nearly all the young drivers were local residents.

Young drivers at fault in injury crashes Dunedin City (2005 - 2009)

Licence type	Female	Male	Total
Full	193	390	583
Learner	58	122	180
Restricted	169	285	454
Overseas	11	19	30
Never licensed	17	17	34
Disqualified	5	15	20
Other (unknown, wrong class)	14	22	36
Total	470	875	1345

Injury crashes involving young drivers Dunedin City (2005 - 2009)

Crash type or contributory cause	Urban roads	Rural roads
Alcohol	106	25
Speed	205	90
Failed to stop/Give way	310	9
Poor handling	230	137
Poor observation	634	84
Poor judgement	222	87
Lost control - straight	88	55
Lost control - bend	199	134
Rear end / obstruction	255	33
Crossing / turning	292	11

Further information about the 916 injury crashes involving young drivers on local roads in Dunedin City 2005 to 2009:

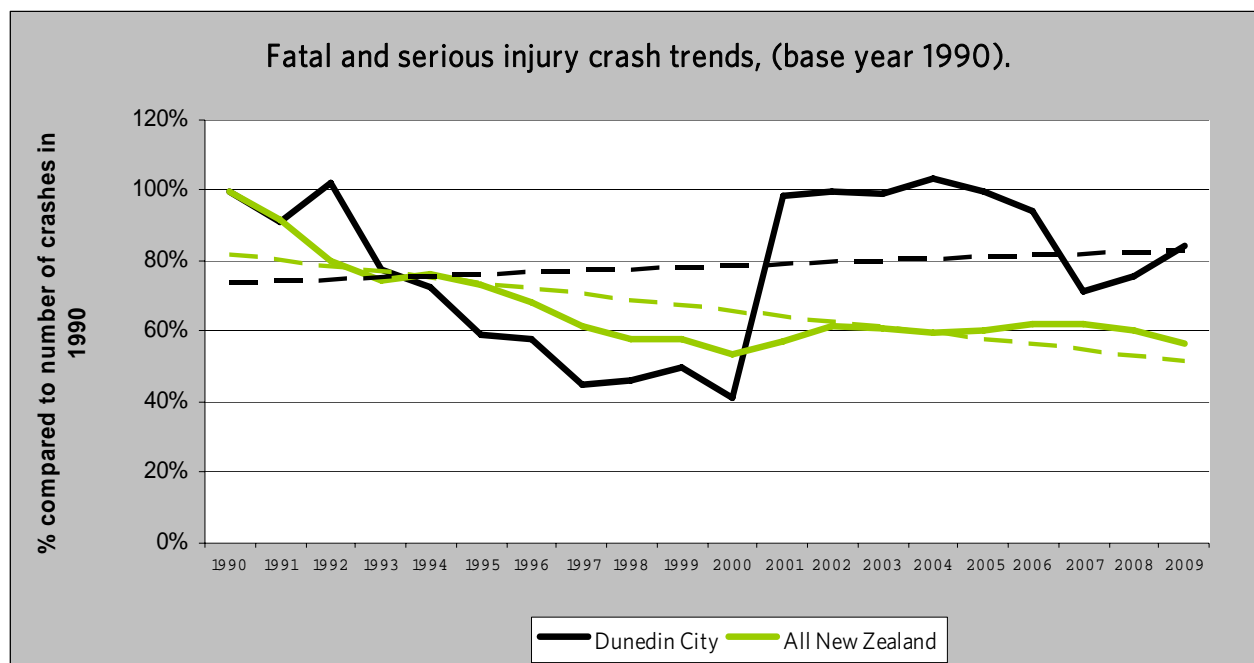
- 5 deaths, 228 serious injuries 1141 minor injuries
- 38 percent were single vehicle crashes
- 85 percent were on urban roads
- 42 percent at intersections
- 38 percent at night
- 32 percent wet or icy roads
- Worst month February, March
- Worst day of week Friday, Saturday
- Worst time 3 pm to 6 pm

Further information about the 272 injury crashes involving young drivers on State highways in Dunedin City 2005 to 2009:

- 4 deaths, 58 serious injuries 381 minor injuries
- 31 percent were single vehicle crashes
- 60 percent were on urban roads
- 42 percent at intersections
- 35 percent at night
- 26 percent on wet or icy roads
- Worst month May
- Worst day of week Thursday
- Worst time 3 am to 6 pm

Looking back - the last two decades.

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



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