

***Vulnerable Road  
Users  
Road Safety Report  
2005 to 2009***



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## Introduction and general information

This road safety report is an example of information supplied by the NZ Transport Agency to assist with implementing the *Safer Journeys* road safety strategy. *Safer Journeys* contains a long-term, multi-agency commitment to achieving a safe road system, which is increasingly free of death and serious injury in New Zealand, and which refuses to accept that any road death is inevitable.

The NZ Transport Agency provides information on road safety to its stakeholders and the public. It also has responsibility for promoting safety and sustainability in land transport, among a variety of other functions.

This report helps identify road safety issues for Vulnerable Road Users (VRUs) by presenting tables or graphs of:

- numbers and trends in reported crashes and casualties
- characteristics and types of crashes and casualties
- factors contributing to crashes
- locations with bad crash records
- characteristics of crashes on council authority roads

Vulnerable Road Users (VRUs) are defined as pedestrians (including persons on skateboards, roller-skates, foot scooters and using mobility aids such as powered wheelchairs), cyclists and motorcyclists (including mopeds).

The information is intended to assist road controlling authorities, the New Zealand Police and others in evaluating the safety performance of the road network in relation to the specific VRU group. Each group of VRUs is compared to the other two groups and does not include direct comparisons to all reported crashes in the country.

Researchers, students, and organisations with an interest in road safety will also find the information useful.

### Source of crash information

This report uses data from the NZ Transport Agency's crash database. This database includes all crashes involving injury and non-injury for which Police reports have been completed and forwarded to the NZ Transport Agency. Mostly five-year data (2005 to 2009) has been used, but 10-year data (2000 to 2009) has been used to analyse trends.

Crash data for each specific VRU group was selected from the database to stand alone in a comparison with the data selected for the other VRU groups defined.

Figures 1.1 to 1.8 are tables specific to crashes for the whole country as there are currently no details available to define distances travelled by the specific VRU groups.

### **Definitions of urban and rural**

Data has been separated for urban and rural (open) roads through this report because each has a distinctly different pattern of crashes. In this report urban roads are defined as all those with a speed limit of 70 km/h or less, however it should be noted that some locations which have been speed limit zoned might be more appropriately defined as rural but are included in urban zones.

### **Definition of statistically significant**

A number of graphs include a comparison between the road controlling authority, all New Zealand and a similar peer group. These graphs can include an indication as to whether the difference is statistically significant. For the purposes of this report statistically significant means that a difference of this size is unlikely to be due to chance. Significance is noted at the 5% level ( $P < 0.05$ ), this means that the observed result would occur by chance in only 1 in 20 similar situations.

### **Road user compliance data**

The Ministry of Transport collects information on road user compliance with traffic law. This information includes speed surveys, occupant restraint use surveys and cycle helmet use surveys. Information about these surveys is available on Ministry of Transport web site.

The appropriate web addresses are as follows:

Speed Surveys                    <http://www.transport.govt.nz/research/SpeedSurveys/>

Safety belts                      <http://www.transport.govt.nz/research/safetybeltstatistics/>

Cycle helmets                    <http://www.transport.govt.nz/research/cyclehelmets2009/>

The information is also distributed quarterly in the Ministry of Transport publication Road safety progress.

The Ministry of Transport also conducts public attitude surveys. These have been undertaken annually since 1994. They evaluate attitudes to road safety issues, primarily alcohol-impaired driving and speed. Surveys are carried out in May and June of each year by trained interviewers who conduct interviews with respondents in their homes. The

sample is chosen to be representative of the New Zealand adult population, and includes men and women aged 15 and over from towns, cities and rural areas throughout New Zealand.

The results of these surveys are available from:

<http://www.transport.govt.nz/research/PublicAttitudestoRoadSafety-Survey/>

### **General explanatory notes**

1. Crash and casualty information in this report generally includes data for both council roads and state highways. Some tables and charts can separate this information, however figures 8.1–8.26 provide information for local council roads only.
2. Crash and casualty rates are based on 2009 populations estimates updated from the 2006 census, traffic flows from the year 2009, and the average of five year crash data (2005–2009).
3. Traffic flows are based on Road Asset Maintenance and Management (RAMM) data from December 2009. As different road controlling authorities update flow data in RAMM at different times some data will be more up to date than other data, hence caution should be exercised when comparing traffic flow based crash rates in one authority with those of other authorities particularly as the traffic flow data (VKT) used in the calculations can not be considered definitive. Comparisons should be considered as indicative only. As no traffic flow data is available for specific VRUs crash rates based on VKT are not possible at this time.
4. With four to five categories of road for each council authority, some categories will only have short lengths of road. This may cause significant variation in the calculated crash and casualty rates.
5. The crash numbers include all those within the road controlling authority. The crash numbers used in the crash rate section can, however, vary slightly from the remainder of the document as only 'on road' crashes can be used. These are crashes on roads that have traffic volume information recorded. Crashes that occurred in car parks, reserves, beaches etc. are excluded.



6. The severity of a crash is determined as the most severely injured casualty in the crash. Injury severity is classified as fatal, serious, or minor as follows:
  - Fatal:** Injuries that result in death within 30 days of a crash.
  - Serious:** Fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock necessitating medical treatment, and any injury involving removal to and detention in hospital.
  - Minor:** Injuries which are not serious but which require first aid, or cause discomfort or pain to the person injured, eg sprains and bruises.
  
7. Figures 3.1 and 3.2 indicate other road users who were injured in crashes that involved the "principal" road user, ie for pedestrians the crash may have resulted in the pedestrian being injured secondary to a crash between two vehicles.
  
8. Ethnicity of road users involved in crashes can now be recorded on traffic crash reports, although some reports may not include this data. Figures 3.25 and 3.26 shows the ethnicity of casualties, where known. Ethnicity is divided into five different groups. Only data for 2005 to 2009 is available. The graph includes all casualties irrespective of culpability.

NOTE: Ethnicity data should be treated with caution as the data can be considered subjective and incomplete.
  
9. For the licence status grouping in Figures 3.27 and 3.28 the 'no/wrong licence' group includes drivers who have never held a licence or have an expired or wrong class licence. This graph includes all drivers irrespective of injury or culpability.
  
10. See appendix for detailed descriptions of:
  - crash movement types and crash movement groupings (for Figures 4.1–4.4)
  - grouping of factors contributing to crashes (for Figures 5.1–5.14)
  
11. Blackspot sites for the specific road users listed in Figures 9.1 are listed by the total number of crashes at the sites in the period 2005 to 2009 inclusive. Site were defined by selecting both injury and non-injury crashes that involved the specific road users and then grouping them based on an urban site radius of 30 metres and a rural site radius of 250 metres. Only sites with 5 or more reported crashes have been listed.

12. Figures 9.2 are roads/routes within a local authority which have large numbers of the specific road users involved in crashes on them. The numbers are determined by aggregating the sites as defined by the first named road of the sites (down to sites with only 1 crash) in the list that gives the blackspots in Figures 9.1. No account is taken of the length of the road or whether the named road is contiguous within the named authority. Roads/routes are listed for those with more than 5 reported crashes in the period 2005 to 2009.

# *Crash Rates and Costs*



## National crash reporting rates

The ratio of 'reported serious injuries' can be assessed by comparing seriously injured casualty numbers from Police crash reports to hospital admissions, given that a serious injury is generally one requiring hospital attention.

Figure 1.1 below indicates the serious injury reporting rate for each region.

**Figure 1.1 Reporting rate serious injuries to hospital admissions**

Region	2005	2006	2007	2008	2009
Northland	30%	28%	34%	38%	27%
Auckland	17%	20%	16%	18%	18%
Waikato	40%	38%	50%	47%	40%
Bay of Plenty	32%	37%	38%	29%	27%
Gisborne	32%	26%	31%	28%	27%
Hawkes Bay	80%	75%	59%	68%	42%
Taranaki	55%	65%	79%	41%	36%
Manawatu-Wanganui	38%	34%	35%	36%	31%
Wellington	68%	61%	74%	55%	48%
Nelson-Marlborough	44%	52%	54%	50%	39%
West Coast	53%	55%	59%	53%	54%
Canterbury	47%	42%	49%	45%	43%
Otago	99%	85%	77%	69%	39%
Southland	78%	103%	73%	53%	39%
<b>New Zealand</b>	<b>36%</b>	<b>35%</b>	<b>37%</b>	<b>35%</b>	<b>33%</b>

This is the ratio of the number of persons with serious injuries in reported crashes divided by the number of persons admitted to hospital with serious injuries.

These variations in reporting rates need to be considered when viewing the trends in crashes and casualties shown in this report.

**Note: These values should be considered indicative only.**

**Figure 1.2 Crashes per 100 million vehicle kilometres travelled**

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
VRUs - Cyclists	n/a	n/a	n/a	n/a
VRUs - Pedestrians	n/a	n/a	n/a	n/a
VRUs - Motorcyclists	n/a	n/a	n/a	n/a

**Figure 1.3 Casualties per 100 million vehicle kilometres travelled**

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
VRUs - Cyclists	n/a	n/a	n/a	n/a
VRUs - Pedestrians	n/a	n/a	n/a	n/a
VRUs - Motorcyclists	n/a	n/a	n/a	n/a

**Figure 1.4 Peer group crash and casualty rates**
**Regions**

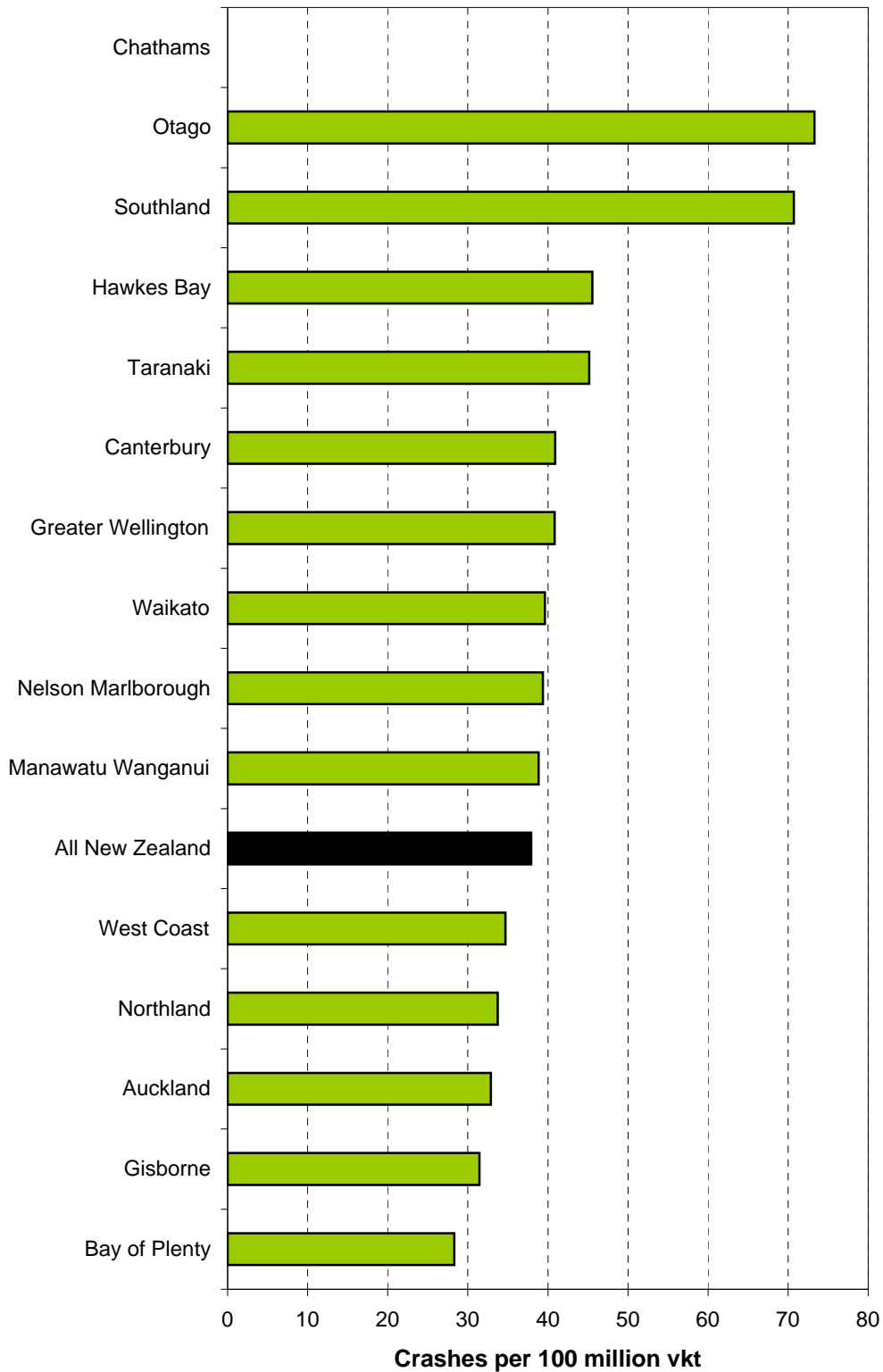
Region name	Crashes per					Casualties per					2009 Population	% of rural crashes
	10,000 Population (5 year average)	100 million vehicle kilometres travelled				10,000 Population (5 year average)	100 million vehicle kilometres travelled					
		Council roads		State Highways			Council roads		State Highways			
		Urban	Rural	Urban	Rural		Urban	Rural	Urban	Rural		
Auckland	23	33	29	40	14	29	42	41	53	19	1454200	28
Bay of Plenty	16	28	29	17	17	22	35	43	24	27	371020	48
Gisborne	27	31	21	28	28	38	41	31	38	44	46200	47
Hawkes Bay	32	46	30	37	24	44	57	45	48	38	153270	47
Manawatu Wanganui	27	39	25	31	18	38	47	37	42	28	230000	54
Nelson Marlborough	25	39	23	22	20	33	47	35	27	29	136800	52
Southland	91	71	32	57	24	138	102	50	77	39	45330	50
Greater Wellington	27	41	37	32	14	34	49	50	43	20	386480	27
Canterbury	51	41	22	24	14	67	51	31	31	21	278450	30
Chathams	1109	n/a	n/a	n/a	n/a	91	n/a	n/a	n/a	n/a	640	n/a
Northland	26	34	34	20	22	39	43	49	32	39	185900	71
Otago	47	73	43	47	21	69	103	65	65	33	186150	45
Taranaki	28	45	31	30	22	39	58	45	38	33	108240	53
Waikato	32	40	29	22	19	45	50	39	31	30	384870	58
West Coast	38	35	24	20	22	55	48	34	30	33	32590	77
<b>All New Zealand</b>	<b>26</b>	<b>38</b>	<b>29</b>	<b>28</b>	<b>18</b>	<b>36</b>	<b>48</b>	<b>42</b>	<b>38</b>	<b>26</b>	<b>4331000</b>	<b>41</b>

N/A : Denotes that data for vehicle kilometres travelled (VKT) is not available or inappropriate for some categories.

Crashes and casualties per 100 million VKT are based on five years of reported injury on-road crash data (2005-2009) and December 2009 VKT estimates.

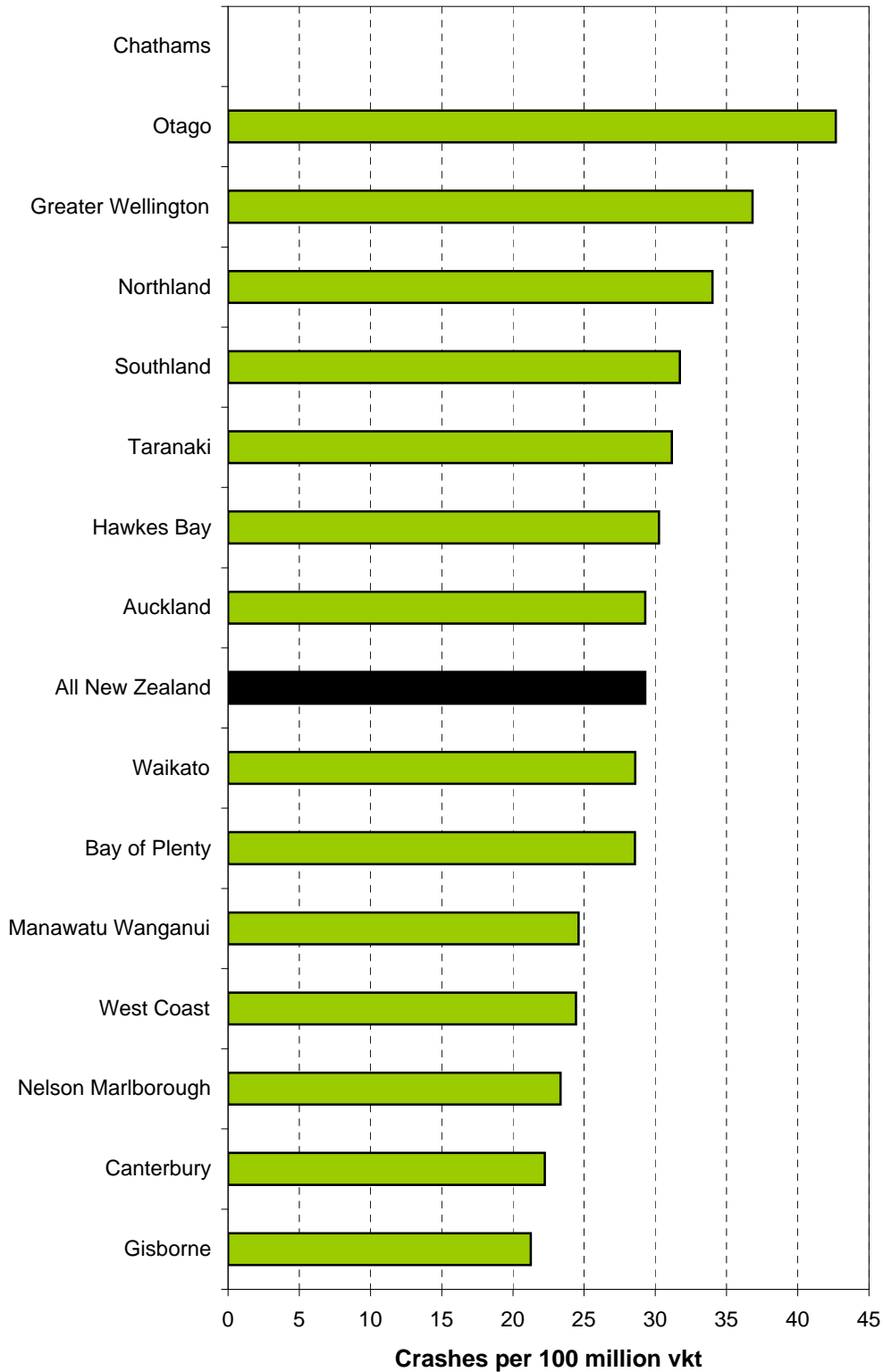
Crashes and casualties per 10,000 population are based on five year average crash data (2005-2009) and Statistics NZ 2009 population estimates.

**Figure 1.5 Crashes per 100 million vehicle-kilometres travelled - urban council roads**

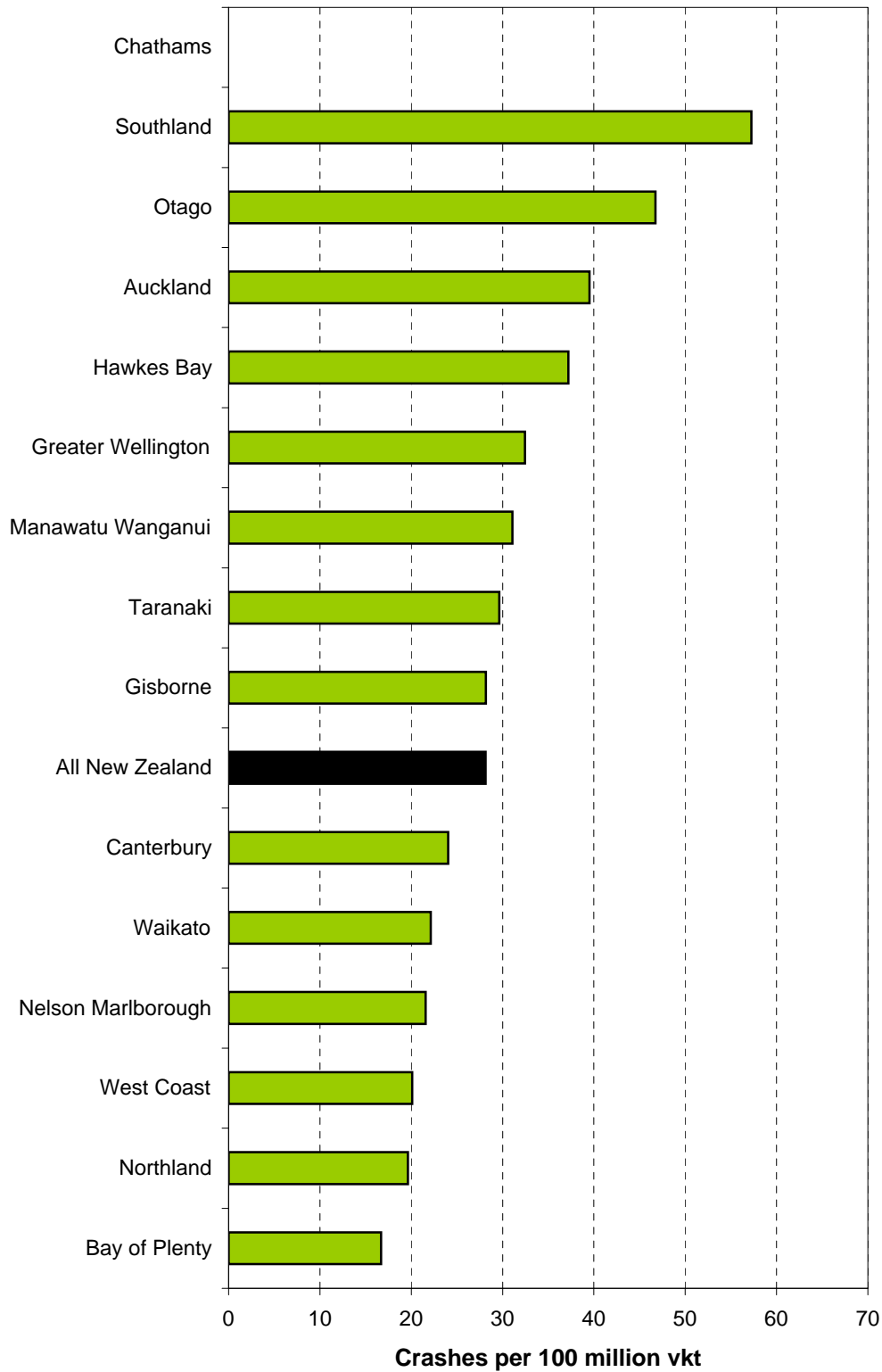




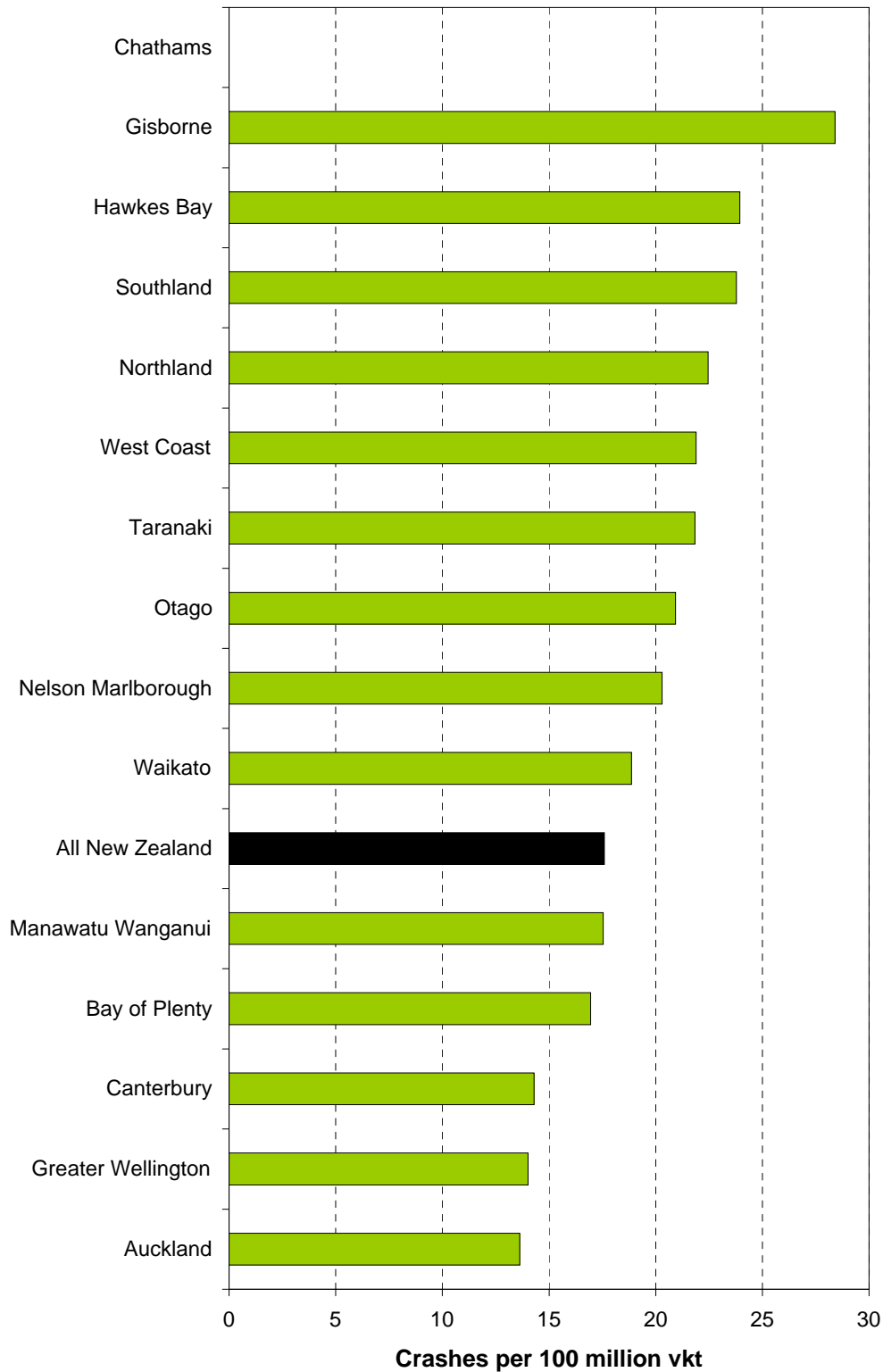
**Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural council roads**



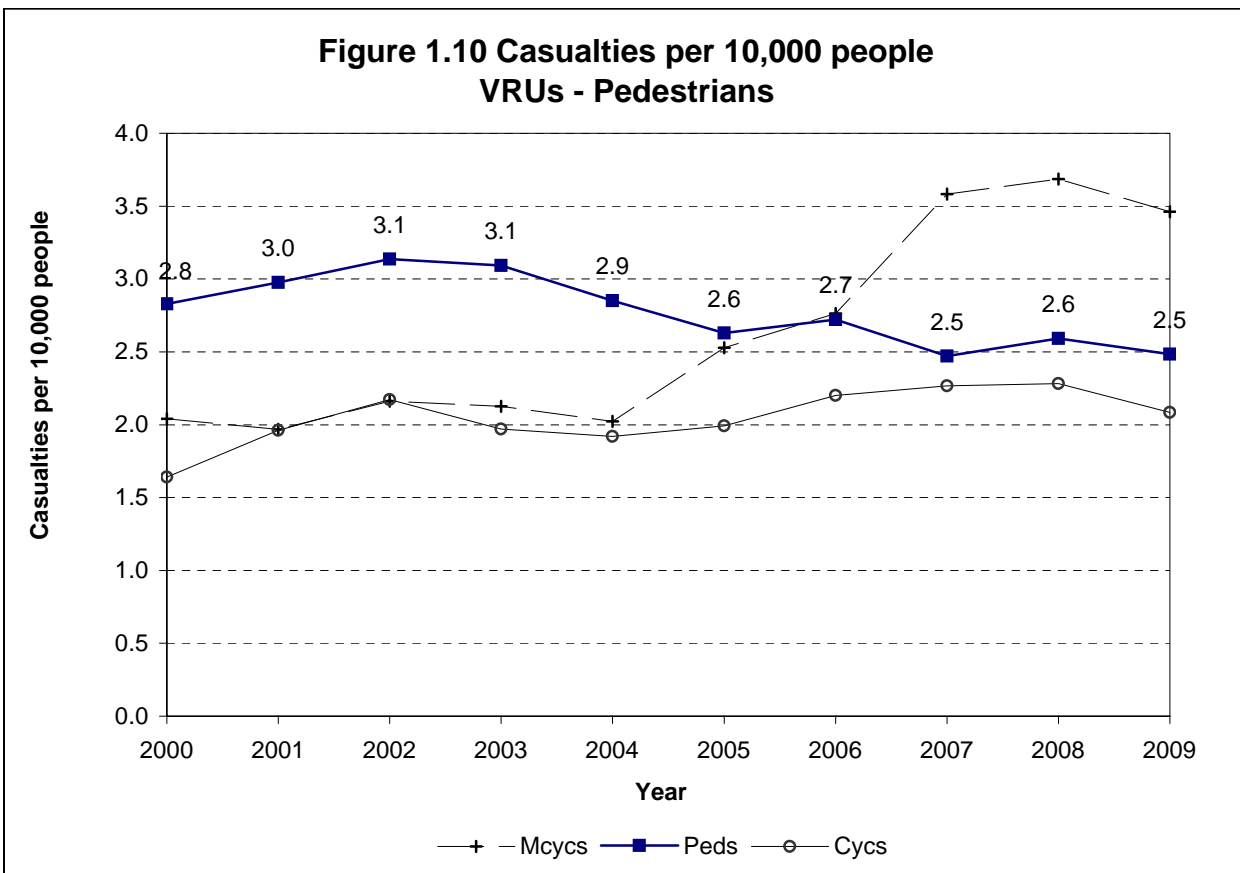
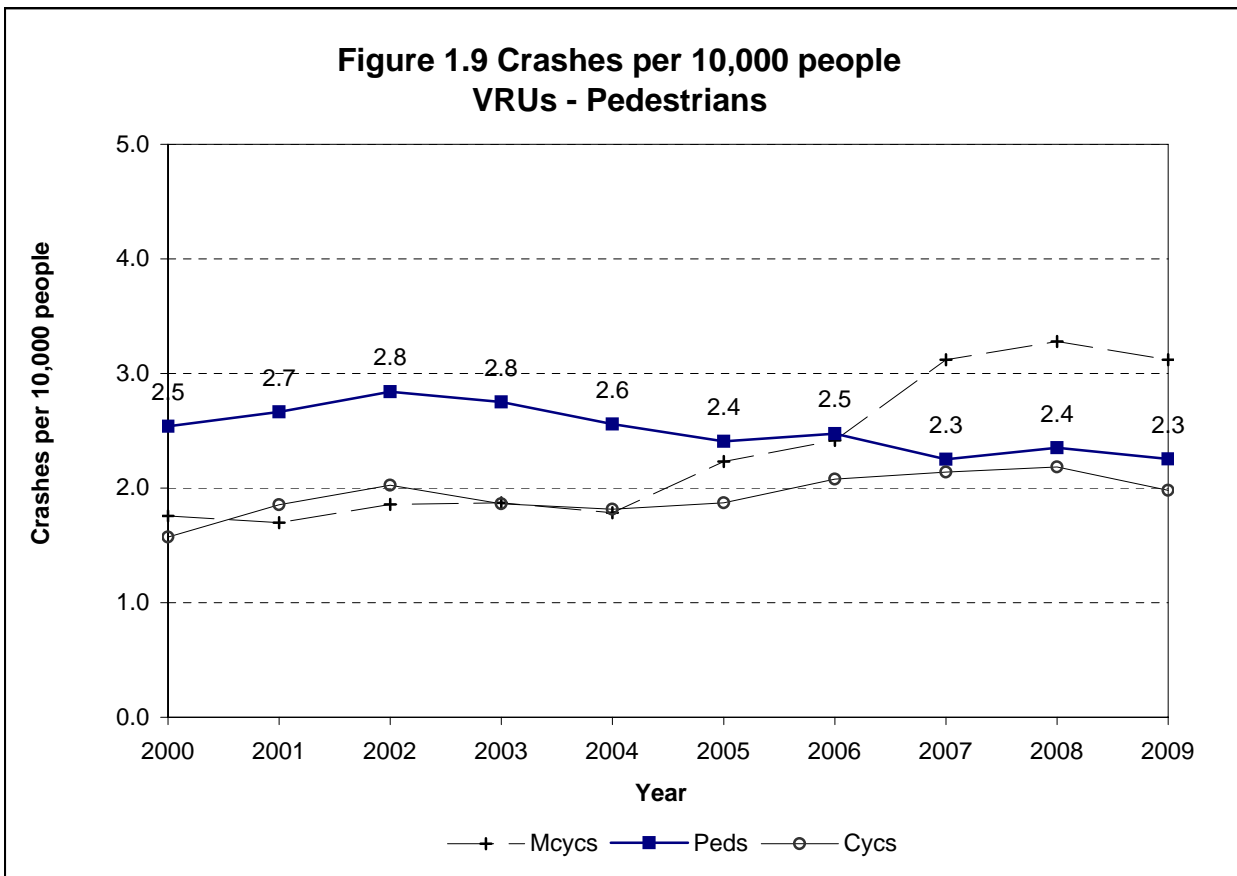
**Figure 1.7 Crashes per 100 million vehicle kilometres travelled - urban state highways**



**Figure 1.8 Crashes per 100 million vehicle-kilometres travelled  
- rural state highways**



# Part 1: Pedestrians



**Figure 1.11 Social cost of crashes in VRUs - Pedestrians in 2009**

		VRUs - Pedestrians	All VRUs
Council roads	urban	\$259.40	\$625.49
	rural	\$23.93	\$215.80
State Highways	urban	\$40.17	\$111.07
	rural	\$34.42	\$232.27
<b>Total</b>		<b>\$357.92</b>	<b>\$1,184.63</b>

Note: Crash costs are in \$ millions

The social costs of a road crash and the associated injuries include a number of different elements:

- Loss of life and life quality
- Loss of output due to temporary incapacitation
- Medical costs
- Legal costs
- Property damage costs

The average value of a loss of life due to a road crash is estimated by the amount of money the New Zealand population would be willing to pay for a safety improvement that would result in the expected avoidance of one premature death. This is the willingness to pay based value of statistical life or VOSL. The VOSL was established at \$2 million in 1991. This has been indexed to the average hourly earnings (ordinary time) to express the value in current dollars. The updated VOSL is \$3.5 million (in June 2009 dollars). Based on several international and New Zealand studies on VOSL, the average loss of life quality for permanent impairments due to a serious and a minor injury were estimated to be 10% and 0.4% of the VOSL respectively.

Crash rates can vary due to reporting rates. These are adjusted on a regional basis in this report by comparing with hospitalisation rates.

The other social cost components are estimated based on a number of studies conducted during the early to mid-1990s and are updated for price changes by indexing to an appropriate price index.

For a detail discussion on this, please refer to 'The social cost of road crashes and injuries: June 2009 update', available at the Ministry of Transport's website:

<http://www.transport.govt.nz/assets/NewPDFs/NewFolder/Social-Cost-June-2009-update-final.pdf>

The average social cost per reported crash (in June 2009 dollars) are estimated at:

Rural fatal crash	\$4,260,000
Rural serious crash	\$820,000
Rural minor crash	\$91,000
Urban fatal crash	\$3,775,000
Urban serious crash	\$699,000
Urban minor crash	\$82,000

These values include an allowance for non-reported injury crashes, and the totals in Fig. 1.11 also include an allowance for non-injury crashes.



# *Crash Counts*





**Figure 2.1: Crash numbers and severity 2005 to 2009 - whole Country**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	32	48	47	37	33	197	4%	3%
Serious crashes	260	281	244	274	241	1300	26%	27%
Minor crashes	703	707	661	693	699	3463	70%	70%
Total injury crashes	995	1036	952	1004	973	4960	100%	100%
Non-injury crashes	134	112	110	111	101	568		

**Figure 2.2: Crash numbers and severity 2005 to 2009 - urban roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	25	31	33	26	23	138	3%	2%
Serious crashes	236	247	220	257	222	1182	25%	24%
Minor crashes	680	687	643	670	678	3358	72%	74%
Total injury crashes	941	965	896	953	923	4678	100%	100%
Non-injury crashes	129	105	106	108	101	549		

**Figure 2.3: Crash numbers and severity 2005 to 2009 - rural roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	7	17	14	11	10	59	21%	9%
Serious crashes	24	34	24	17	19	118	42%	42%
Minor crashes	23	20	18	23	21	105	37%	49%
Total injury crashes	54	71	56	51	50	282	100%	100%
Non-injury crashes	5	7	4	3	0	19		

**Figure 2.4: Casualty numbers and severity 2005 to 2009 - whole Country**

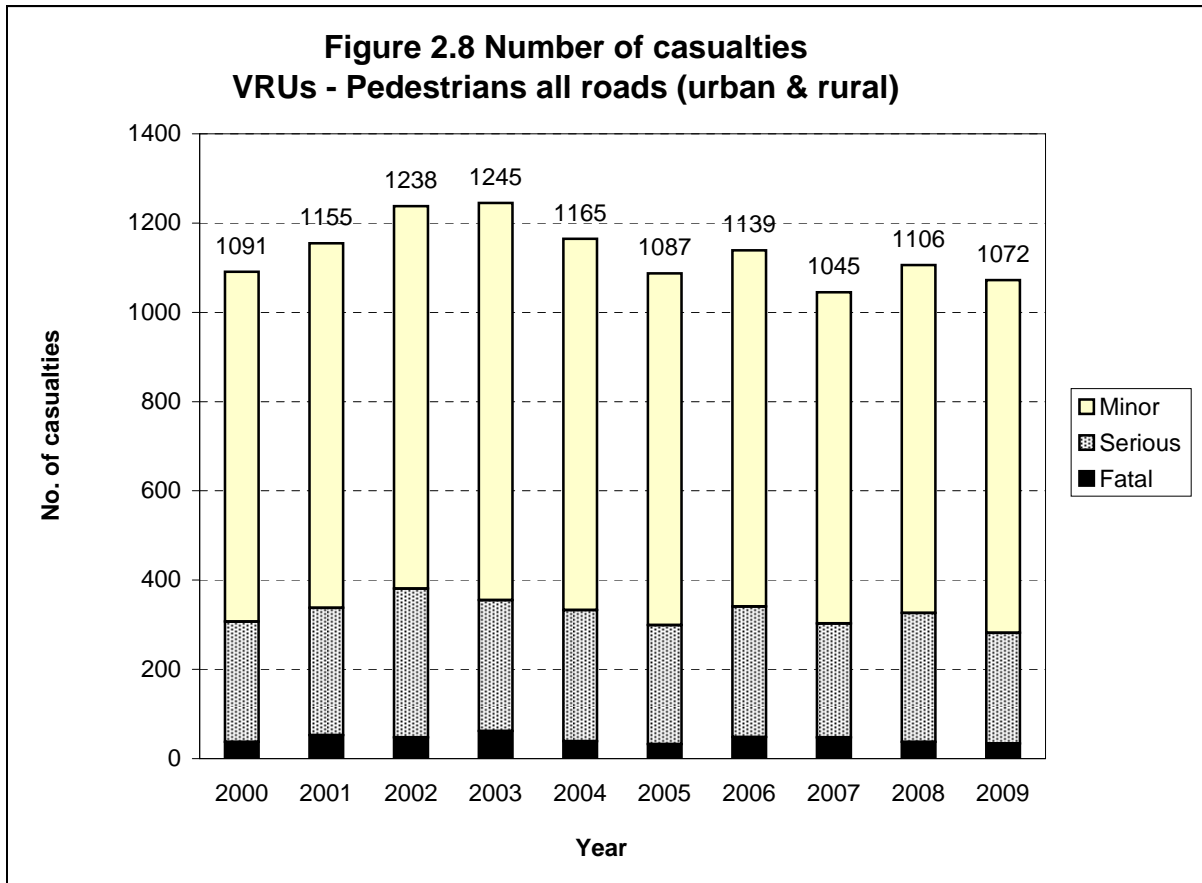
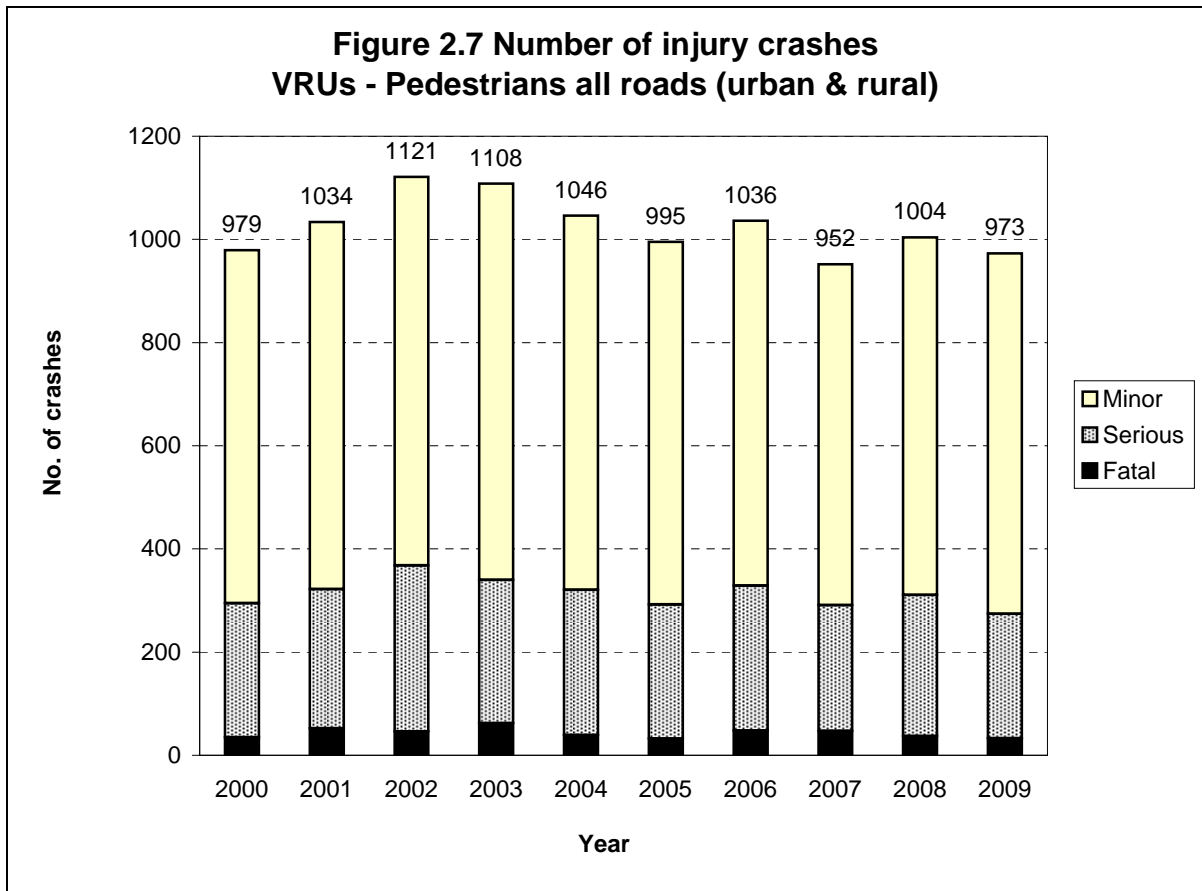
	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	32	48	47	37	34	198	4%	3%
Serious casualties	267	293	256	289	248	1353	25%	26%
Minor casualties	788	798	742	780	790	3898	72%	71%
Total casualties	1087	1139	1045	1106	1072	5449	100%	100%

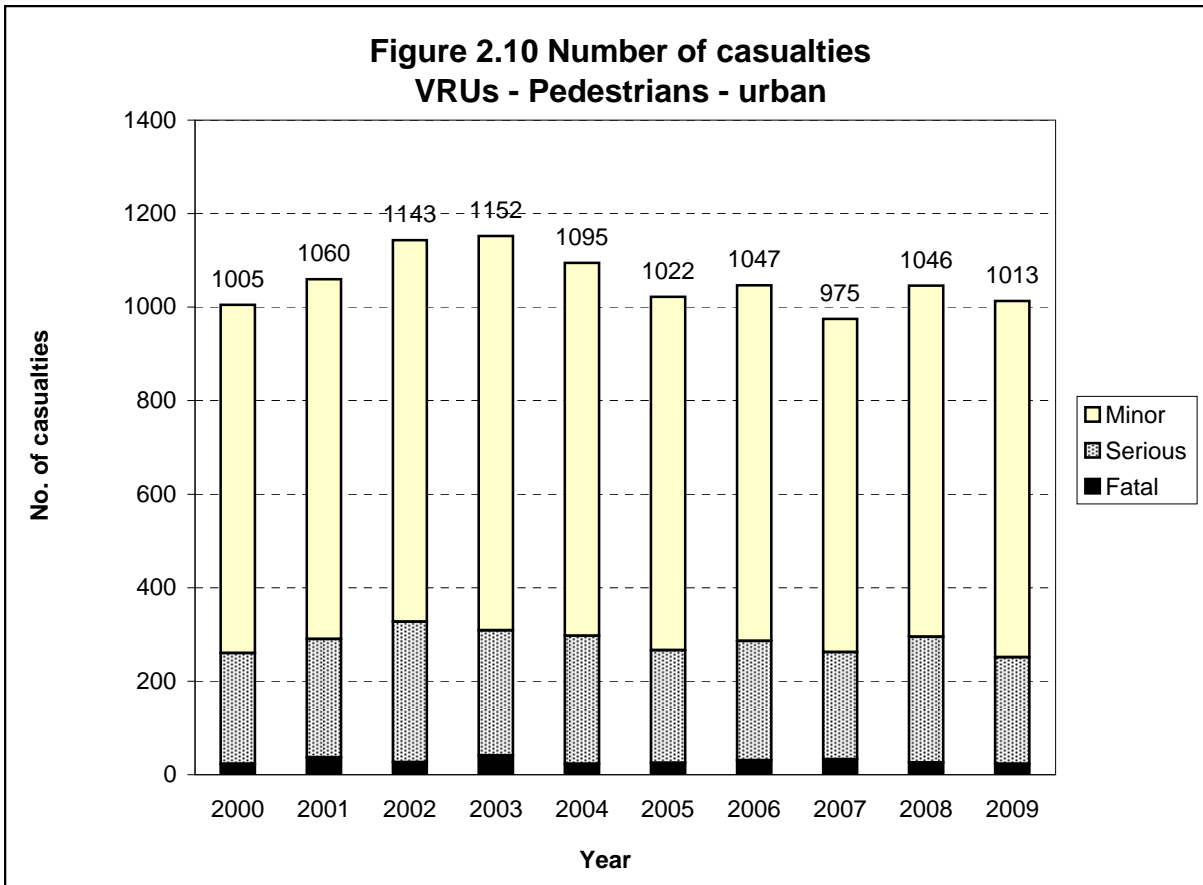
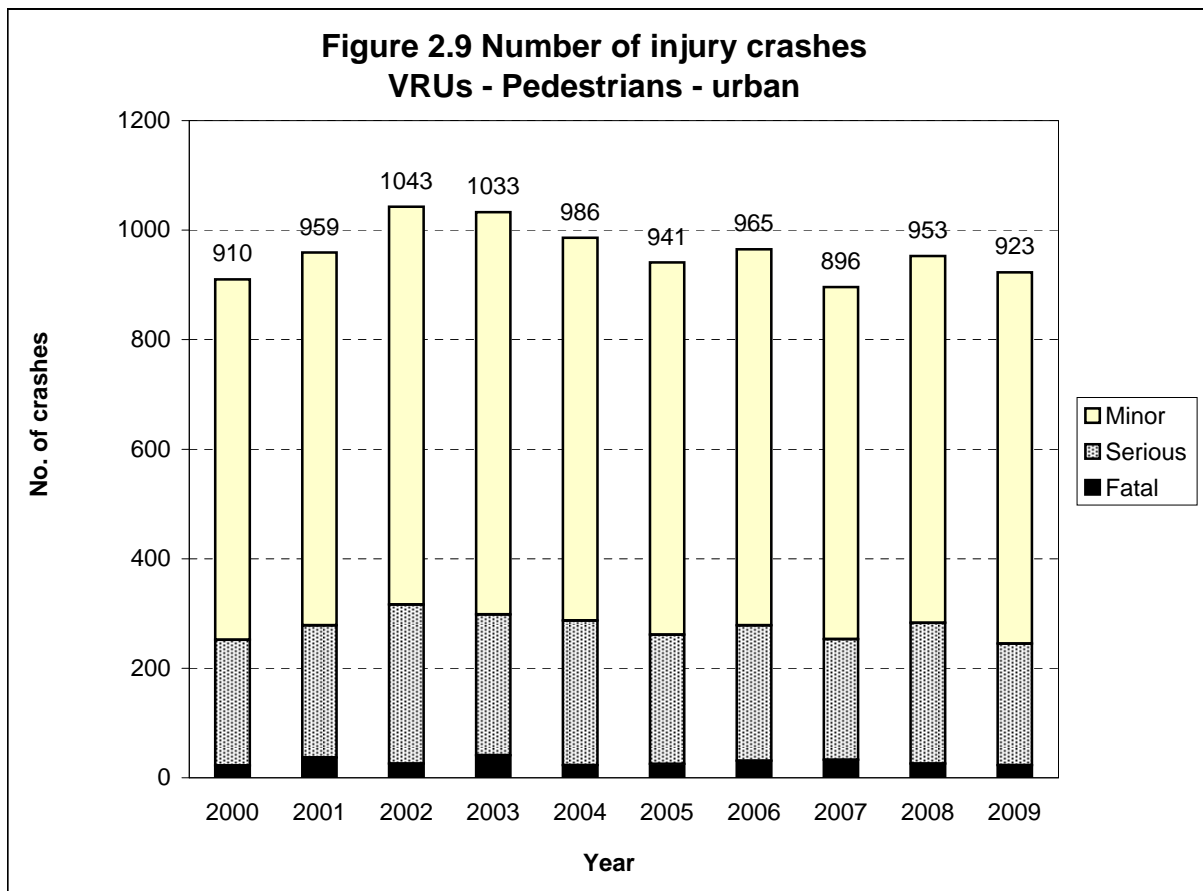
**Figure 2.5: Casualty numbers and severity 2005 to 2009 - urban roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	25	31	33	26	23	138	3%	2%
Serious casualties	241	255	229	269	228	1222	24%	23%
Minor casualties	756	761	713	751	762	3743	73%	76%
Total casualties	1022	1047	975	1046	1013	5103	100%	100%

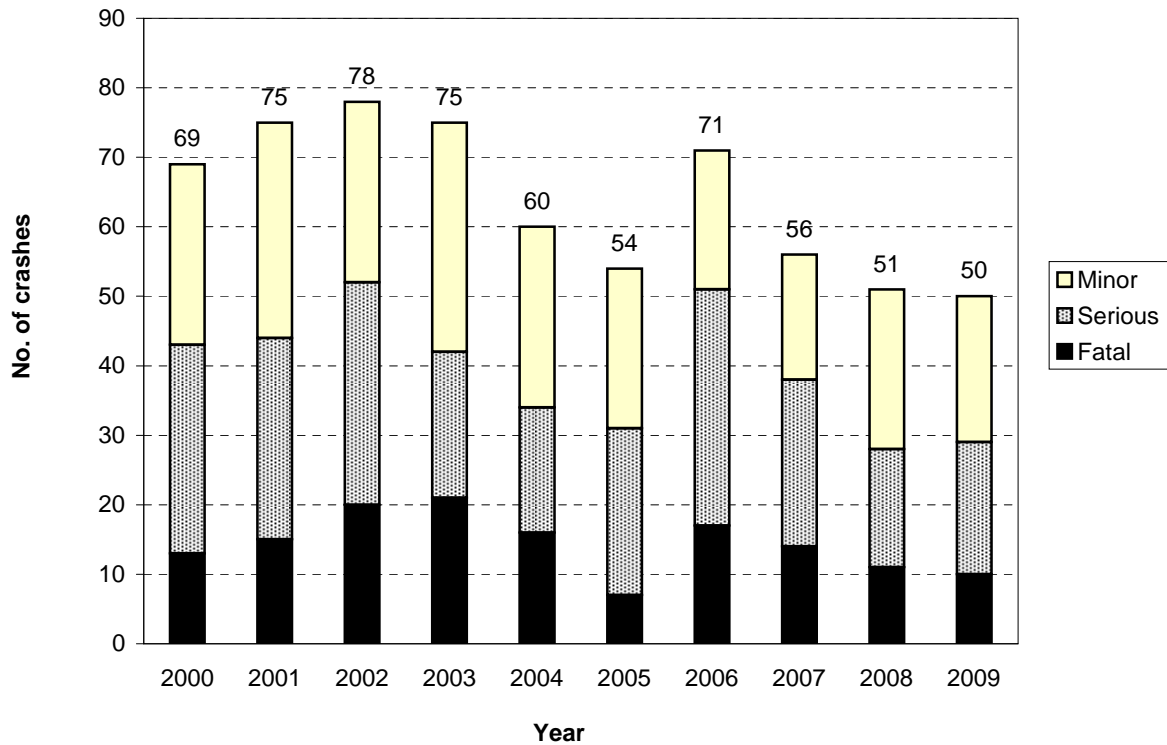
**Figure 2.6: Casualty numbers and severity 2005 to 2009 - rural roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	7	17	14	11	11	60	17%	8%
Serious casualties	26	38	27	20	20	131	38%	39%
Minor casualties	32	37	29	29	28	155	45%	53%
Total casualties	65	92	70	60	59	346	100%	100%

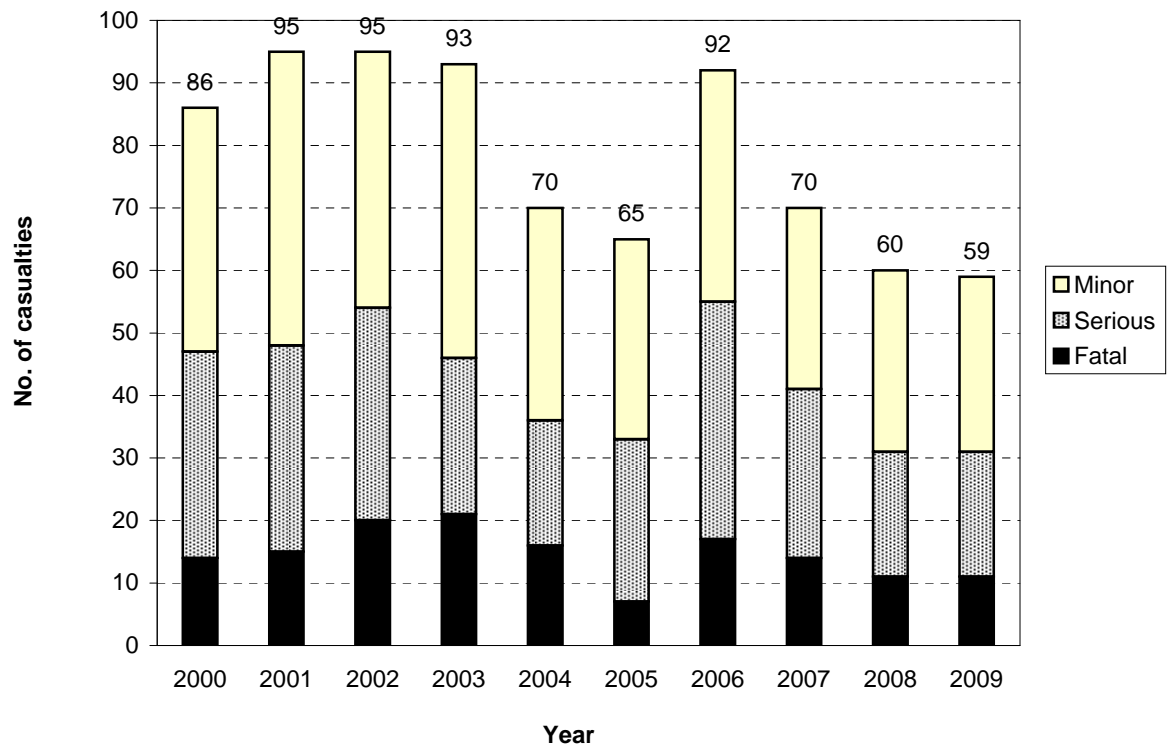


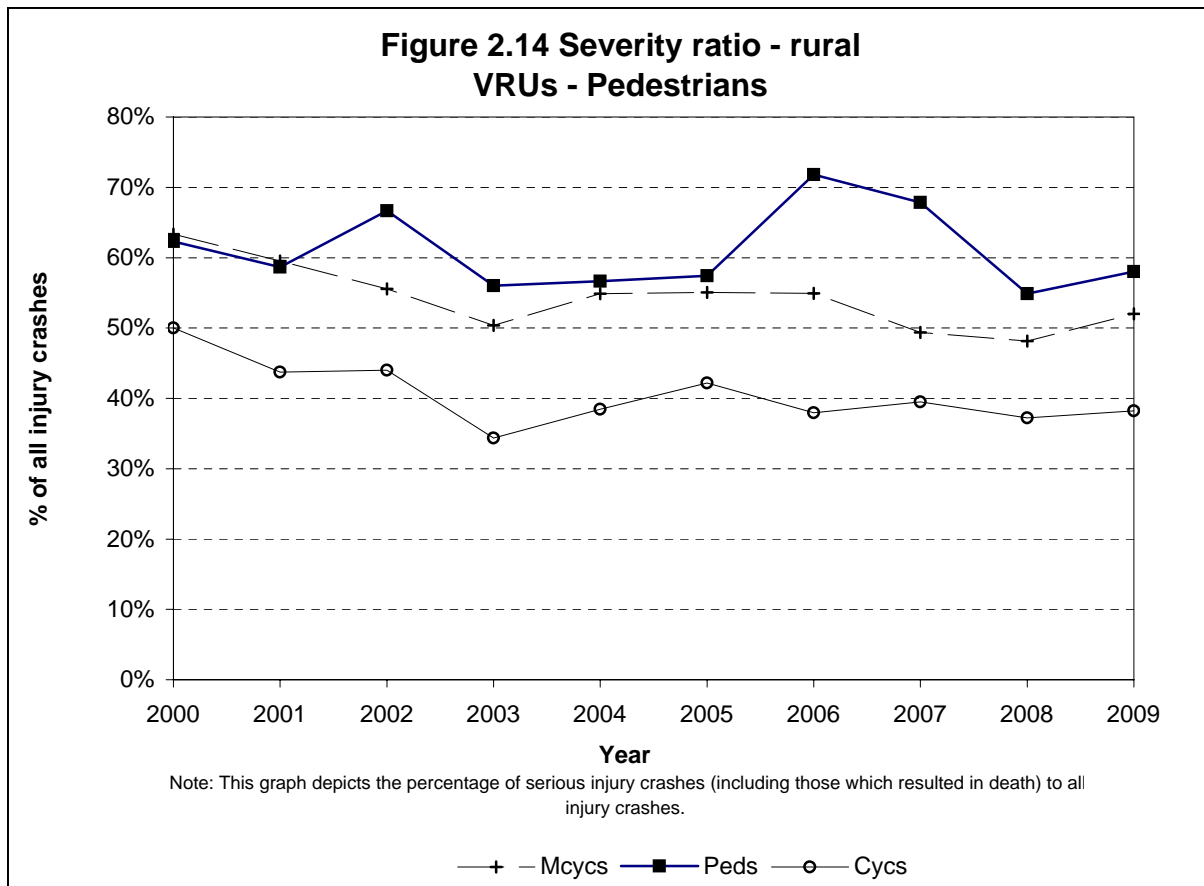
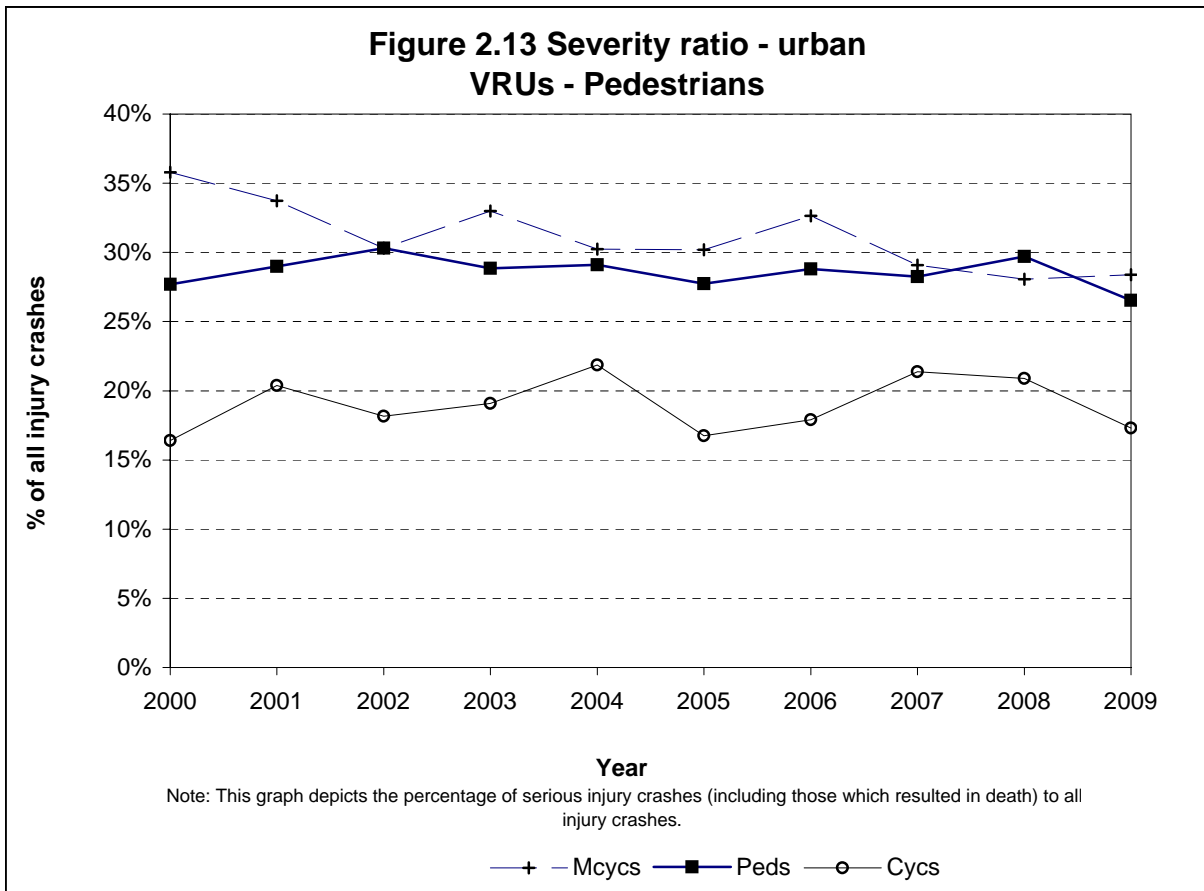


**Figure 2.11 Number of injury crashes**  
VRUs - Pedestrians - rural



**Figure 2.12 Number of casualties**  
VRUs - Pedestrians - rural





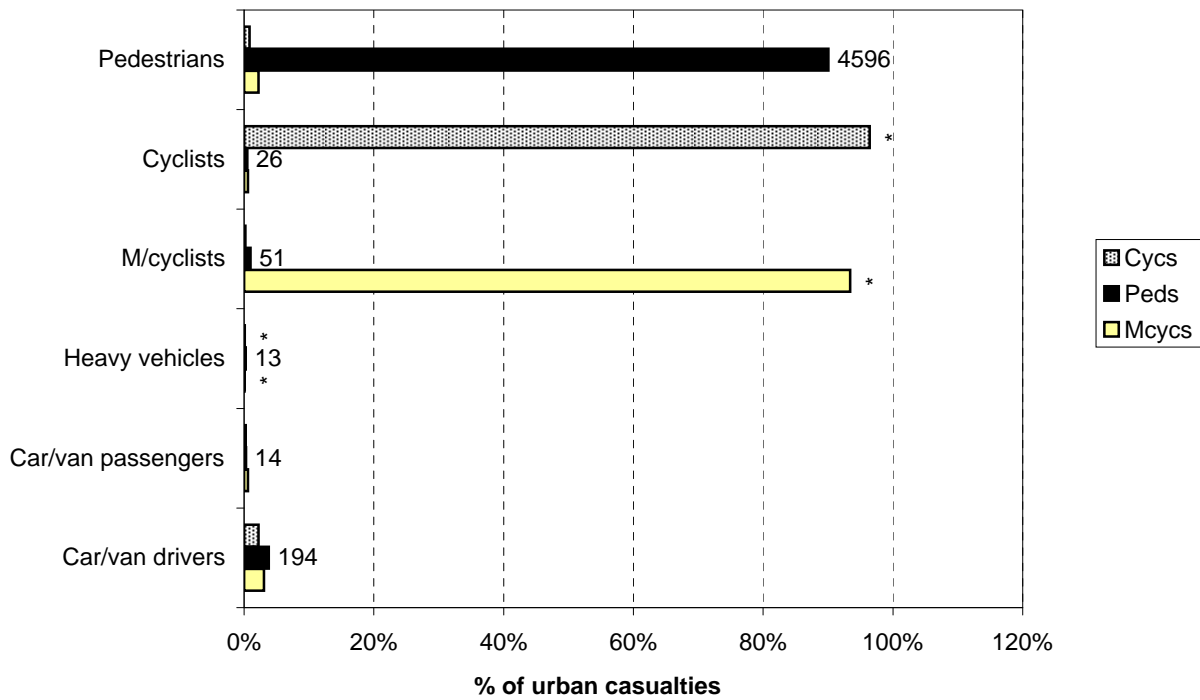


# *Road User Statistics*



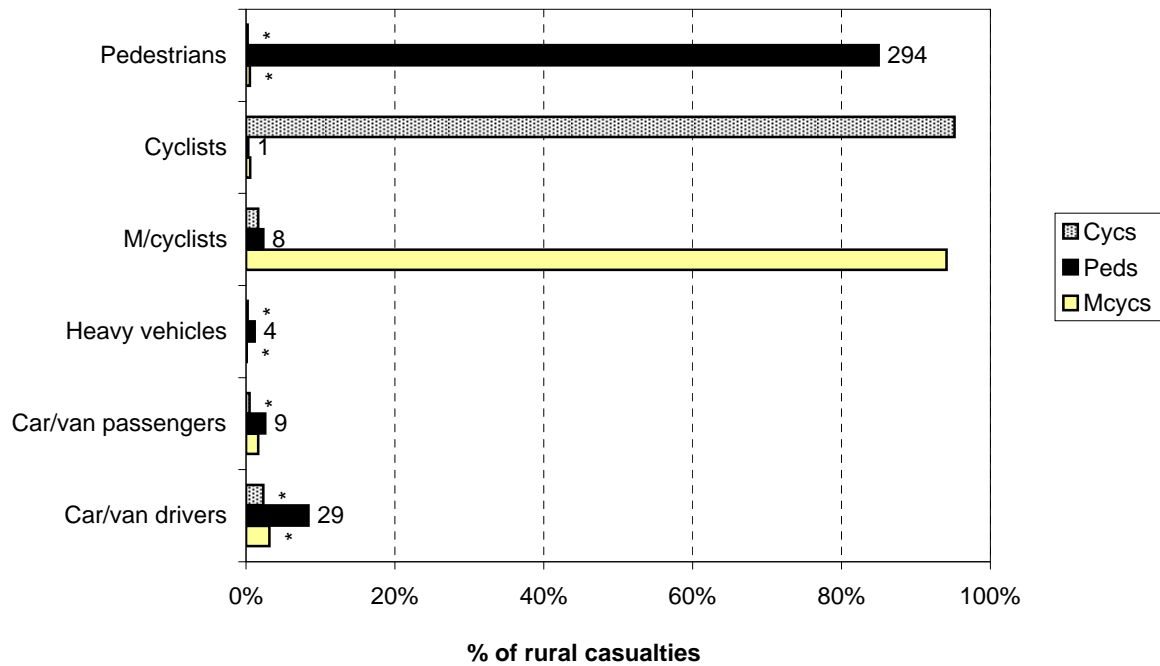


**Figure 3.1 Road user casualties - urban  
VRUs - Pedestrians (2005-2009)**



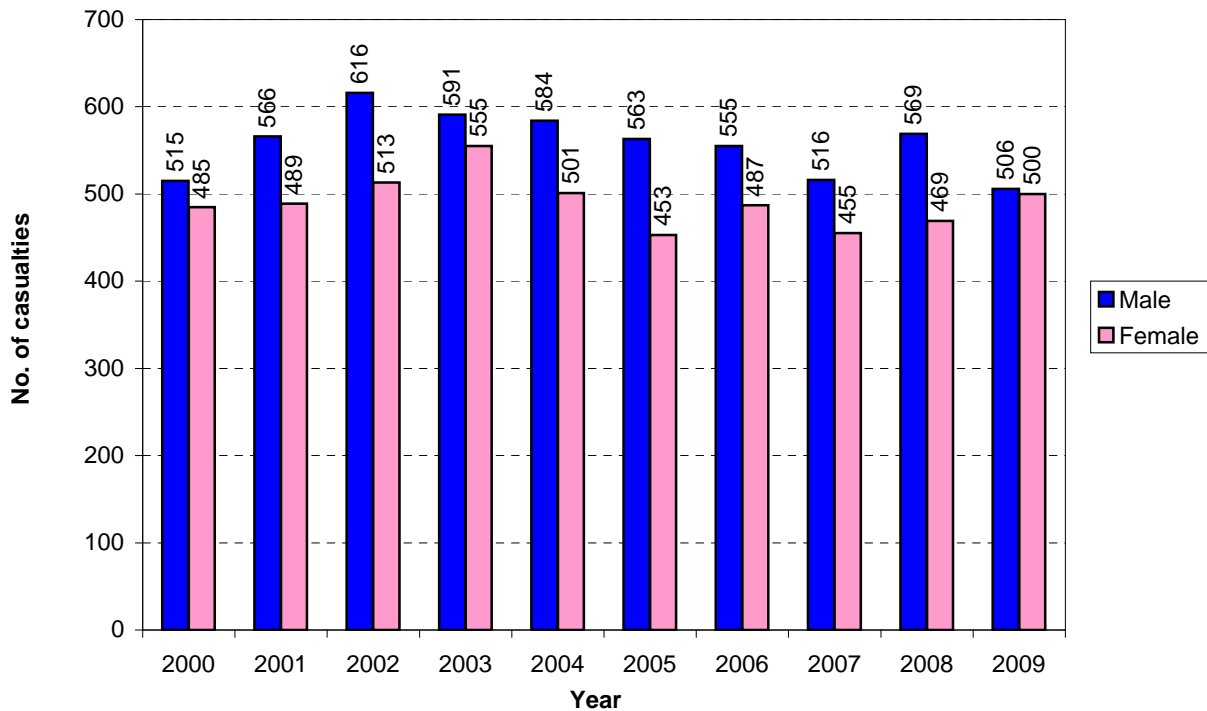
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.2 Road user casualties - rural  
VRUs - Pedestrians (2005-2009)**



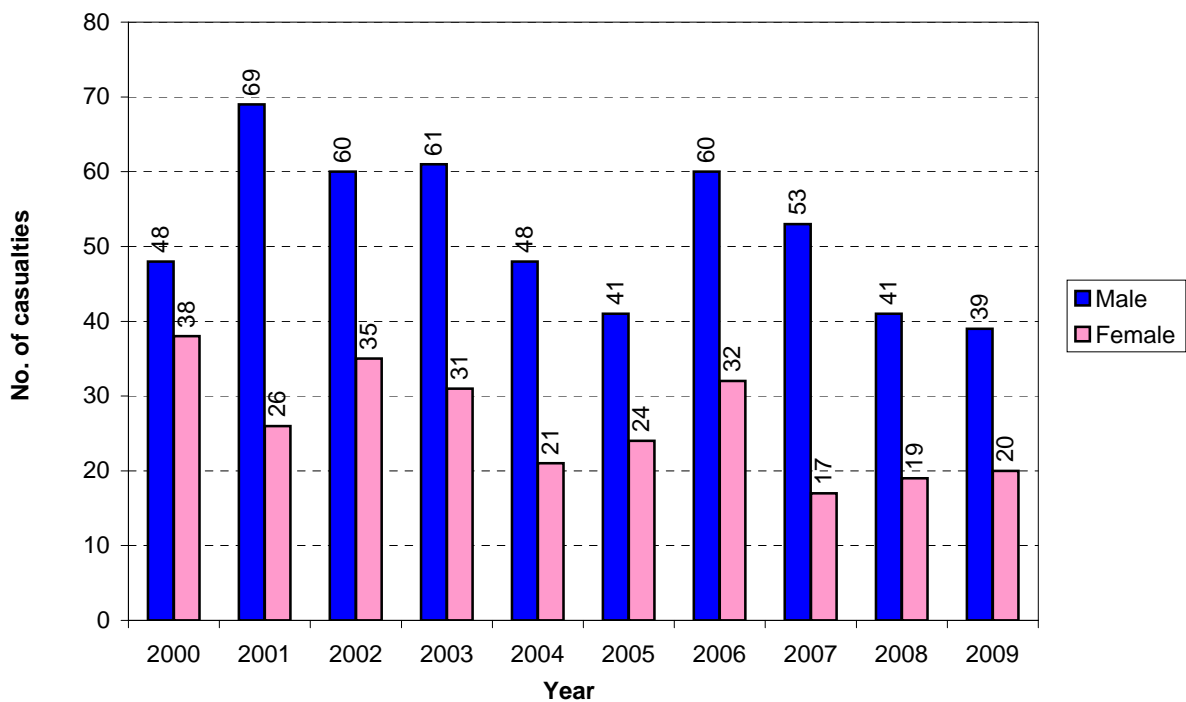
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.3 Male/female casualties - urban  
VRUs - Pedestrians**



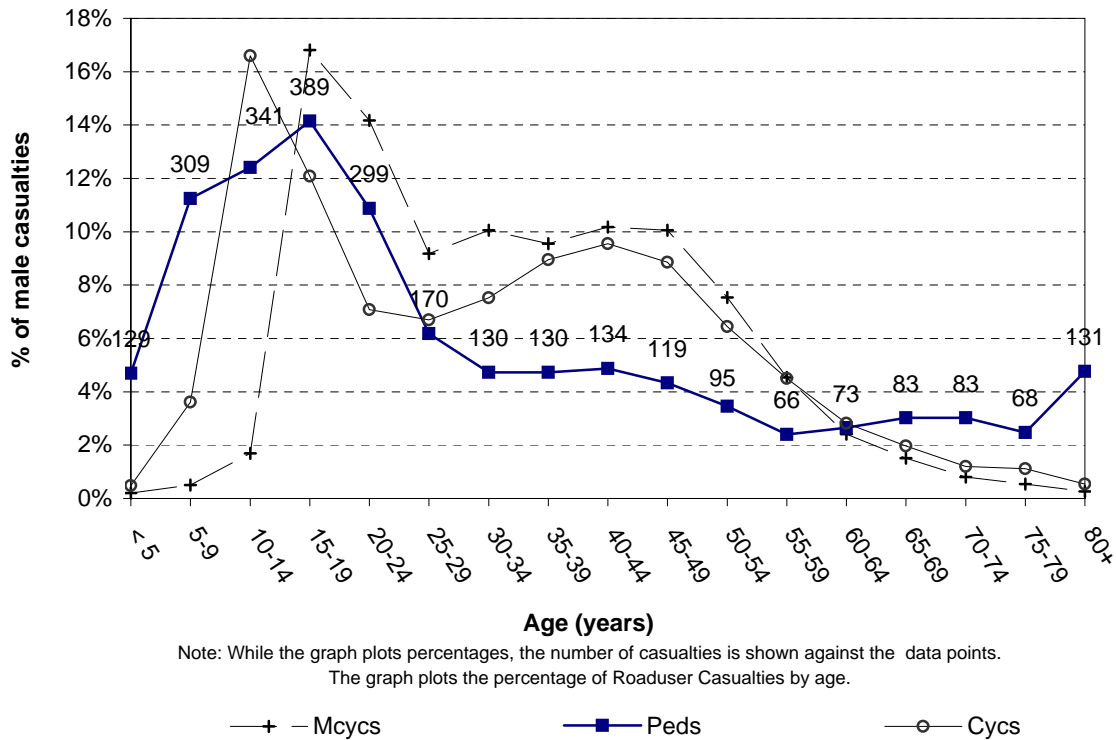
Note: This graph shows the number of male and female roadusers injured

**Figure 3.4 Male/female casualties - rural  
VRUs - Pedestrians**

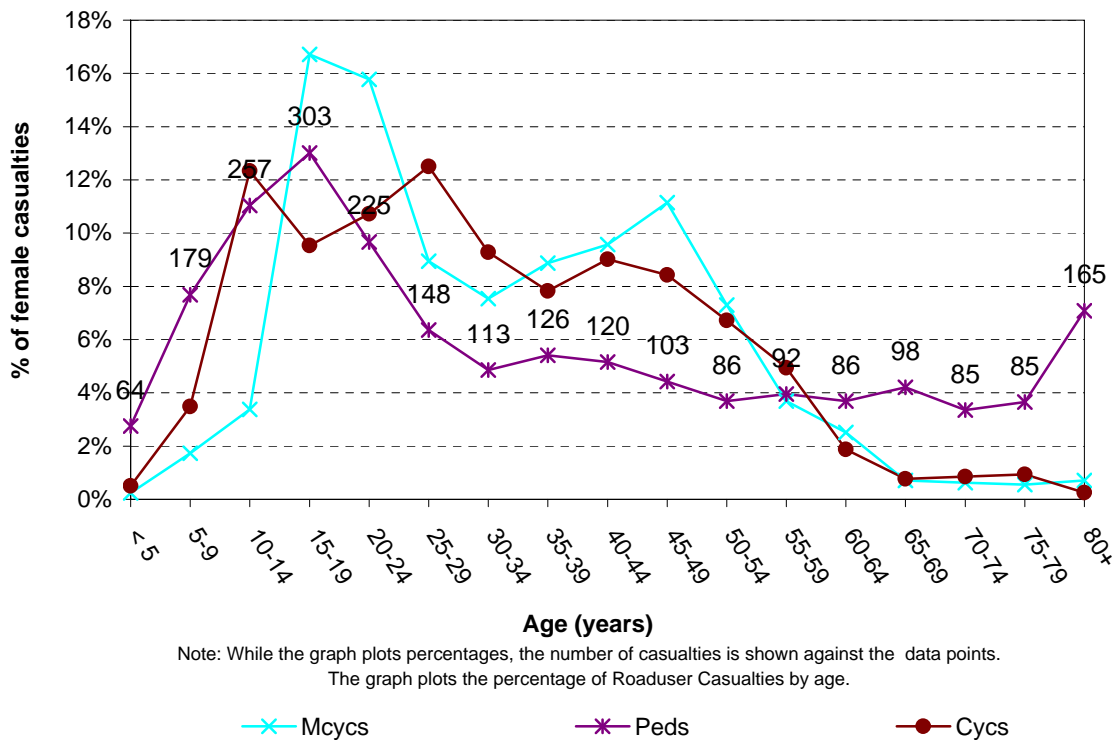


Note: This graph shows the number of male and female roadusers injured

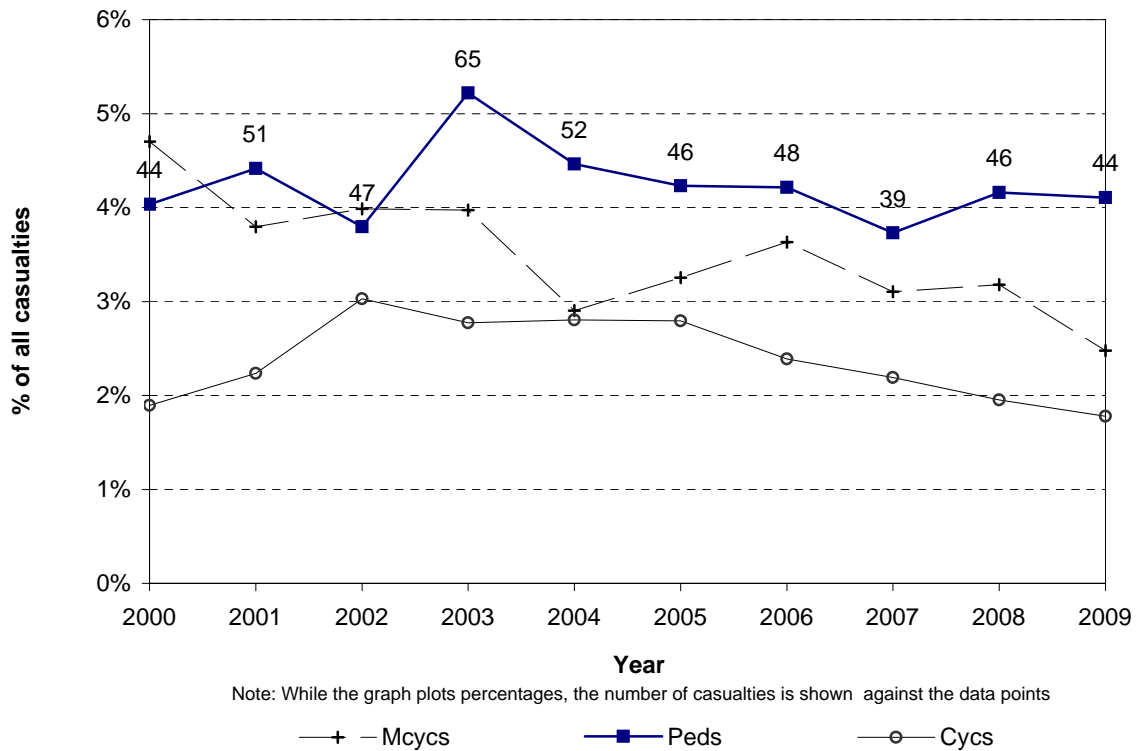
**Figure 3.5 Male casualties by age  
VRUs - Pedestrians (2005-2009)**



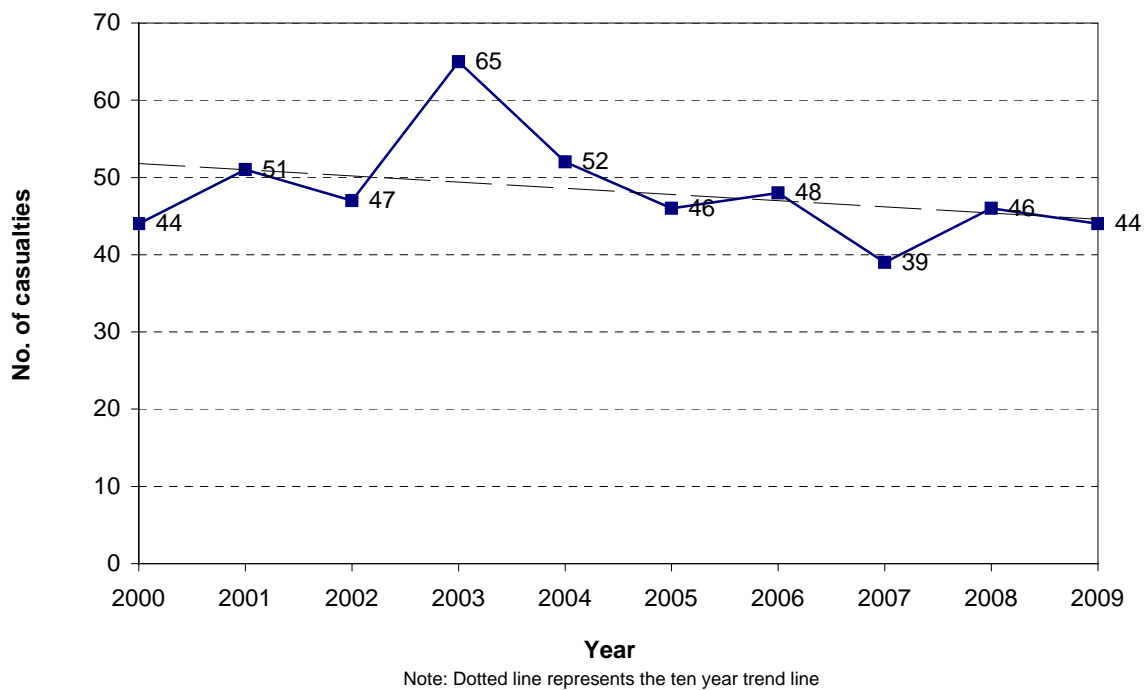
**Figure 3.6 Female casualties by age  
VRUs - Pedestrians (2005-2009)**



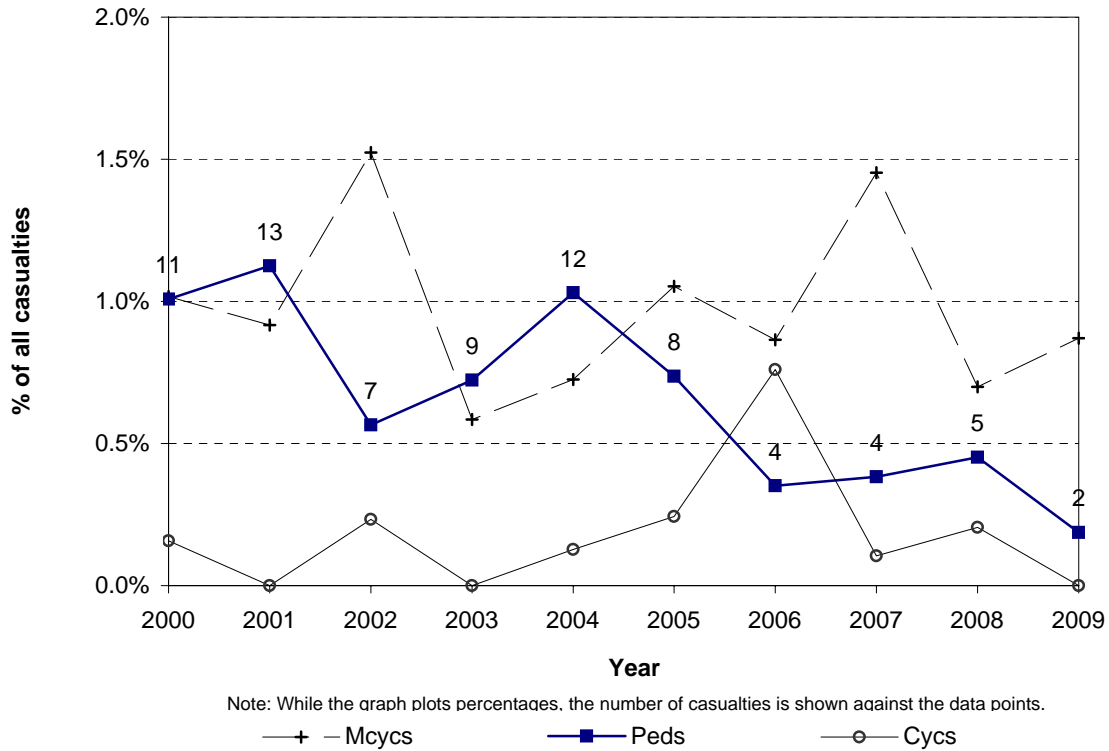
**Figure 3.7 Car/van driver casualties  
VRUs - Pedestrians**



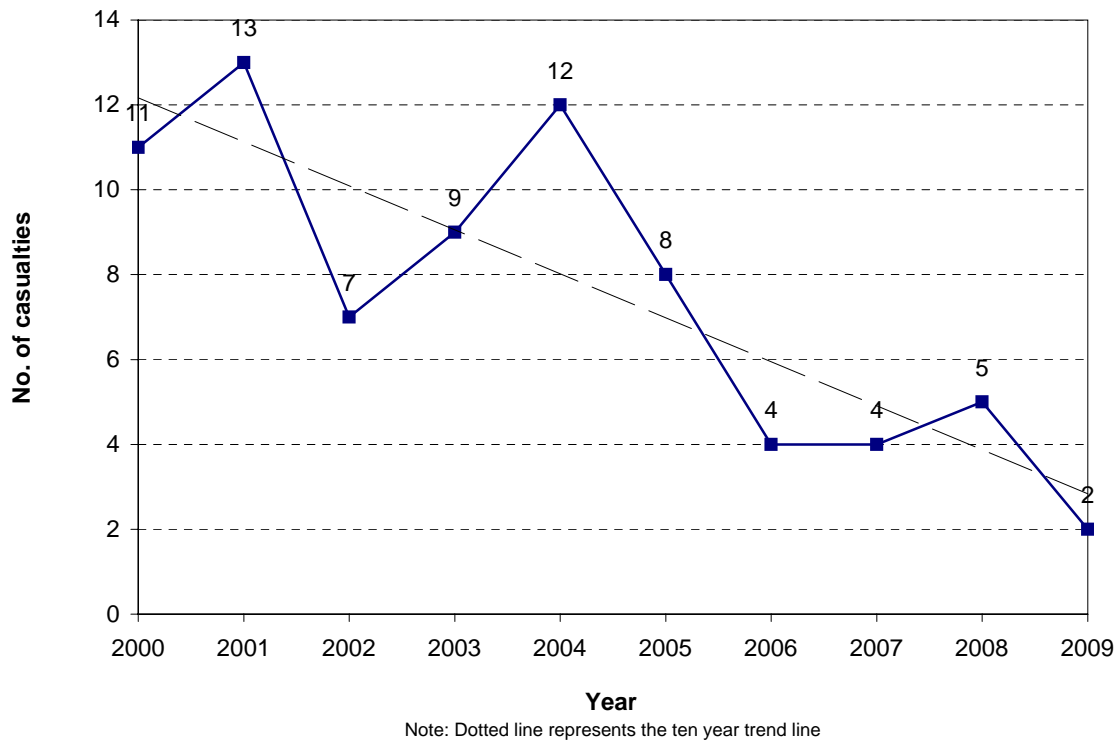
**Figure 3.8 Car/van driver casualties  
VRUs - Pedestrians**



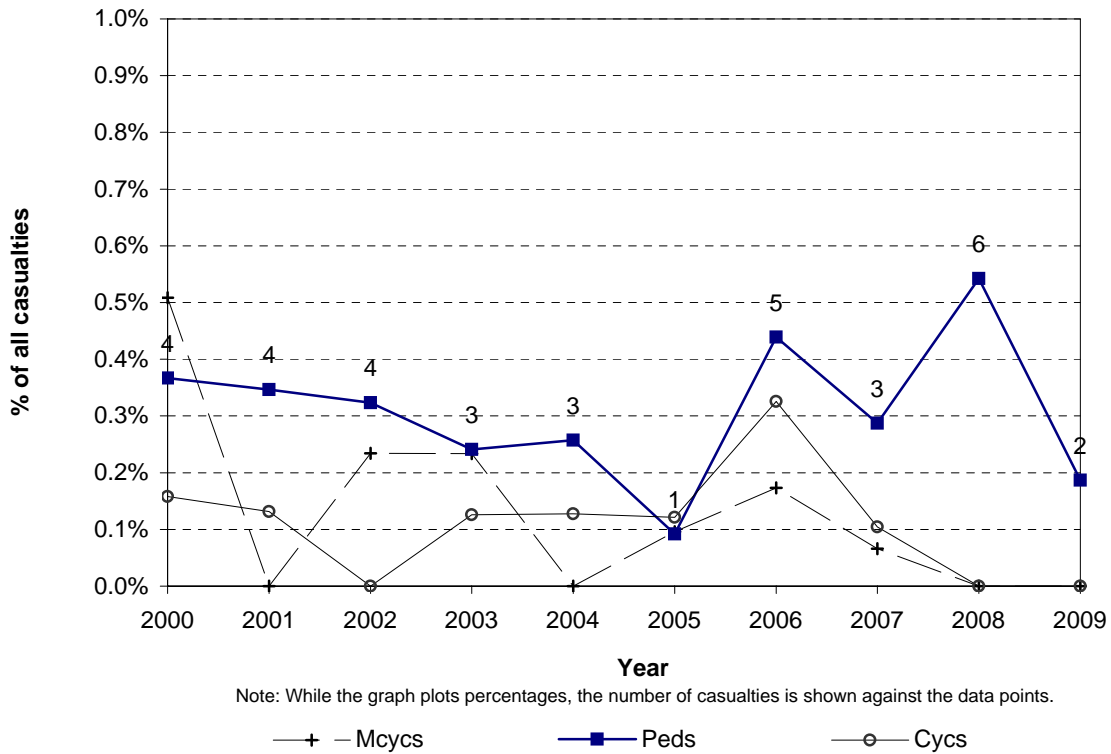
**Figure 3.9 Car/van passenger casualties  
VRUs - Pedestrians**



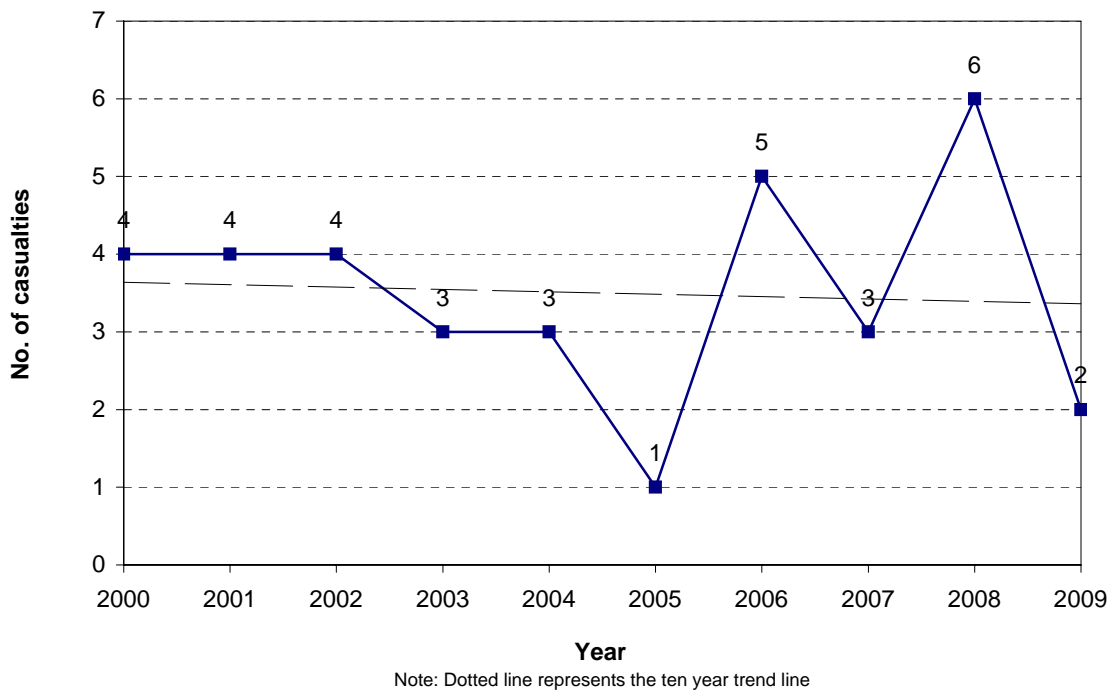
**Figure 3.10 Car/van passenger casualties  
VRUs - Pedestrians**



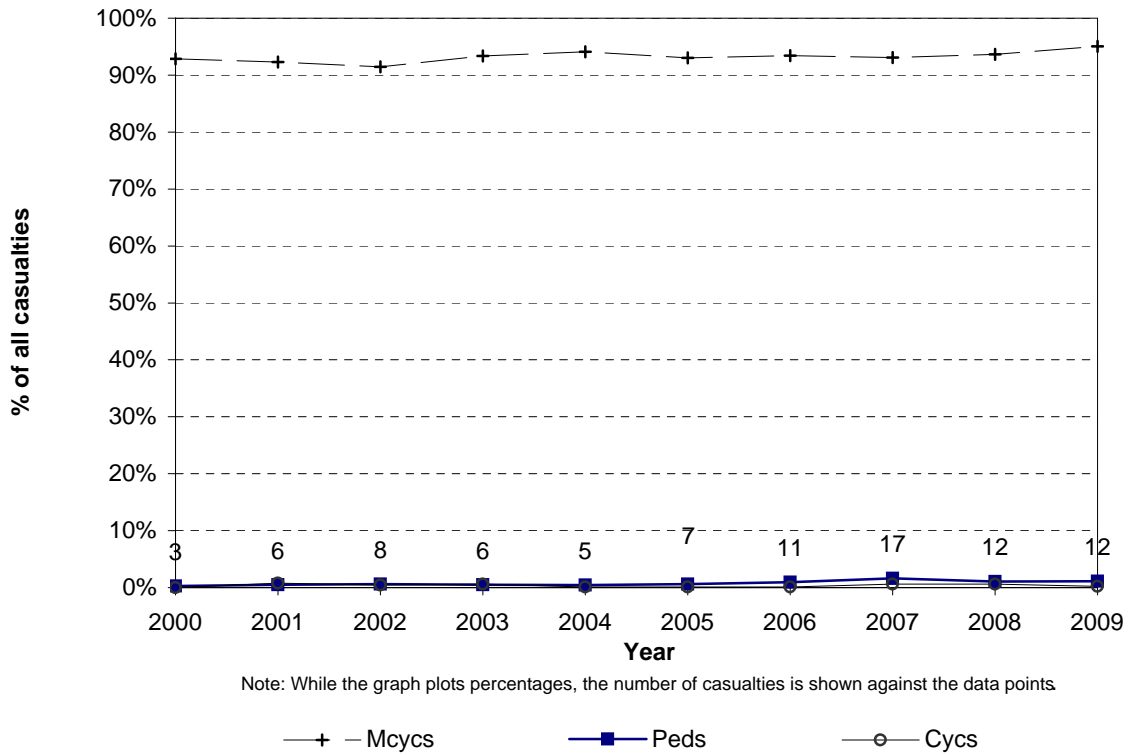
**Figure 3.11 Heavy vehicle casualties  
VRUs - Pedestrians**



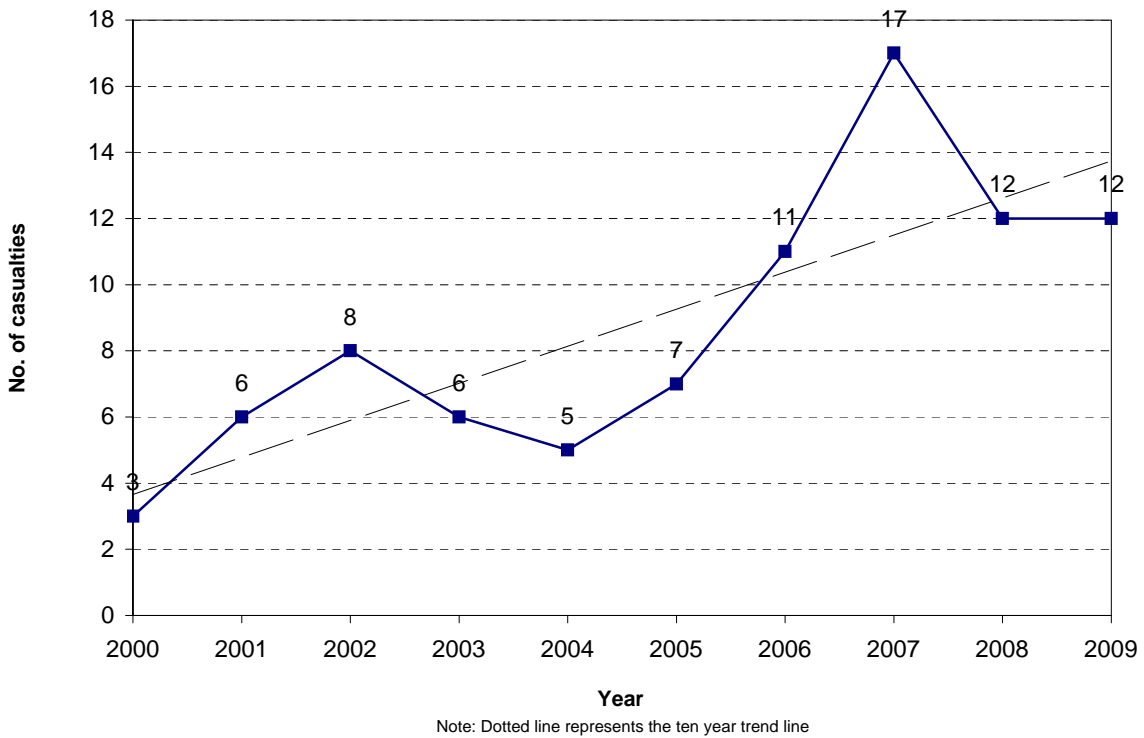
**Figure 3.12 Heavy vehicle casualties  
VRUs - Pedestrians**



**Figure 3.13 Motorcyclist casualties  
VRUs - Pedestrians**

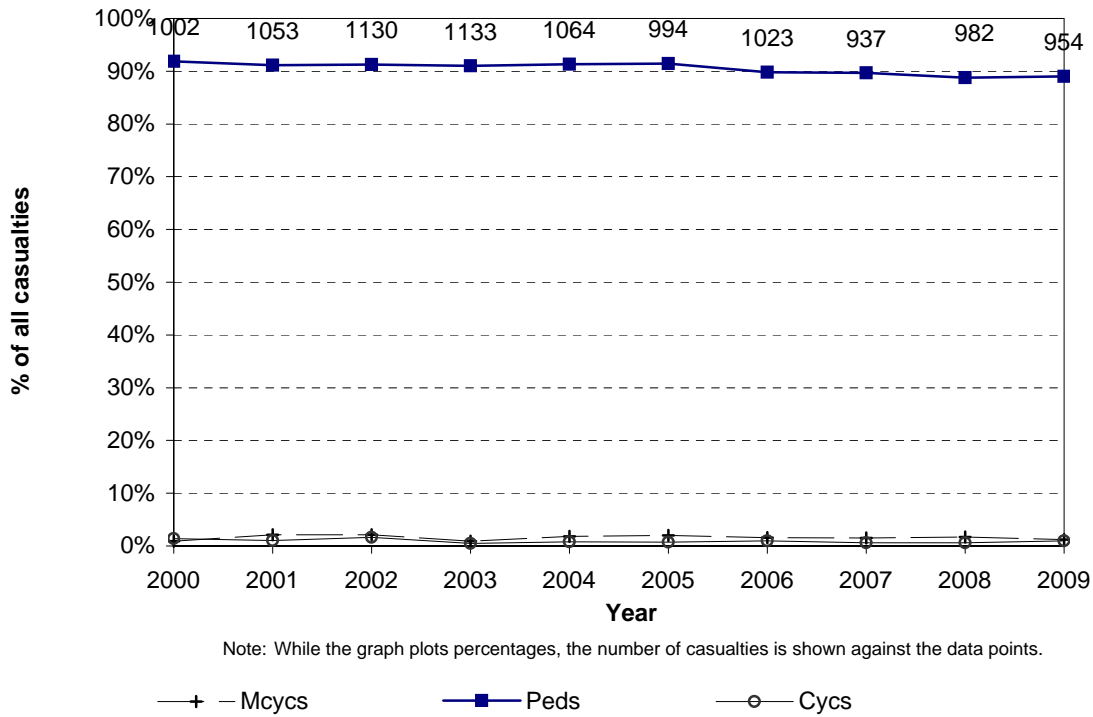


**Figure 3.14 Motorcyclist casualties  
VRUs - Pedestrians**

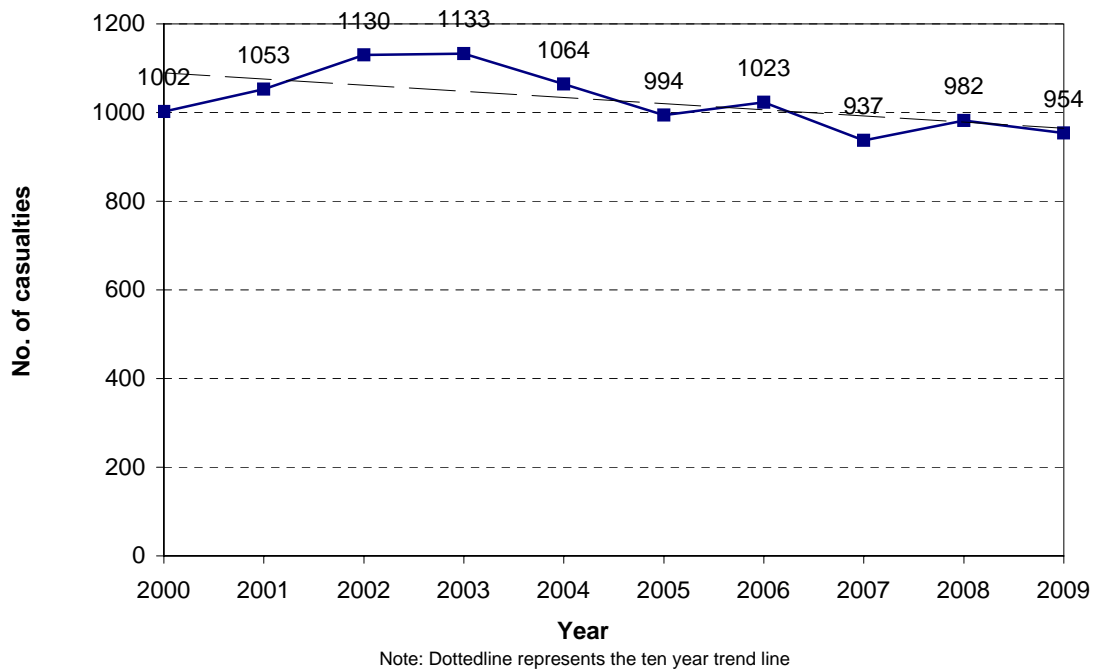




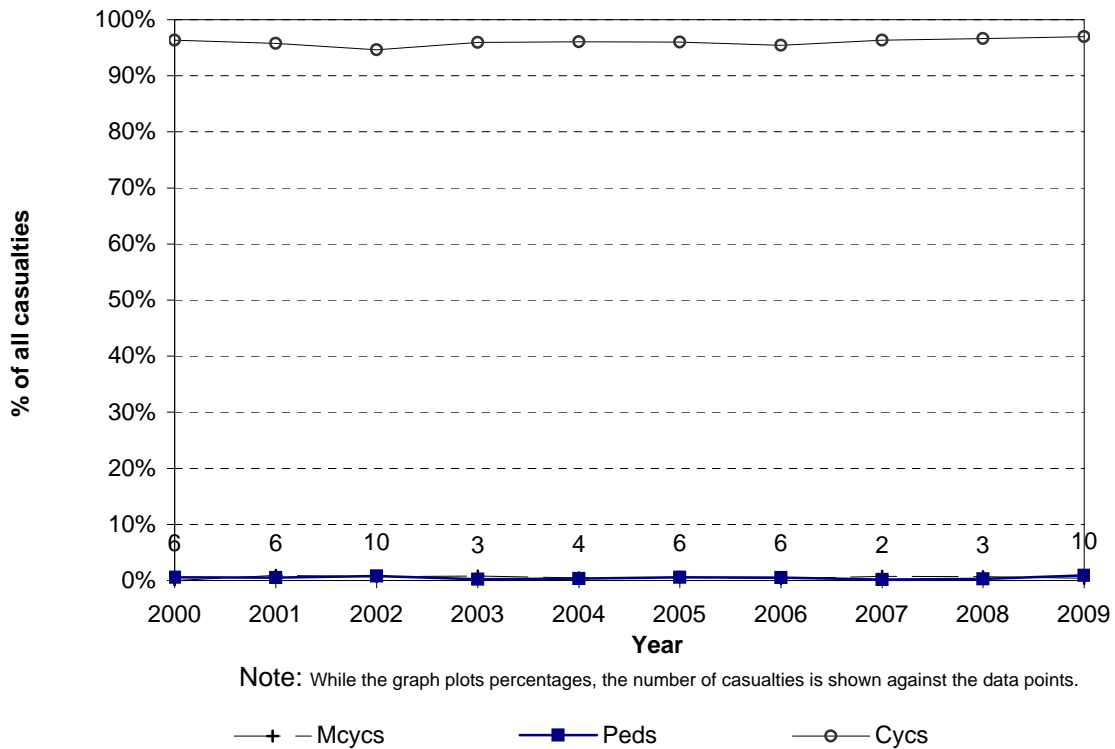
**Figure 3.15 Pedestrian casualties**  
**VRUs - Pedestrians**



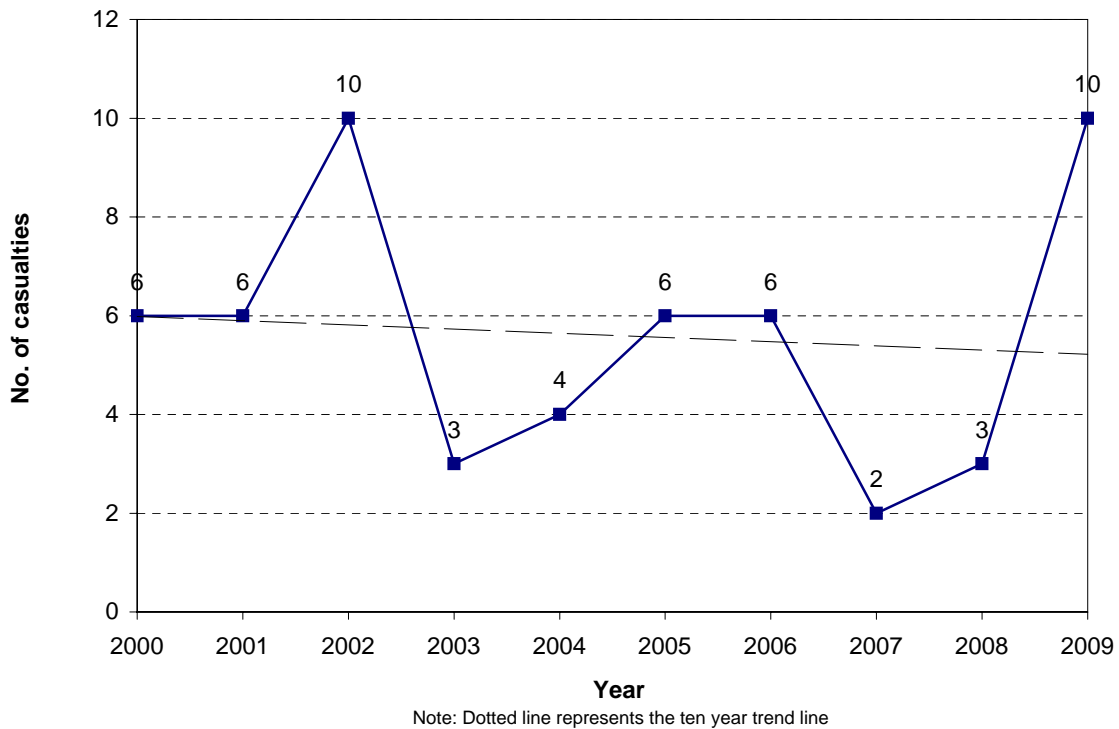
**Figure 3.16 Pedestrian casualties**  
**VRUs - Pedestrians**



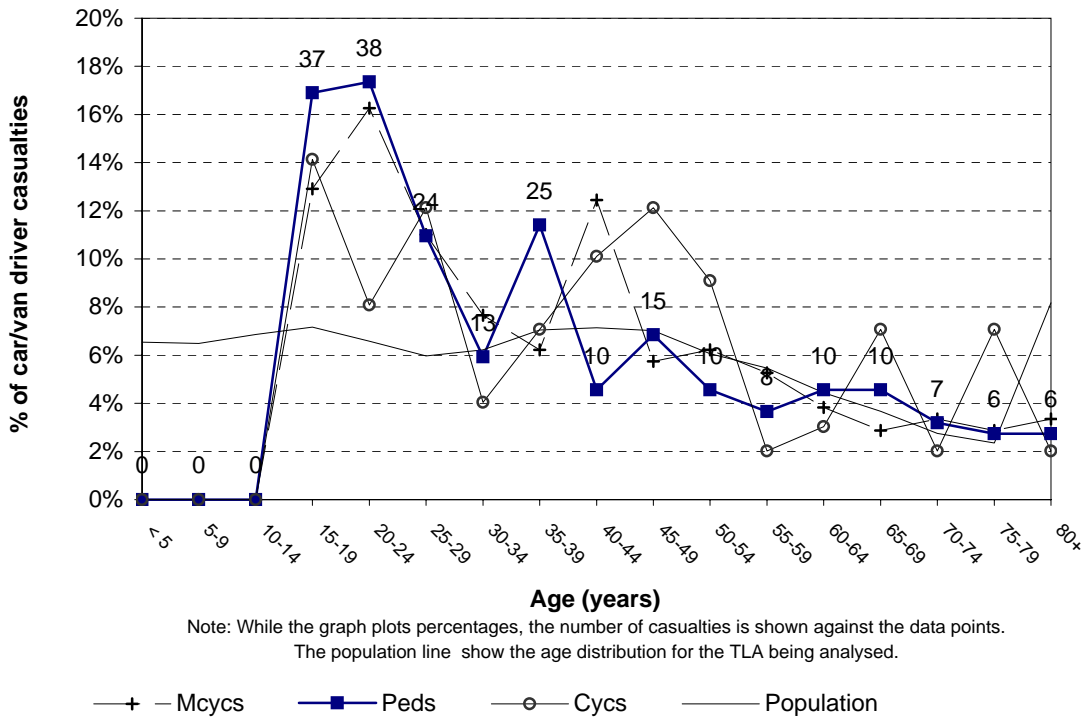
**Figure 3.17 Cyclist casualties  
VRUs - Pedestrians**



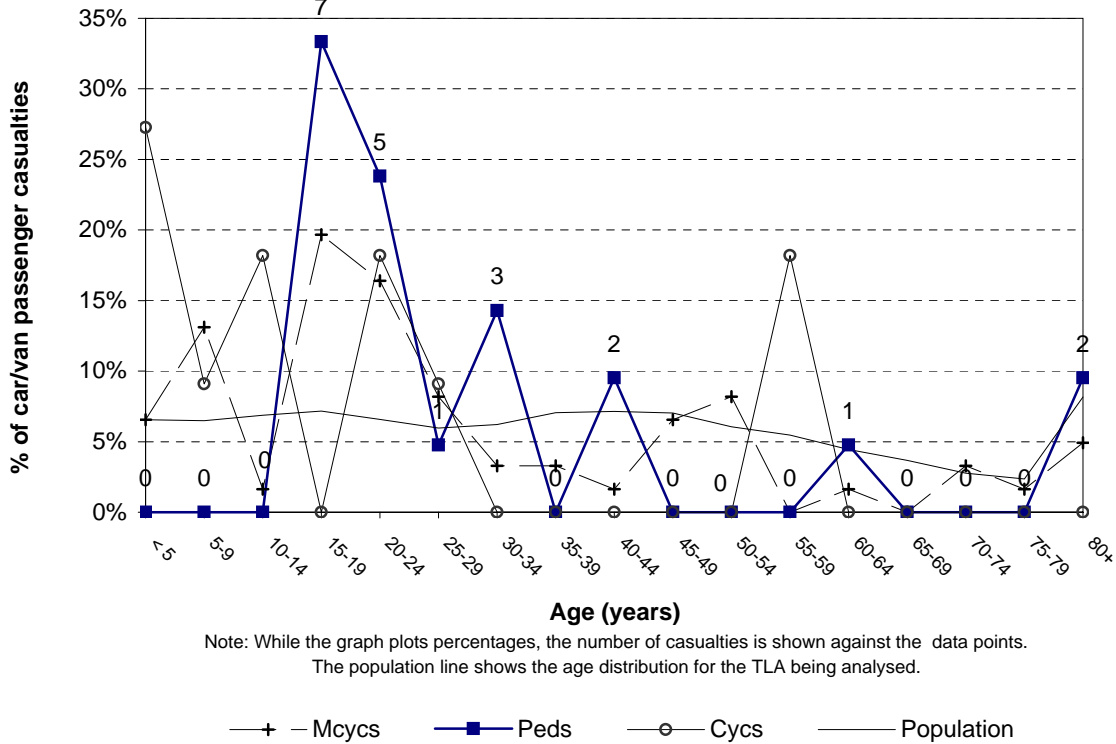
**Figure 3.18 Cyclist casualties  
VRUs - Pedestrians**



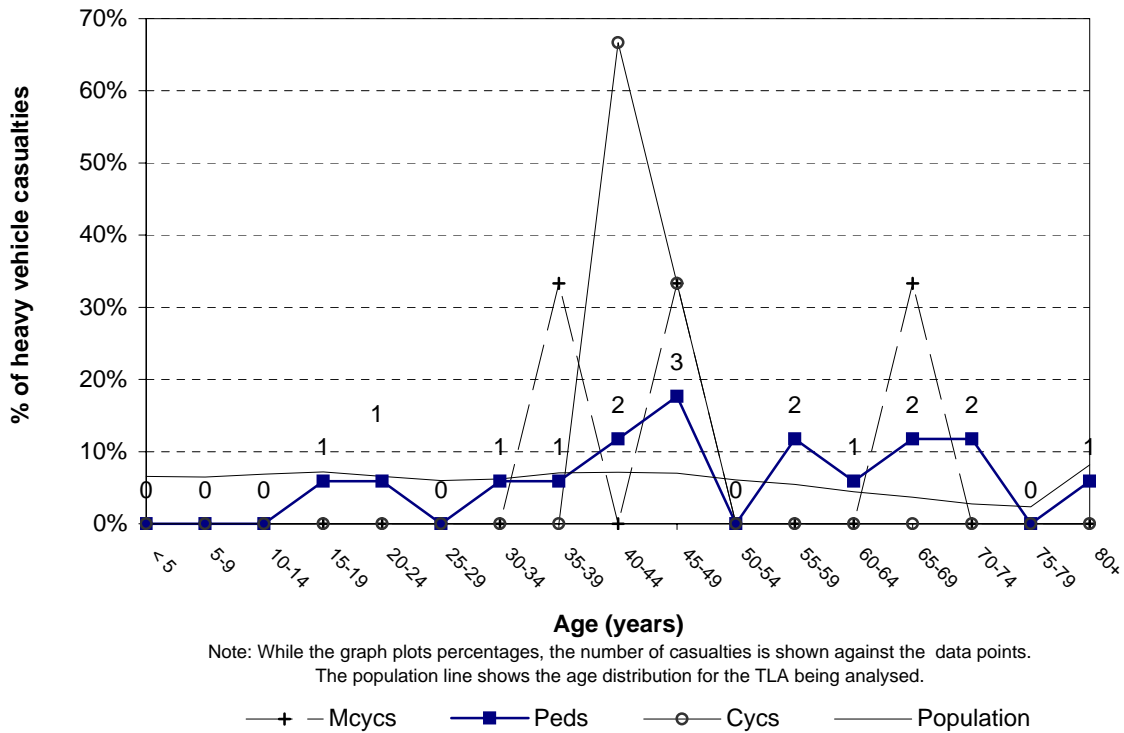
**Figure 3.19 Car/van driver casualty age VRUs - Pedestrians (2005-2009)**



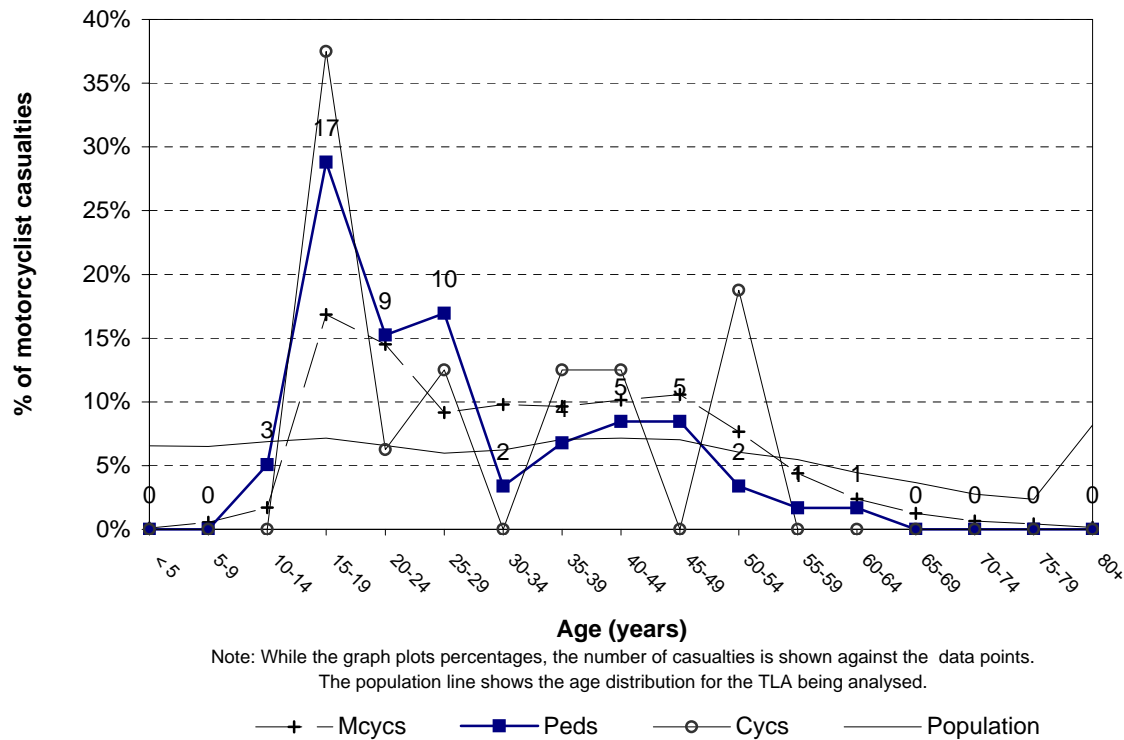
**Figure 3.20 Car/van passenger casualty age VRUs - Pedestrians (2005-2009)**



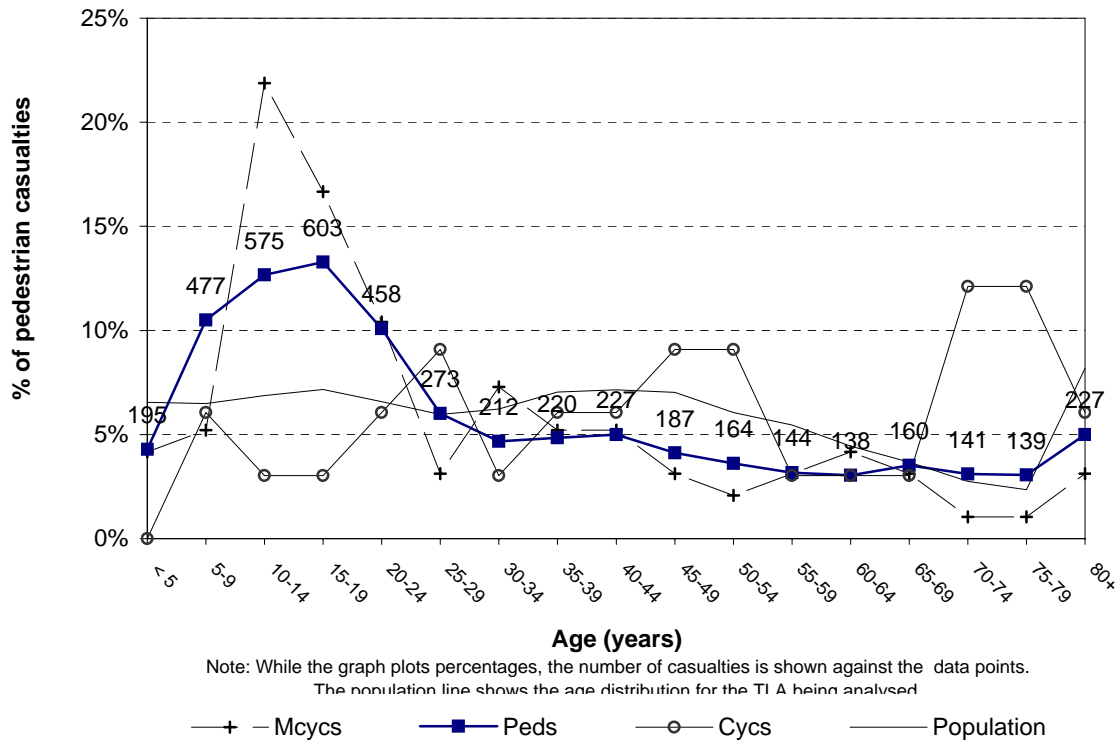
**Figure 3.21 Heavy vehicle casualty age VRUs - Pedestrians (2005-2009)**



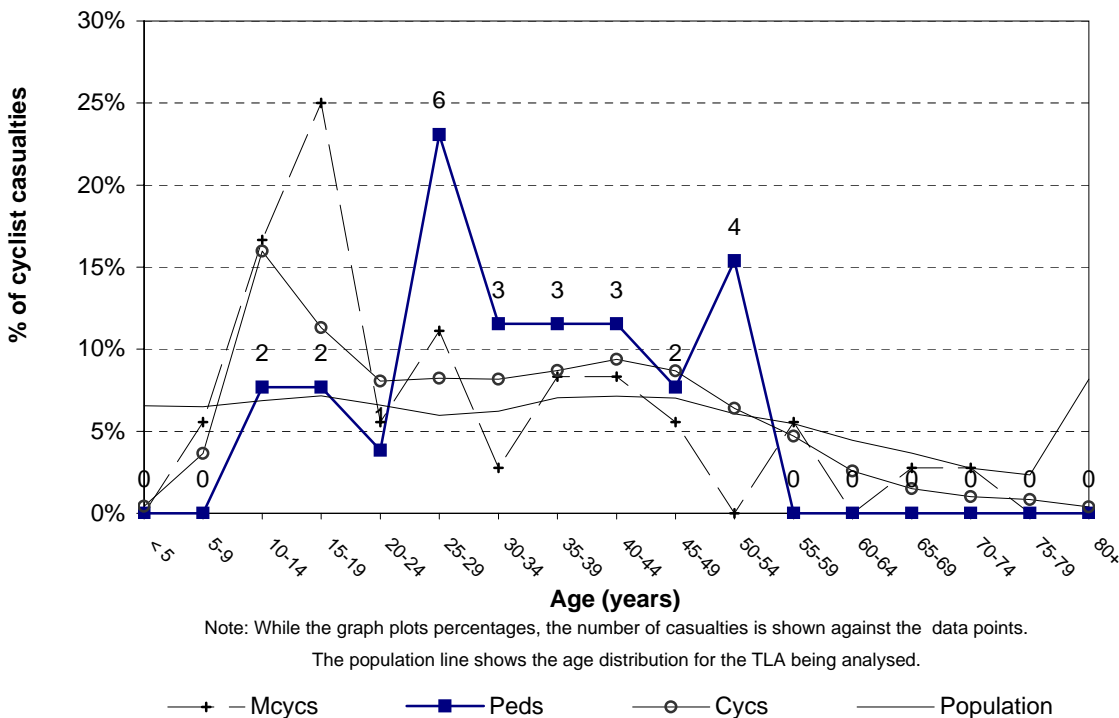
**Figure 3.22 Motorcyclist casualty age VRUs - Pedestrians (2005-2009)**



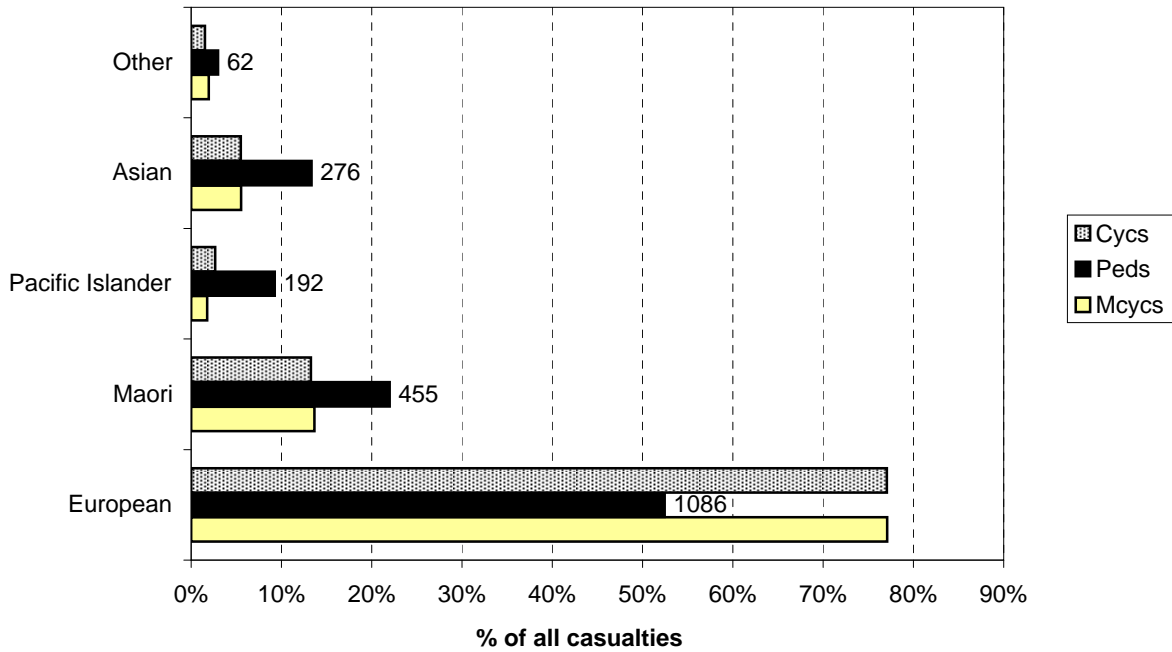
**Figure 3.23 Pedestrian casualty age VRUs - Pedestrians (2005-2009)**



**Figure 3.24 Cyclist casualty age VRUs - Pedestrians (2005-2009)**

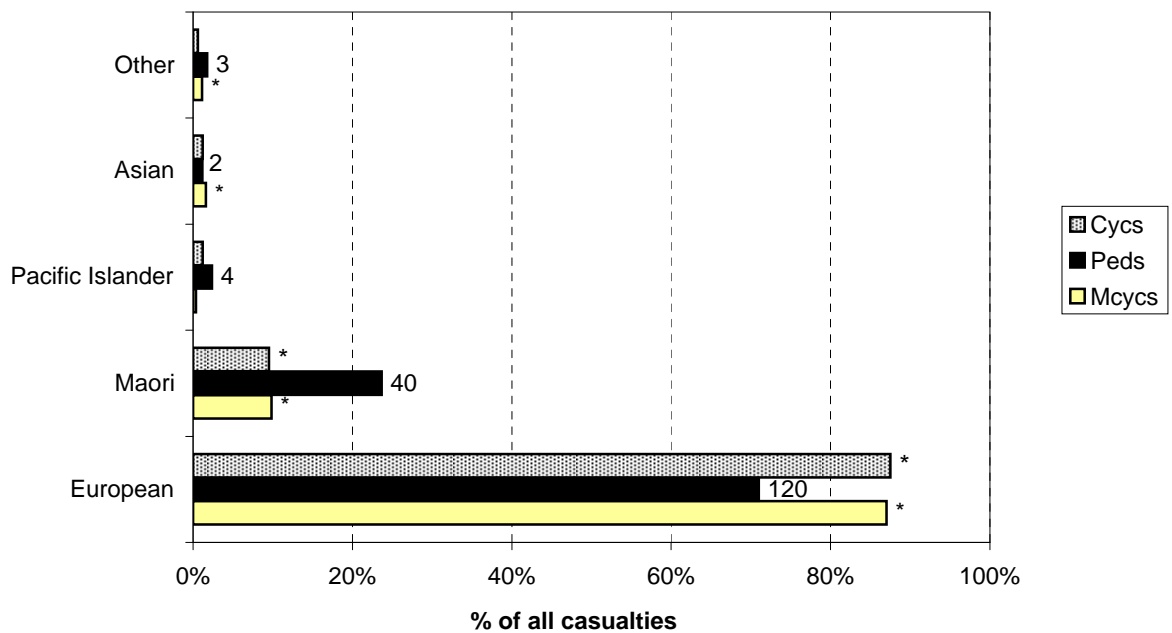


**Figure 3.25 Casualty ethnicity - urban  
VRUs - Pedestrians (2005-2009)**



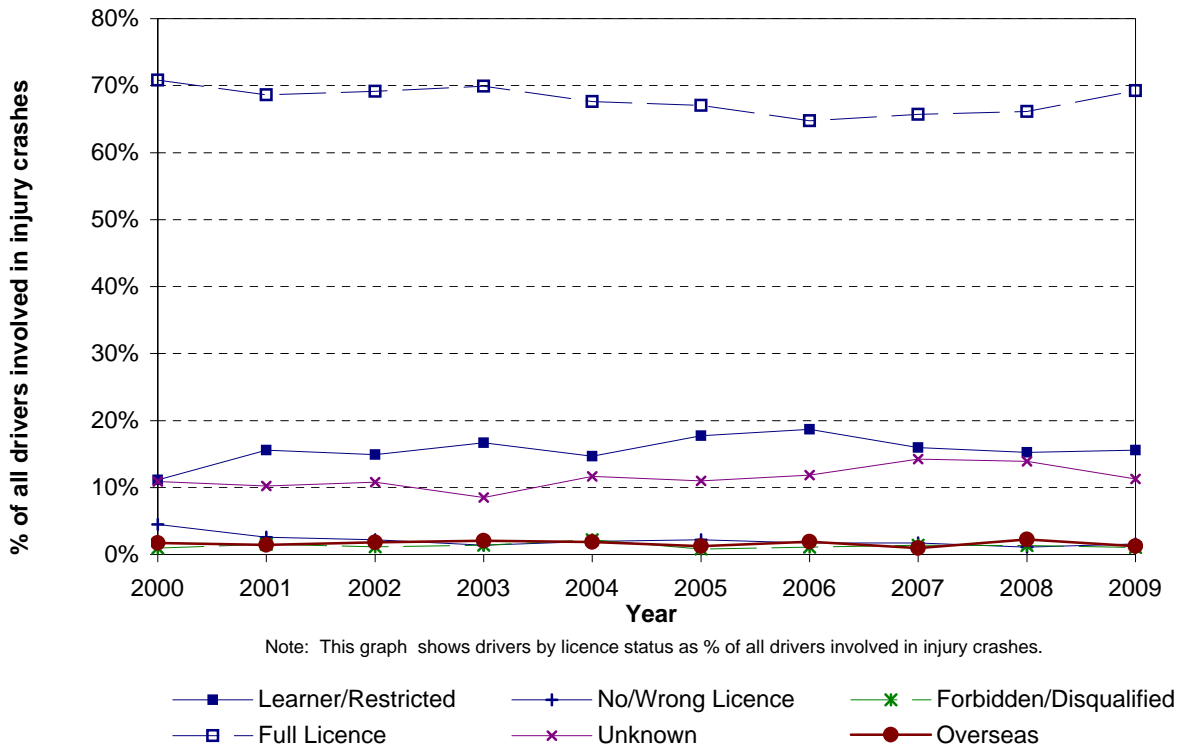
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.26 Casualty ethnicity - rural  
VRUs - Pedestrians (2005-2009)**

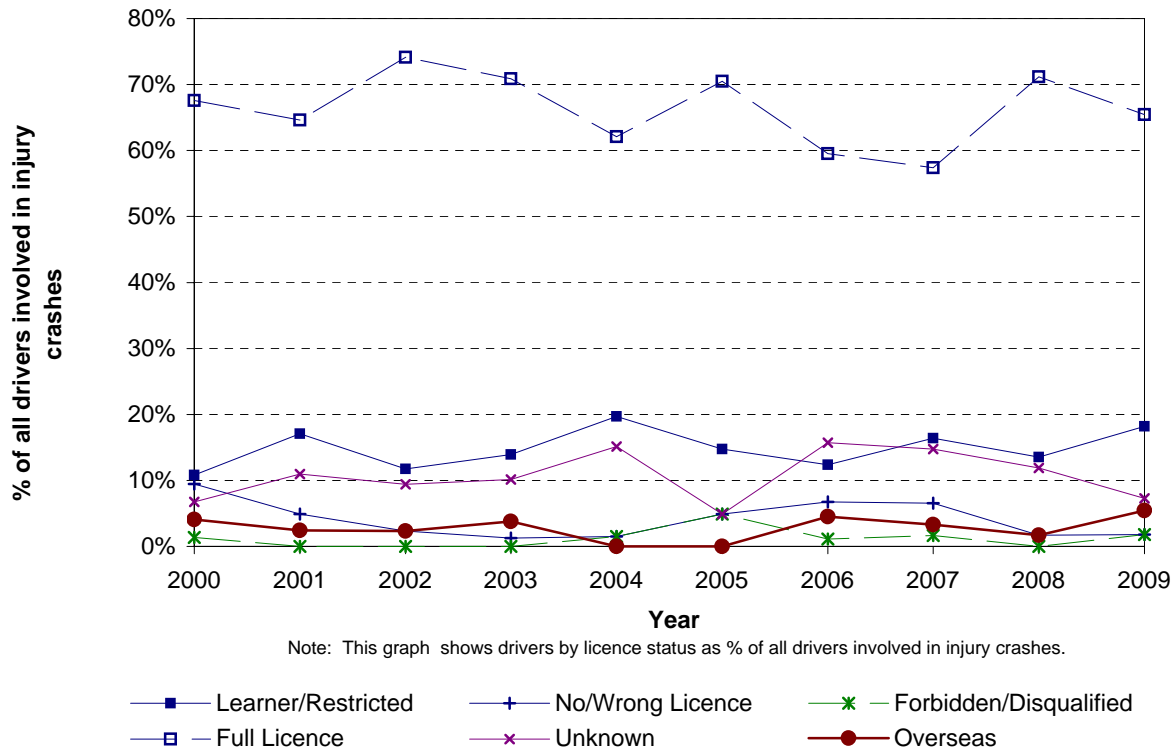


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.27 Licence status - urban  
VRUs - Pedestrians**



**Figure 3.28 Licence status - rural  
VRUs - Pedestrians**

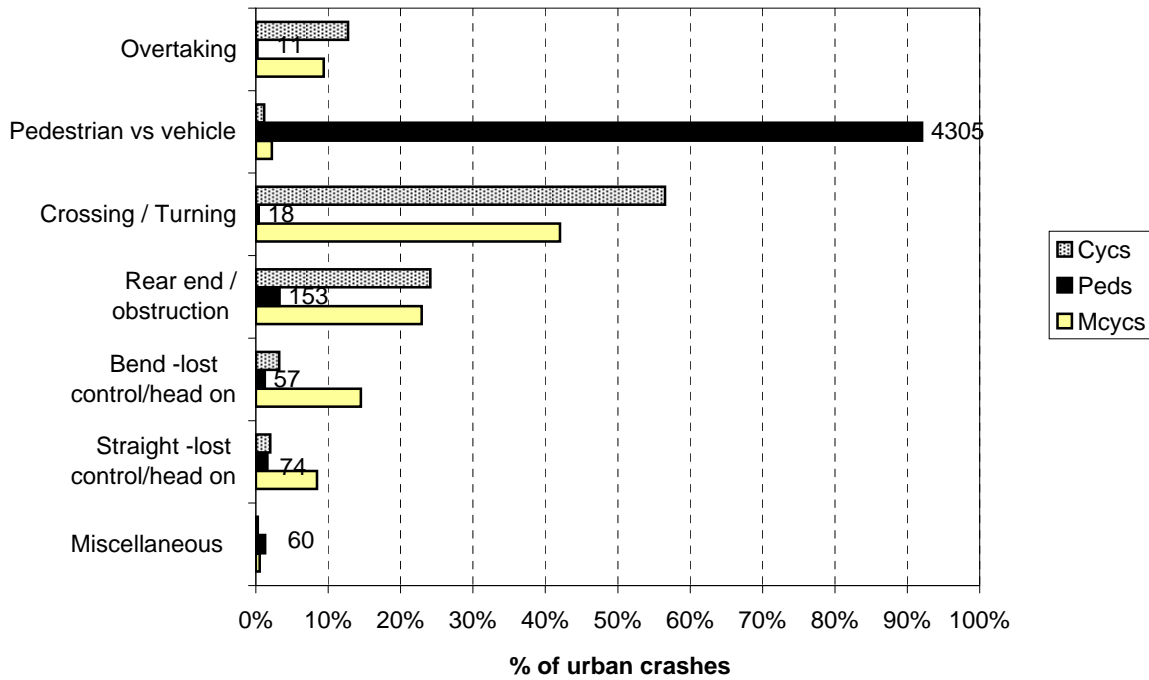


# *Crash Type Statistics*



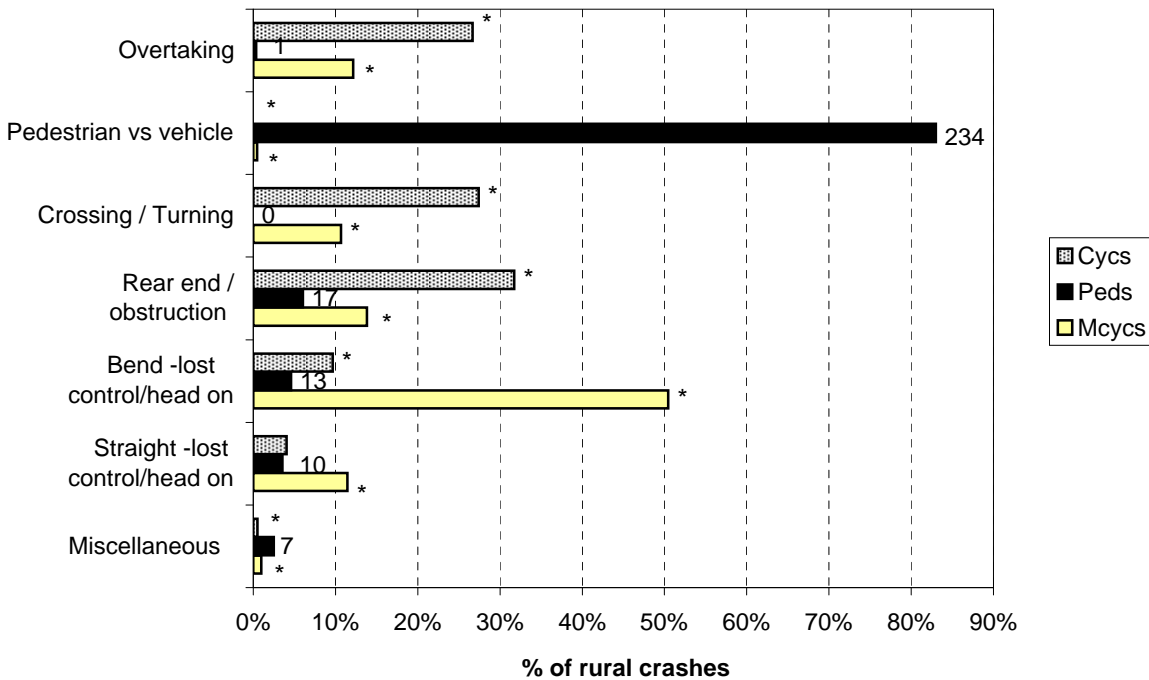


**Figure 4.1 Crash movement type - urban  
VRUs - Pedestrians (2005-2009)**



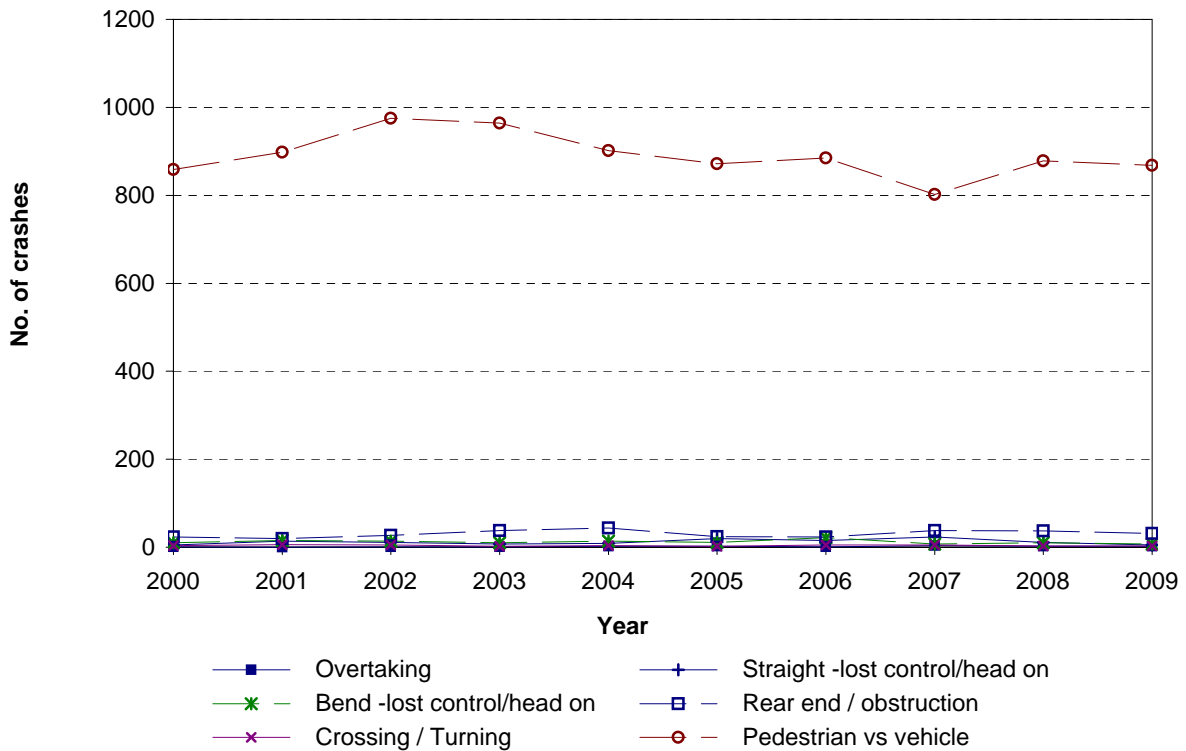
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 4.2 Crash movement type - rural  
VRUs - Pedestrians roads (2005-2009)**

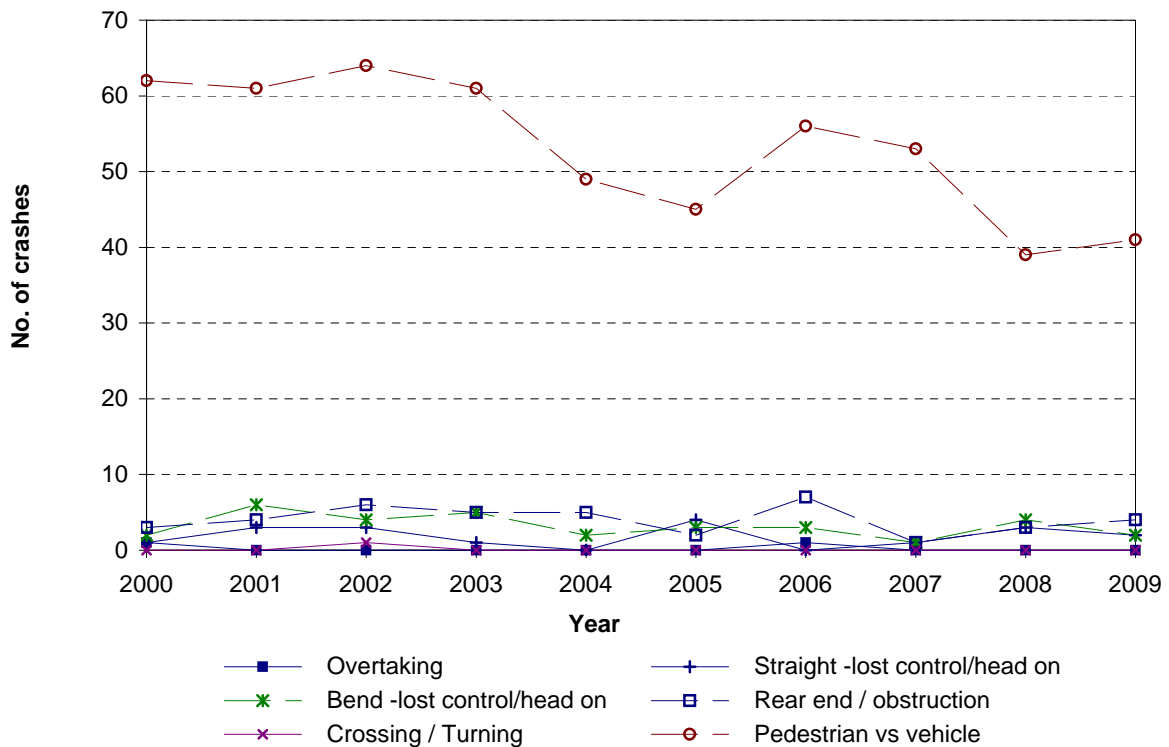


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

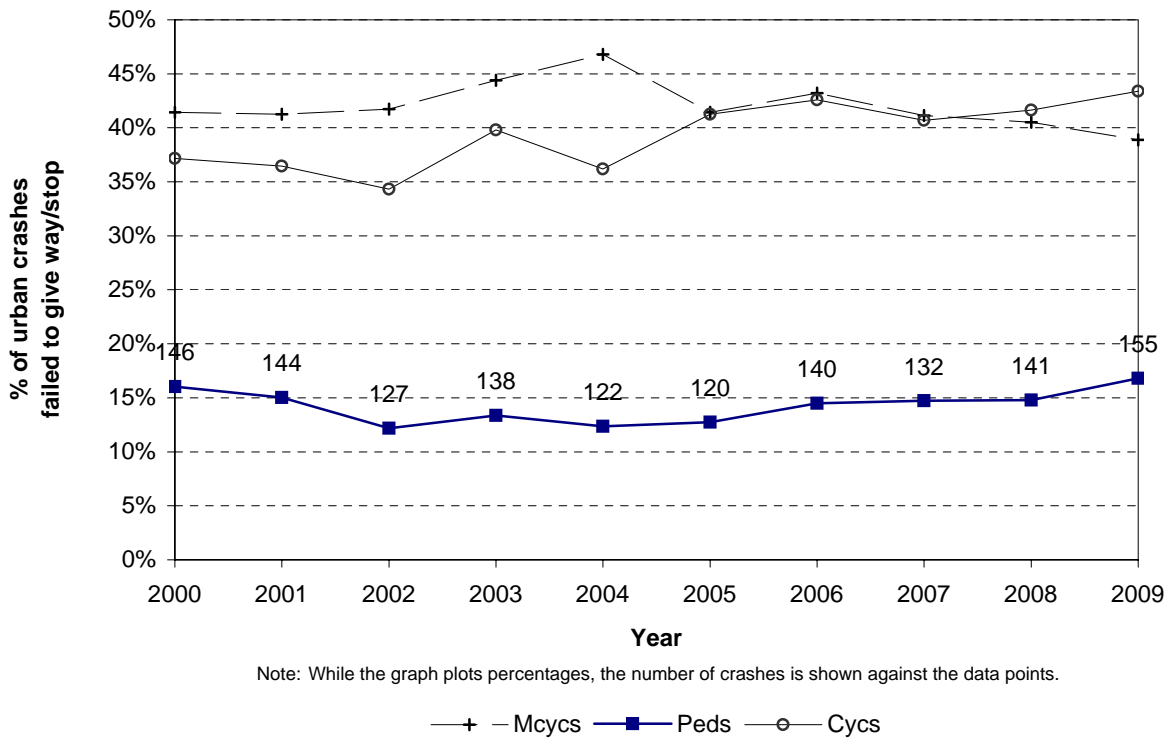
**Figure 4.3 Crash movement type - trends  
VRUs - Pedestrians - urban roads**



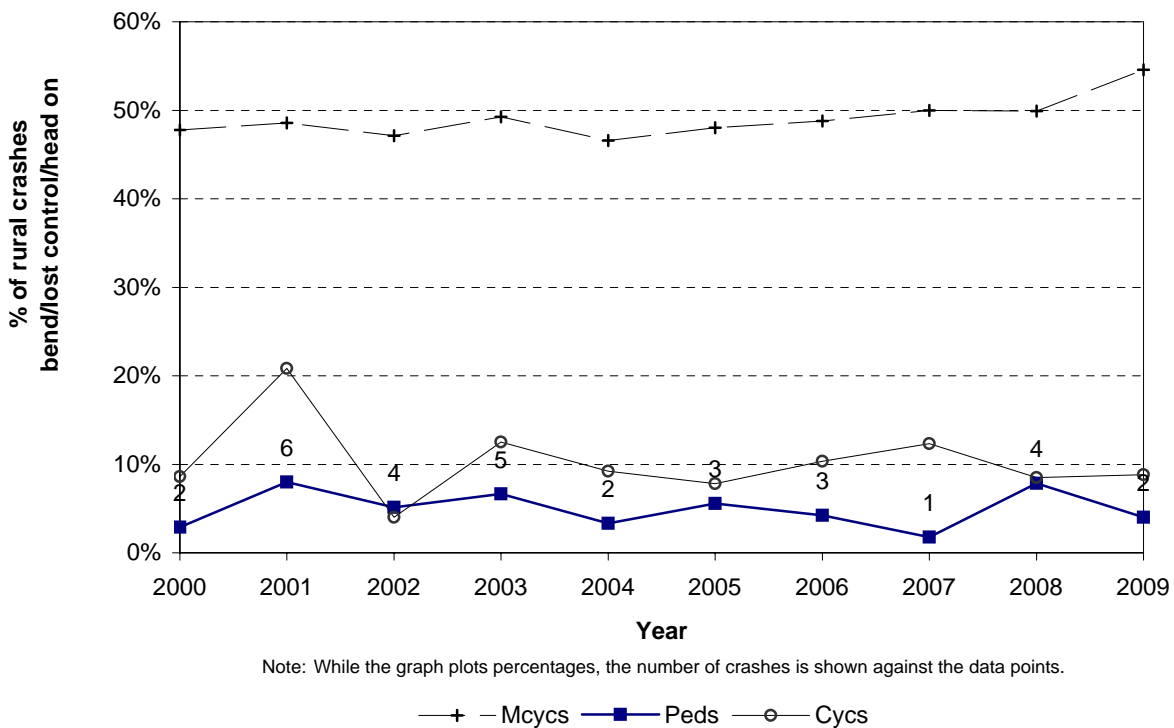
**Figure 4.4 Crash movement type - trends  
VRUs - Pedestrians - rural roads**



**Figure 4.5 Failed to give way / stop  
VRUs - Pedestrians - urban roads**



**Figure 4.6 Bend - lost control / head - on  
VRUs - Pedestrians - rural roads**

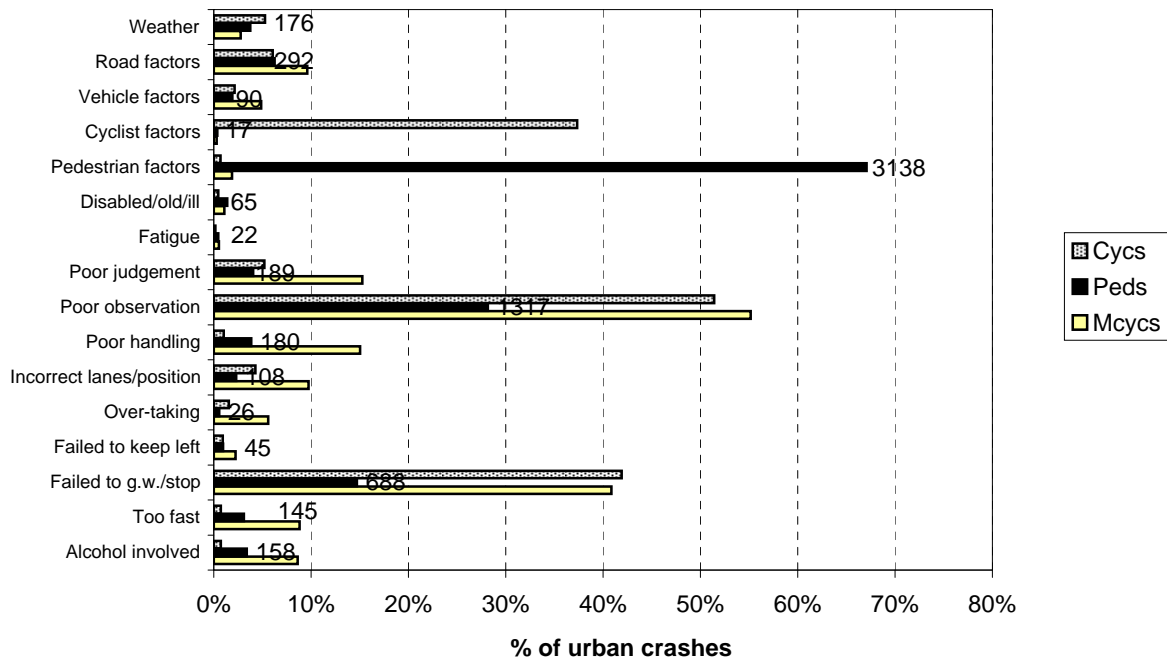




# *Crash Factor Statistics*

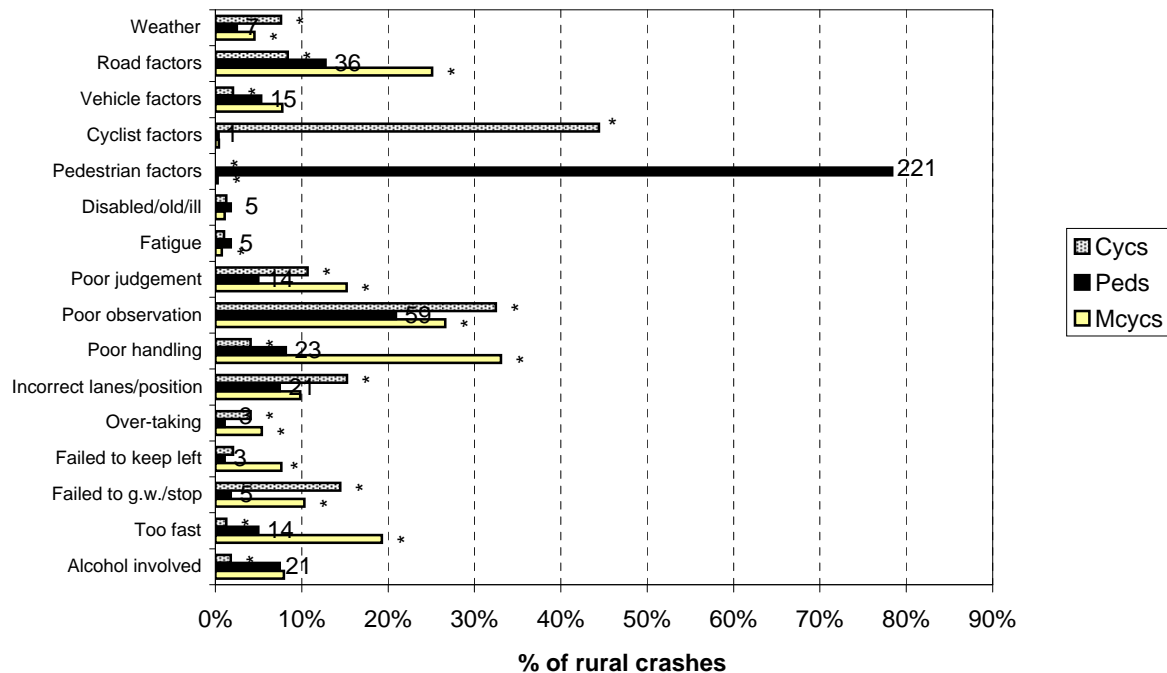


**Figure 5.1 Contributing factors - urban  
VRUs - Pedestrians (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

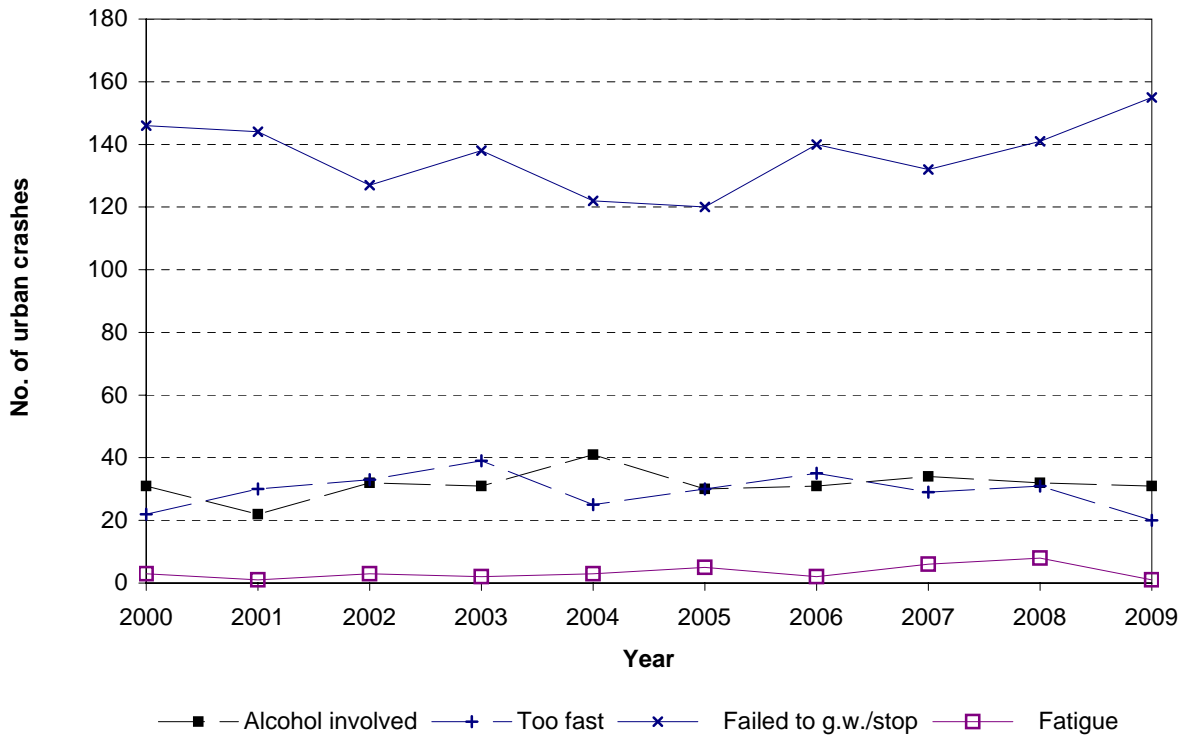
**Figure 5.2 Contributing factors - rural  
VRUs - Pedestrians (2005-2009)**



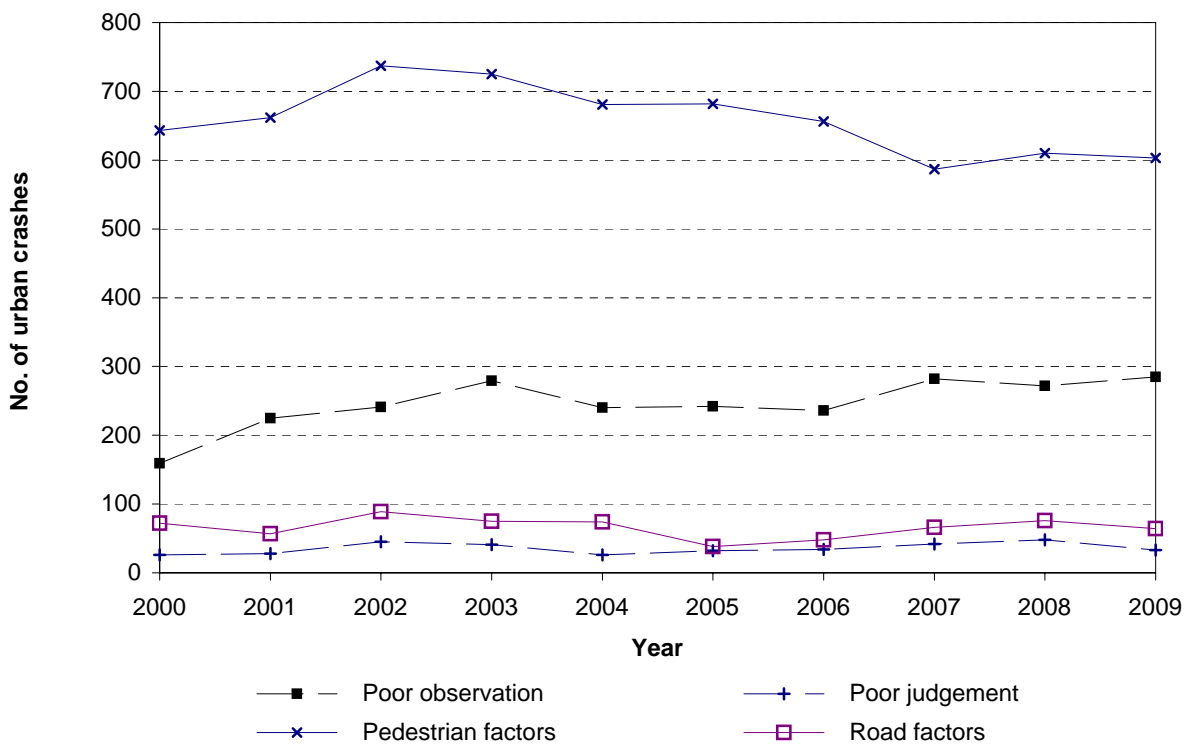
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



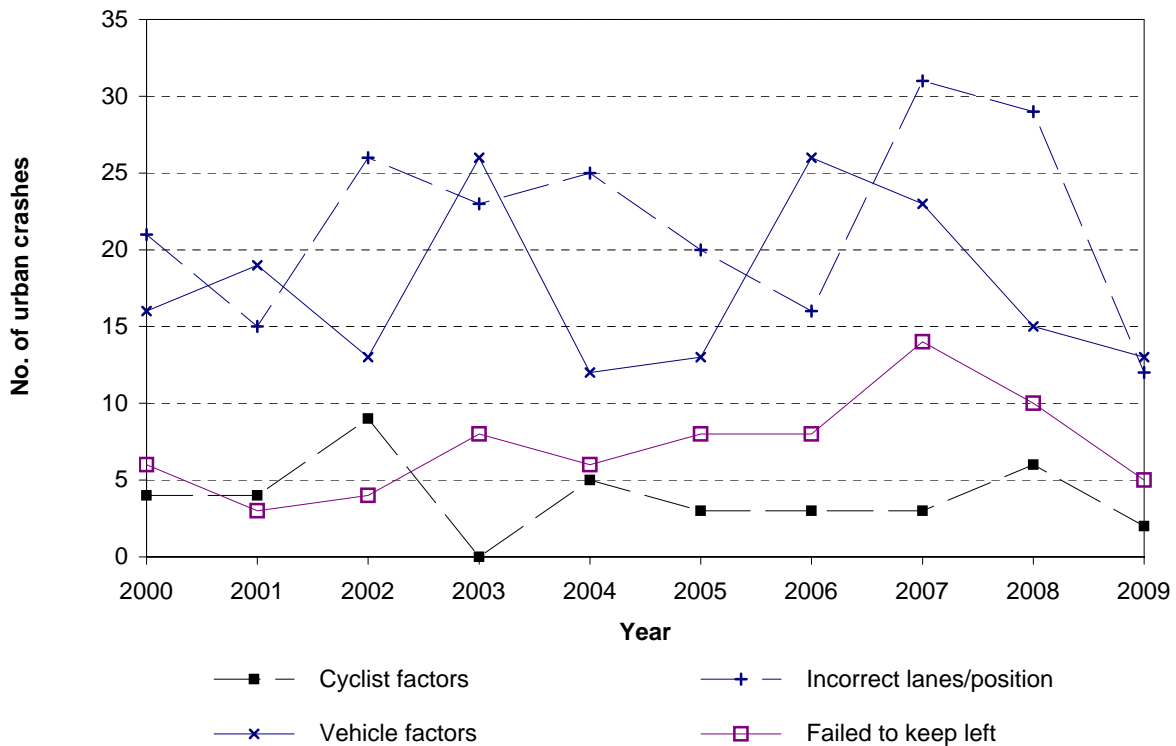
**Figure 5.3 Contributing factor trends  
VRUs - Pedestrians - urban roads**



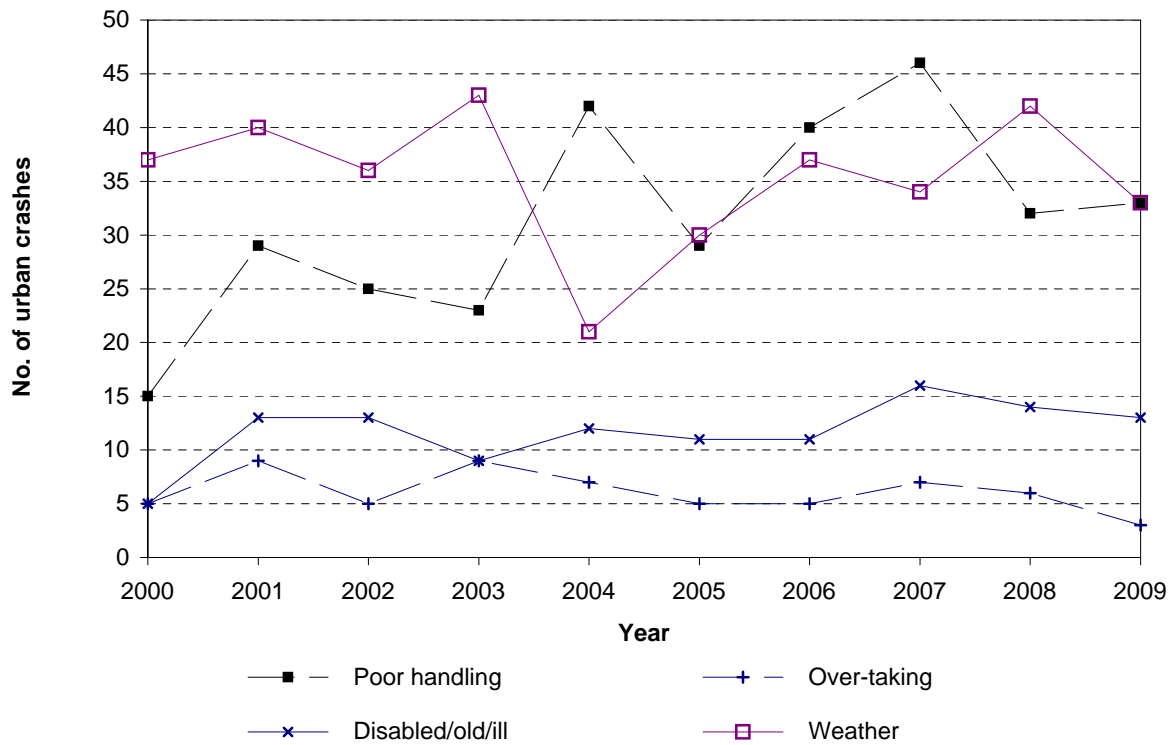
**Figure 5.4 Contributing factor trends  
VRUs - Pedestrians - urban roads**



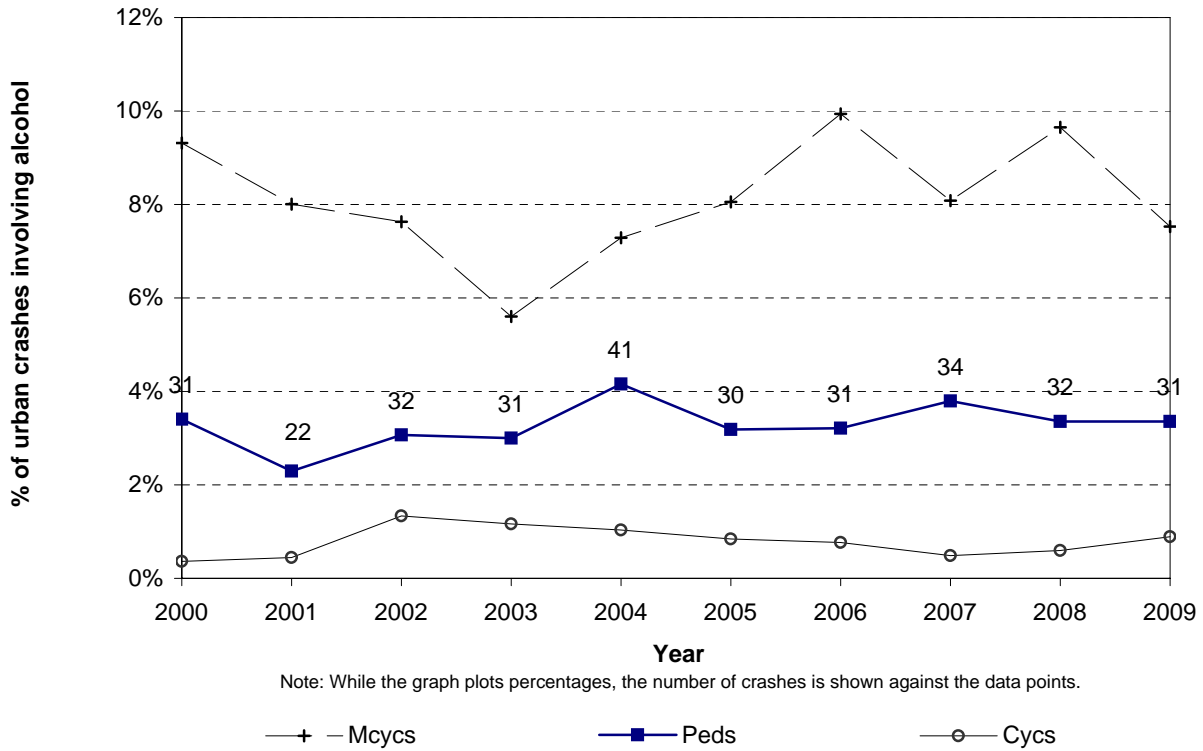
**Figure 5.5 Contributing factor trends  
VRUs - Pedestrians - urban roads**



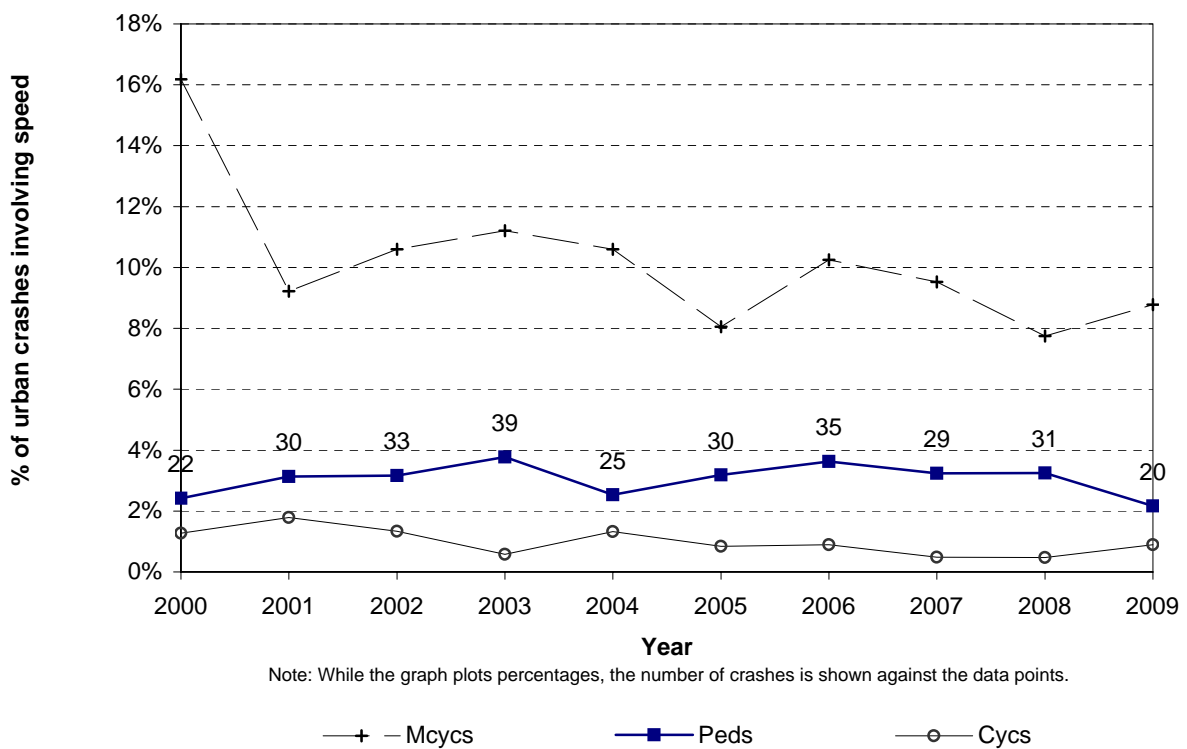
**Figure 5.6 Contributing factor trends  
VRUs - Pedestrians - urban roads**



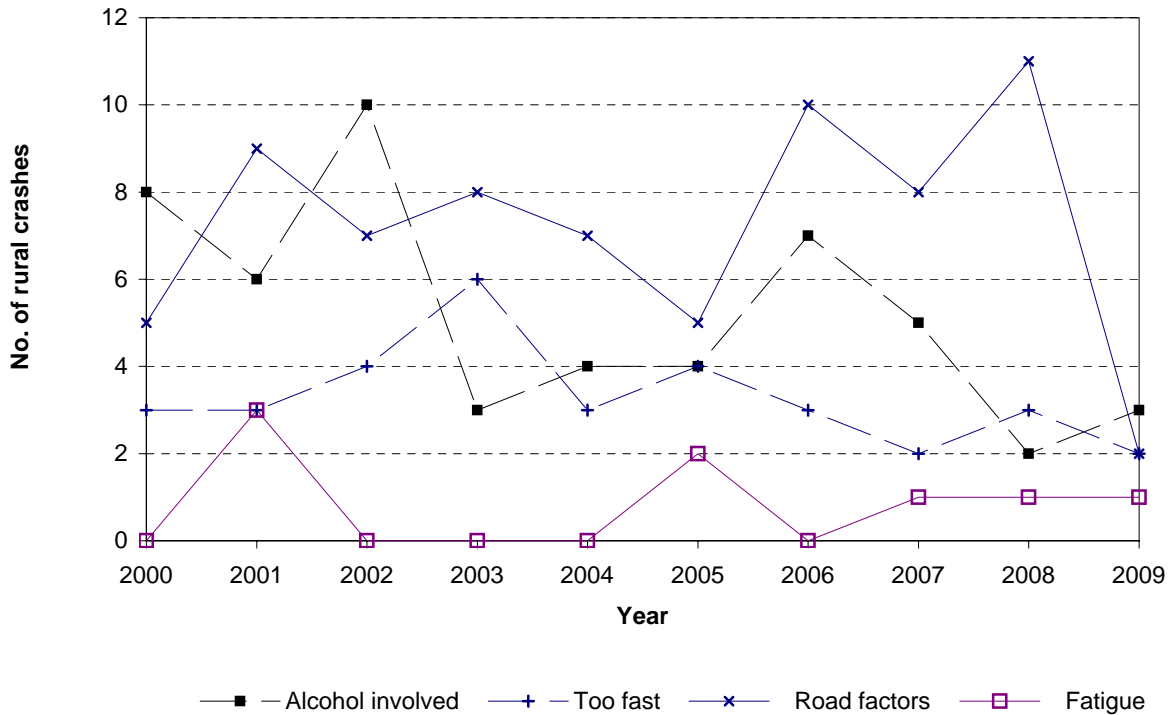
**Figure 5.7 Alcohol involved trend  
VRUs - Pedestrians - urban roads**



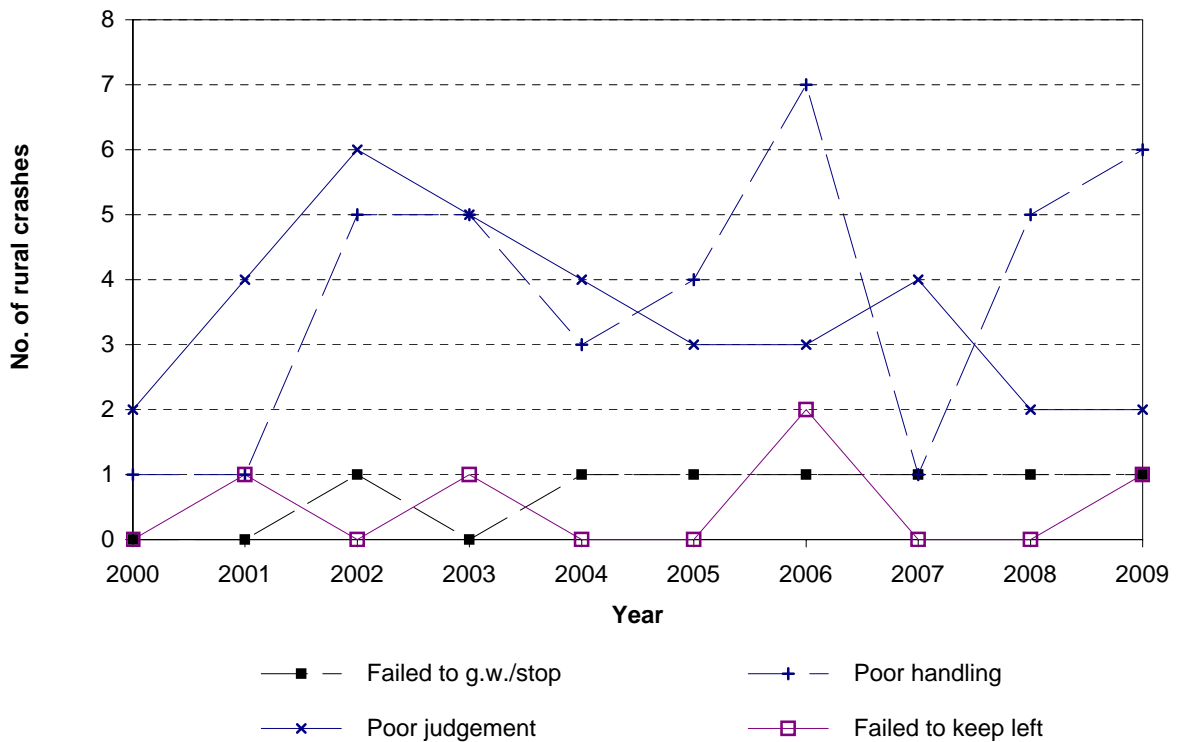
**Figure 5.8 Speed involved trend  
VRUs - Pedestrians - urban roads**



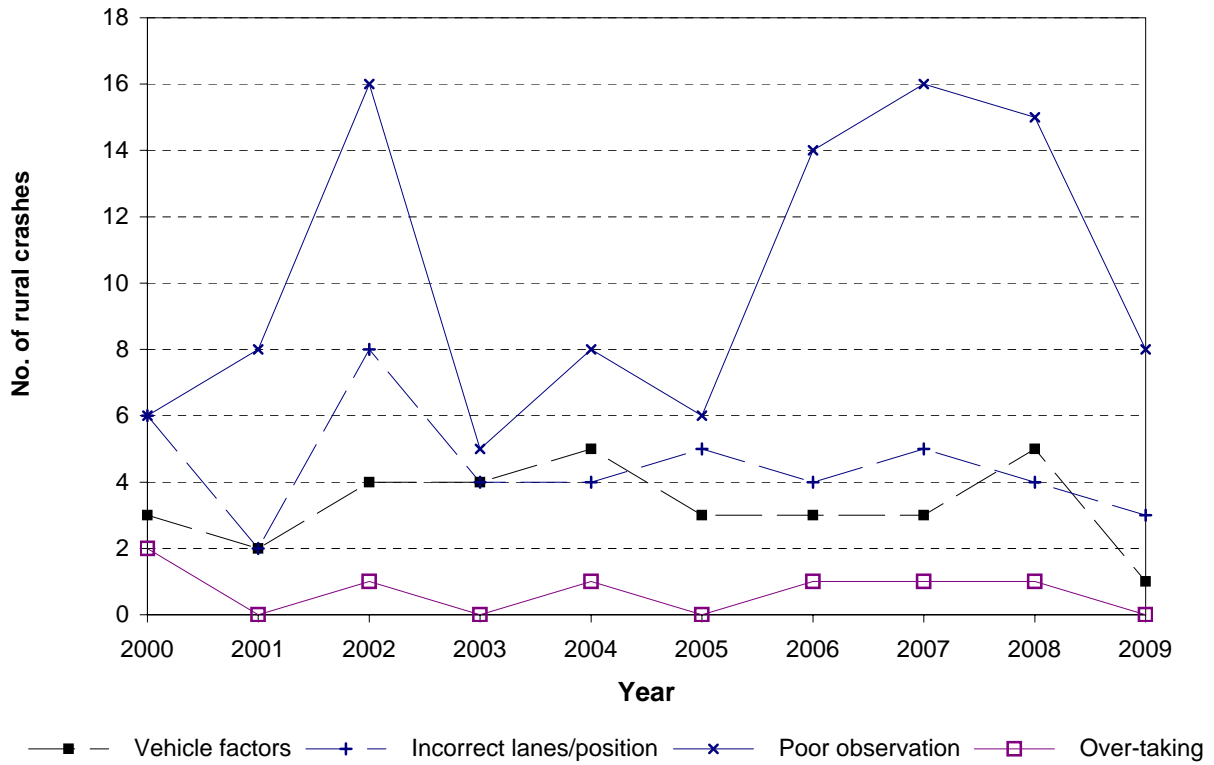
**Figure 5.9 Contributing factor trends  
VRUs - Pedestrians - rural roads**



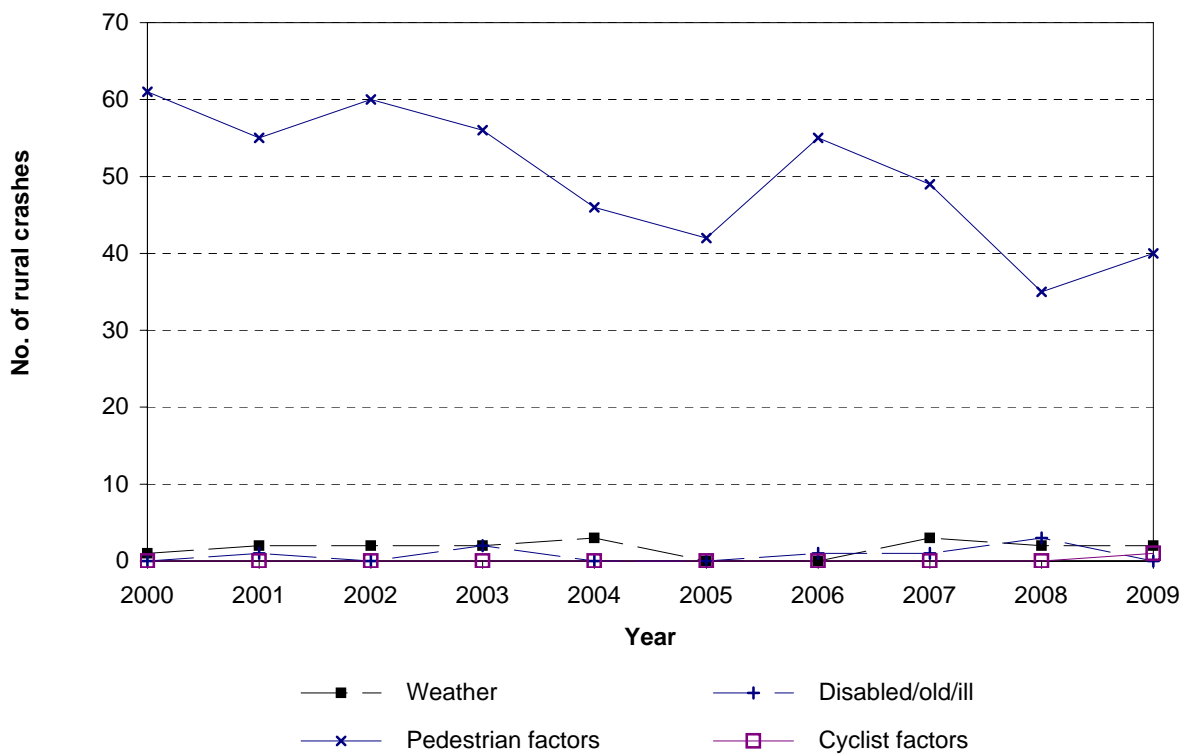
**Figure 5.10 Contributing factor trends  
VRUs - Pedestrians - rural roads**



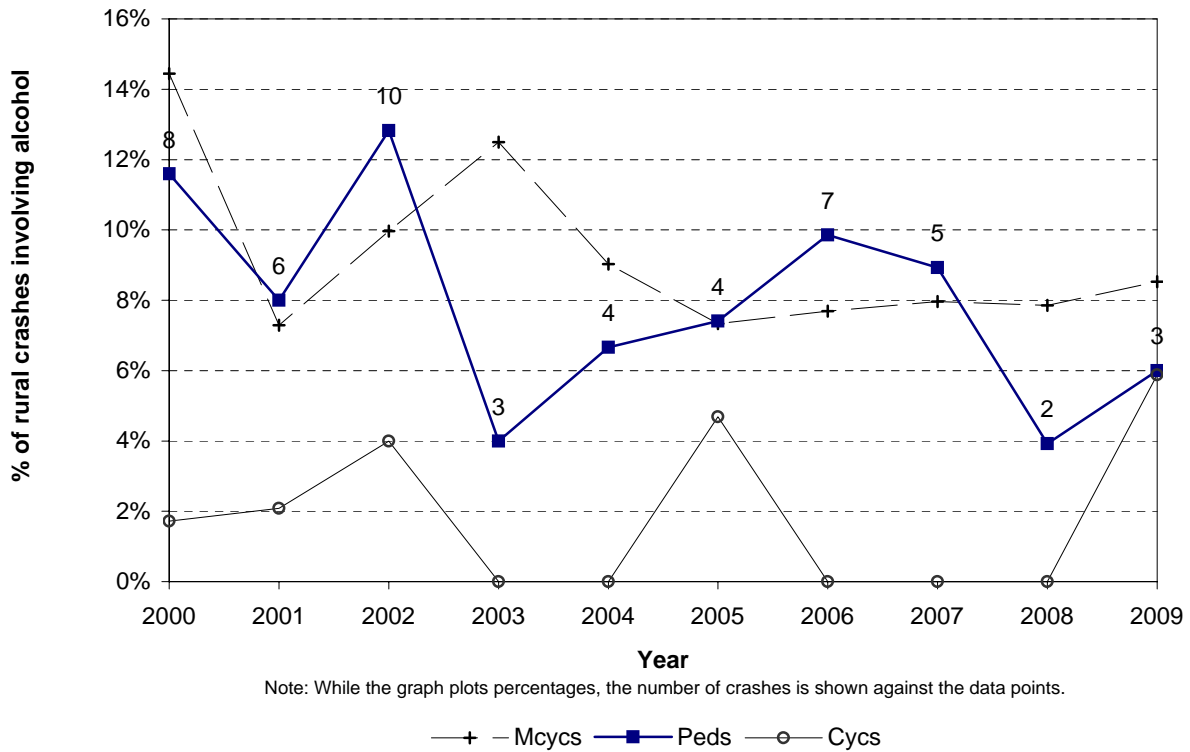
**Figure 5.11 Contributing factor trends  
VRUs - Pedestrians - rural roads**



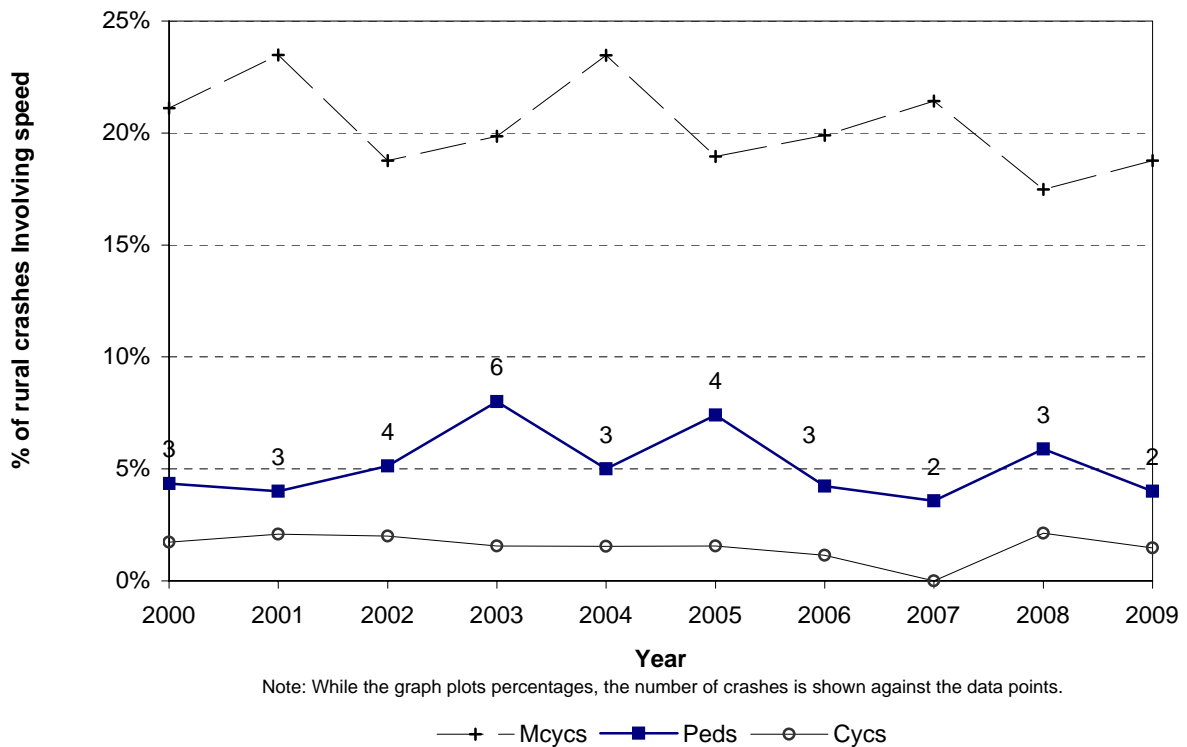
**Figure 5.12 Contributing factor trends  
VRUs - Pedestrians - rural roads**



**Figure 5.13 Alcohol involved trend  
VRUs - Pedestrians - rural roads**



**Figure 5.14 Speed involved trend  
VRUs - Pedestrians - rural roads**



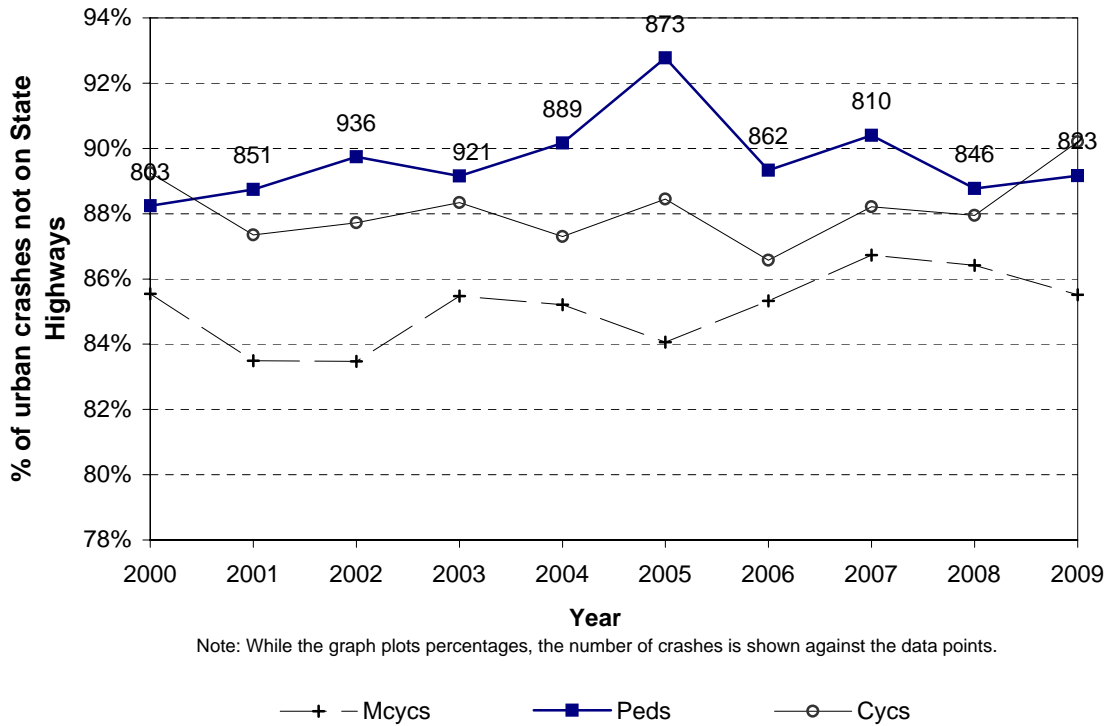


# *Environmental Statistics*

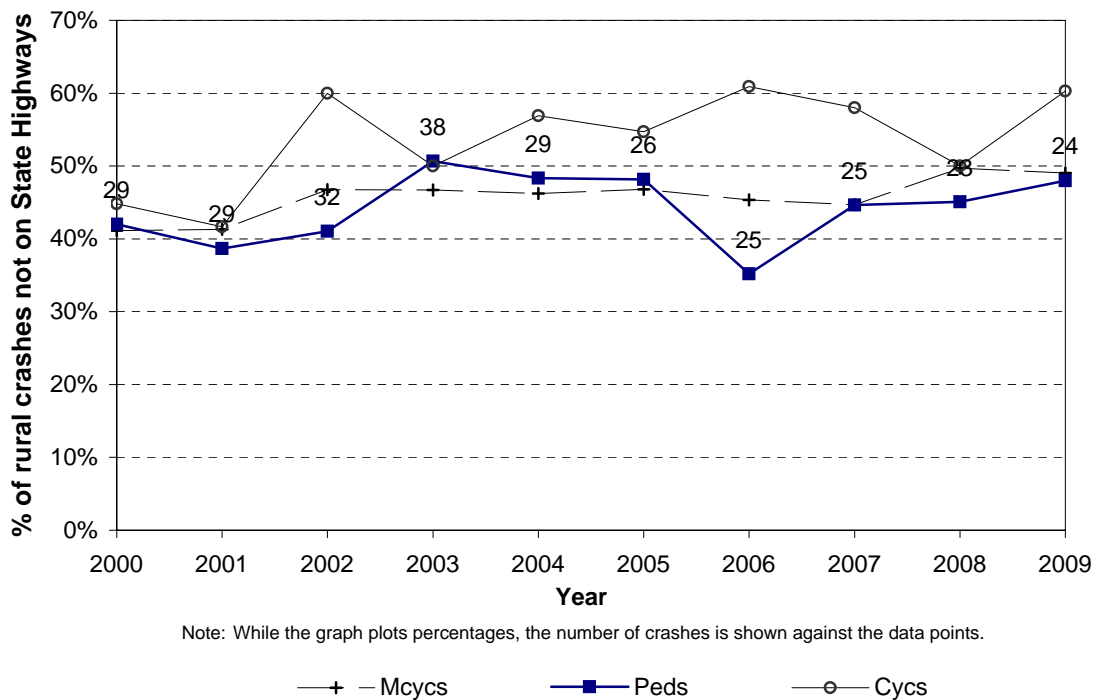




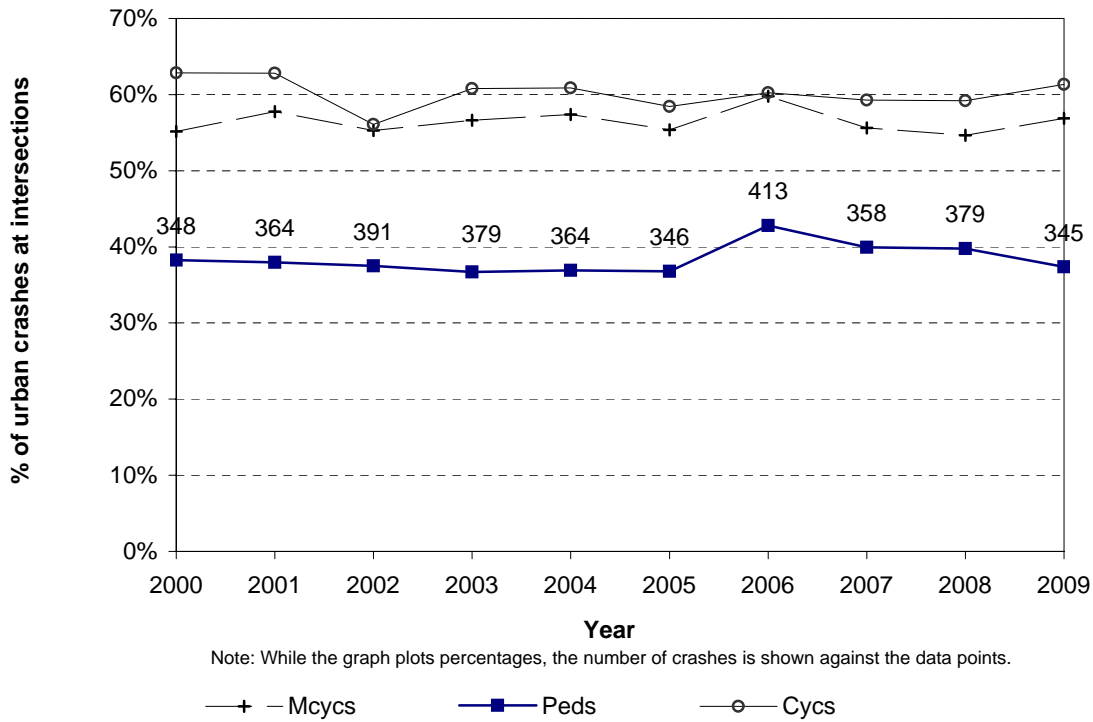
**Figure 6.1 Crashes not on state highways  
VRUs - Pedestrians - urban roads**



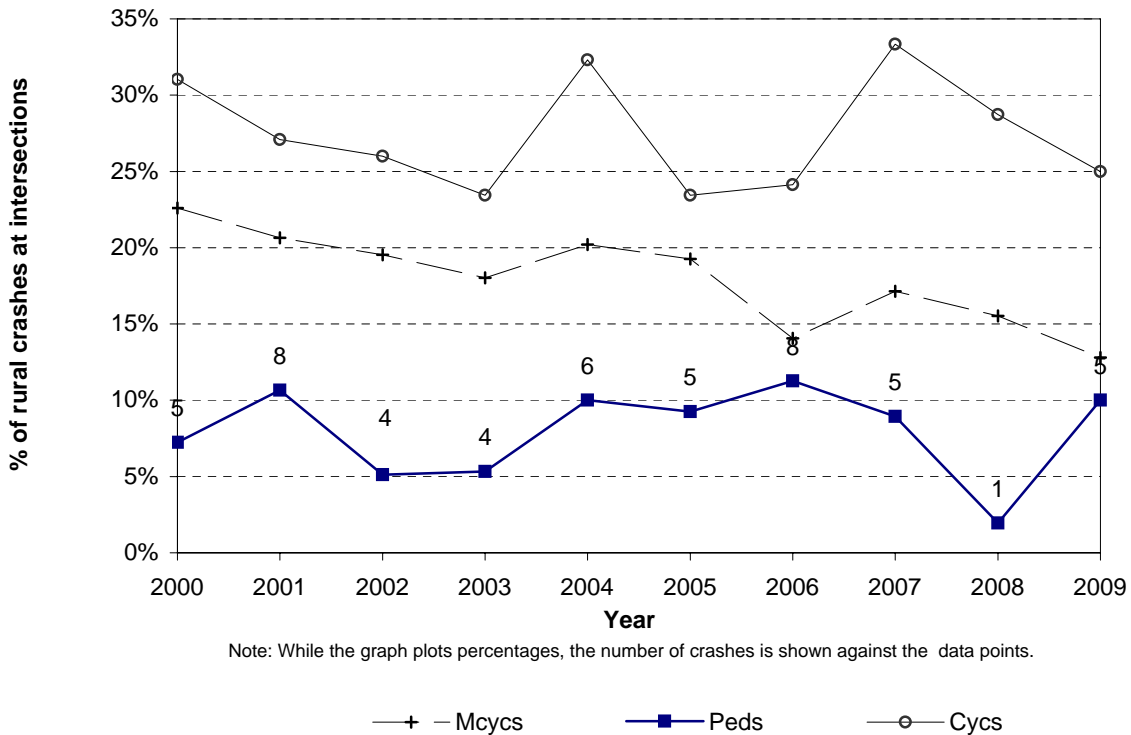
**Figure 6.2 Crashes not on state highways  
VRUs - Pedestrians - rural roads**



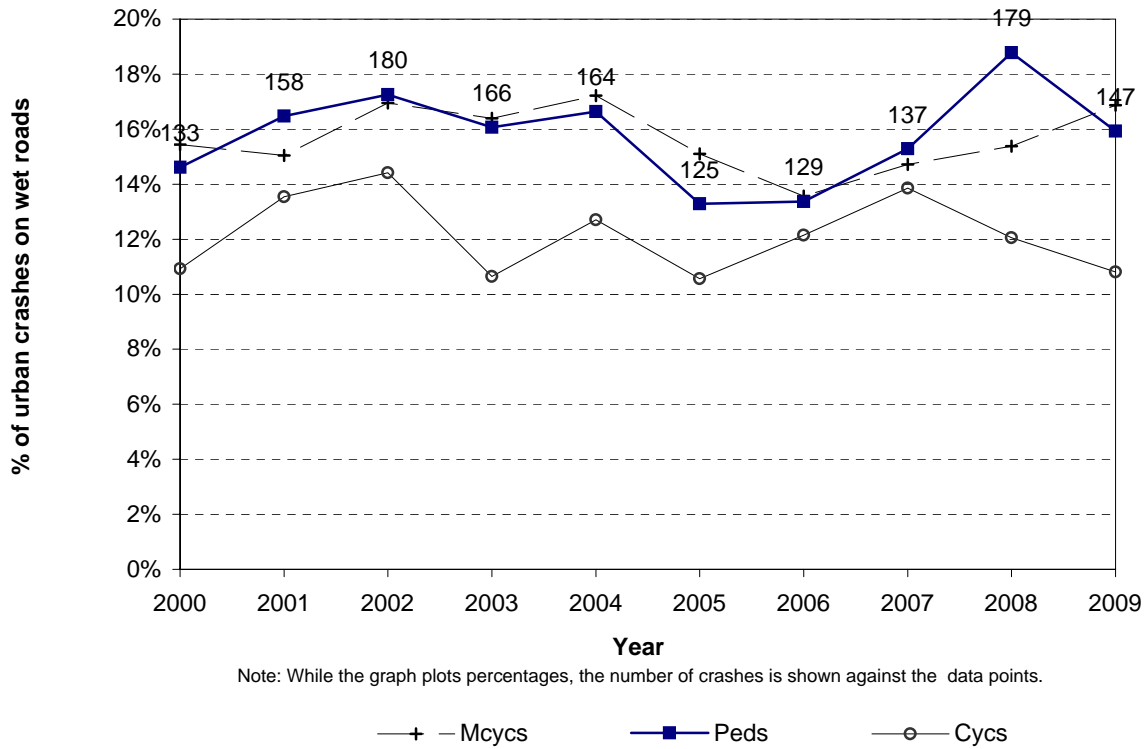
**Figure 6.3 Intersection crashes  
VRUs - Pedestrians - urban roads**



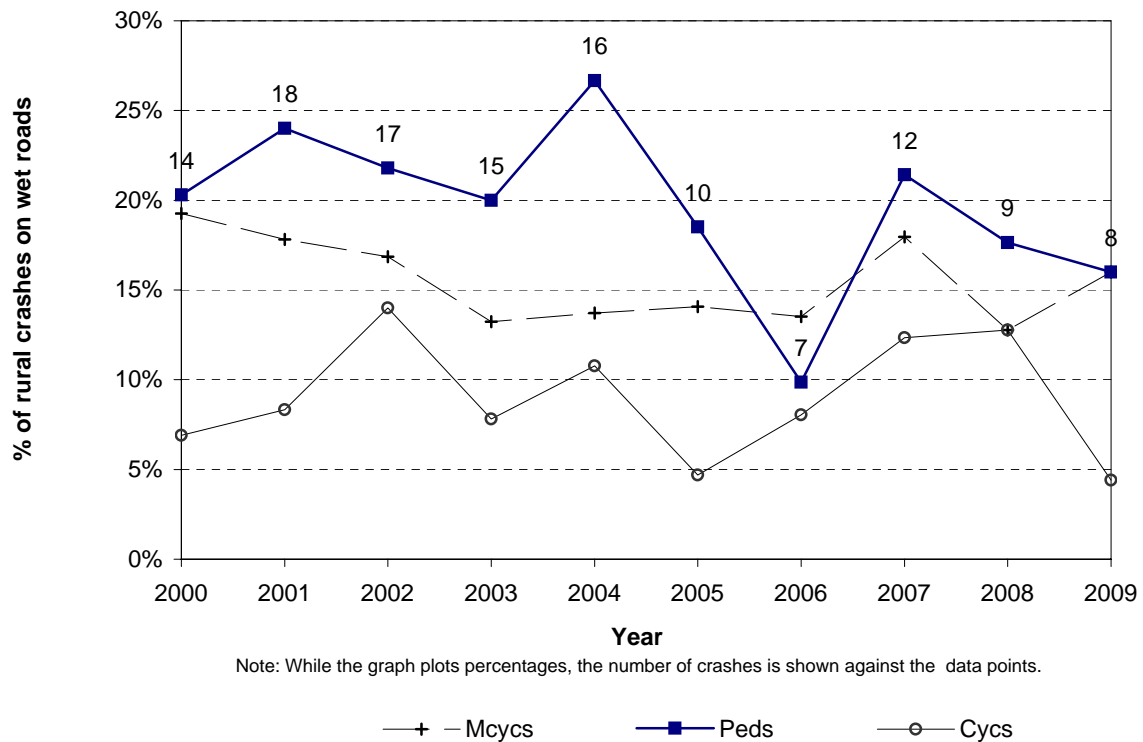
**Figure 6.4 Intersection crashes  
VRUs - Pedestrians - rural roads**



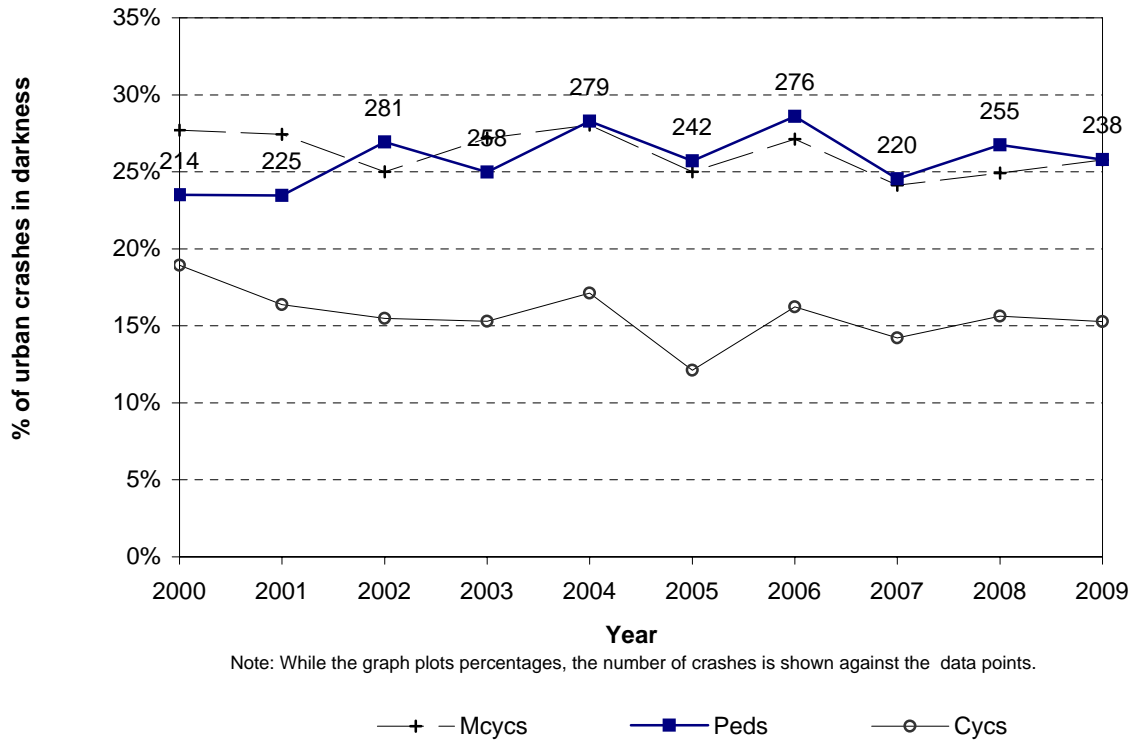
**Figure 6.5 Wet road crashes  
VRUs - Pedestrians - urban roads**



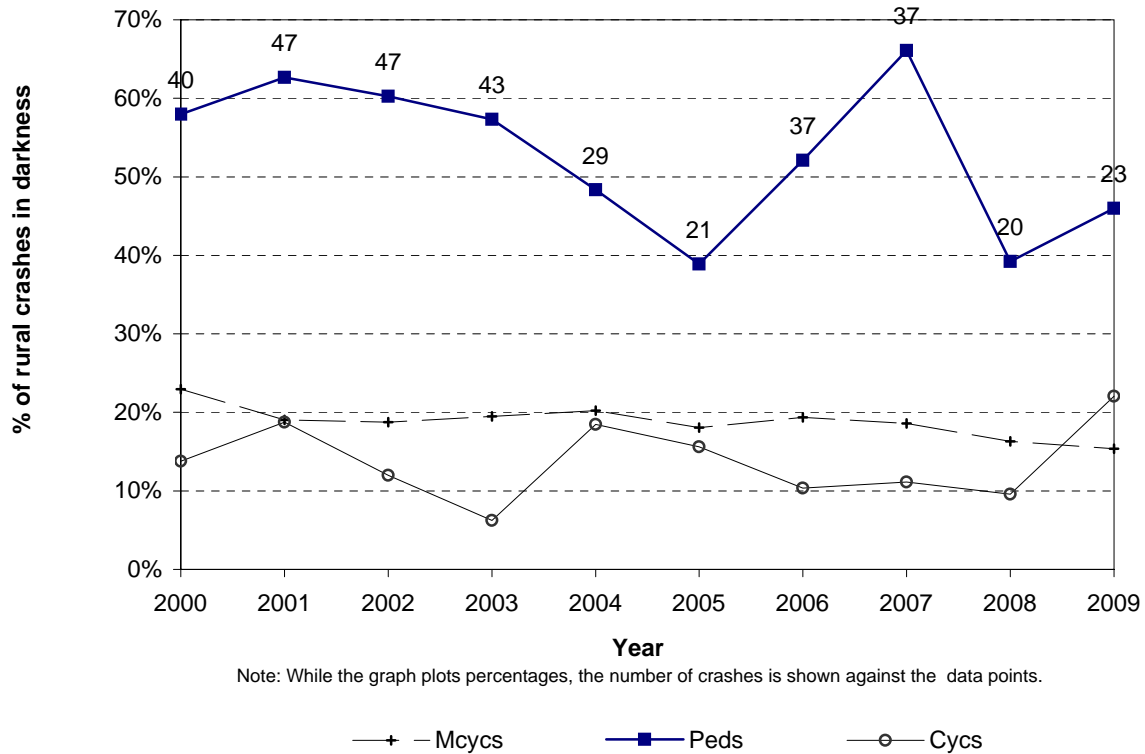
**Figure 6.6 Wet road crashes  
VRUs - Pedestrians - rural roads**



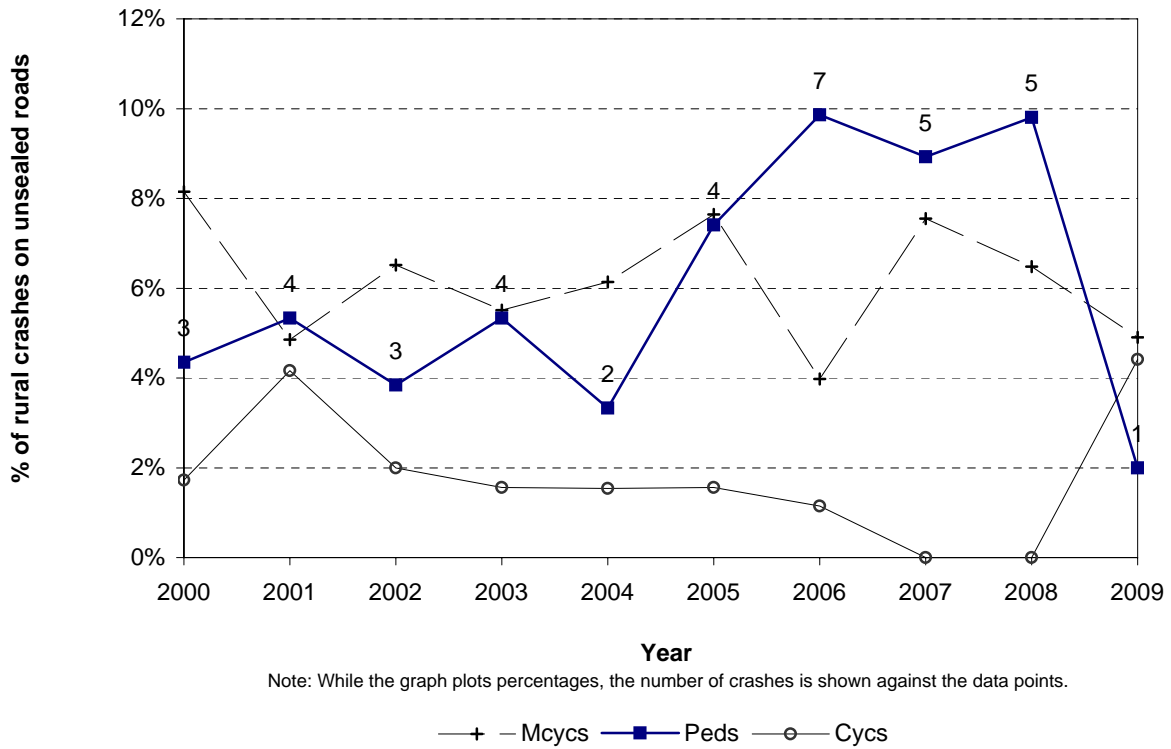
**Figure 6.7 Crashes in darkness  
VRUs - Pedestrians - urban roads**



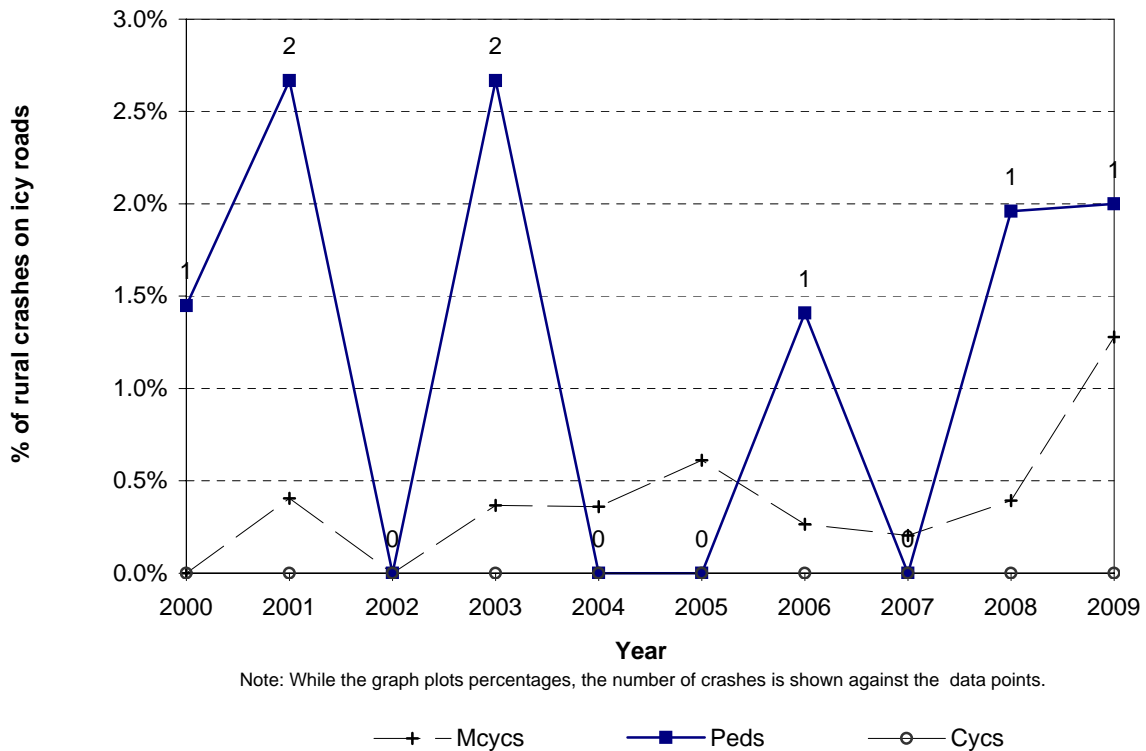
**Figure 6.8 Crashes in darkness  
VRUs - Pedestrians - rural roads**



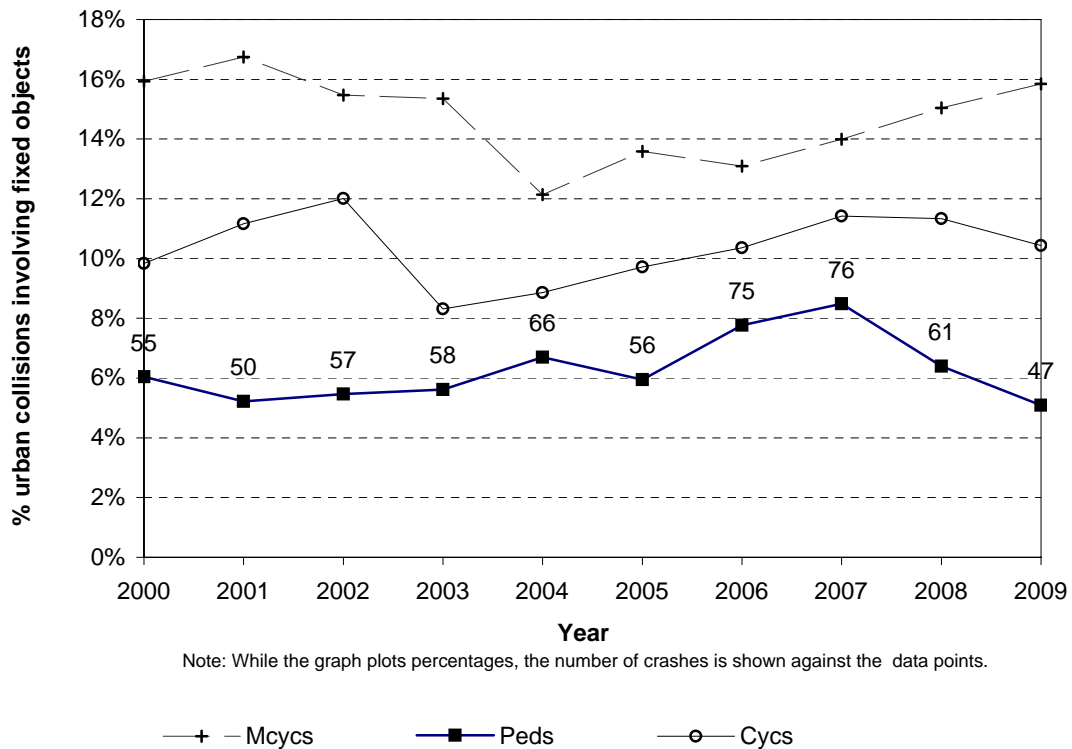
**Figure 6.9 Unsealed road crashes  
VRUs - Pedestrians - rural roads**



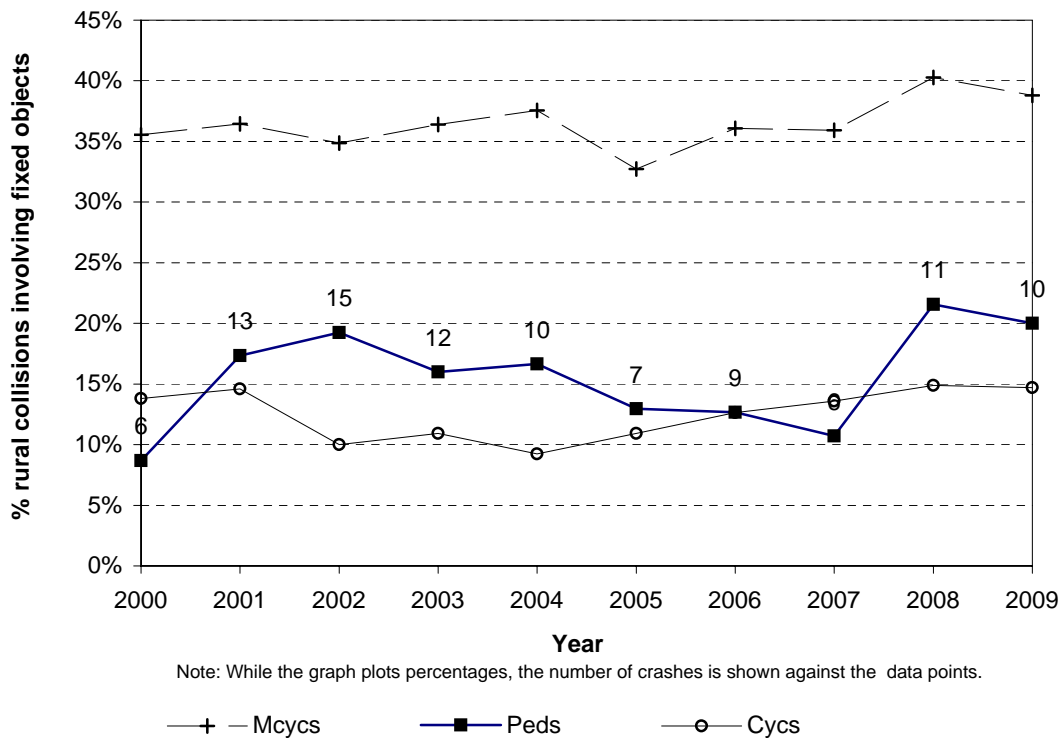
**Figure 6.10 Icy road crashes  
VRUs - Pedestrians - rural roads**



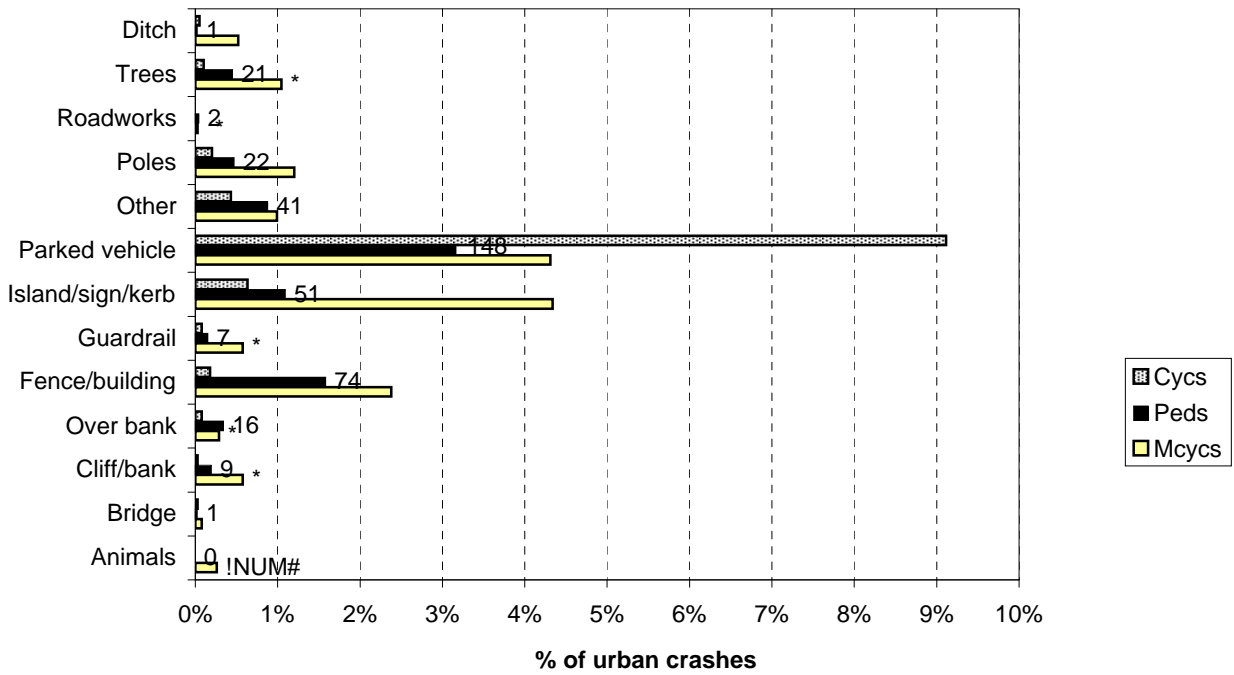
**Figure 6.11 Collisions with objects  
VRUs - Pedestrians - urban roads**



**Figure 6.12 Collisions with objects  
VRUs - Pedestrians - rural roads**

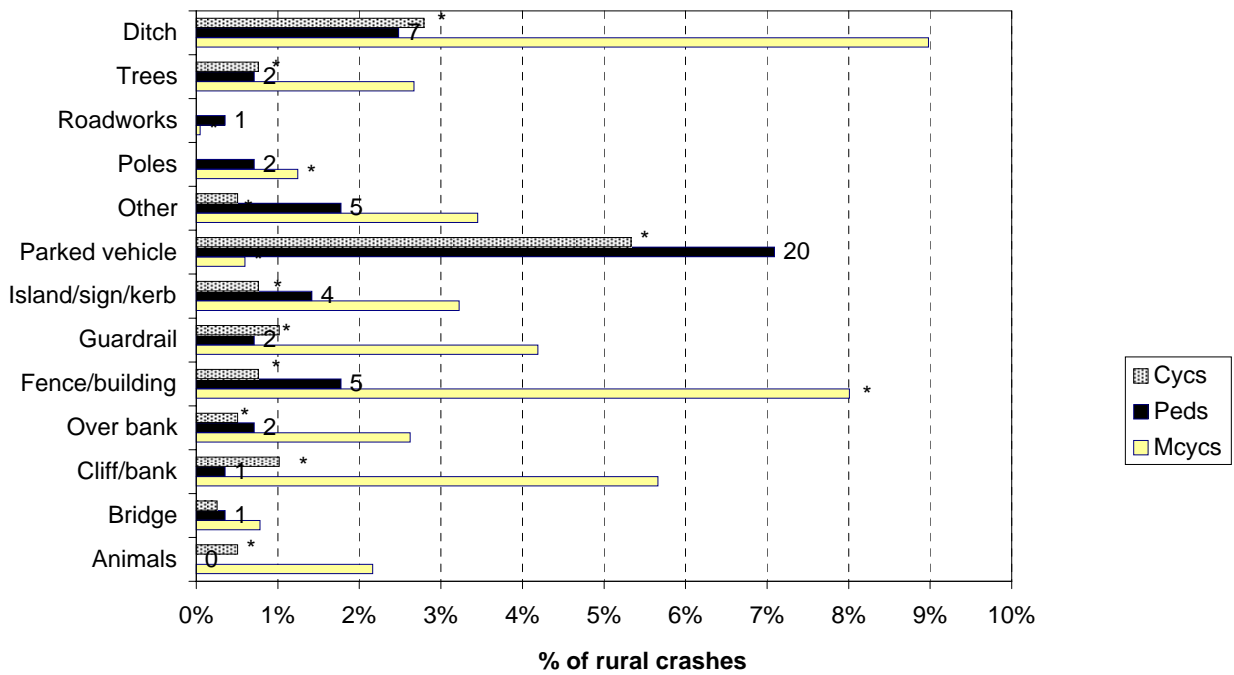


**Figure 6.13 Objects struck - urban  
VRUs - Pedestrians (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 6.14 Objects struck - rural  
VRUs - Pedestrians (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

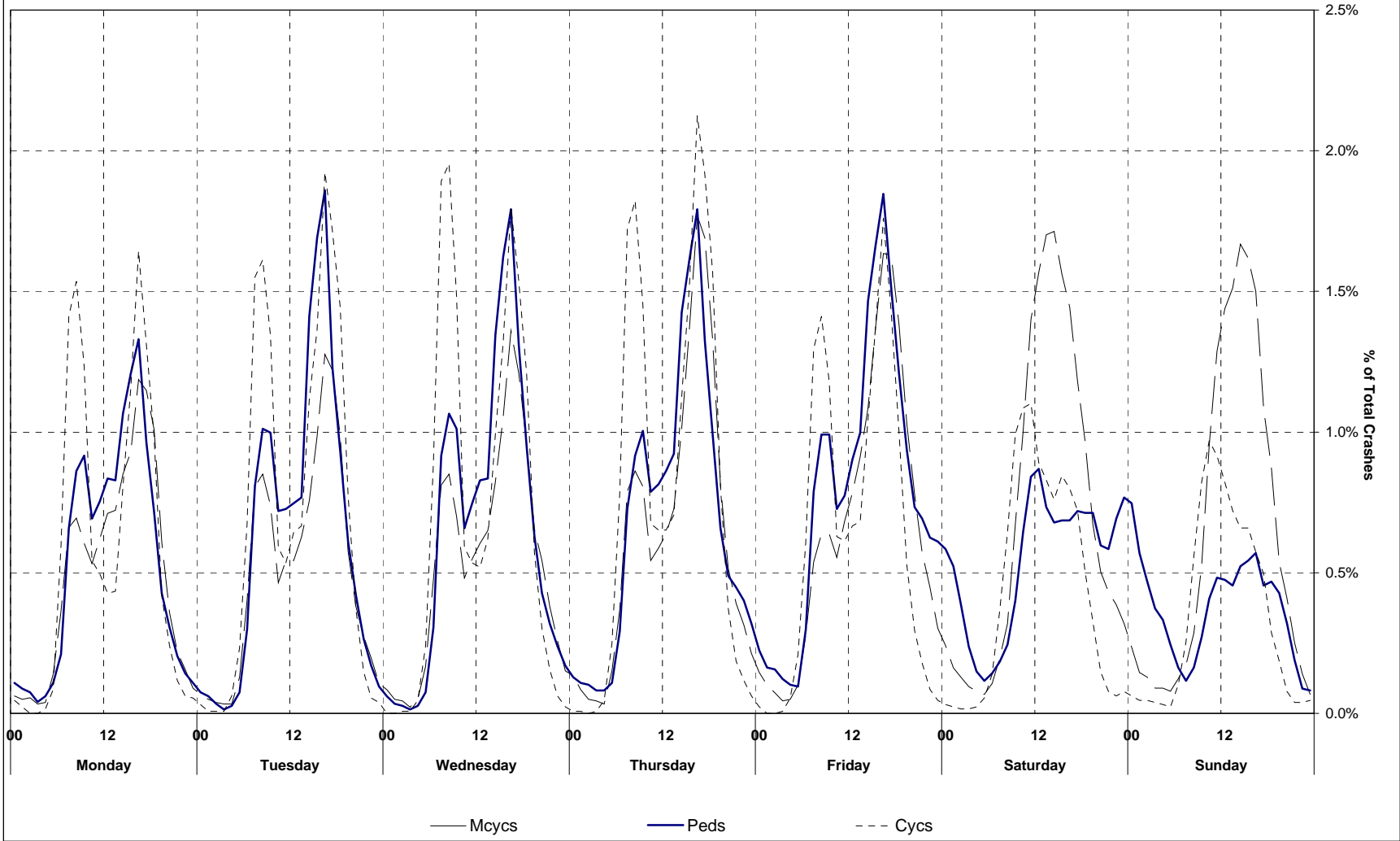




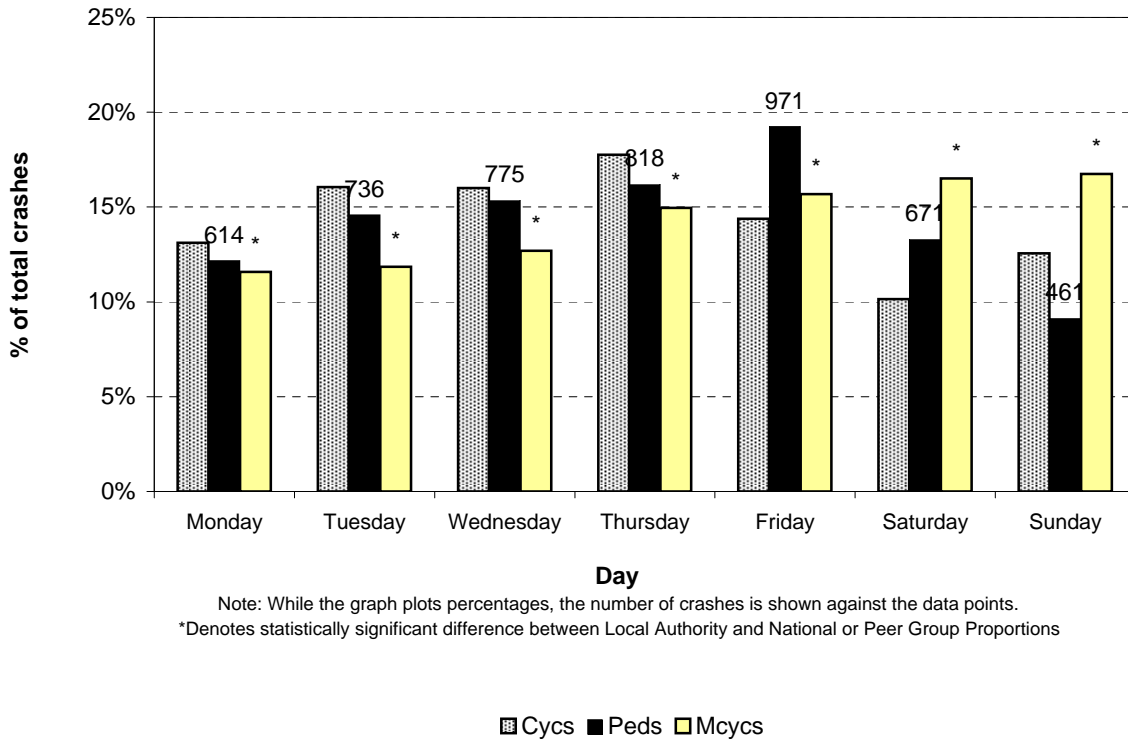
# *Date and Time Statistics*



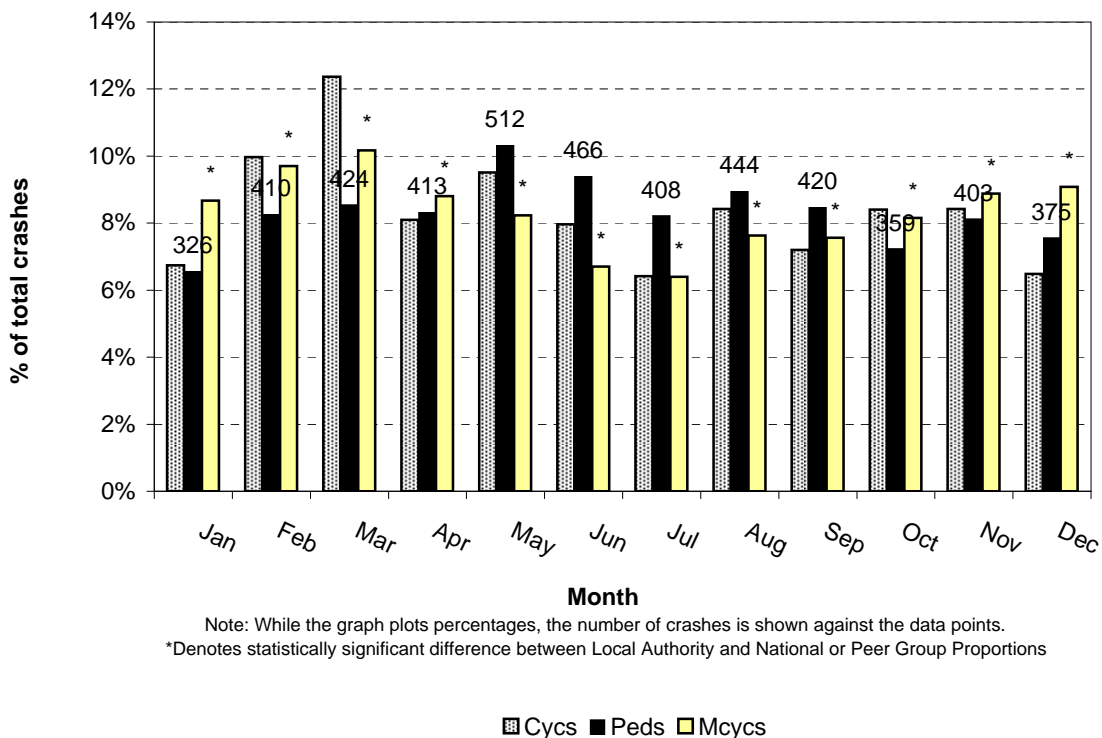
Figure 7.1 Time pattern over average week  
VRUs - Pedestrians (2005-2009)



**Figure 7.2 Day of week (6 a.m. to 6 a.m.)  
VRUs - Pedestrians (2005-2009)**



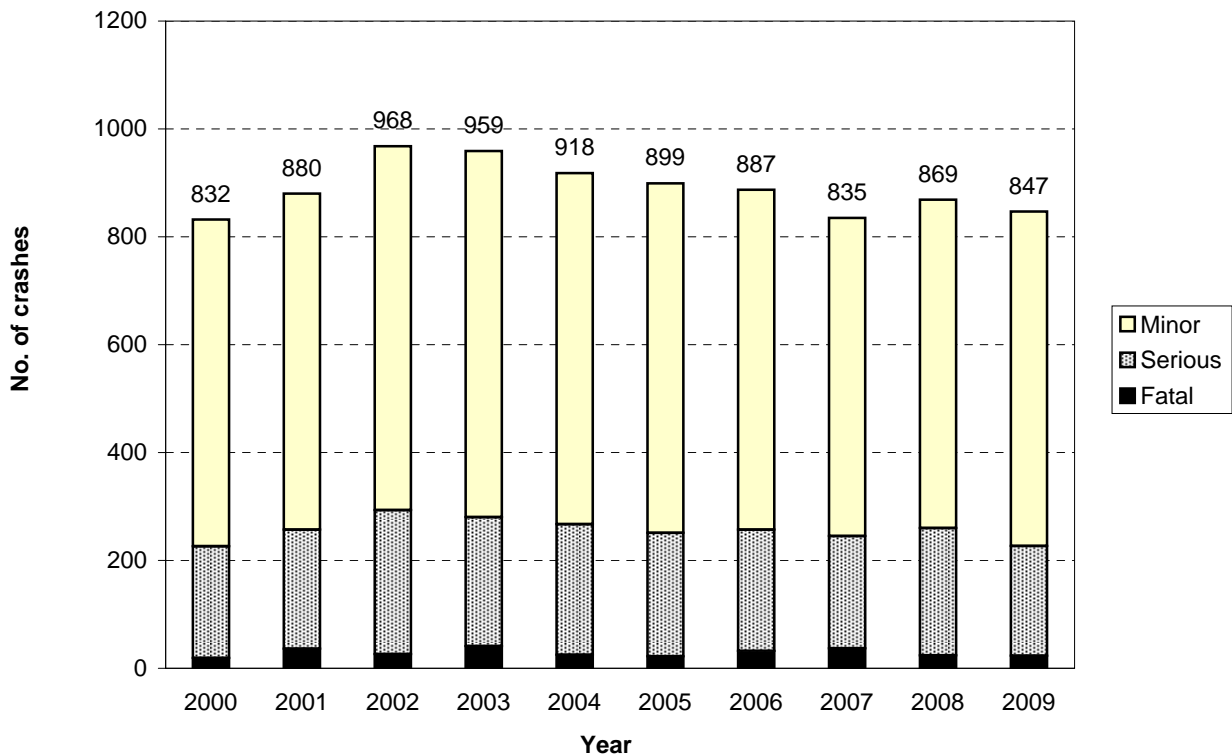
**Figure 7.3 Month of year  
VRUs - Pedestrians (2005-2009)**



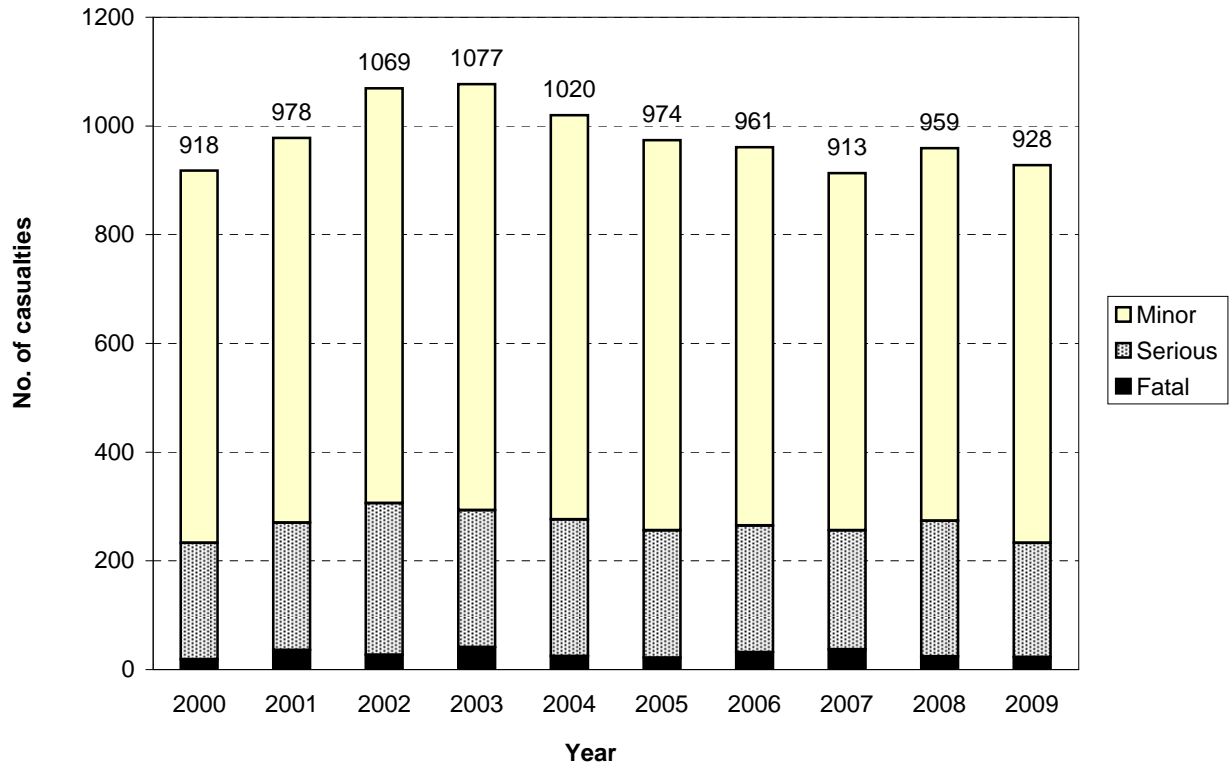
# *Local Road Statistics*



**Figure 8.1 Number of injury crashes**  
VRUs - Pedestrians - council roads (urban & rural)

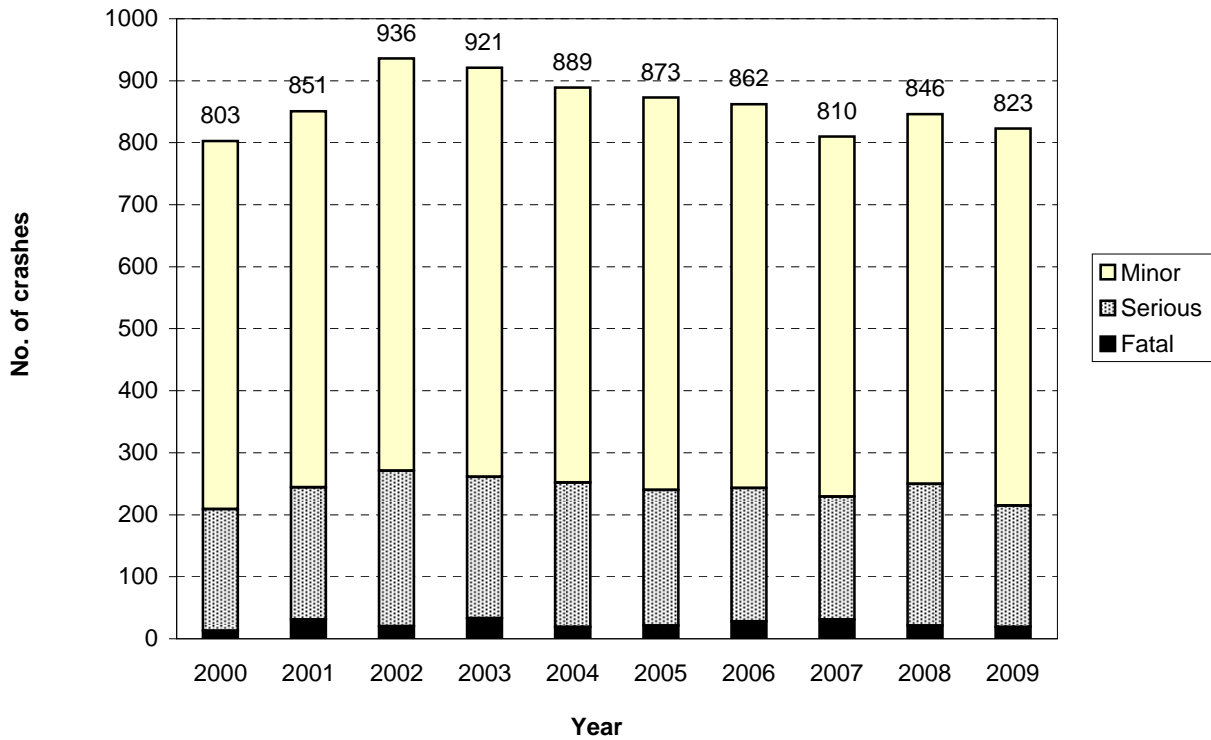


**Figure 8.2 Number of casualties**  
VRUs - Pedestrians - council roads (urban & rural)

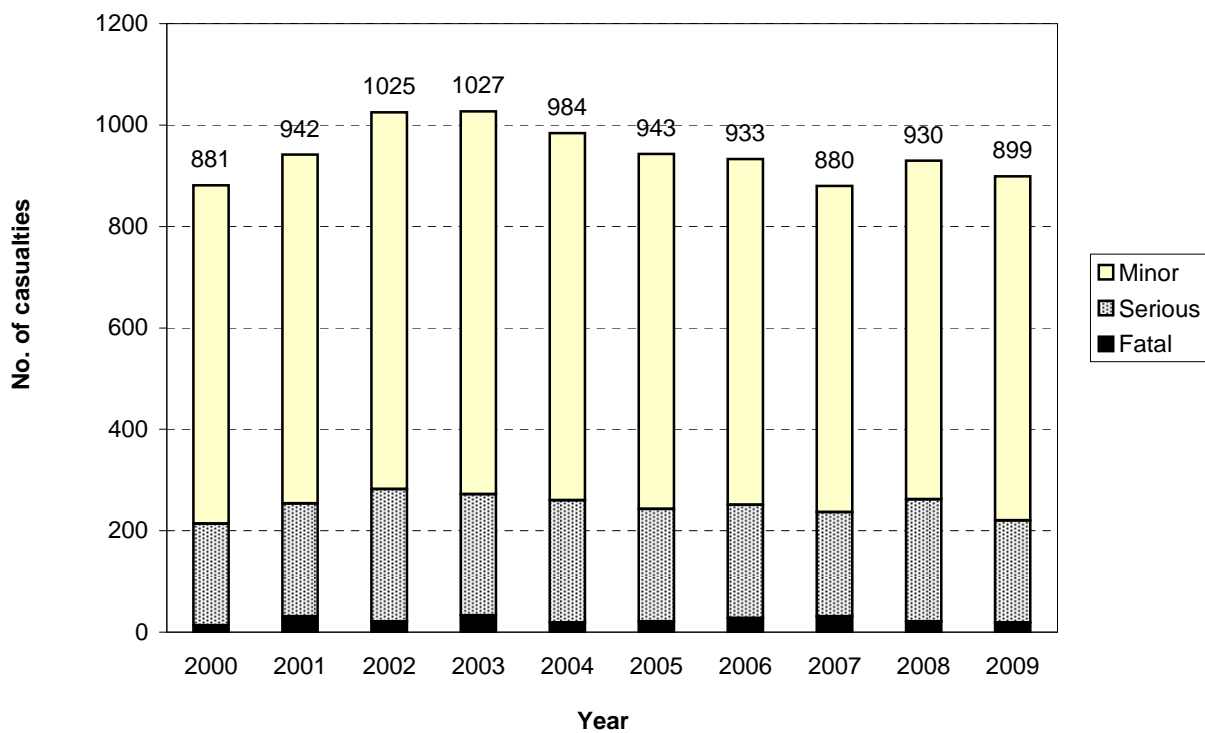




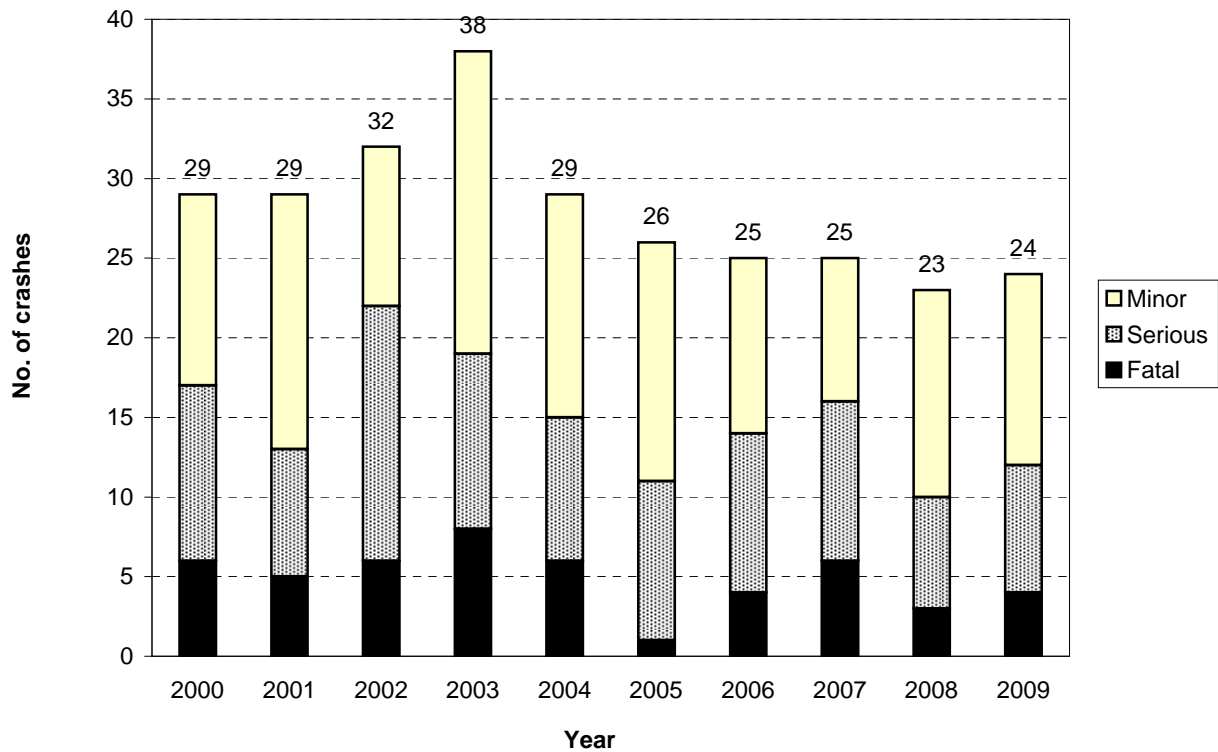
**Figure 8.3 Number of injury crashes**  
VRUs - Pedestrians - urban council roads



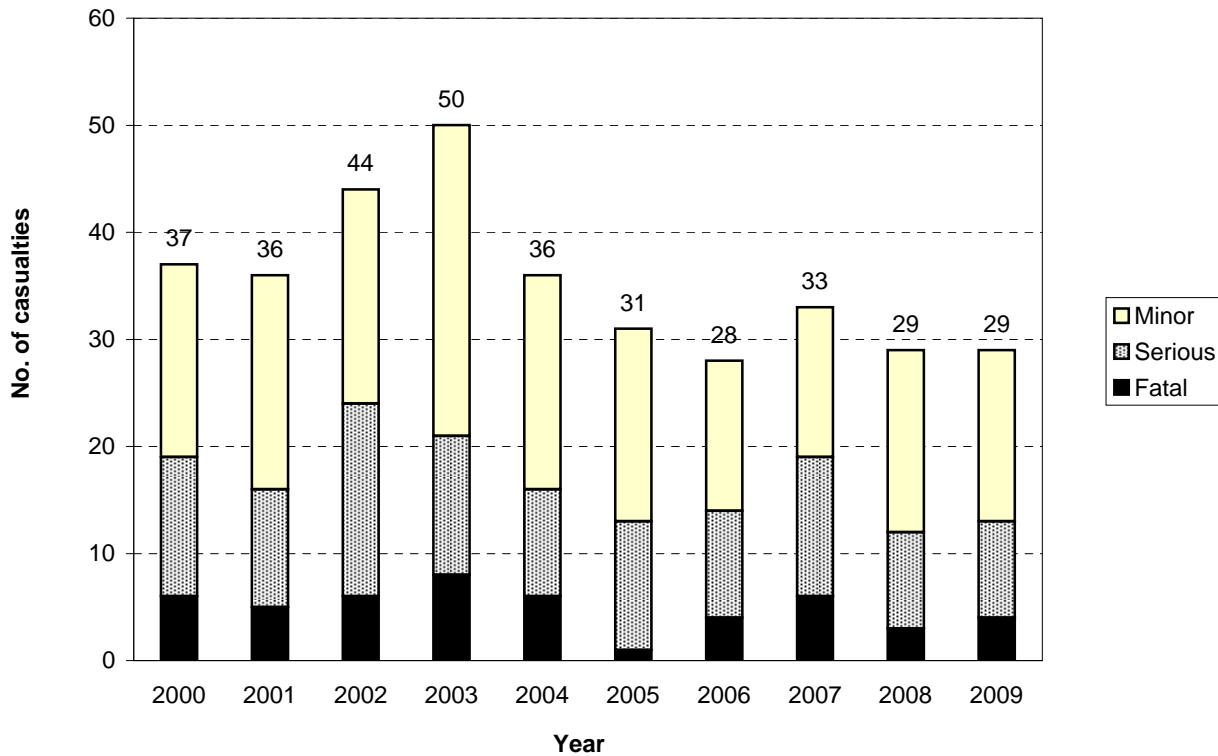
**Figure 8.4 Number of casualties**  
VRUs - Pedestrians - urban council roads



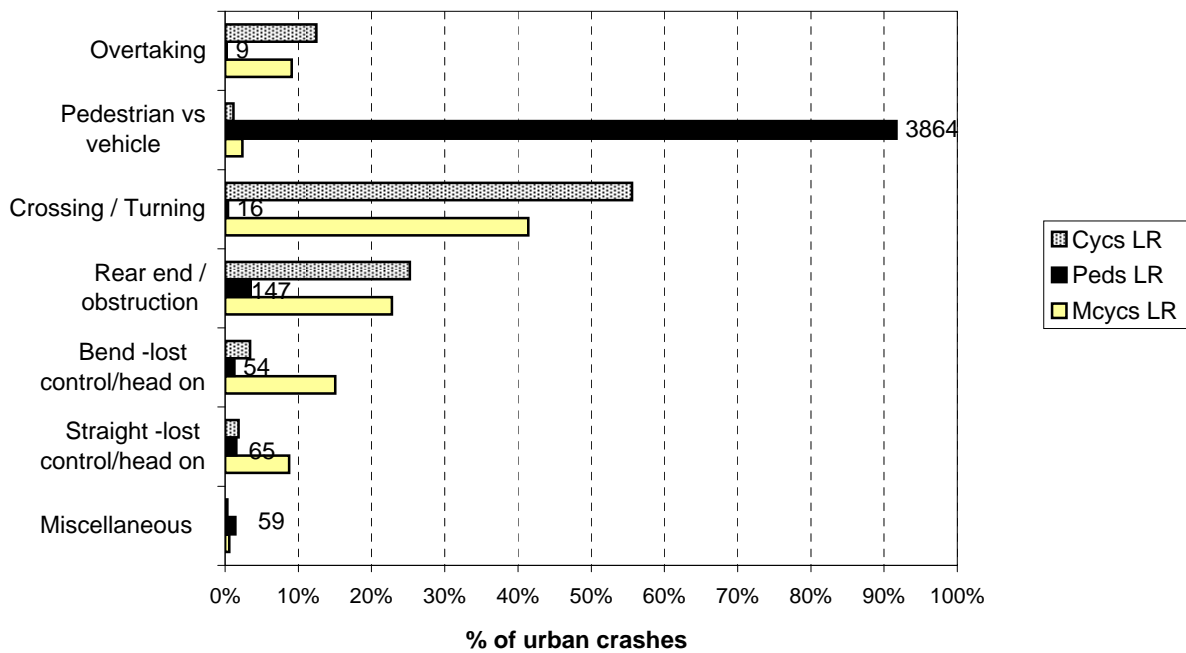
**Figure 8.5 Number of injury crashes  
VRUs - Pedestrians - rural council roads**



**Figure 8.6 Number of casualties  
VRUs - Pedestrians - rural council roads**

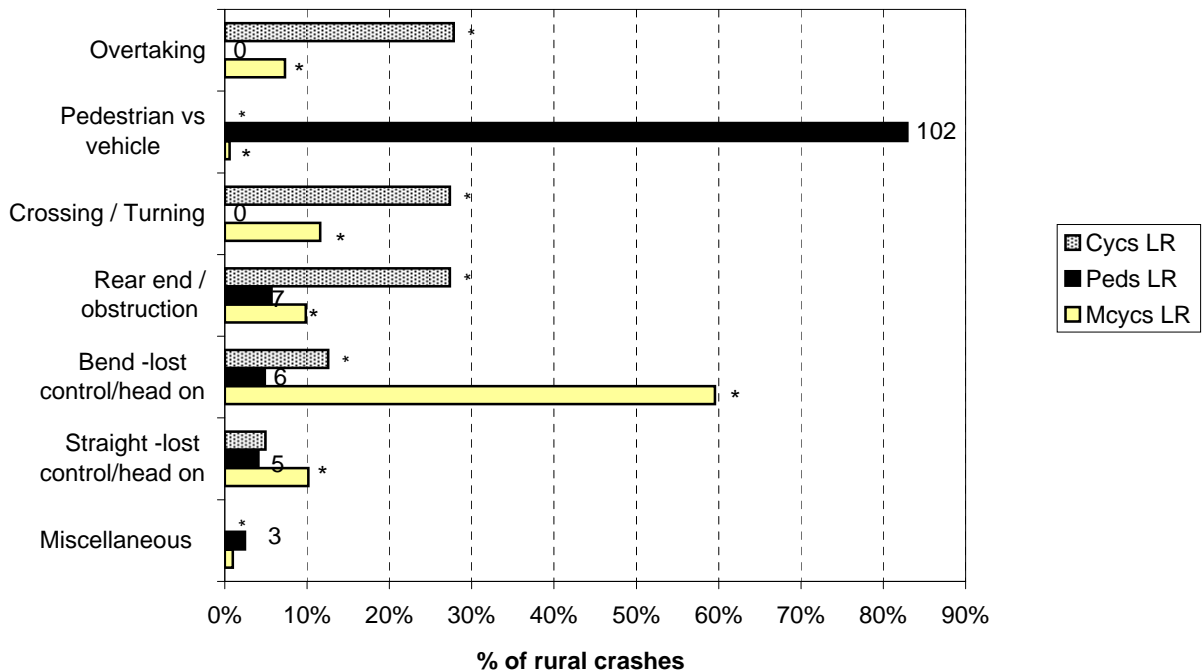


**Figure 8.7 Crash movement type - urban  
VRUs - Pedestrians council roads (2005-2009)**



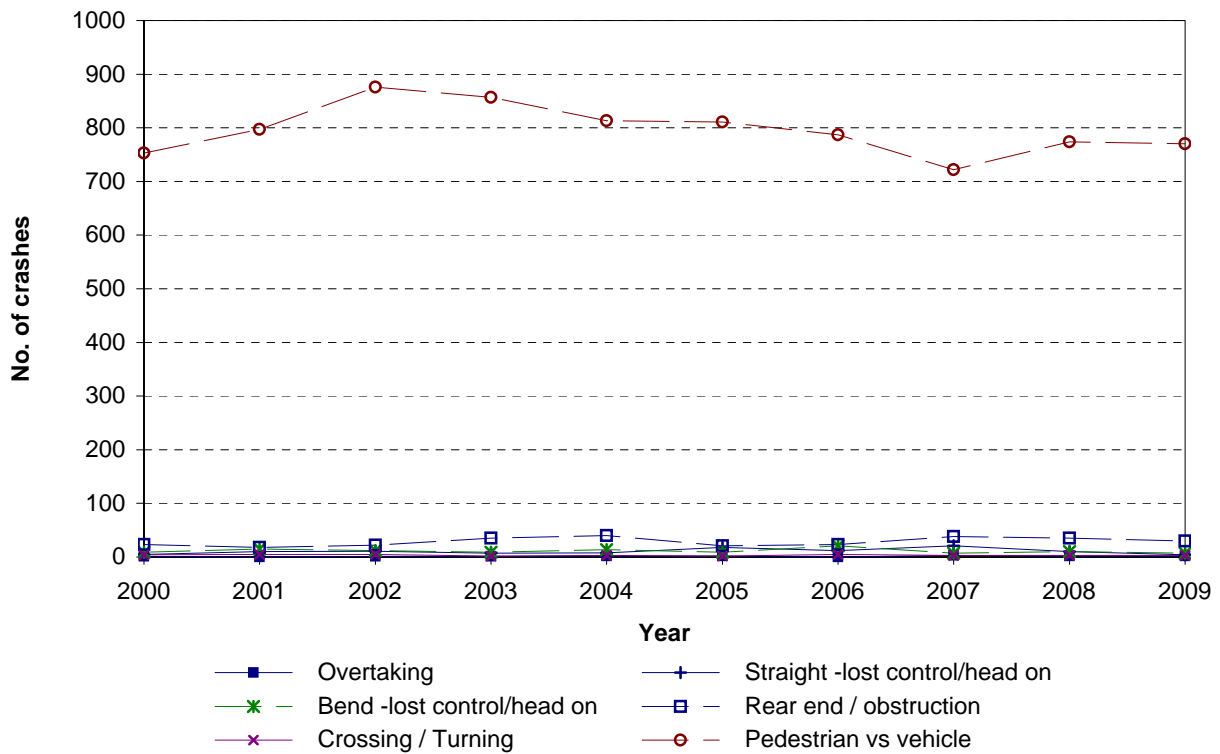
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.8 Crash movement type - rural  
VRUs - Pedestrians council roads (2005-2009)**

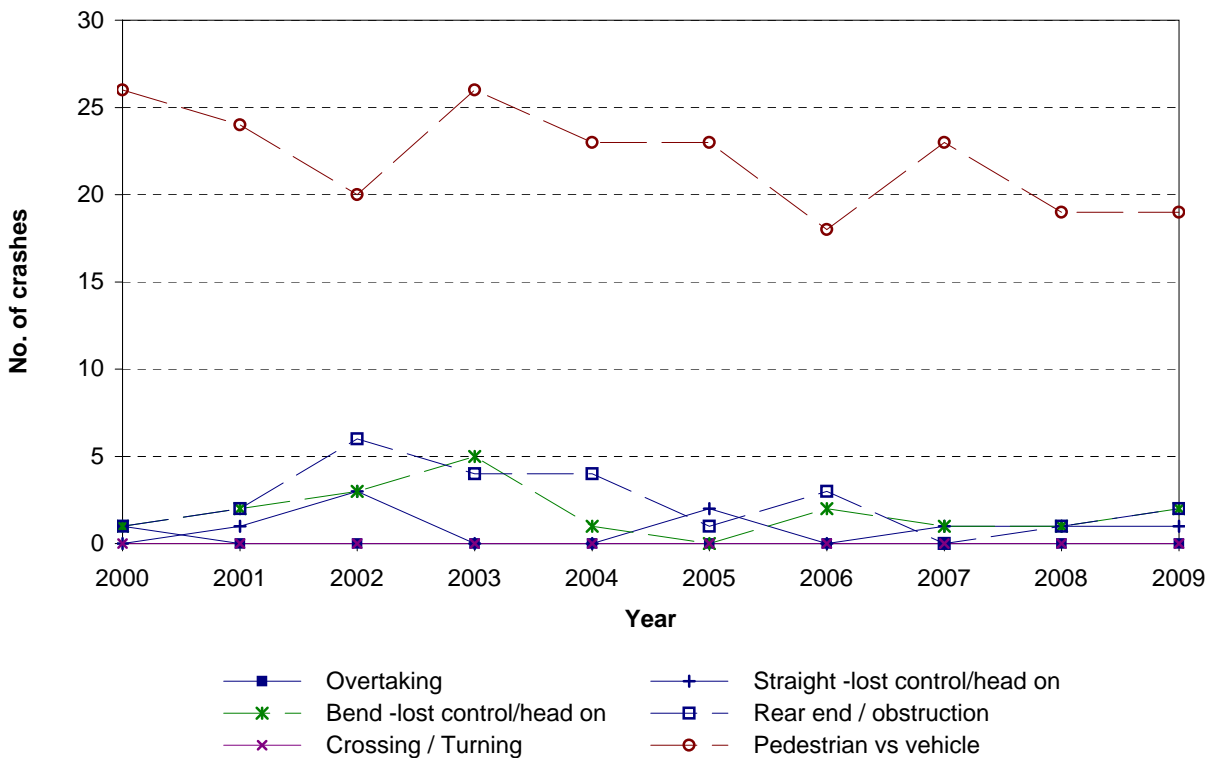


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

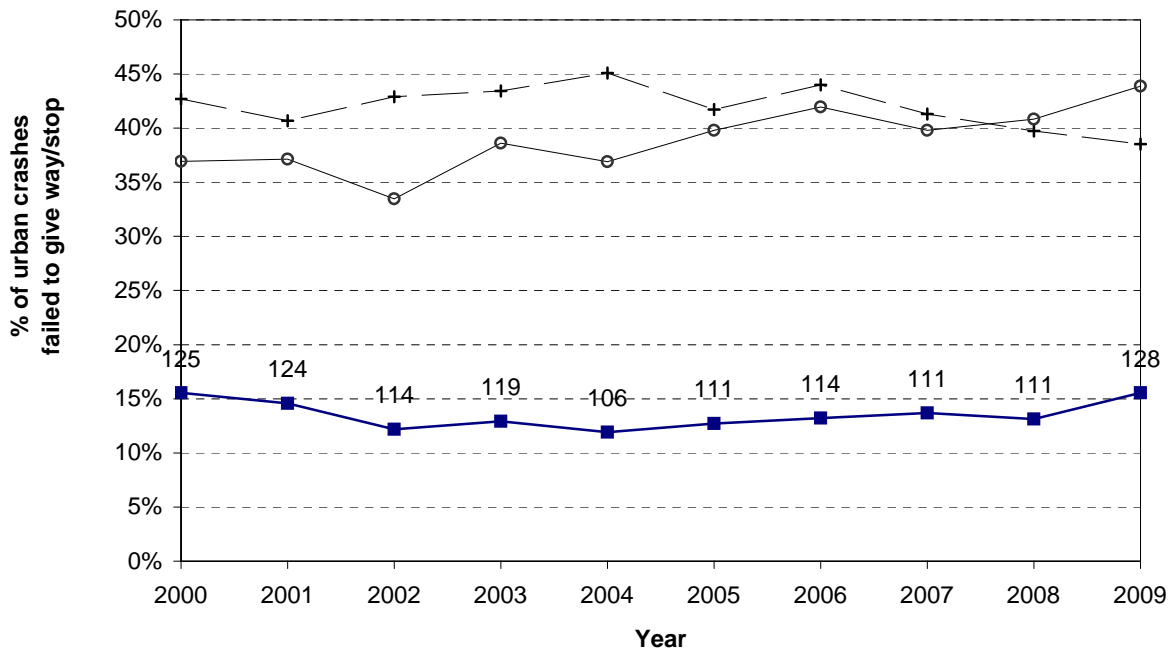
**Figure 8.9 Crash movement type - Trends  
VRUs - Pedestrians - urban council roads**



**Figure 8.10 Crash movement type - Trends  
VRUs - Pedestrians - rural council roads**



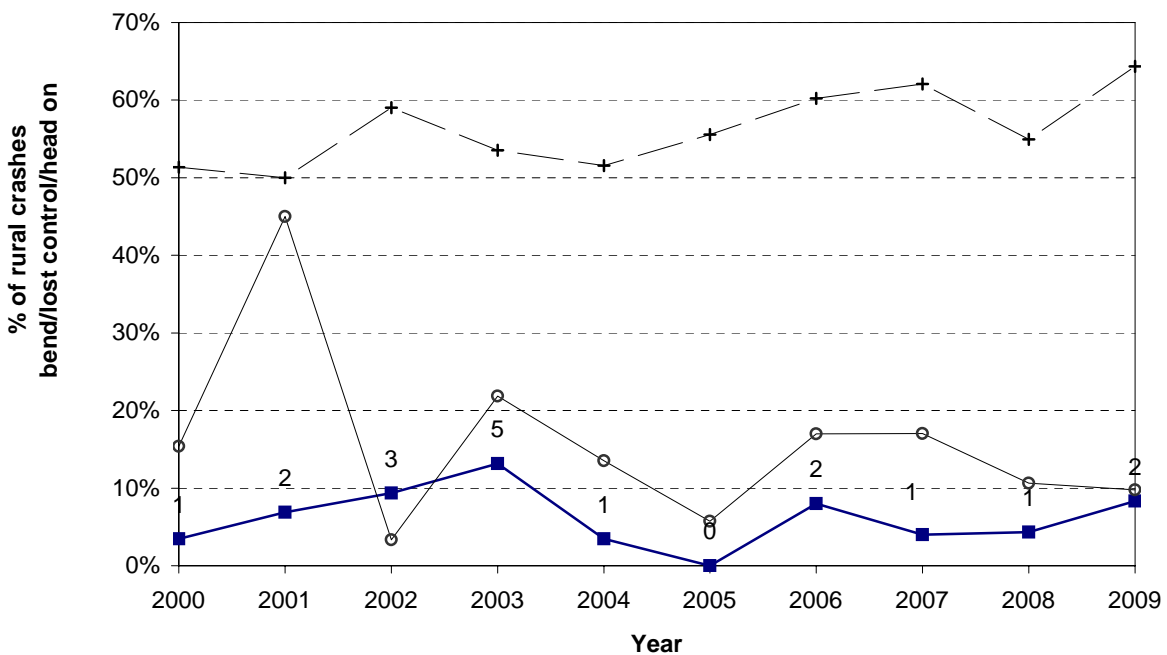
**Figure 8.11 Failed to give way/stop  
VRUs - Pedestrians - urban council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Mccycs LR —■— Peds LR —○— Cyps LR

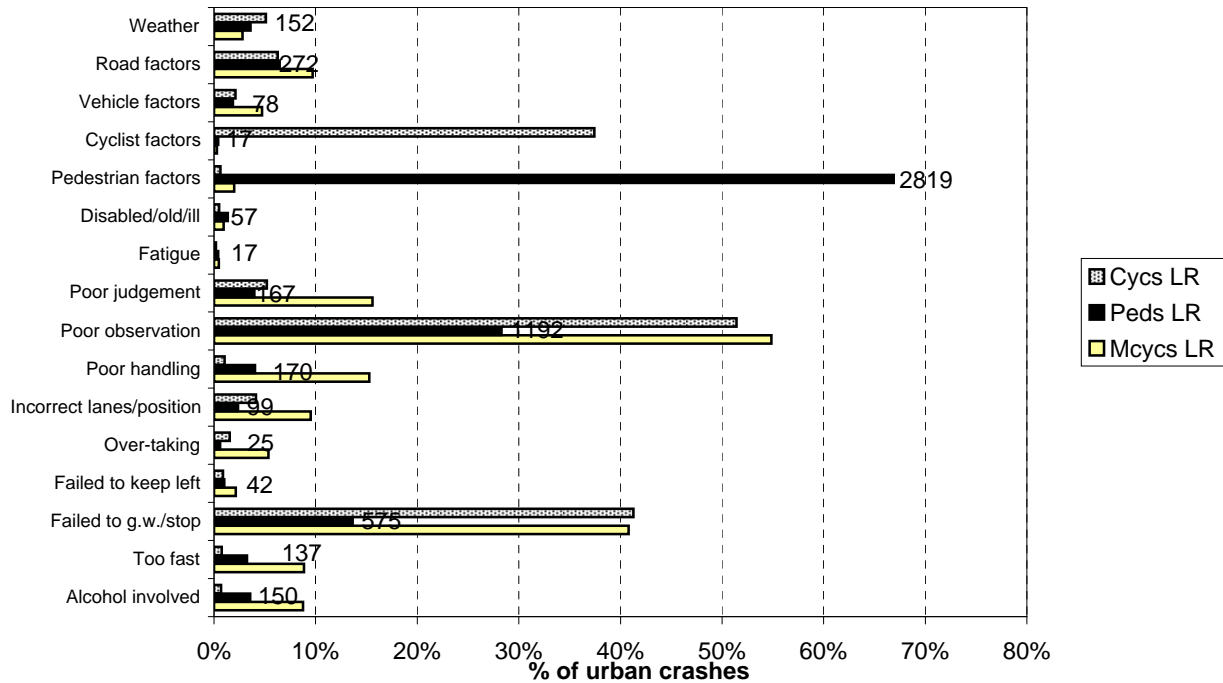
**Figure 8.12 Bend - lost control / head - on  
VRUs - Pedestrians - rural council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Mccycs LR —■— Peds LR —○— Cyps LR

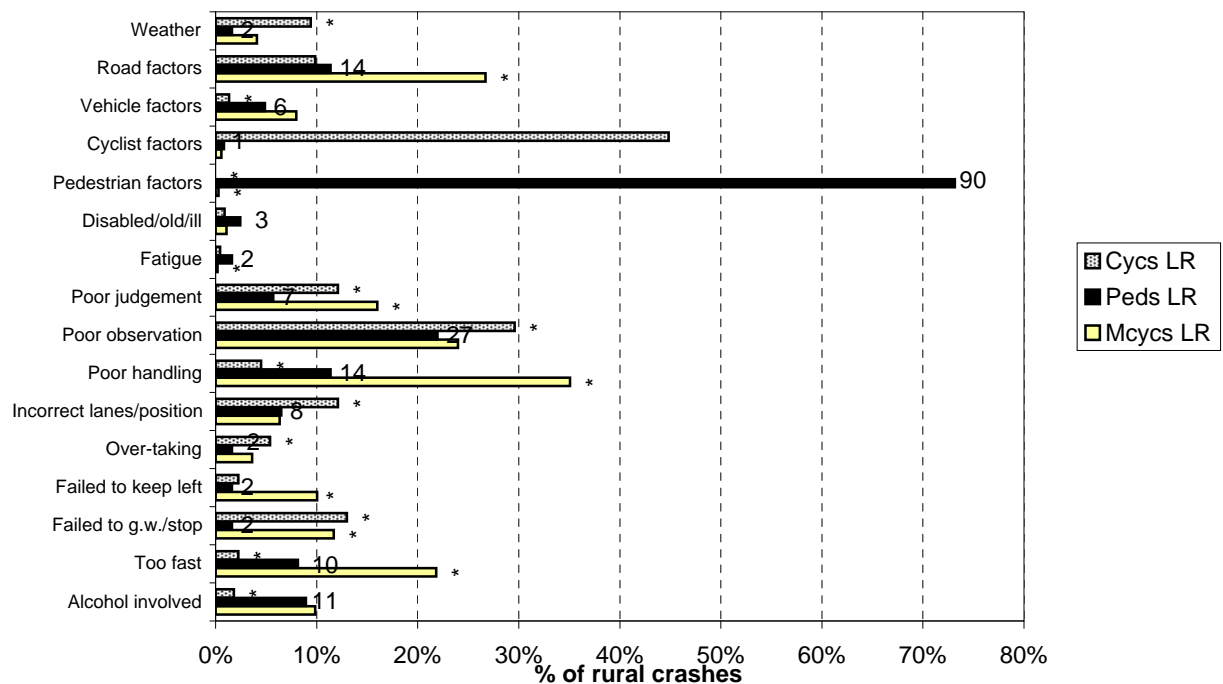
**Figure 8.13 Contributing factors - urban  
VRUs - Pedestrians council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

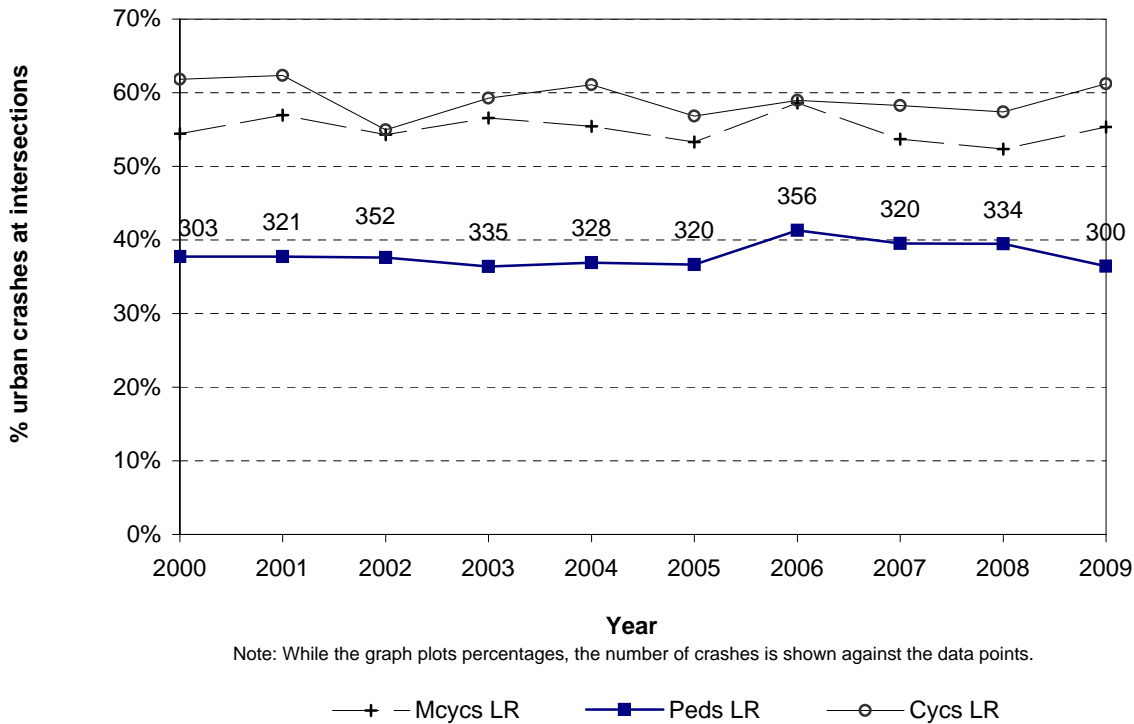
**Figure 8.14 Contributing factors - rural  
VRUs - Pedestrians council roads (2005-2009)**



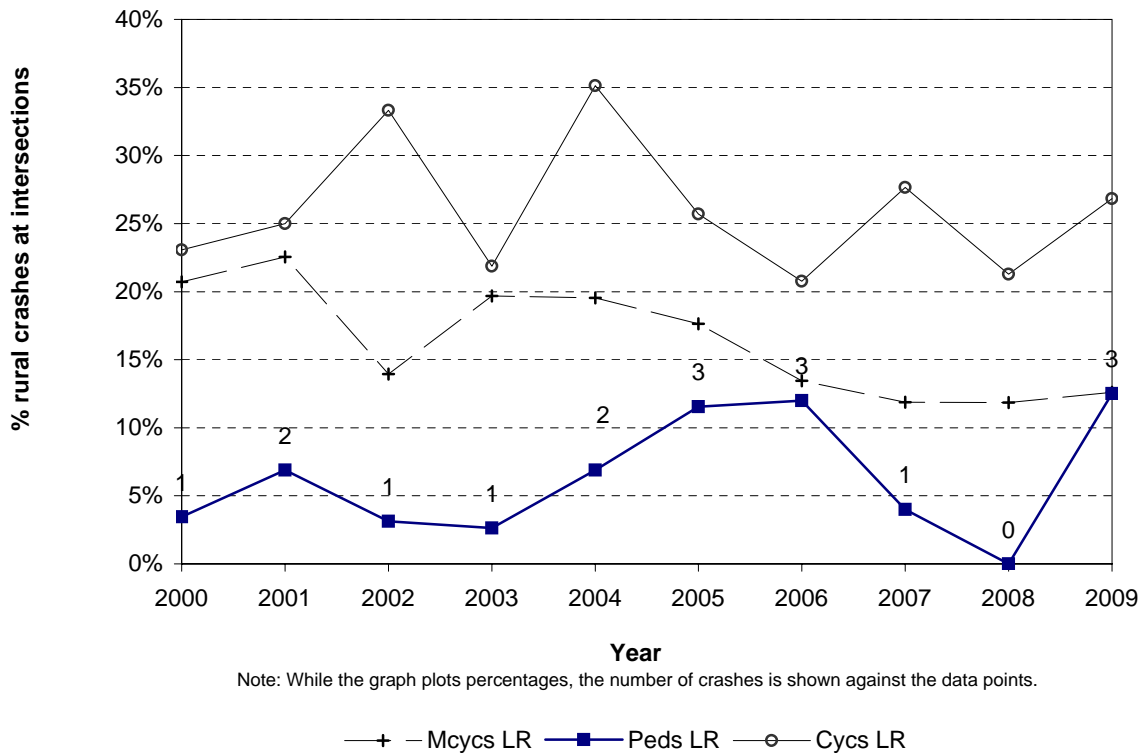
Note: While the graph plots percentages, the number of casualties is shown against the data points.

\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

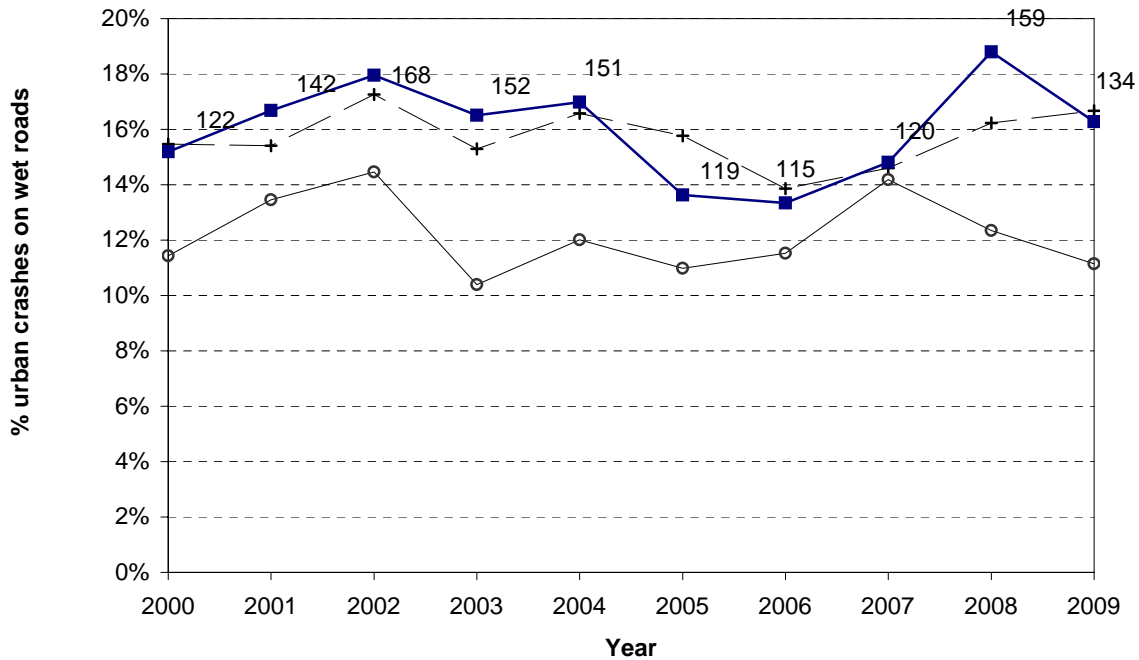
**Figure 8.15 Intersection crashes  
VRUs - Pedestrians - urban council roads**



**Figure 8.16 Intersection crashes  
VRUs - Pedestrians - rural council roads**



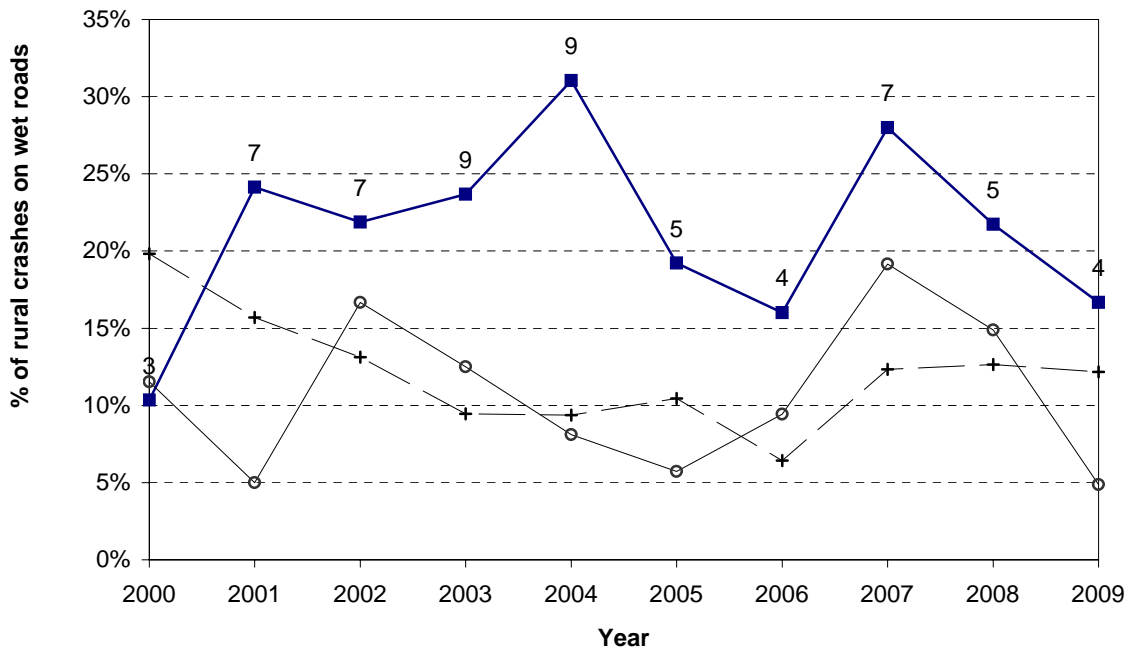
**Figure 8.17 Wet road crashes**  
VRUs - Pedestrians - urban council roads



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Mccycs LR —■— Peds LR —○— Cycls LR

**Figure 8.18 Wet road crashes**  
VRUs - Pedestrians - rural council roads

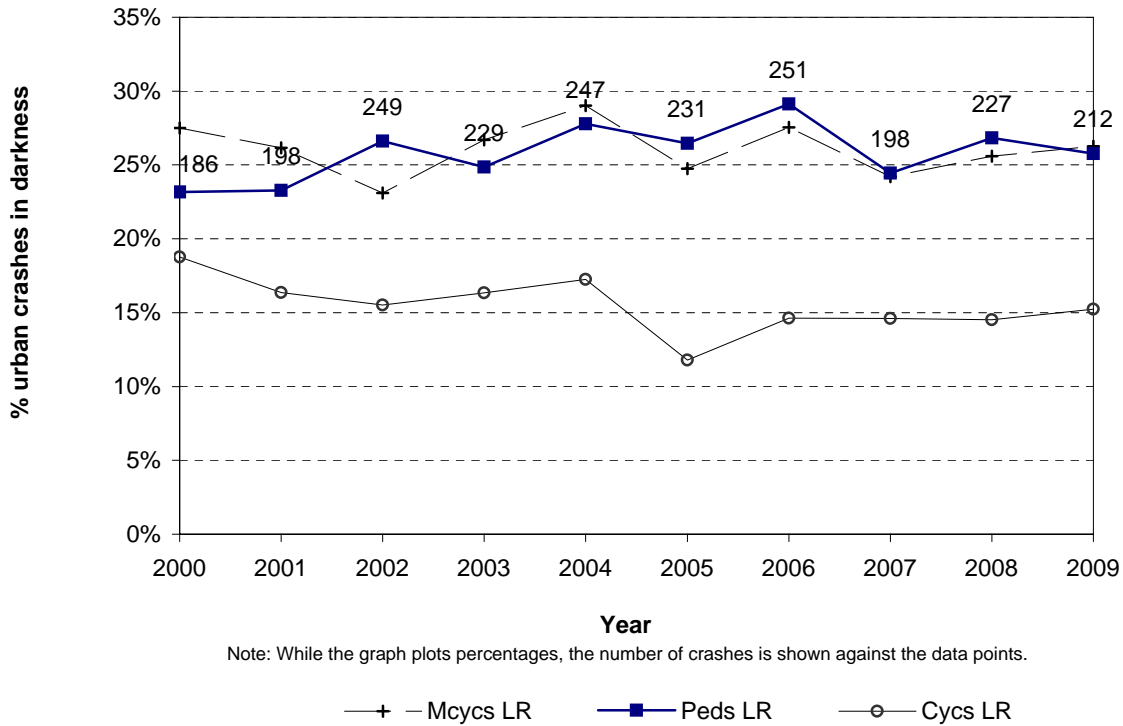


Note: While the graph plots percentages, the number of crashes is shown against the data points.

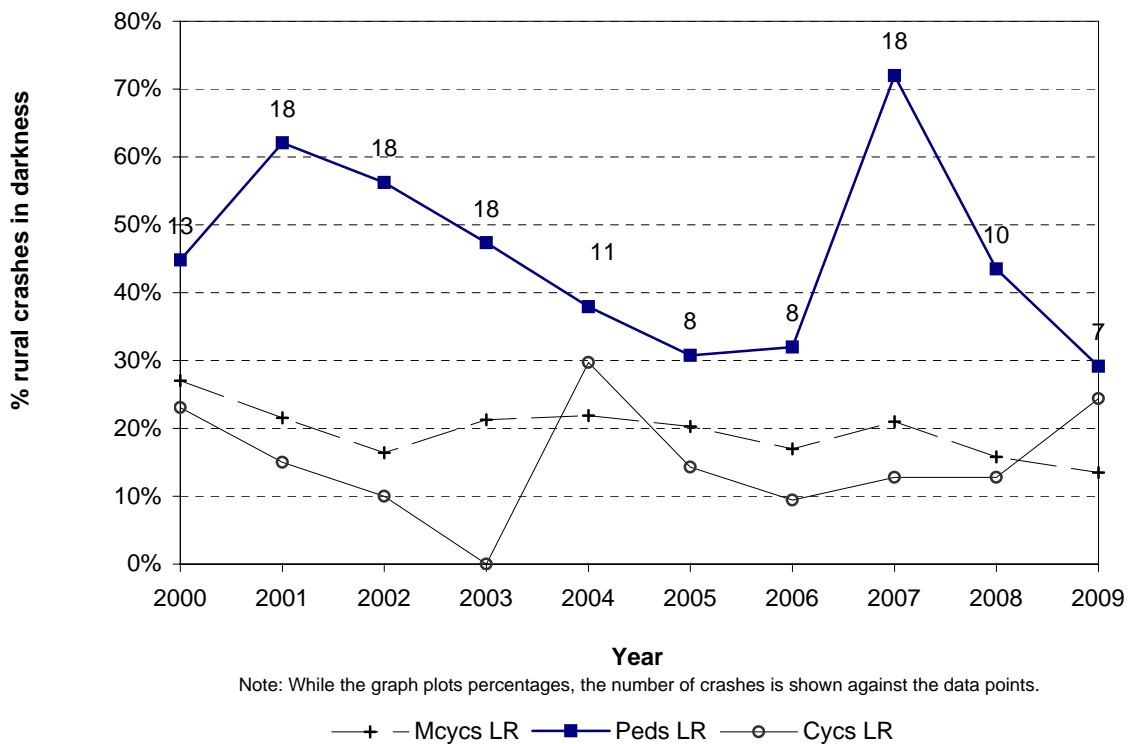
—+— Mccycs LR —■— Peds LR —○— Cycls LR



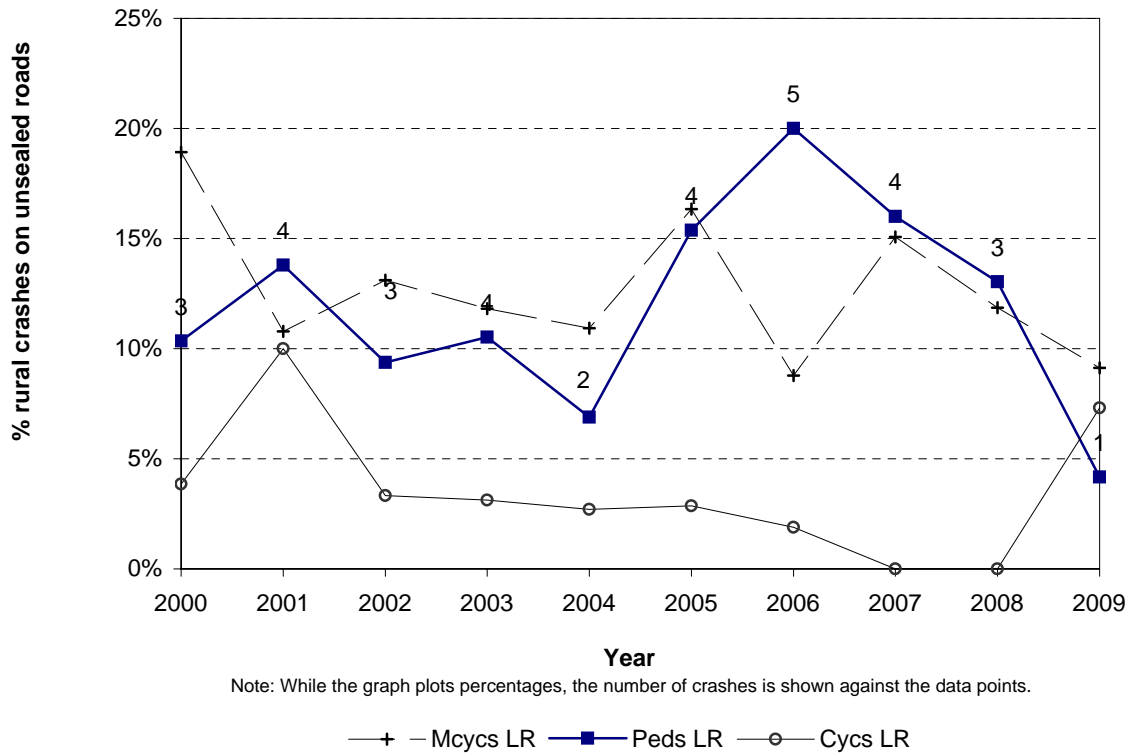
**Figure 8.19 Crashes in darkness  
VRUs - Pedestrians - urban council roads**



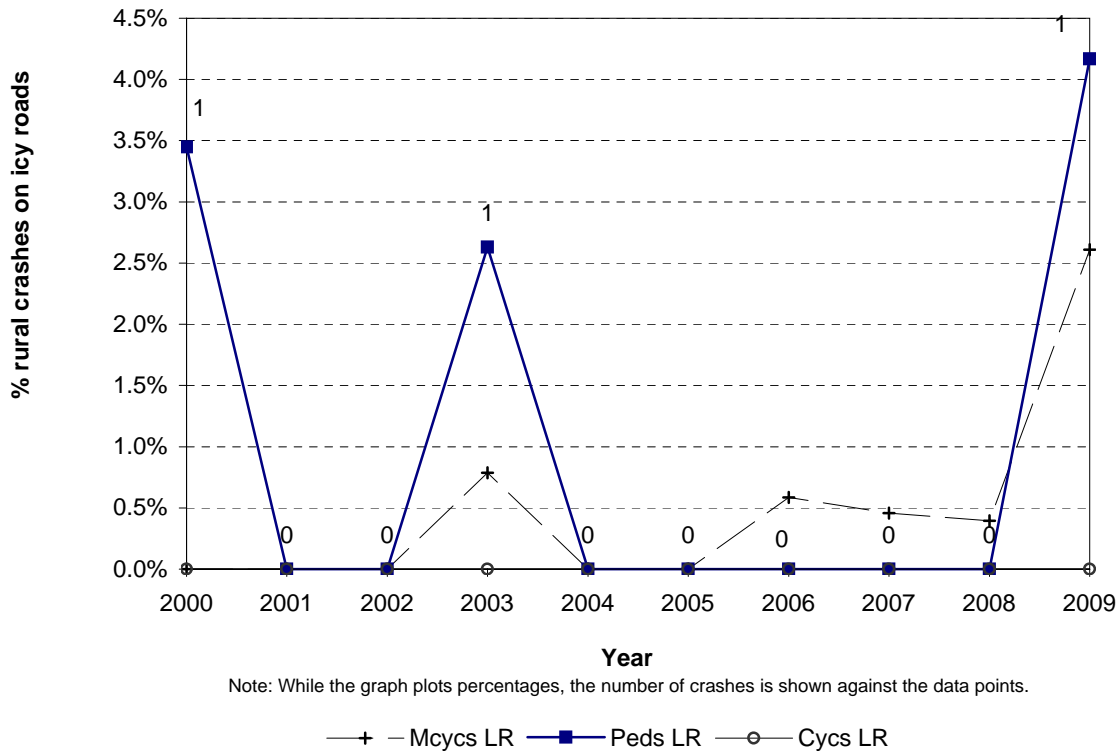
**Figure 8.20 Crashes in darkness  
VRUs - Pedestrians - rural council roads**



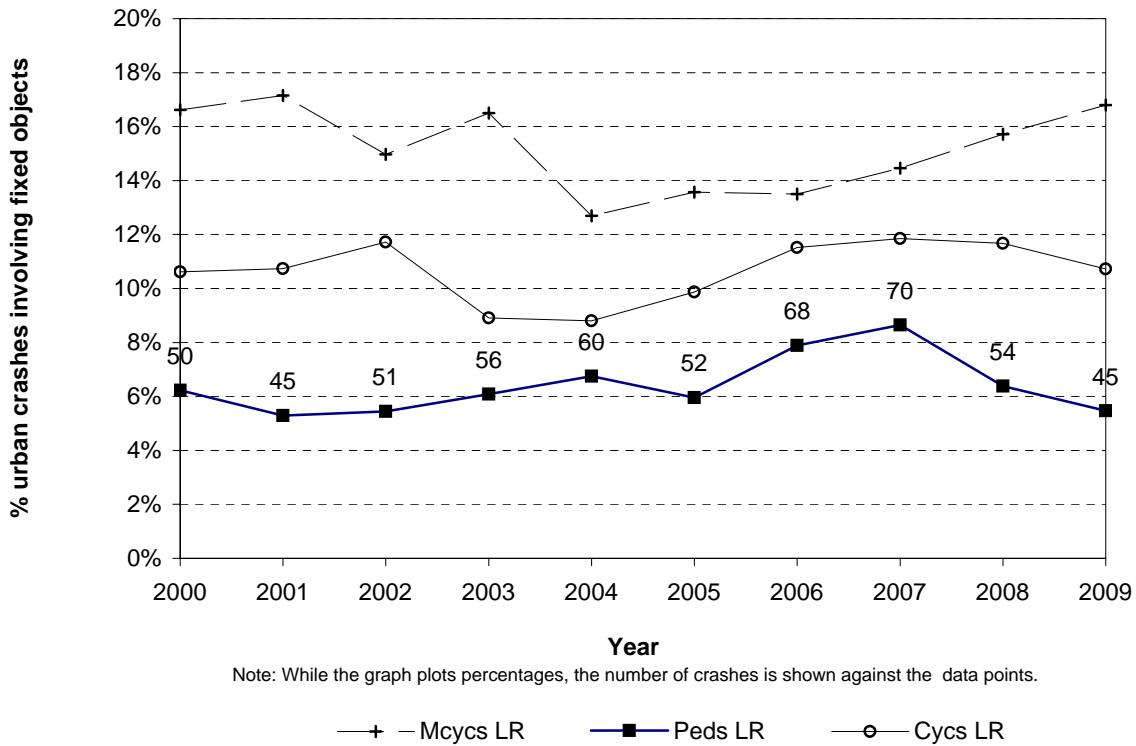
**Figure 8.21 Crashes on unsealed roads  
VRUs - Pedestrians - rural council roads**



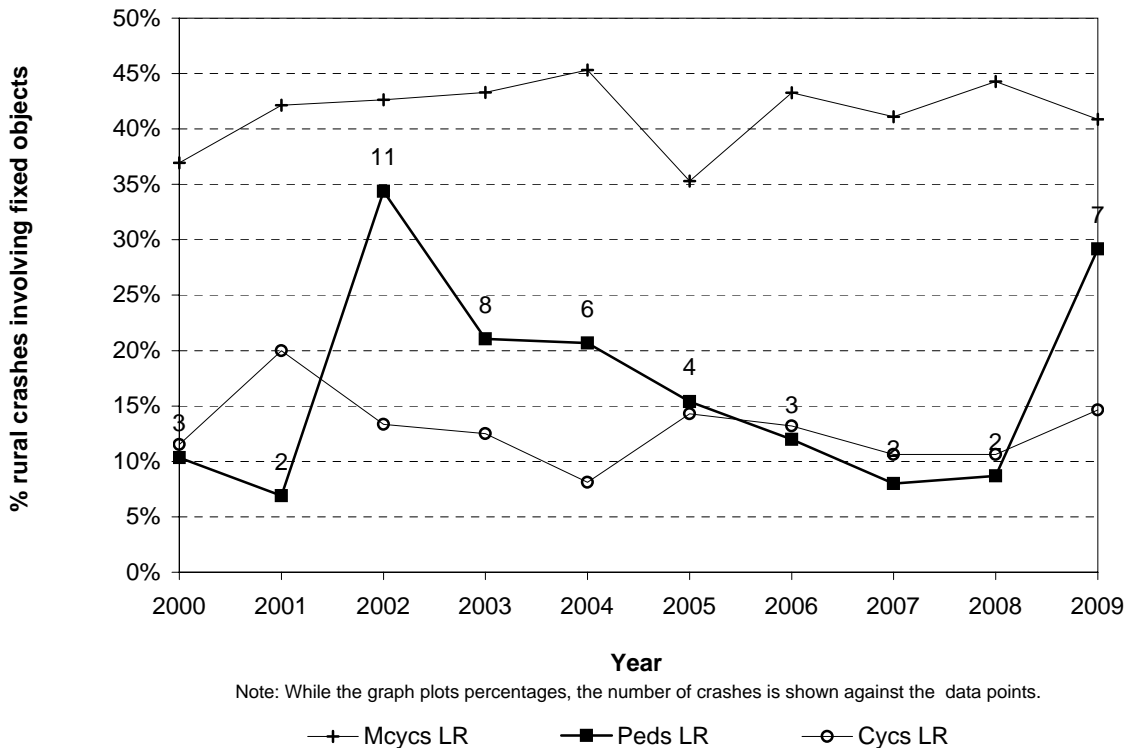
**Figure 8.22 Icy road crashes  
VRUs - Pedestrians - rural council roads**



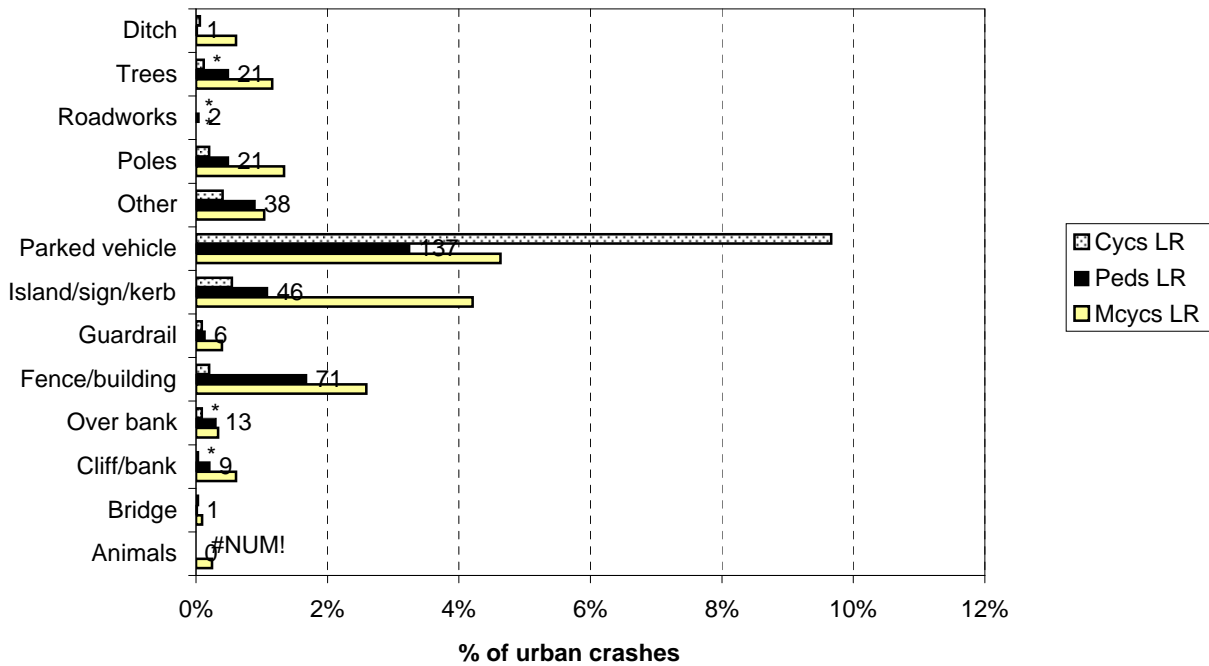
**Figure 8.23 Collisions with objects  
VRUs - Pedestrians - urban council roads**



**Figure 8.24 Collisions with objects  
VRUs - Pedestrians - rural council roads**

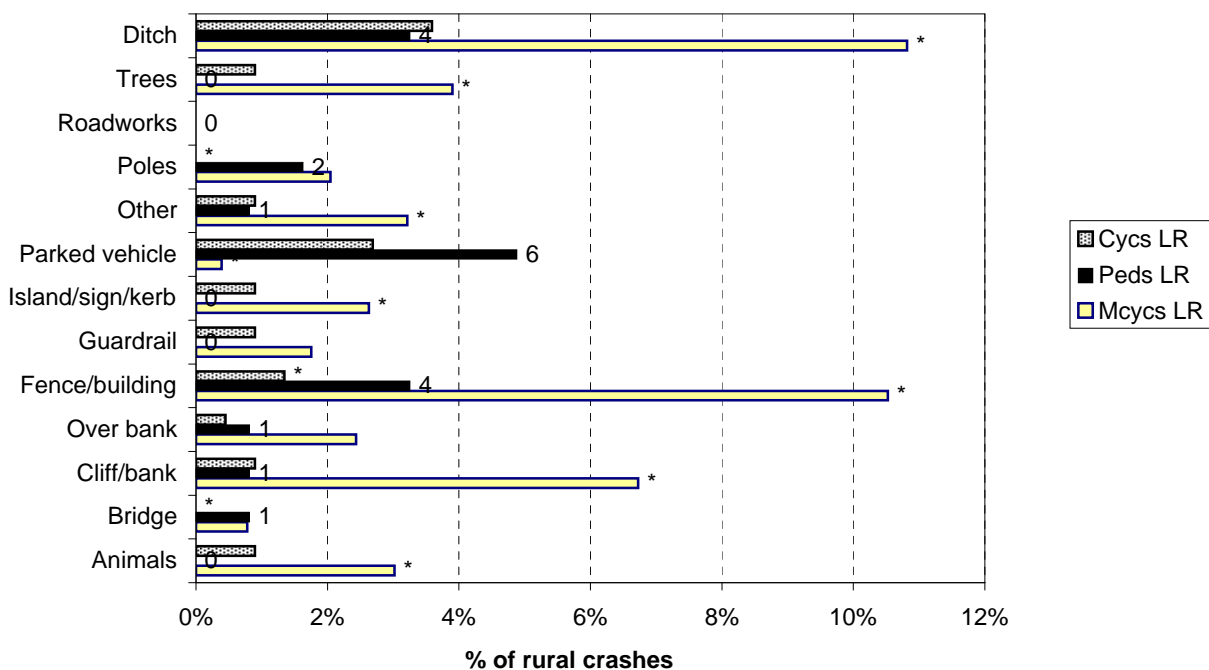


**Figure 8.25 Objects struck - urban  
VRUs - Pedestrians council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.26 Objects struck - rural  
VRUs - Pedestrians council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



# *Crash Location Statistics*



**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Wellington City	COURTENAY PLACE/TARANAKI ST	15	13	2
Wellington City	WILLIS ST/WILLESTON ST	11	11	1
Auckland City	QUEEN ST/CITY ROAD	10	10	0
Christchurch City	COLOMBO ST/LICHFIELD ST	10	9	2
Wellington City	GHUZNEE ST/CUBA ST	12	9	2
Dunedin City	GEORGE ST/LONDON ST	8	8	1
Dunedin City	PRINCES ST/RATTRAY ST	10	8	7
Wellington City	KENT TERRACE/MAJORIBANKS ST	9	7	0
Auckland City	QUEEN ST/KARANGAHAPE ROAD	8	6	0
Auckland City	QUEEN ST/SHORTLAND ST	7	6	2
Christchurch City	CASHEL ST/FITZGERALD AVENUE	6	6	4
Christchurch City	MANCHESTER ST/CASHEL ST	6	6	1
Wellington City	WILLIS ST/MANNERS ST	7	6	1
Auckland City	ALBERT ST/WYNDHAM ST	5	5	1
Christchurch City	BUCKLEYS ROAD/LINWOOD AVENUE	6	5	1
Christchurch City	COLOMBO ST/CASHEL ST	5	5	2
Christchurch City	HEREFORD ST/COLOMBO ST	5	5	1
Christchurch City	MANCHESTER ST/GLOUCESTER ST	6	5	2
Dunedin City	ALBANY ST/MALCOLM ST	6	5	2
Dunedin City	SH 1S/ST ANDREW ST	5	5	0
Hamilton City	BRYCE ST/ANGLESEA ST	7	5	1
Wellington City	CONSTABLE ST/DANIELL ST	5	5	0
Wellington City	COURTENAY PLACE/BLAIR ST	6	5	2
Wellington City	COURTENAY PLACE/TORY ST	6	5	1
Wellington City	CUSTOMHOUSE QUAY/HUNTER ST	5	5	0
Wellington City	HUNTER ST/FEATHERSTON ST	5	5	1
Wellington City	LAMBTON QUAY/MOLESWORTH ST	5	5	1



**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Wellington City	TARANAKI ST/VIVIAN ST	5	5	0
Wellington City	WAKEFIELD ST/TARANAKI ST	5	5	0
Auckland City	ALPERS AVENUE/BROADWAY	4	4	0
Auckland City	ASH ST/ROSEBANK ROAD	4	4	1
Auckland City	MAIN HIGHWAY/LADIES MILE	4	4	0
Auckland City	NEW NORTH ROAD/CARRINGTON ROAD	5	4	3
Auckland City	PITT ST/KARANGAHAPE ROAD	4	4	2
Auckland City	PONSONBY ROAD/ANGLESEA ST	4	4	1
Auckland City	QUEEN ST/DARBY ST	5	4	1
Auckland City	QUEEN ST/WAKEFIELD ST	4	4	2
Auckland City	SYMONDS ST/MOUNT ST	4	4	0
Auckland City	VICTORIA ST WEST/ELLIOTT ST	4	4	1
Auckland City	VICTORIA ST WEST/HOBSON ST	4	4	1
Christchurch City	RICCARTON ROAD/MATIPO ST	4	4	0
Dunedin City	GEORGE ST/ST ANDREW ST	5	4	0
Dunedin City	HILLSIDE ROAD/KING EDWARD ST	5	4	0
Dunedin City	NORTH ROAD/OPOHO ROAD	5	4	1
Dunedin City	STUART ST/SMITH ST	4	4	0
Hamilton City	BRYCE ST/VICTORIA ST	4	4	1
Hamilton City	COLLINGWOOD ST/VICTORIA ST	5	4	1
Hamilton City	HOOD ST/VICTORIA ST	4	4	0
Horowhenua District	SH 1N/BATH ST	4	4	2
Horowhenua District	SH 1N/QUEEN ST	4	4	1
Hutt City	HIGH ST/BOULCOTT ST	4	4	1
Hutt City	HIGH ST/DERWENT LEE GROVE	4	4	1
Hutt City	QUEENS DRIVE/BUNNY ST	4	4	0
Invercargill City	ELLES ROAD/MARTIN ST	4	4	0

**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

<b>Local Authority</b>	<b>Location</b>	<b>Total Crashes 2005-2009</b>	<b>Injury Crashes 2005-2009</b>	<b>Total Crashes in 2009</b>
North Shore City	MOKOIA ROAD/BIRKENHEAD AVENUE	4	4	0
Rotorua District	FENTON ST/HAUPAPA ST	4	4	3
Tauranga City	ELIZABETH ST/DEVONPORT ROAD	4	4	1
Waitaki District	SH 1S/FROME ST	5	4	1
Wellington City	AITKEN ST/MOLESWORTH ST	4	4	1
Wellington City	CABLE ST/TARANAKI ST	4	4	1
Wellington City	LAMBTON QUAY/GREY ST	4	4	0
Wellington City	MERCER ST/WILLIS ST	4	4	0
Wellington City	RIDDIFORD ST/HALL ST	4	4	0
Wellington City	WHITMORE ST/FEATHERSTON ST	4	4	0
Whangarei District	RATHBONE ST/ROBERT ST	5	4	1

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Auckland City	QUEEN ST	52
Christchurch City	COLOMBO ST	35
Manukau City	GREAT SOUTH ROAD	33
Auckland City	DOMINION ROAD	32
Wellington City	COURTENAY PLACE	30
Waitakere City	GREAT NORTH ROAD	29
Dunedin City	GEORGE ST	28
Christchurch City	MANCHESTER ST	27
Wellington City	WILLIS ST	27
Auckland City	NEW NORTH ROAD	26
Dunedin City	SH 1S	26
Waitaki District	SH 1S	24
North Shore City	LAKE ROAD	23
Wellington City	TARANAKI ST	23
Auckland City	SYMONDS ST	22
Hutt City	HIGH ST	22
Auckland City	GREAT NORTH ROAD	21
Christchurch City	RICCARTON ROAD	21
Dunedin City	PRINCES ST	21
Hamilton City	VICTORIA ST	19
Wellington City	GHUZNEE ST	19
Auckland City	GREAT SOUTH ROAD	18
Auckland City	MOUNT ALBERT ROAD	18
Auckland City	RICHARDSON ROAD	17
Horowhenua District	SH 1N	17
Wellington City	ADELAIDE ROAD	17
Whangarei District	SH 1N	17
Auckland City	MANUKAU ROAD	15
Auckland City	VICTORIA ST WEST	15

**Table 9.2 Roads with Aggregated Number of Crashes  
 (Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Manukau City	PAKURANGA ROAD	15
Waikato District	SH 1N	15
Auckland City	ALBERT ST	14
Hamilton City	BRYCE ST	14
Rotorua District	SH 30A	14
Whangarei District	KAMO ROAD	14
Auckland City	SANDRINGHAM ROAD	13
Invercargill City	SH 1S	13
Invercargill City	SH 6	13
New Plymouth District	SH 45	13
Rotorua District	FENTON ST	13
Tasman District	SH 60	13
Tauranga City	CAMERON ROAD	13
Waitakere City	WEST COAST ROAD	13
Wellington City	CONSTABLE ST	13
Wellington City	LAMBTON QUAY	13
Western Bay Of Plenty District	SH 2	13
Auckland City	BLOCKHOUSE BAY ROAD	12
Auckland City	CUSTOMS ST WEST	12
Auckland City	KARANGAHAPE ROAD	12
Auckland City	MAYORAL DRIVE	12
Auckland City	PONSONBY ROAD	12
Christchurch City	FERRY ROAD	12
Christchurch City	HEREFORD ST	12
Christchurch City	MAIN NORTH ROAD	12
Christchurch City	SH 73	12
Far North District	SH 12	12
Invercargill City	ELLES ROAD	12
Manukau City	MASSEY ROAD	12

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Masterton District	SH 2	12
Papakura District	GREAT SOUTH ROAD	12
Christchurch City	BUCKLEYS ROAD	11
Christchurch City	GLOUCESTER ST	11
Far North District	SH 1N	11
North Shore City	MOKOIA ROAD	11
Rotorua District	SH 5	11
Wellington City	SH 1N	11
Auckland City	ROSEBANK ROAD	10
Christchurch City	CASHEL ST	10
Christchurch City	OXFORD TERRACE	10
Christchurch City	PAPANUI ROAD	10
Christchurch City	WAINONI ROAD	10
Hutt City	CAMBRIDGE TERRACE	10
New Plymouth District	SH 3	10
North Shore City	EAST COAST ROAD	10
Palmerston North City	SH 3	10
Waitakere City	TE ATATU ROAD	10
Wellington City	KENT TERRACE	10
Auckland City	BROADWAY	9
Auckland City	MOUNT EDEN ROAD	9
Carterton District	SH 2	9
Christchurch City	NEW BRIGHTON ROAD	9
Dunedin City	NORTH ROAD	9
Hamilton City	GREY ST	9
Manukau City	EAST TAMAKI ROAD	9
North Shore City	BEACH ROAD	9
North Shore City	TAHAROTO ROAD	9
Porirua City	MUNGAVIN AVENUE	9

**Table 9.2 Roads with Aggregated Number of Crashes  
 (Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Queenstown-Lakes District	SH 6A	9
Rodney District	SH 1N	9
Waitakere City	DON BUCK ROAD	9
Wellington City	CUSTOMHOUSE QUAY	9
Wellington City	THE TERRACE	9
Wellington City	TINAKORI ROAD	9
Wellington City	VICTORIA ST	9
Wellington City	WAKEFIELD ST	9
Wellington City	WALLACE ST	9
Whangarei District	WALTON ST	9
Auckland City	PITT ST	8
Auckland City	REMUERA ROAD	8
Central Otago District	SH 8	8
Christchurch City	MOORHOUSE AVENUE	8
Dunedin City	HILLSIDE ROAD	8
Manukau City	ROSCOMMON ROAD	8
Manukau City	TI RAKAU DRIVE	8
Napier City	KENNEDY ROAD	8
North Shore City	GLENFIELD ROAD	8
North Shore City	KITCHENER ROAD	8
Porirua City	WARSPITE AVENUE	8
Taupo District	SH 1N	8
Timaru District	SH 1S	8
Upper Hutt City	FERGUSON DRIVE	8
Waitakere City	EDMONTON ROAD	8
Waitakere City	LINCOLN ROAD	8
Wellington City	DIXON ST	8
Wellington City	RIDDIFORD ST	8
Auckland City	FANSHAWE ST	7

**Table 9.2 Roads with Aggregated Number of Crashes  
 (Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Auckland City	HOWE ST	7
Auckland City	STODDARD ROAD	7
Auckland City	TAMAKI DRIVE	7
Christchurch City	SH 74	7
Christchurch City	WAIRAKEI ROAD	7
Clutha District	SH 1S	7
Dunedin City	ALBANY ST	7
Dunedin City	MAIN SOUTH ROAD	7
Dunedin City	STUART ST	7
Hamilton City	ANGLESEA ST	7
Hamilton City	HUKANUI ROAD	7
Hutt City	WAIWHETU ROAD	7
Manukau City	BAIRDS ROAD	7
Manukau City	STATION ROAD	7
Nelson City	COLLINGWOOD ST	7
Rodney District	SH 17	7
Rotorua District	SH 30	7
Tauranga City	FRASER ST	7
Tauranga City	SH 2	7
Waitakere City	SWANSON ROAD	7
Wanganui District	SH 3	7
Wellington City	JOHNSONVILLE ROAD	7
Wellington City	SH 1N VIVIAN	7
Auckland City	ASH ST	6
Auckland City	CHURCH ST	6
Auckland City	HOBSON ST	6
Auckland City	KHYBER PASS ROAD	6
Auckland City	LOWER HOBSON ST	6
Auckland City	ONEHUNGA MALL	6

**Table 9.2 Roads with Aggregated Number of Crashes  
 (Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Auckland City	QUAY ST	6
Auckland City	ST HELIERS BAY ROAD	6
Christchurch City	BEALEY AVENUE	6
Christchurch City	HILLS ROAD	6
Christchurch City	KILMORE ST	6
Christchurch City	LINCOLN ROAD	6
Christchurch City	MONTREAL ST	6
Christchurch City	ST ASAPH ST	6
Christchurch City	STANMORE ROAD	6
Dunedin City	SH 1S CASTLE	6
Far North District	SH 11	6
Gisborne District	GLADSTONE ROAD	6
Gisborne District	SH 35	6
Gore District	SH 1S	6
Hastings District	SH 2	6
Hutt City	WATERLOO ROAD	6
Manukau City	DAWSON ROAD	6
Manukau City	TE IRIRANGI DRIVE	6
Manukau City	WEYMOUTH ROAD	6
Nelson City	SH 6	6
North Shore City	WAIRAU ROAD	6
Rodney District	SH 16	6
Rotorua District	RANOLF ST	6
Stratford District	SH 3	6
Tararua District	SH 2	6
Thames-Coromandel District	SH 25	6
Wellington City	CABLE ST	6
Wellington City	WHITMORE ST	6
Auckland City	ALPERS AVENUE	5



**Table 9.2 Roads with Aggregated Number of Crashes  
 (Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

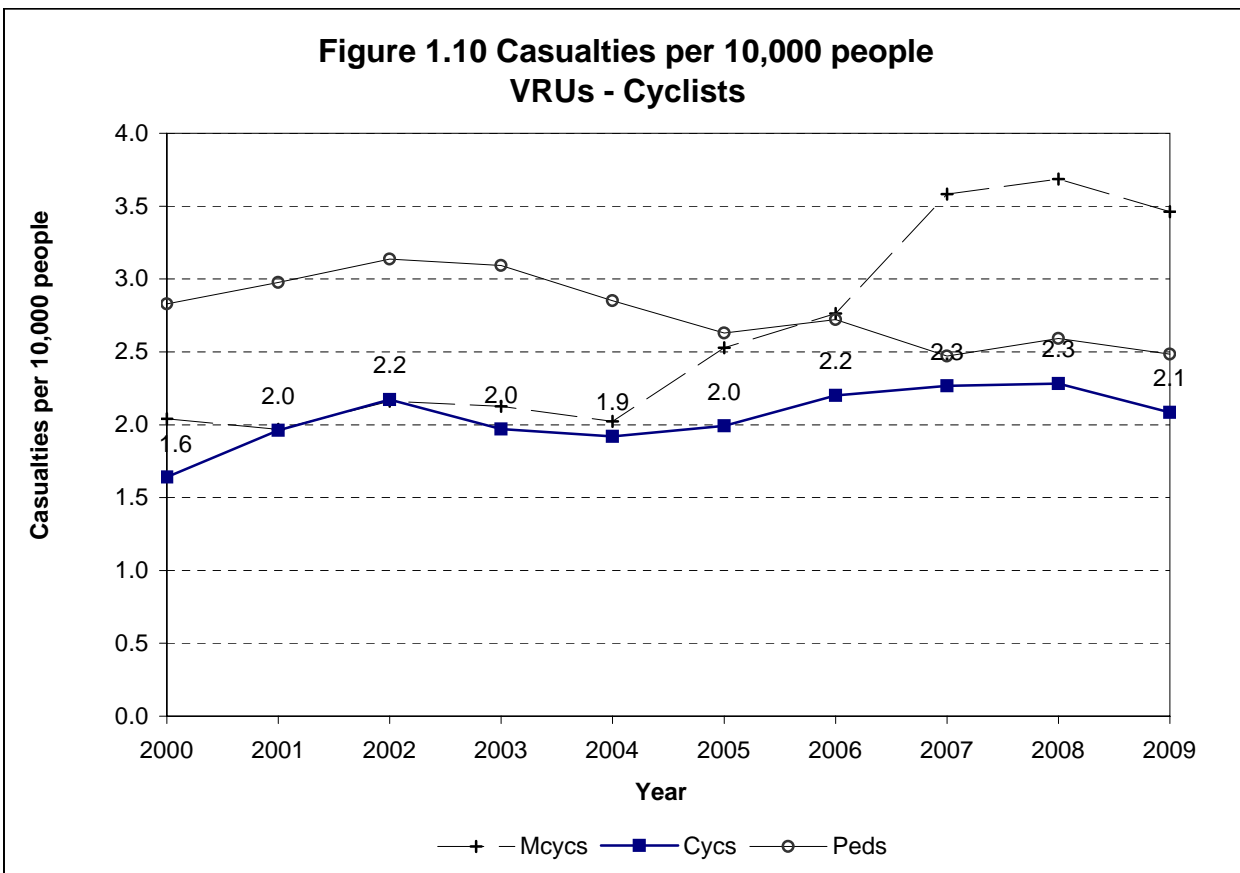
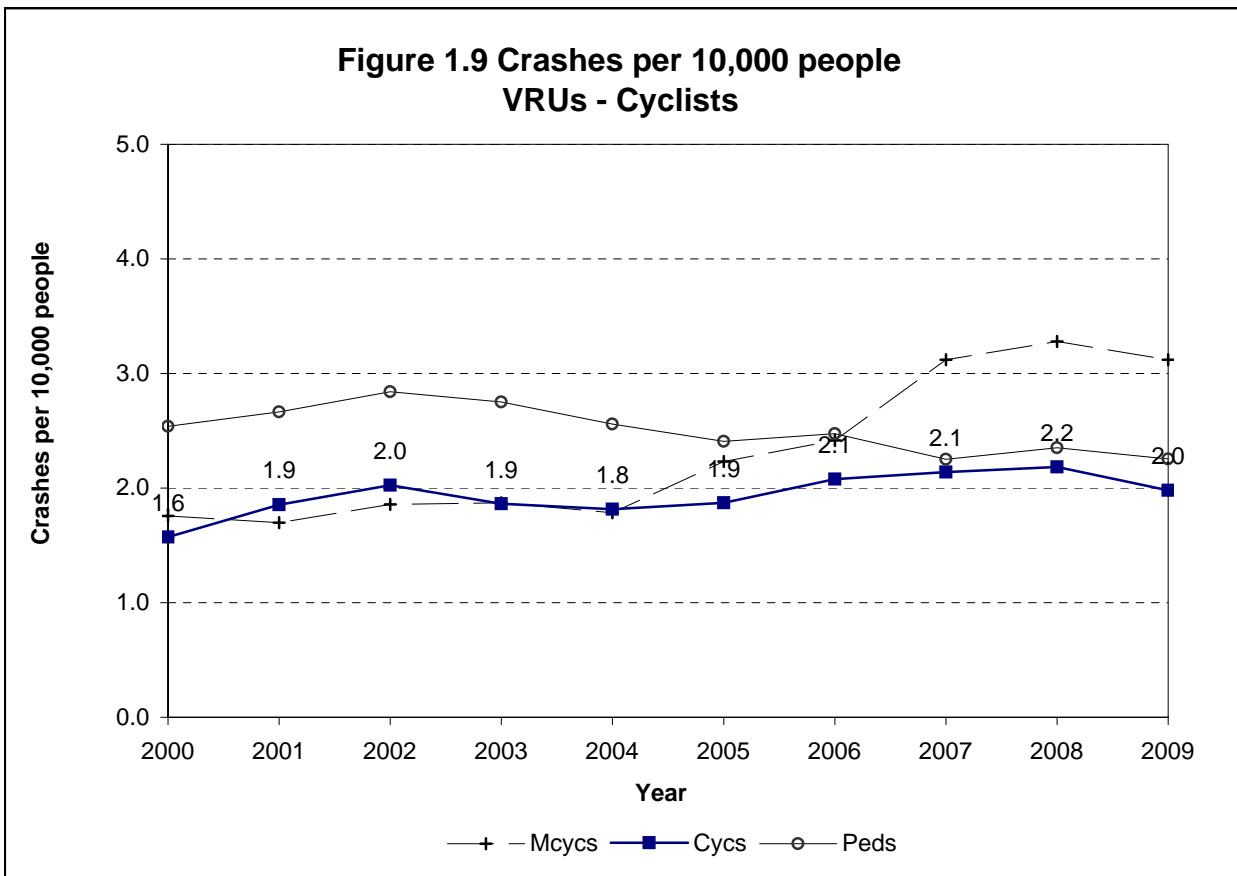
Local Roding Authority and Road		Number of Reported Incidents on Named Road
Auckland City	FORT ST	5
Auckland City	HALSEY ST	5
Auckland City	MAIN HIGHWAY	5
Auckland City	MOUNT SMART ROAD	5
Auckland City	MOUNT WELLINGTON HI	5
Auckland City	PARNELL ROAD	5
Auckland City	RIDDELL ROAD	5
Auckland City	SH 1N	5
Auckland City	WELLESLEY ST EAST	5
Auckland City	WHITE SWAN ROAD	5
Christchurch City	BARRINGTON ST	5
Christchurch City	GREERS ROAD	5
Christchurch City	HAREWOOD ROAD	5
Christchurch City	LINWOOD AVENUE	5
Christchurch City	MADRAS ST	5
Christchurch City	PAGES ROAD	5
Dunedin City	HANOVER ST	5
Far North District	SH 10	5
Gisborne District	CHILDERS ROAD	5
Hamilton City	COLLINGWOOD ST	5
Hamilton City	PEACHGROVE ROAD	5
Hamilton City	RIVER ROAD	5
Hastings District	TE MATA ROAD	5
Hutt City	MAIN ROAD	5
Hutt City	QUEENS DRIVE	5
Kapiti Coast District	SH 1N	5
Manukau City	KIRKBRIDE ROAD	5
Manukau City	PIGEON MOUNTAIN ROA	5
Manukau City	WORDSWORTH ROAD	5

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Roding Authority and Road		Number of Reported Incidents on Named Road
Marlborough District	SH 1S	5
Nelson City	RUTHERFORD ST	5
New Plymouth District	DEVON ST EAST	5
New Plymouth District	SH 44	5
North Shore City	BIRKENHEAD AVENUE	5
Palmerston North City	FEATHERSTON ST	5
Palmerston North City	FITZHERBERT AVENUE	5
South Waikato District	SH 32	5
Upper Hutt City	SH 2	5
Waipa District	SH 1N	5
Waitakere City	RATA ST	5
Waitakere City	SH 16	5
Wanganui District	VICTORIA AVENUE	5
Wellington City	ARO ST	5
Wellington City	CAMBRIDGE TERRACE	5
Wellington City	HUNTER ST	5
Wellington City	KARORI ROAD	5
Wellington City	RINTOUL ST	5
Whakatane District	SH 2	5
Whangarei District	RATHBONE ST	5

# Part 2: Cyclists



**Figure 1.11 Social cost of crashes in VRUs - Cyclists in 2009**

		VRUs - Cyclists	All VRUs
Council roads	urban	\$141.35	\$625.49
	rural	\$23.64	\$215.80
State Highways	urban	\$18.73	\$111.07
	rural	\$27.51	\$232.27
<b>Total</b>		<b>\$211.23</b>	<b>\$1,184.63</b>

Note: Crash costs are in \$ millions

The social costs of a road crash and the associated injuries include a number of different elements:

- Loss of life and life quality
- Loss of output due to temporary incapacitation
- Medical costs
- Legal costs
- Property damage costs

The average value of a loss of life due to a road crash is estimated by the amount of money the New Zealand population would be willing to pay for a safety improvement that would result in the expected avoidance of one premature death. This is the willingness to pay based value of statistical life or VOSL. The VOSL was established at \$2 million in 1991. This has been indexed to the average hourly earnings (ordinary time) to express the value in current dollars. The updated VOSL is \$3.5 million (in June 2009 dollars). Based on several international and New Zealand studies on VOSL, the average loss of life quality for permanent impairments due to a serious and a minor injury were estimated to be 10% and 0.4% of the VOSL respectively.

Crash rates can vary due to reporting rates. These are adjusted on a regional basis in this report by comparing with hospitalisation rates.

The other social cost components are estimated based on a number of studies conducted during the early to mid-1990s and are updated for price changes by indexing to an appropriate price index.

For a detail discussion on this, please refer to 'The social cost of road crashes and injuries: June 2009 update', available at the Ministry of Transport's website:

<http://www.transport.govt.nz/assets/NewPDFs/NewFolder/Social-Cost-June-2009-update-final.pdf>

The average social cost per reported crash (in June 2009 dollars) are estimated at:

Rural fatal crash	\$4,260,000
Rural serious crash	\$820,000
Rural minor crash	\$91,000
Urban fatal crash	\$3,775,000
Urban serious crash	\$699,000
Urban minor crash	\$82,000

These values include an allowance for non-reported injury crashes, and the totals in Fig. 1.11 also include an allowance for non-injury crashes.



# *Crash Counts*





**Figure 2.1: Crash numbers and severity 2005 to 2009 - whole Country**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	12	9	12	10	8	51	1%	3%
Serious crashes	134	164	196	200	154	848	20%	27%
Minor crashes	628	696	696	722	692	3434	79%	70%
<b>Total injury crashes</b>	<b>774</b>	<b>869</b>	<b>904</b>	<b>932</b>	<b>854</b>	<b>4333</b>	<b>100%</b>	<b>100%</b>
Non-injury crashes	240	256	211	223	260	1190		

**Figure 2.2: Crash numbers and severity 2005 to 2009 - urban roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	7	3	6	5	1	22	1%	2%
Serious crashes	112	137	170	170	135	724	18%	24%
Minor crashes	591	642	647	663	650	3193	81%	74%
<b>Total injury crashes</b>	<b>710</b>	<b>782</b>	<b>823</b>	<b>838</b>	<b>786</b>	<b>3939</b>	<b>100%</b>	<b>100%</b>
Non-injury crashes	233	246	206	211	247	1143		

**Figure 2.3: Crash numbers and severity 2005 to 2009 - rural roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	5	6	6	5	7	29	7%	9%
Serious crashes	22	27	26	30	19	124	31%	42%
Minor crashes	37	54	49	59	42	241	61%	49%
<b>Total injury crashes</b>	<b>64</b>	<b>87</b>	<b>81</b>	<b>94</b>	<b>68</b>	<b>394</b>	<b>100%</b>	<b>100%</b>
Non-injury crashes	7	10	5	12	13	47		

**Figure 2.4: Casualty numbers and severity 2005 to 2009 - whole Country**

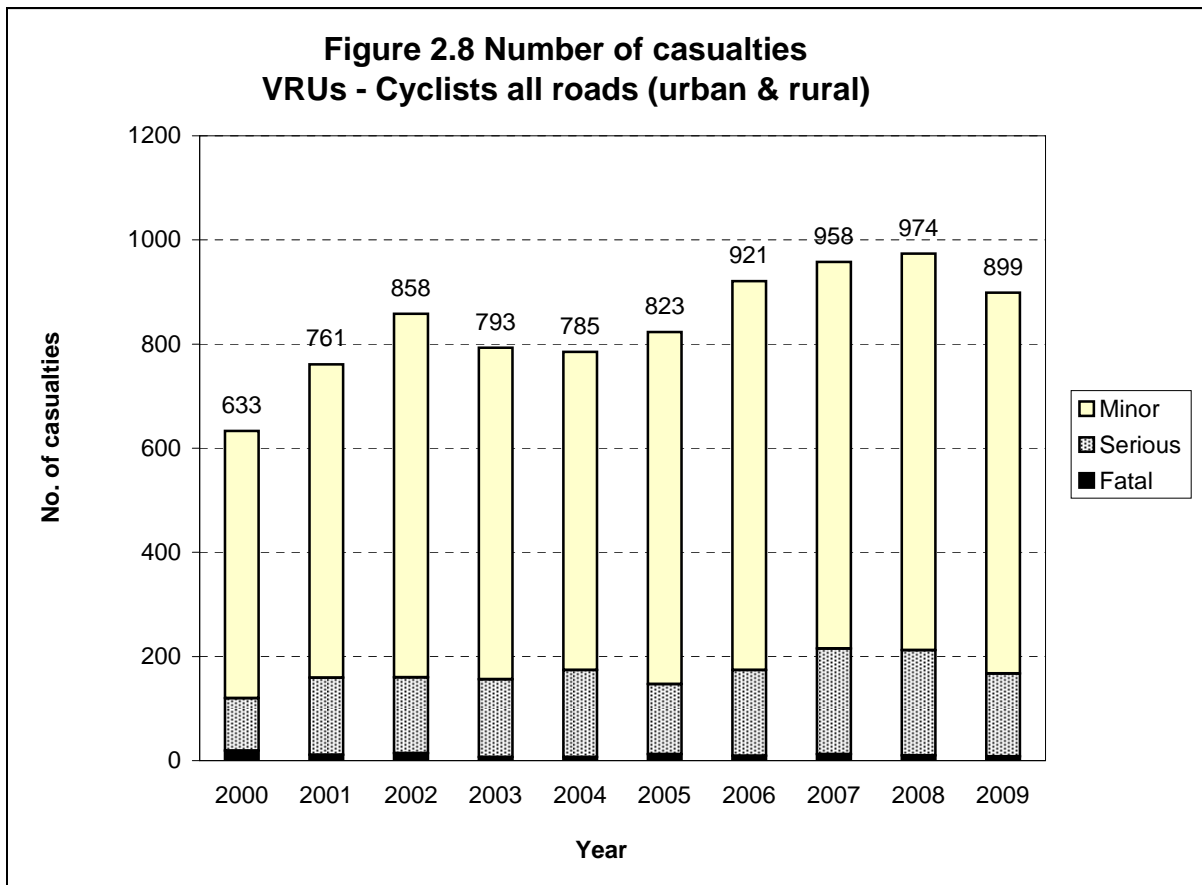
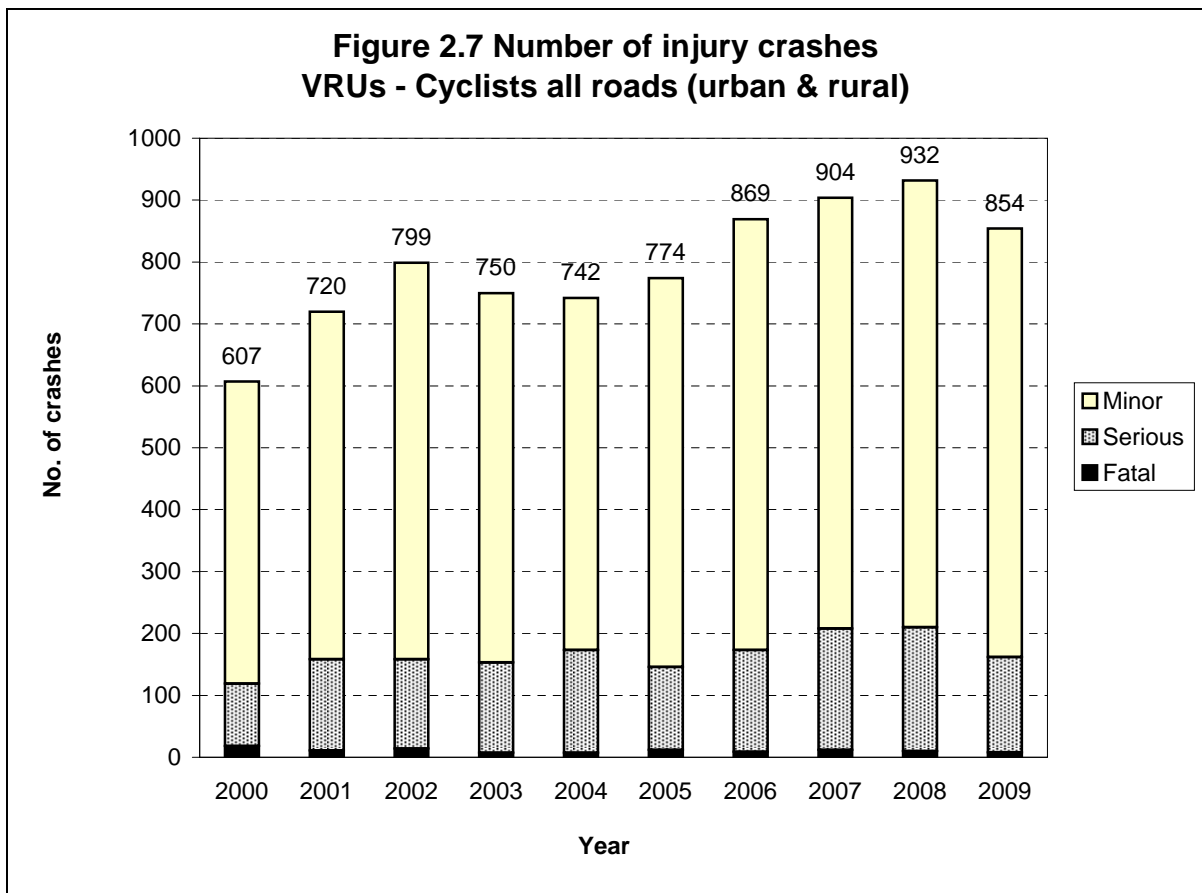
	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	12	9	12	10	8	51	1%	3%
Serious casualties	135	165	203	202	159	864	19%	26%
Minor casualties	676	747	743	762	732	3660	80%	71%
<b>Total casualties</b>	<b>823</b>	<b>921</b>	<b>958</b>	<b>974</b>	<b>899</b>	<b>4575</b>	<b>100%</b>	<b>100%</b>

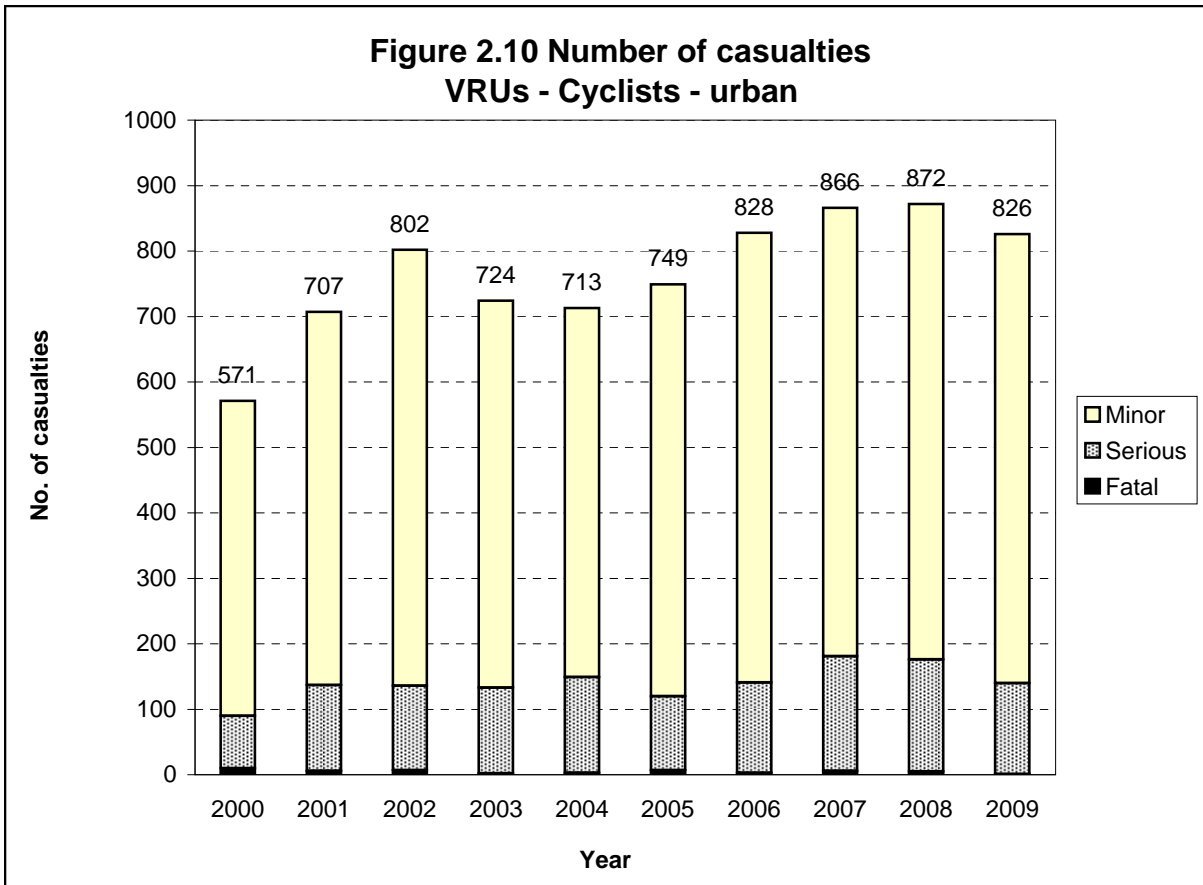
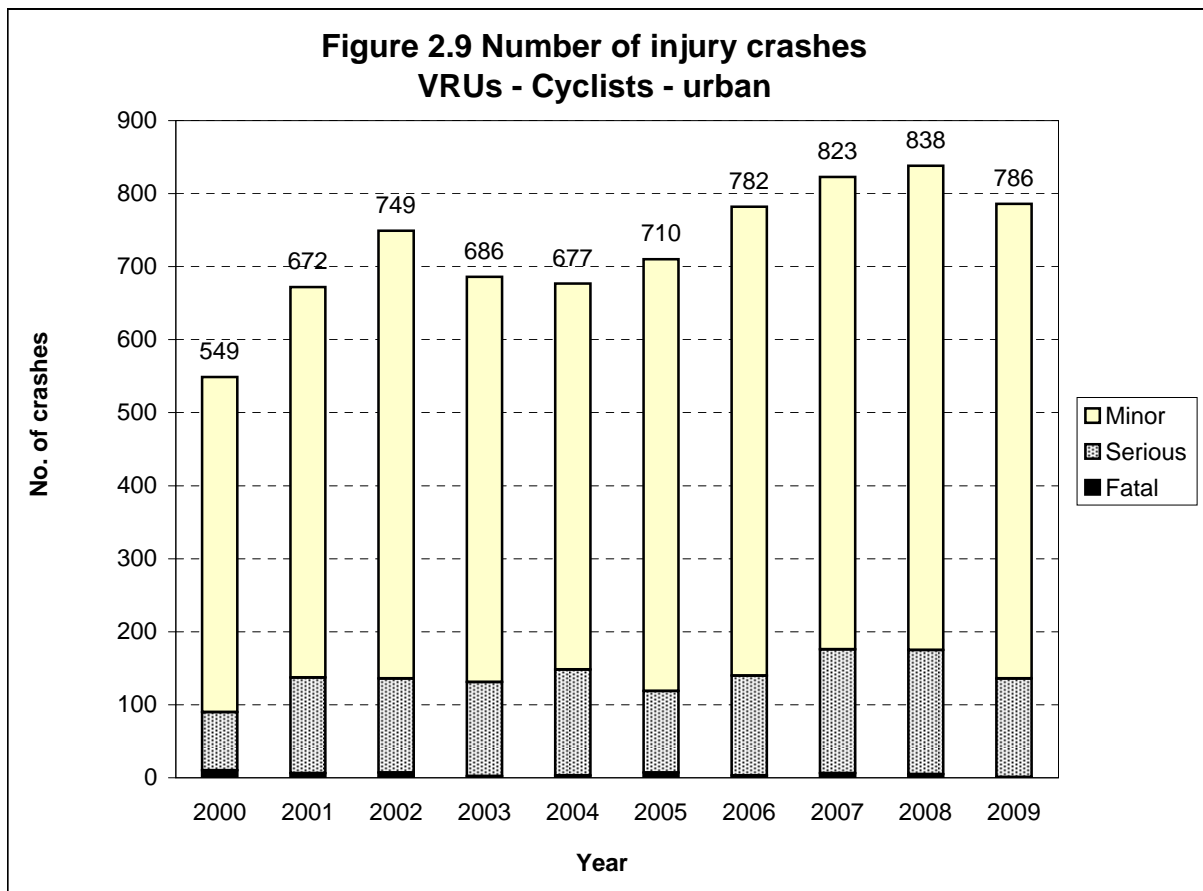
**Figure 2.5: Casualty numbers and severity 2005 to 2009 - urban roads**

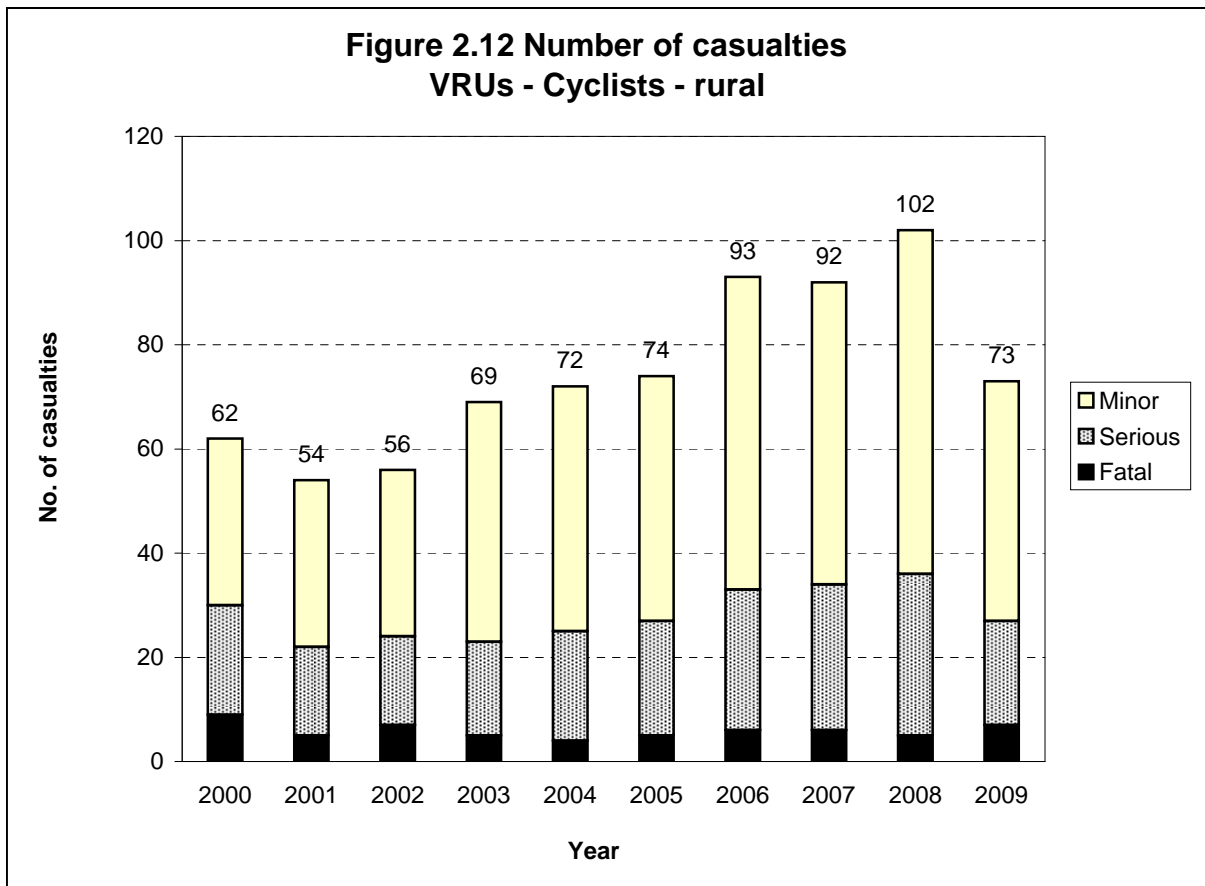
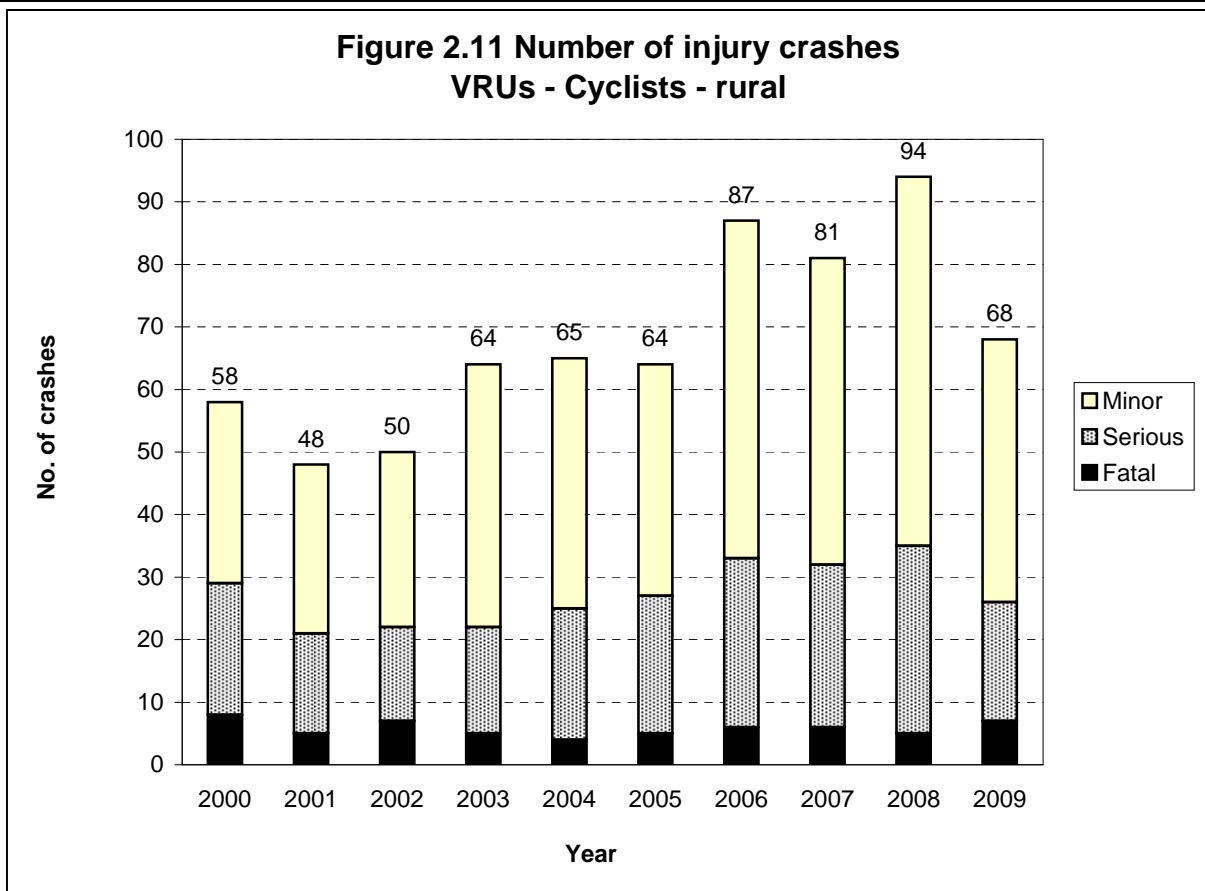
	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	7	3	6	5	1	22	1%	2%
Serious casualties	113	138	175	171	139	736	18%	23%
Minor casualties	629	687	685	696	686	3383	82%	76%
<b>Total casualties</b>	<b>749</b>	<b>828</b>	<b>866</b>	<b>872</b>	<b>826</b>	<b>4141</b>	<b>100%</b>	<b>100%</b>

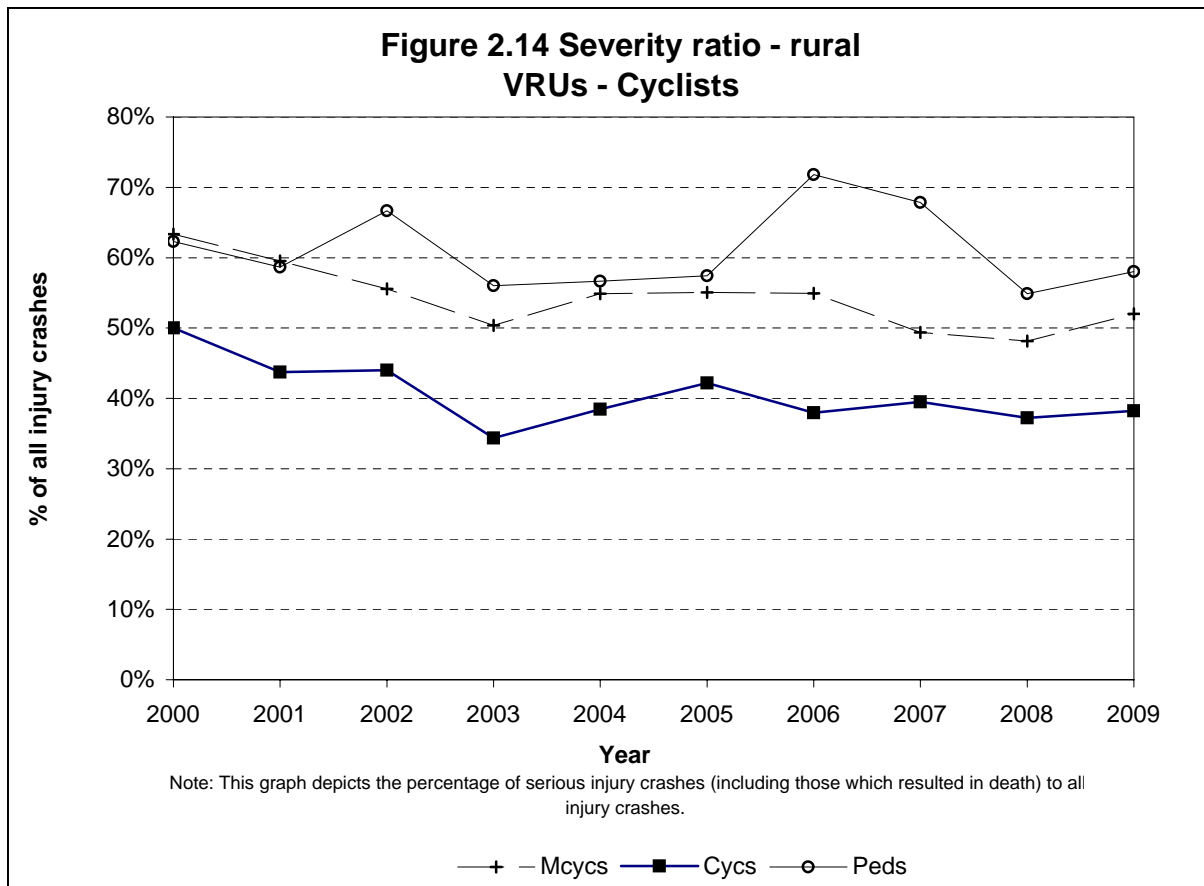
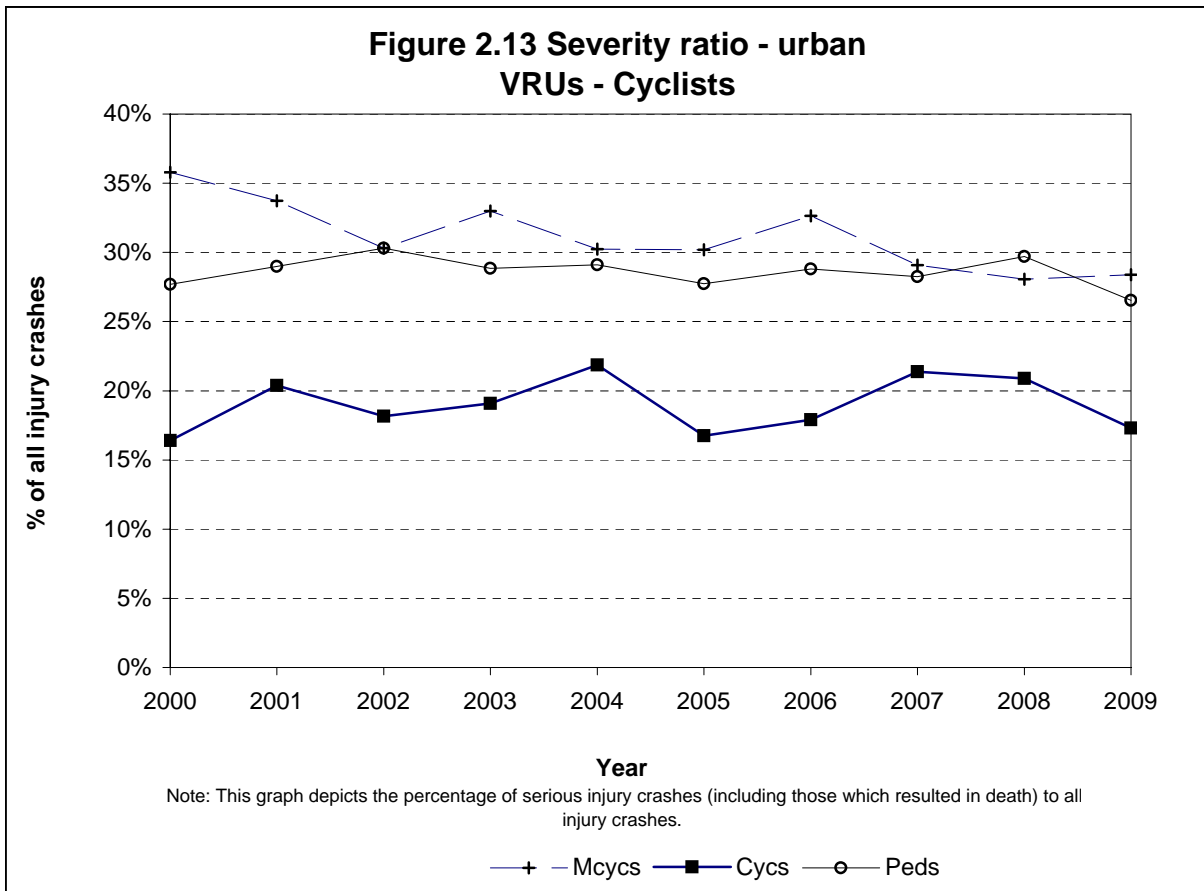
**Figure 2.6: Casualty numbers and severity 2005 to 2009 - rural roads**

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	5	6	6	5	7	29	7%	8%
Serious casualties	22	27	28	31	20	128	29%	39%
Minor casualties	47	60	58	66	46	277	64%	53%
<b>Total casualties</b>	<b>74</b>	<b>93</b>	<b>92</b>	<b>102</b>	<b>73</b>	<b>434</b>	<b>100%</b>	<b>100%</b>









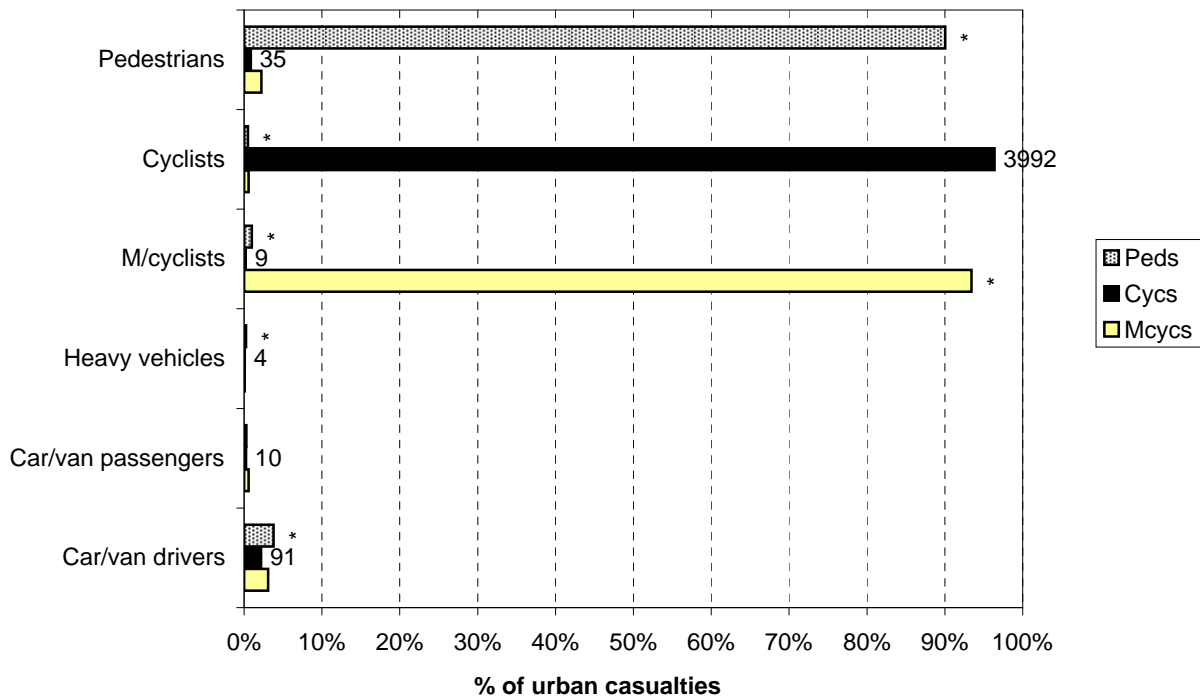


# *Road User Statistics*



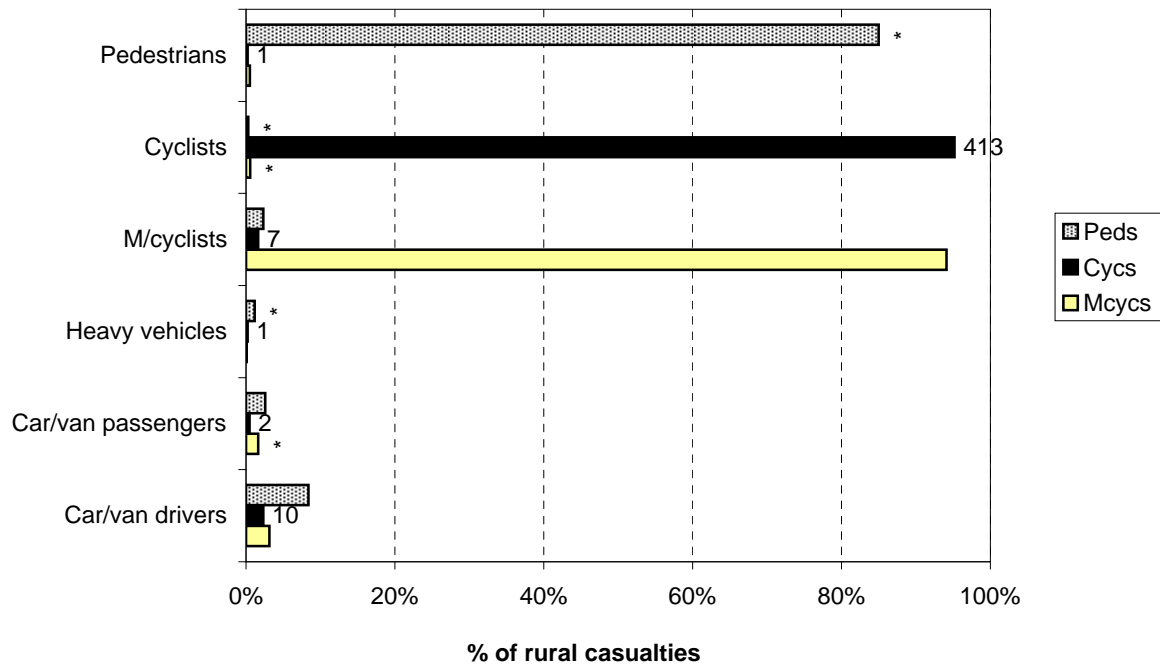


**Figure 3.1 Road user casualties - urban  
VRUs - Cyclists (2005-2009)**



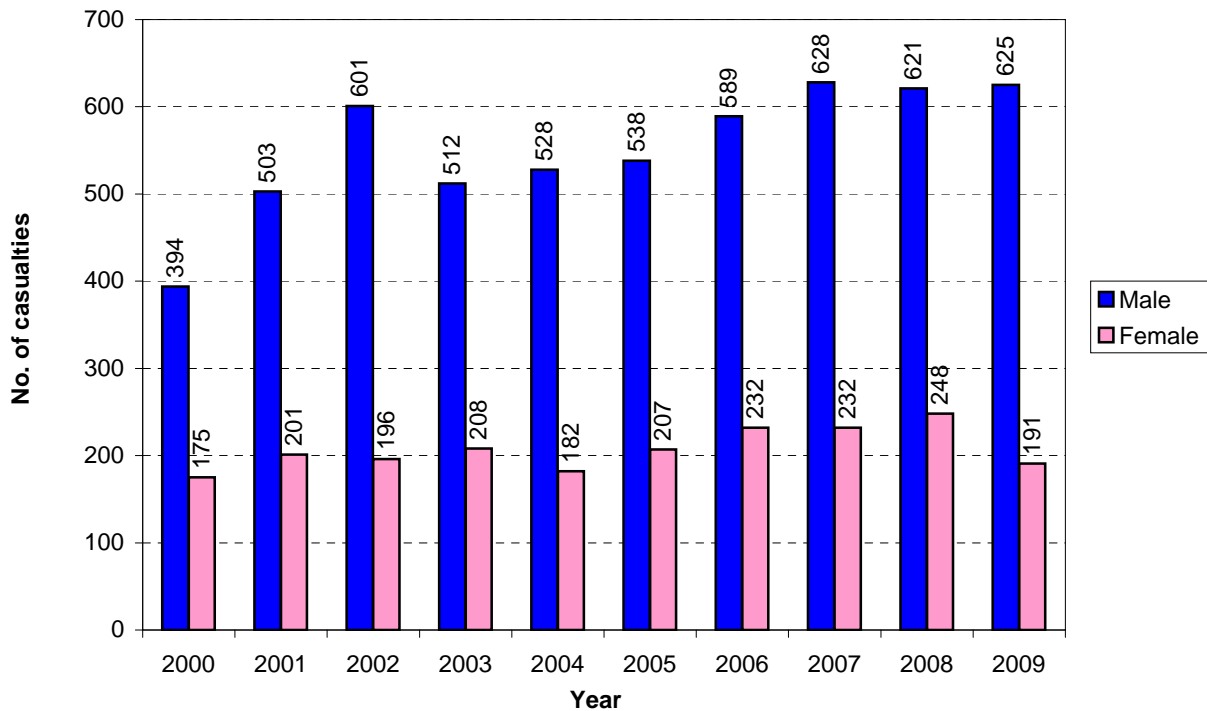
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.2 Road user casualties - rural  
VRUs - Cyclists (2005-2009)**



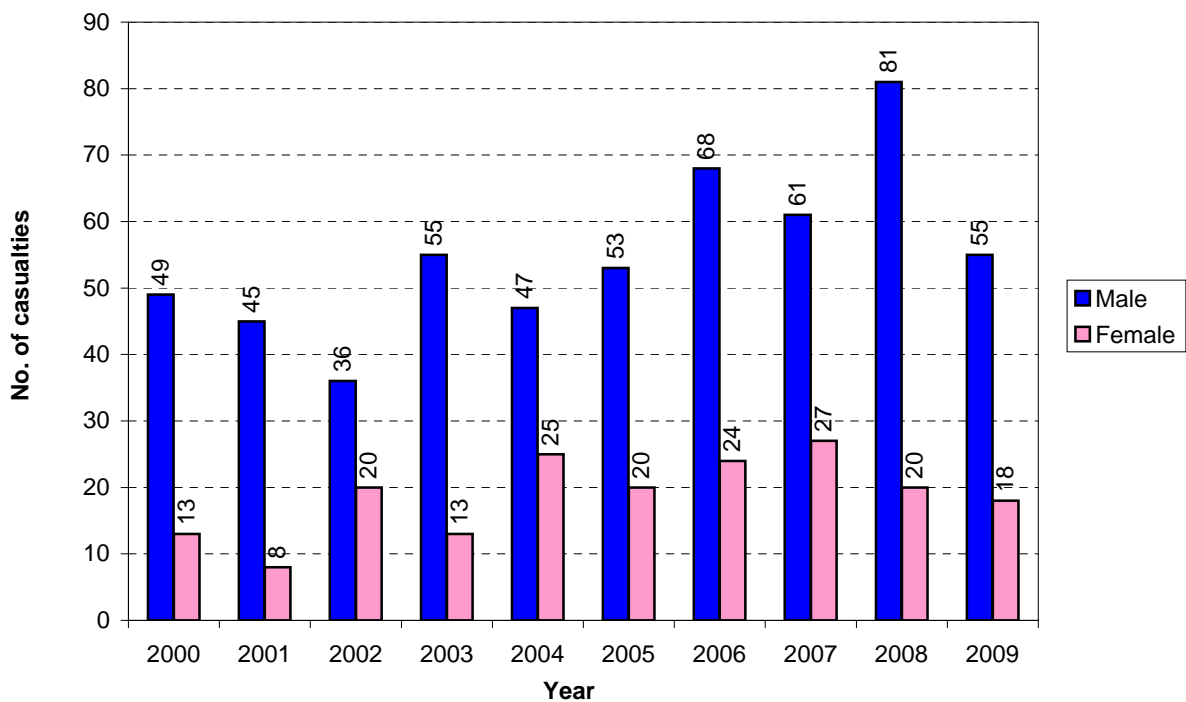
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.3 Male/female casualties - urban  
VRUs - Cyclists**



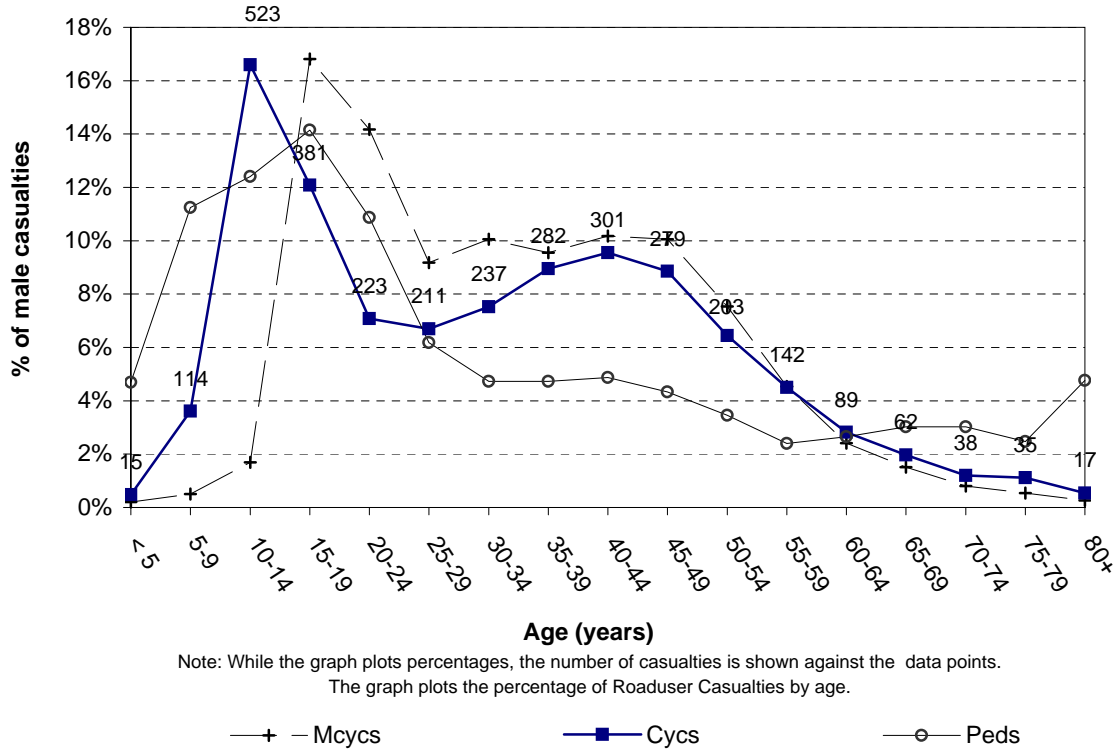
Note: This graph shows the number of male and female roadusers injured

**Figure 3.4 Male/female casualties - rural  
VRUs - Cyclists**

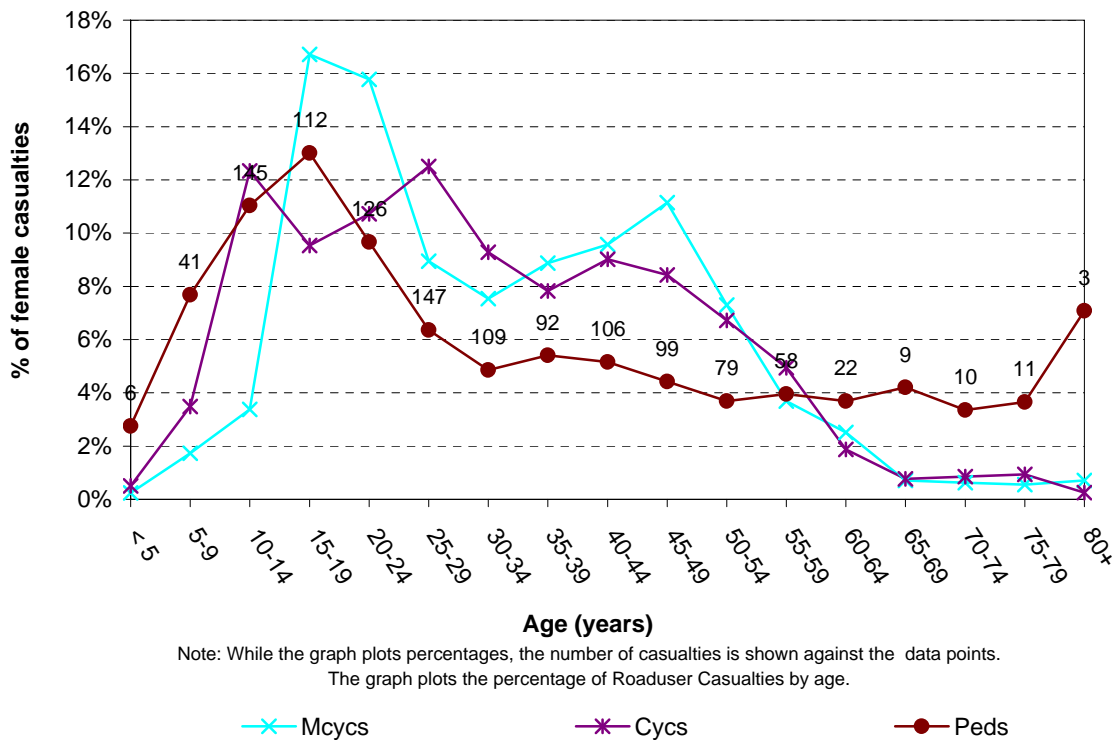


Note: This graph shows the number of male and female roadusers injured

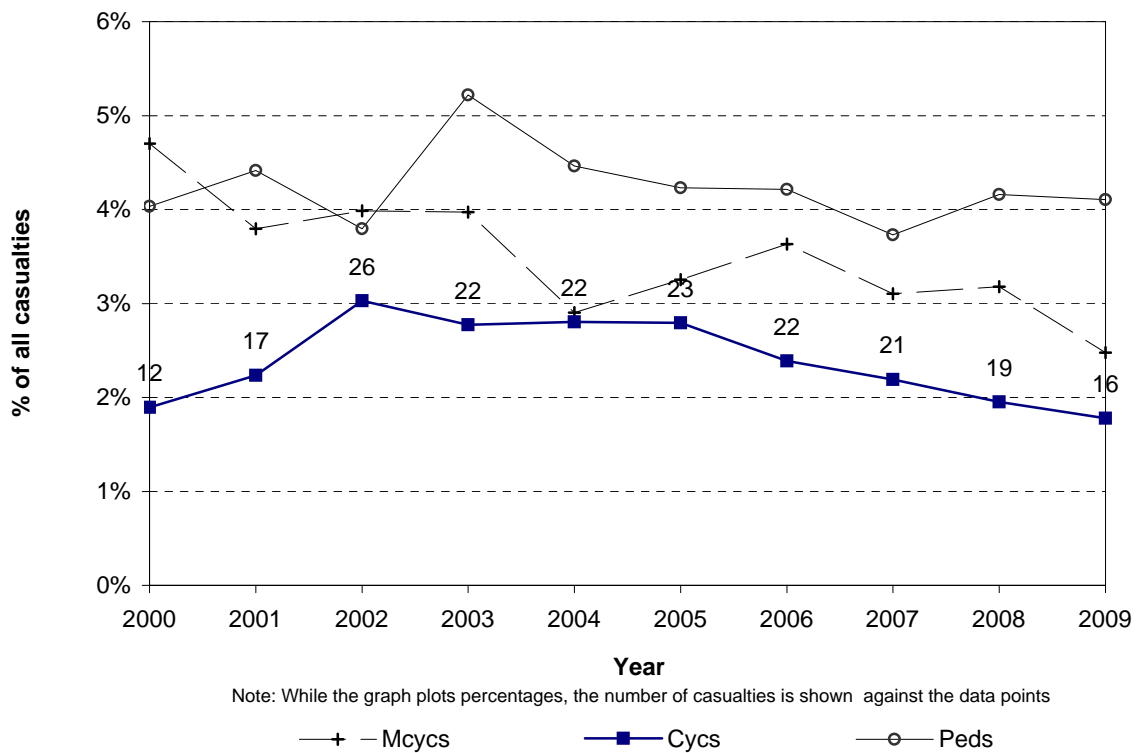
**Figure 3.5 Male casualties by age  
VRUs - Cyclists (2005-2009)**



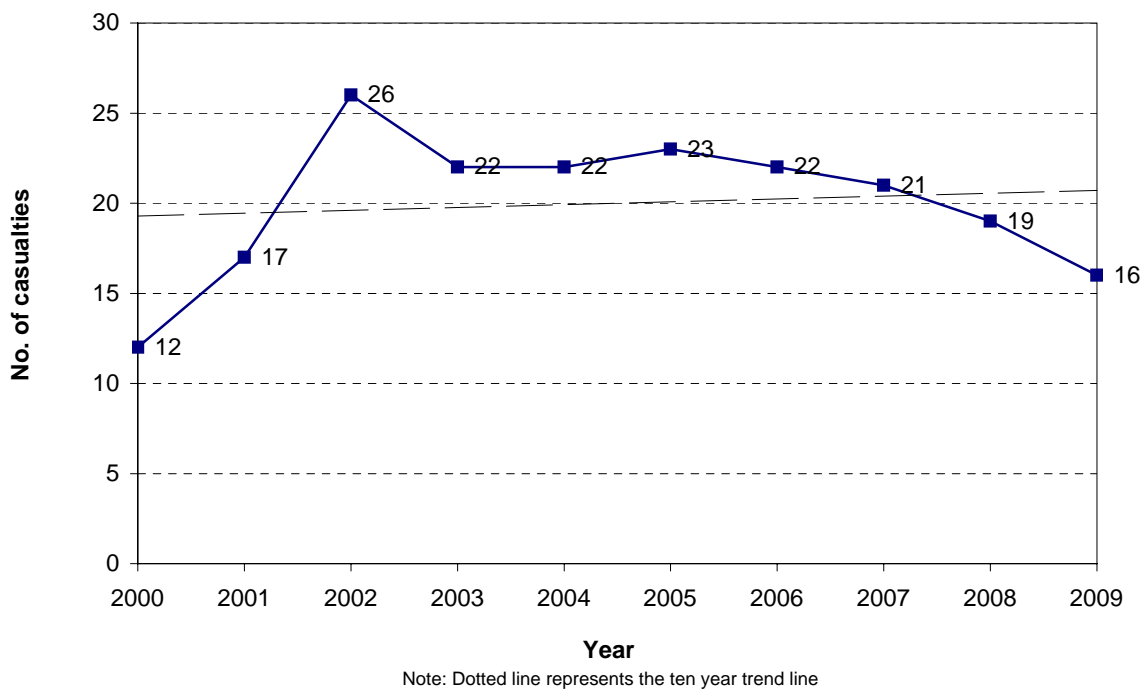
**Figure 3.6 Female casualties by age  
VRUs - Cyclists (2005-2009)**



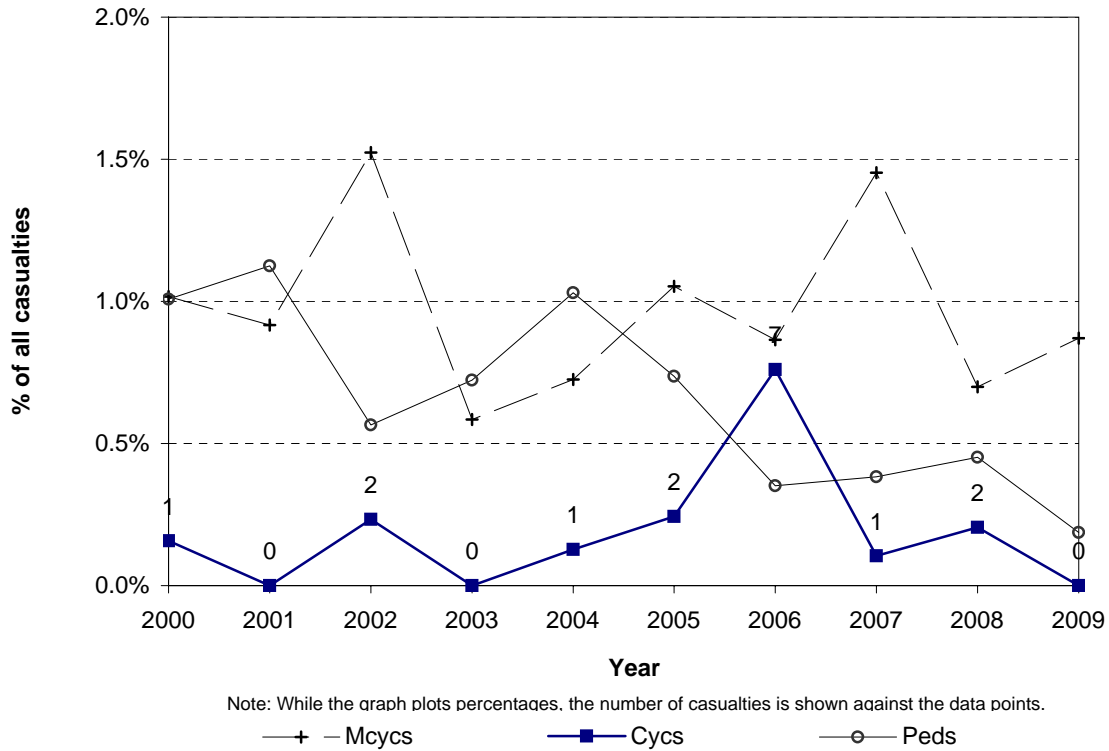
**Figure 3.7 Car/van driver casualties  
VRUs - Cyclists**



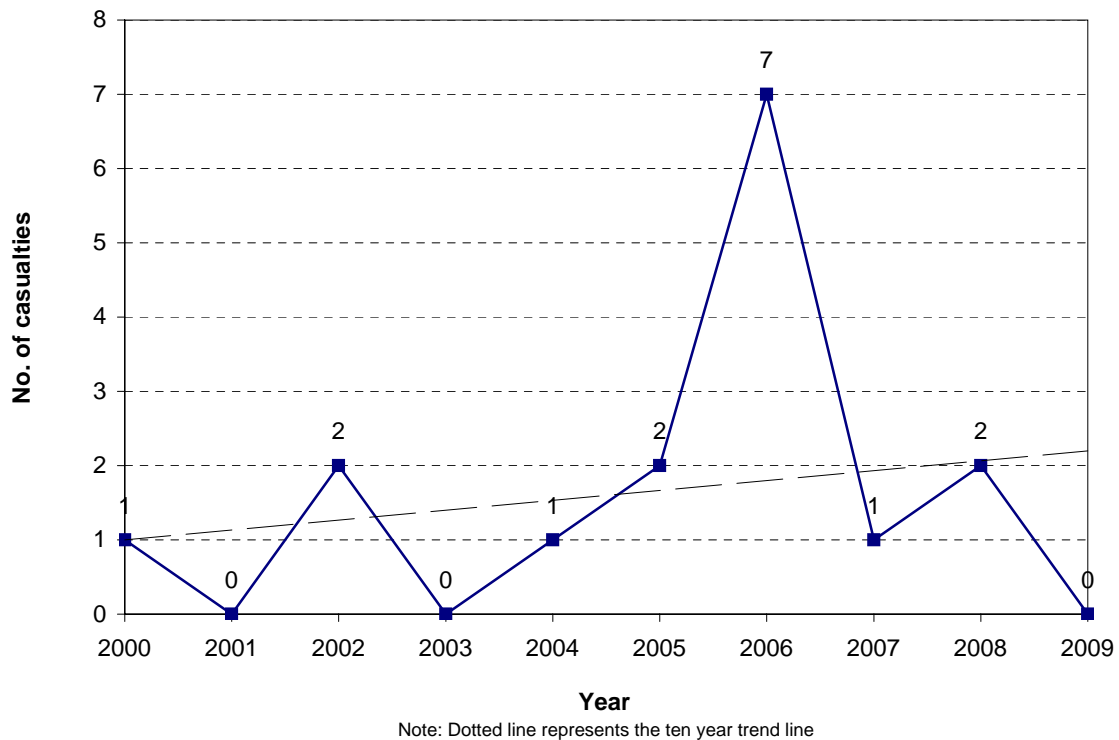
**Figure 3.8 Car/van driver casualties  
VRUs - Cyclists**



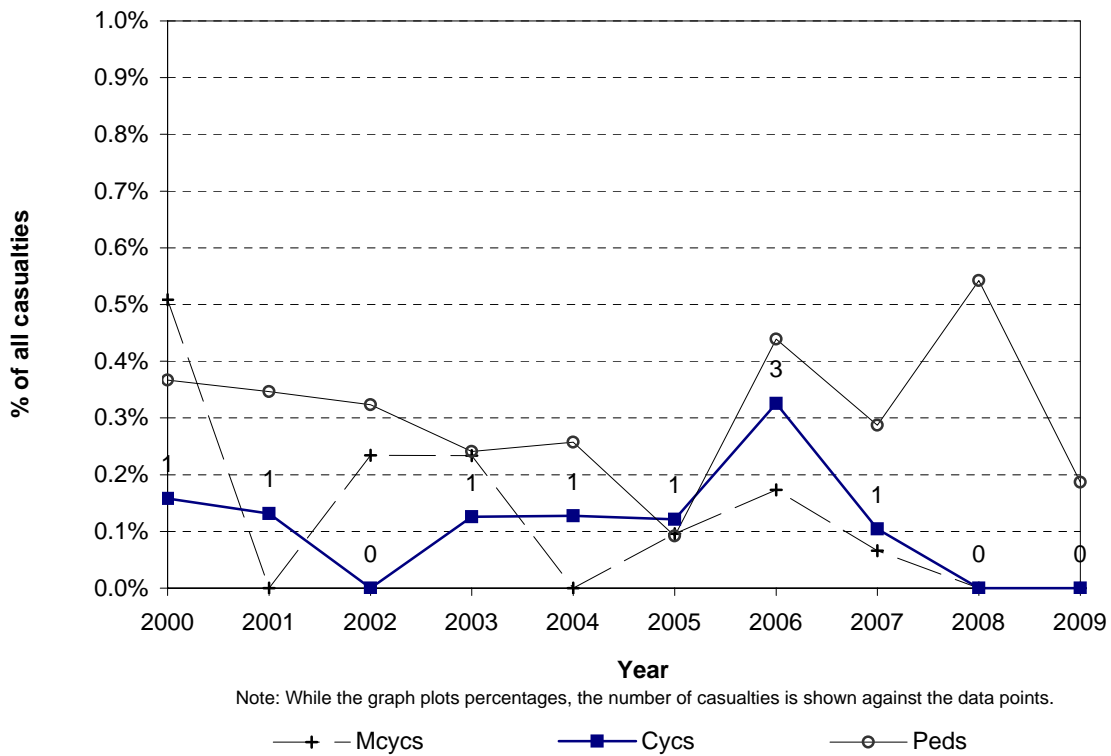
**Figure 3.9 Car/van passenger casualties  
VRUs - Cyclists**



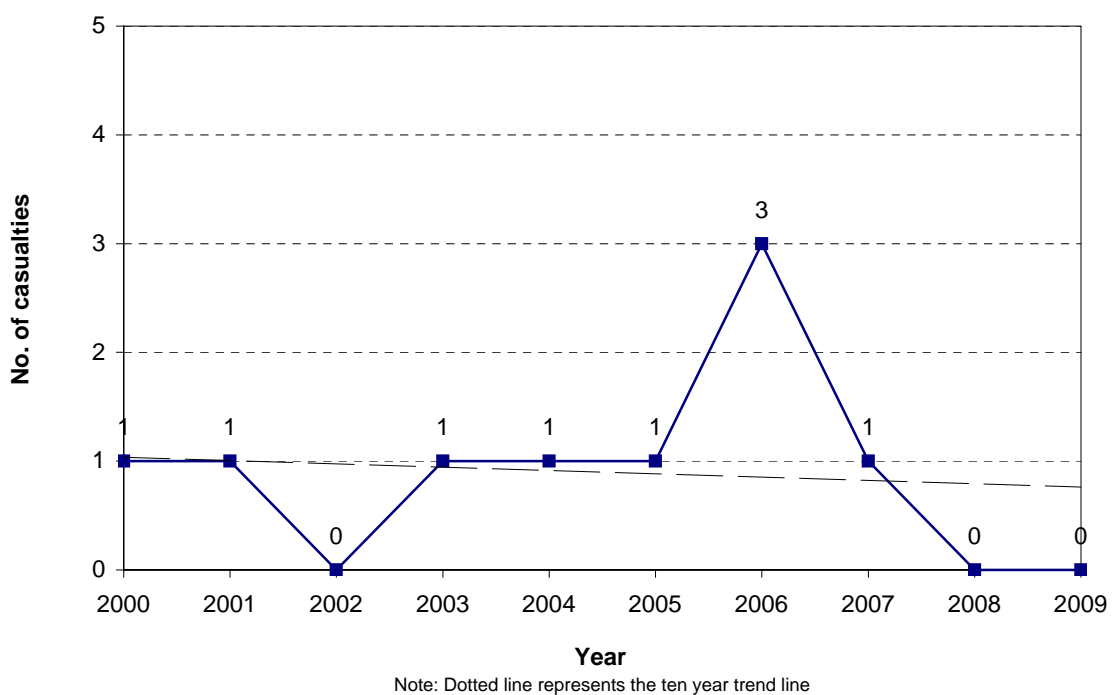
**Figure 3.10 Car/van passenger casualties  
VRUs - Cyclists**



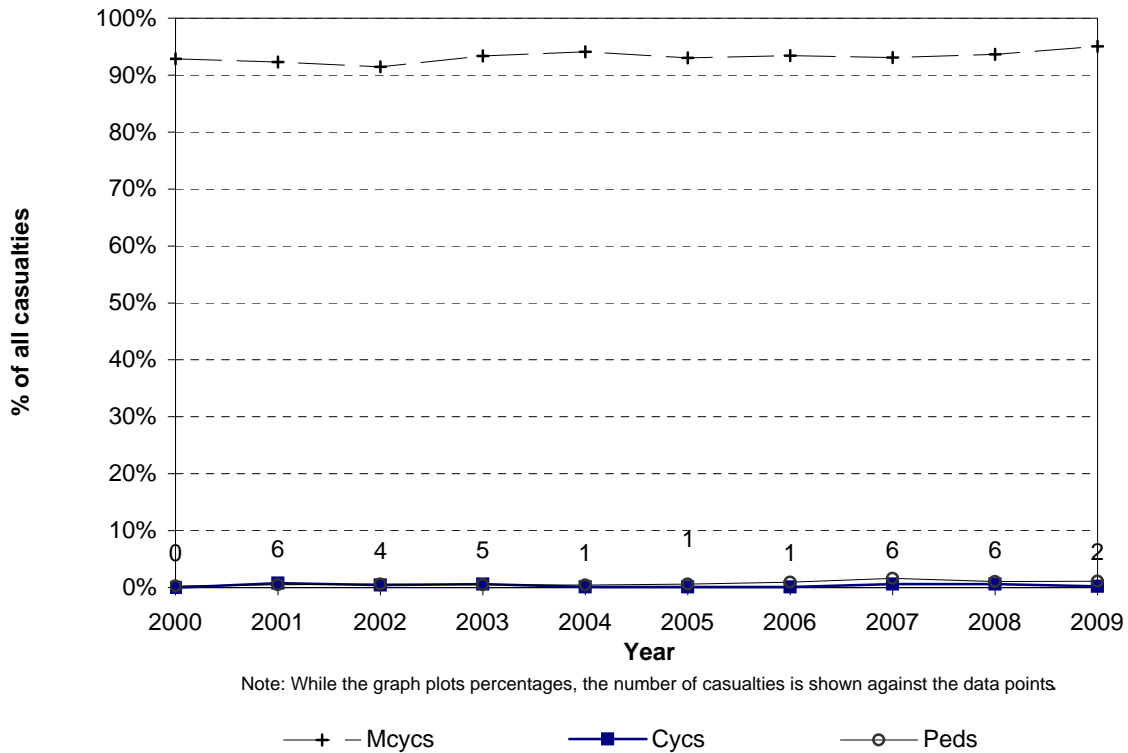
**Figure 3.11 Heavy vehicle casualties  
VRUs - Cyclists**



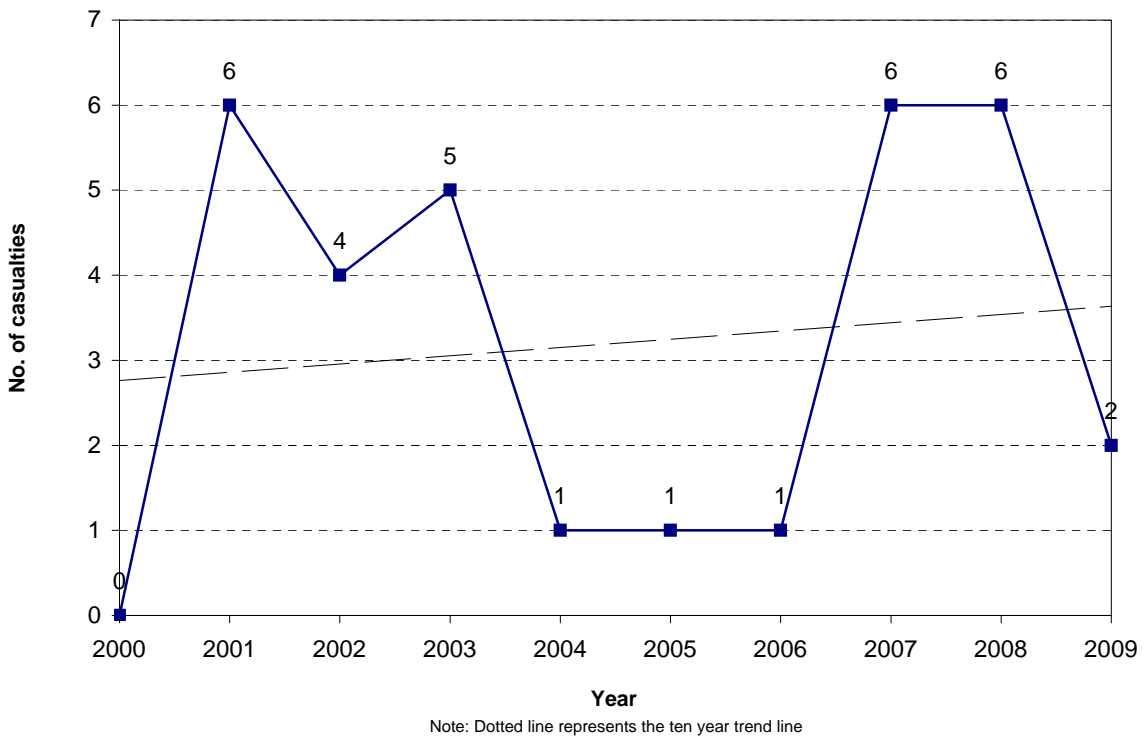
**Figure 3.12 Heavy vehicle casualties  
VRUs - Cyclists**



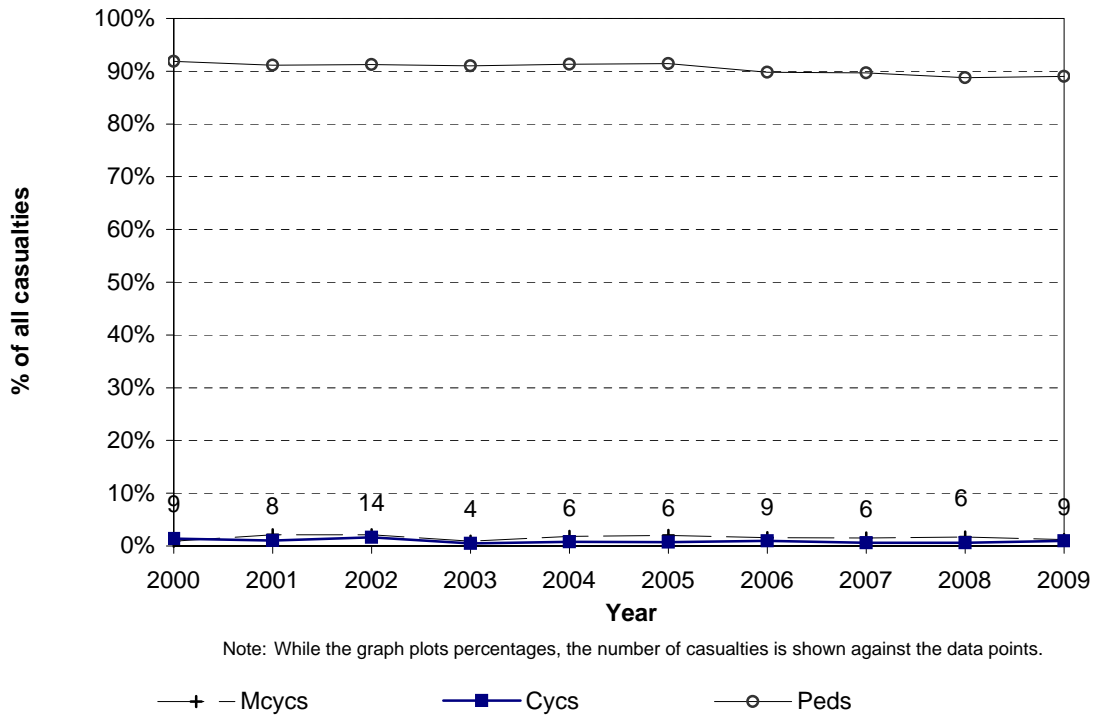
**Figure 3.13 Motorcyclist casualties  
VRUs - Cyclists**



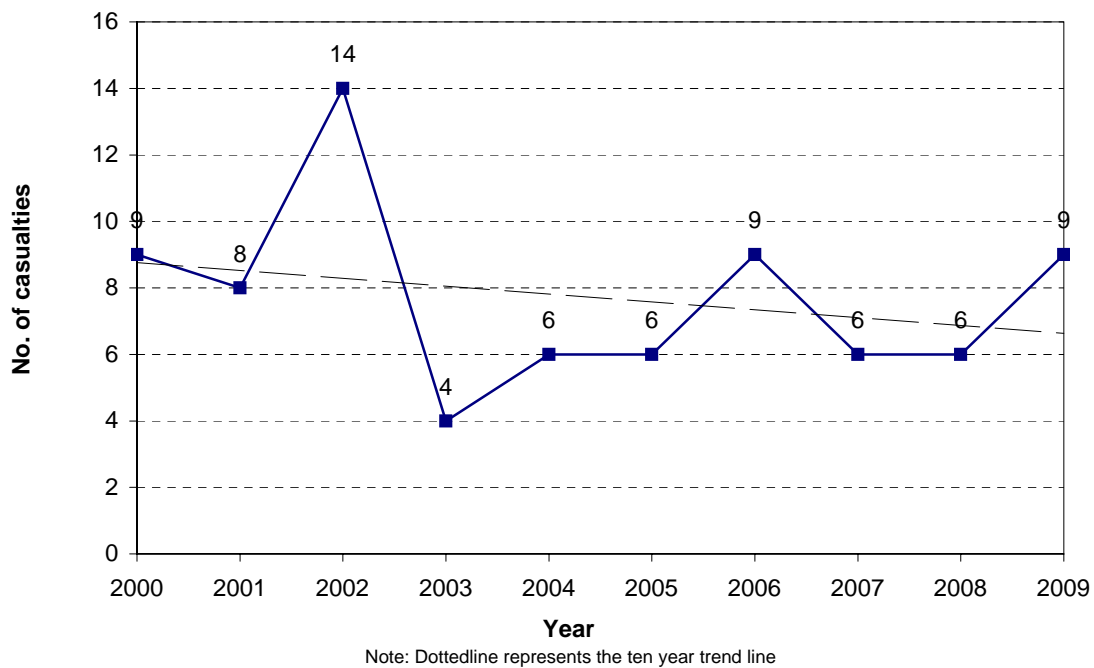
**Figure 3.14 Motorcyclist casualties  
VRUs - Cyclists**



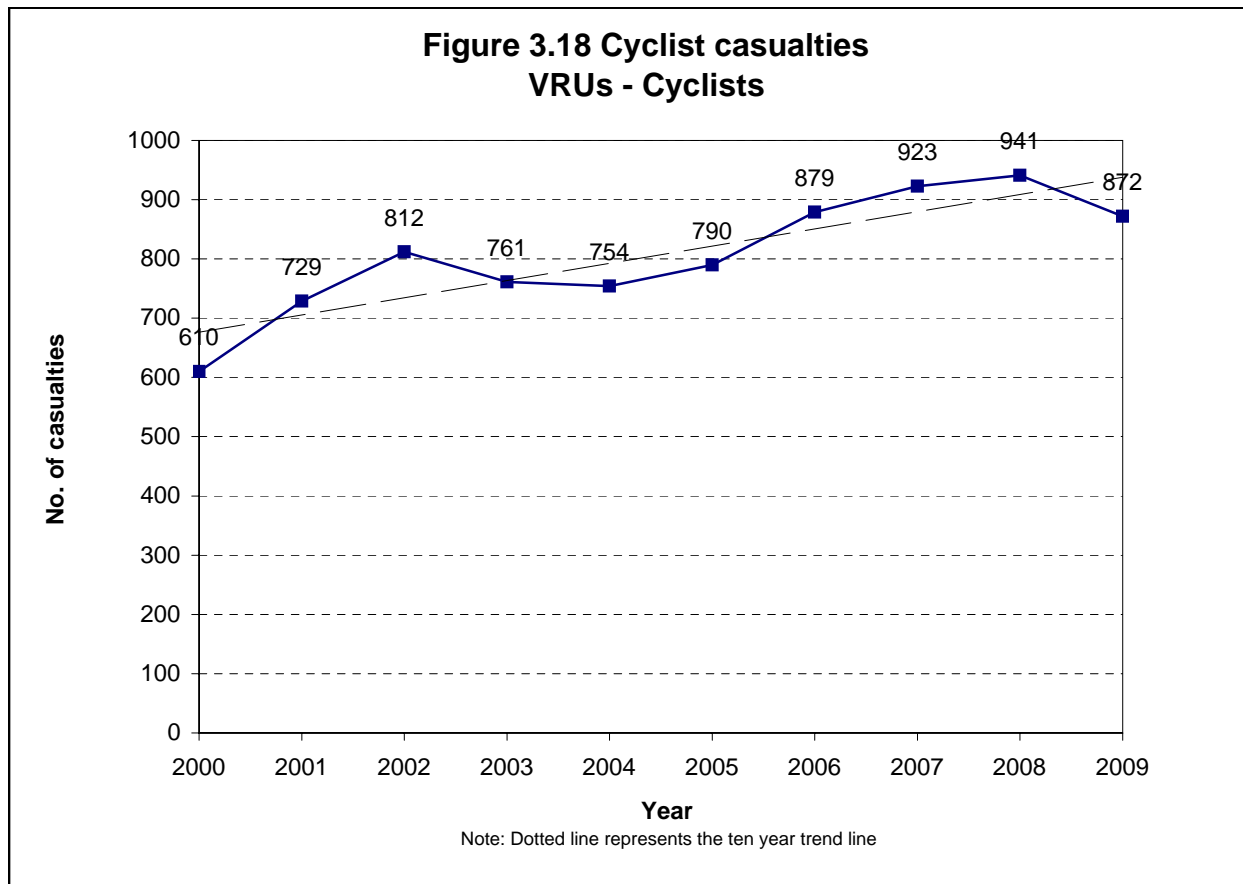
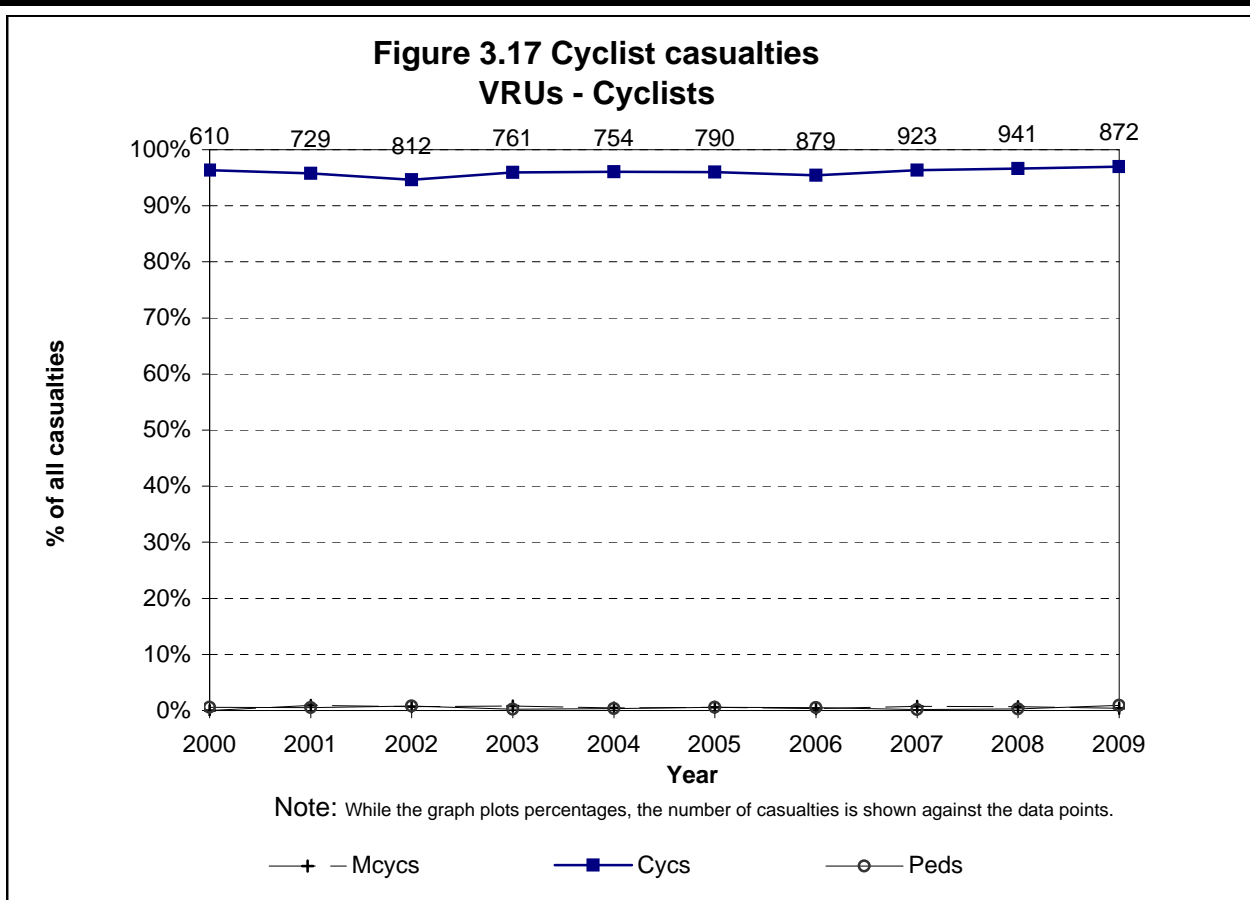
**Figure 3.15 Pedestrian casualties  
VRUs - Cyclists**



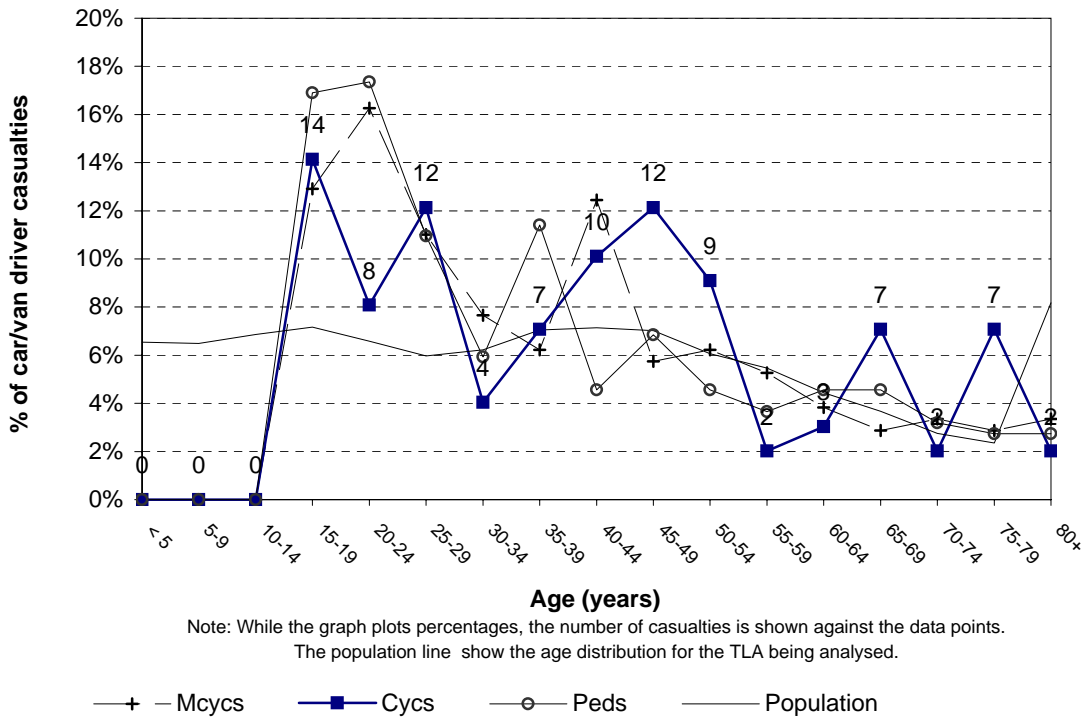
**Figure 3.16 Pedestrian casualties  
VRUs - Cyclists**



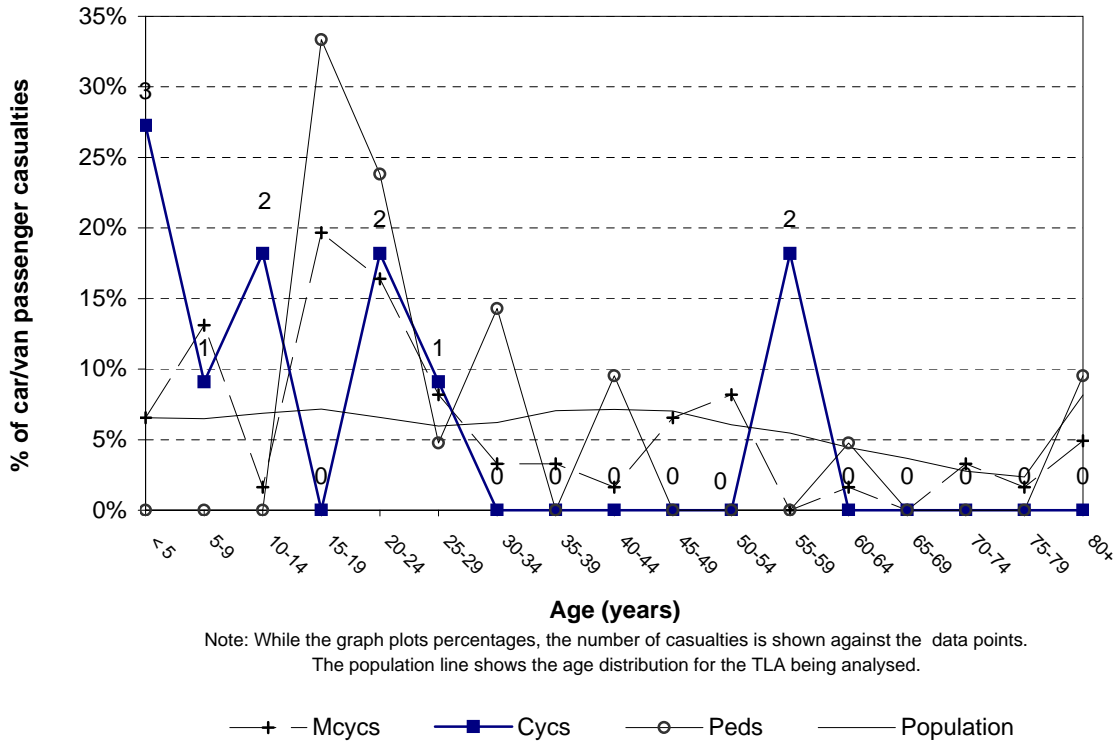




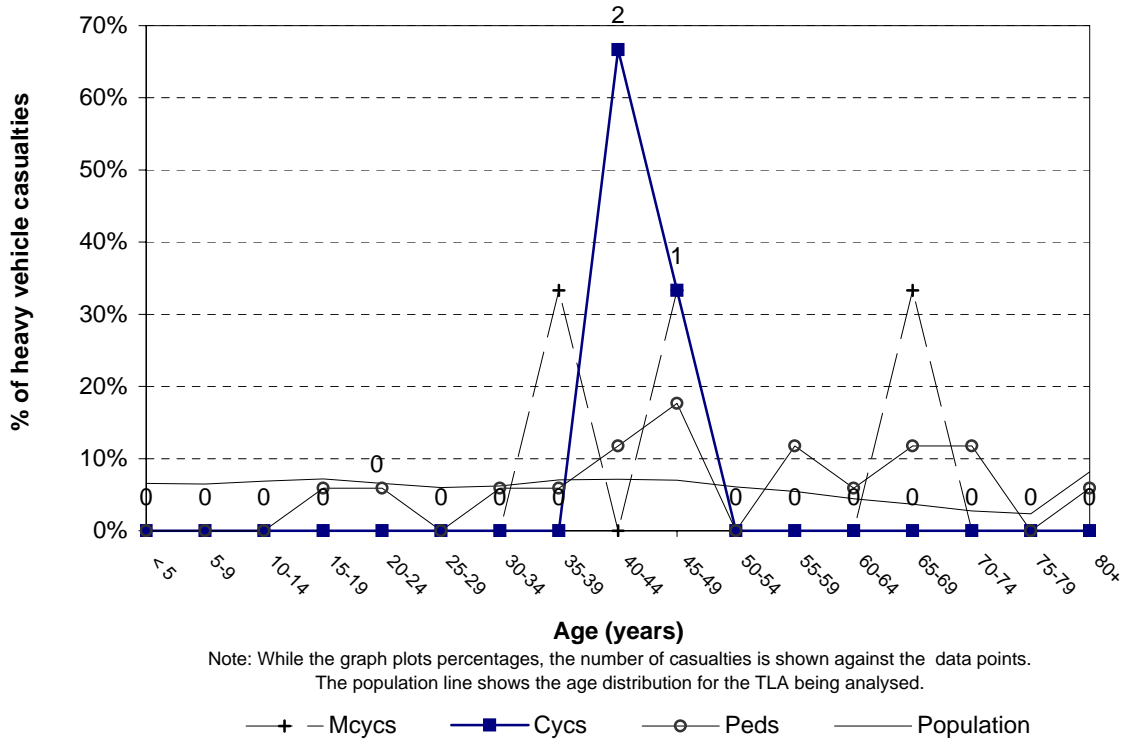
**Figure 3.19 Car/van driver casualty age VRUs - Cyclists (2005-2009)**



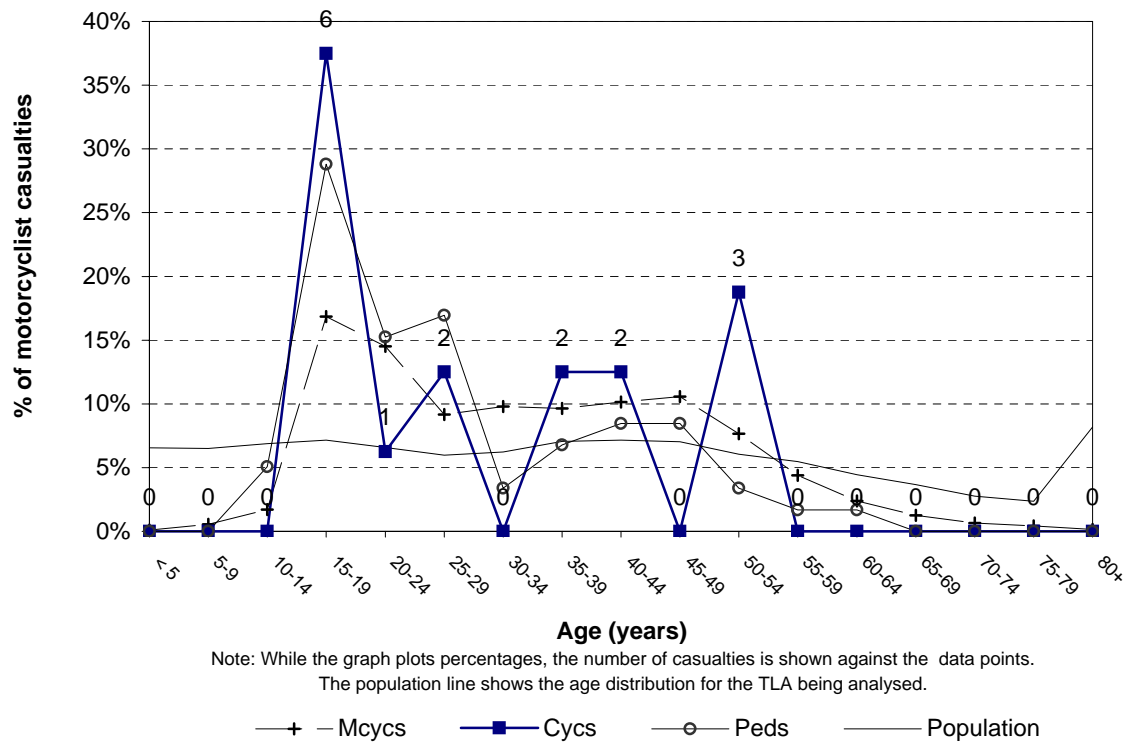
**Figure 3.20 Car/van passenger casualty age VRUs - Cyclists (2005-2009)**



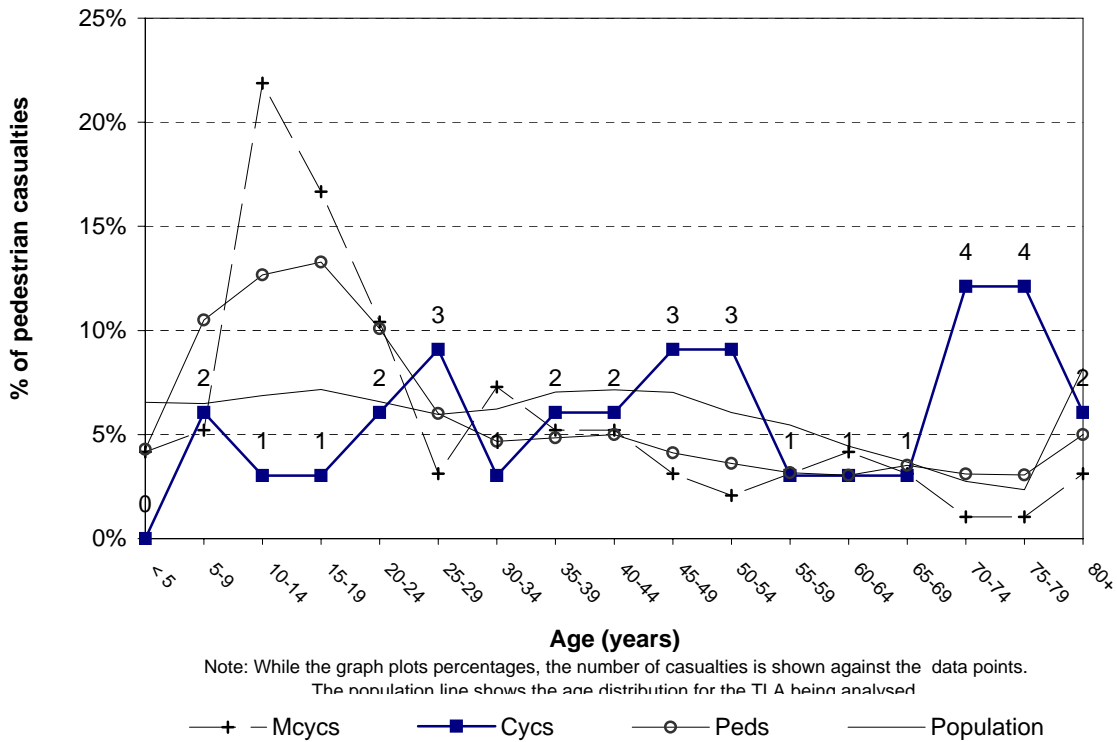
**Figure 3.21 Heavy vehicle casualty age VRUs - Cyclists (2005-2009)**



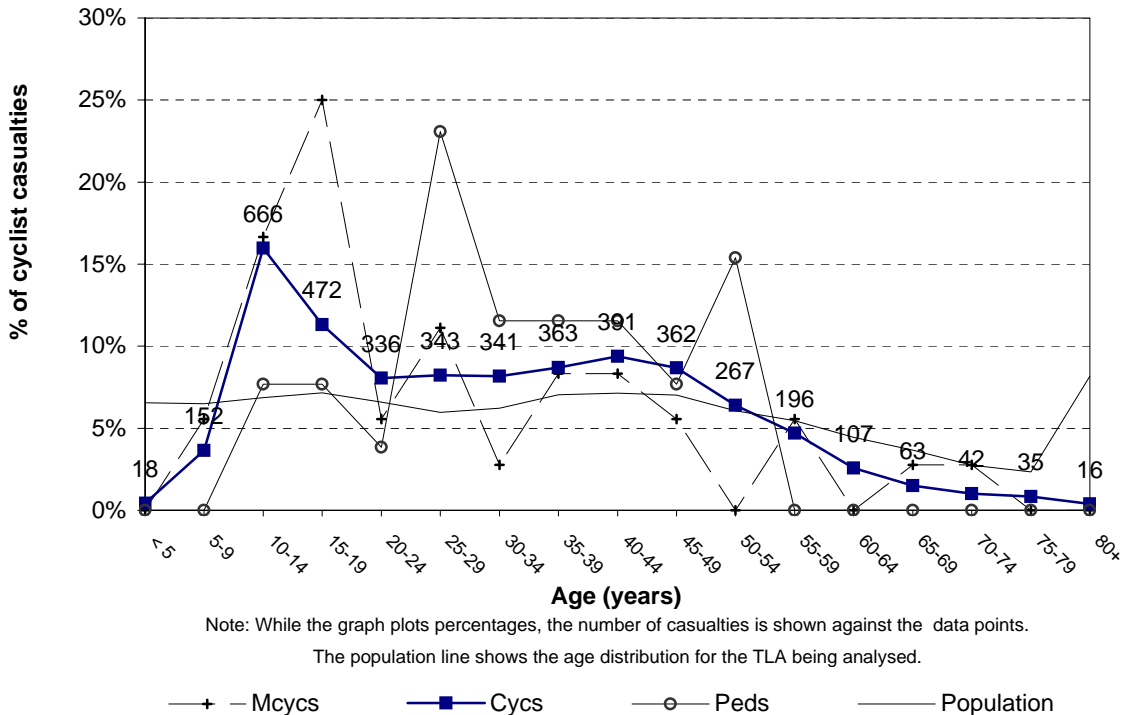
**Figure 3.22 Motorcyclist casualty age VRUs - Cyclists (2005-2009)**



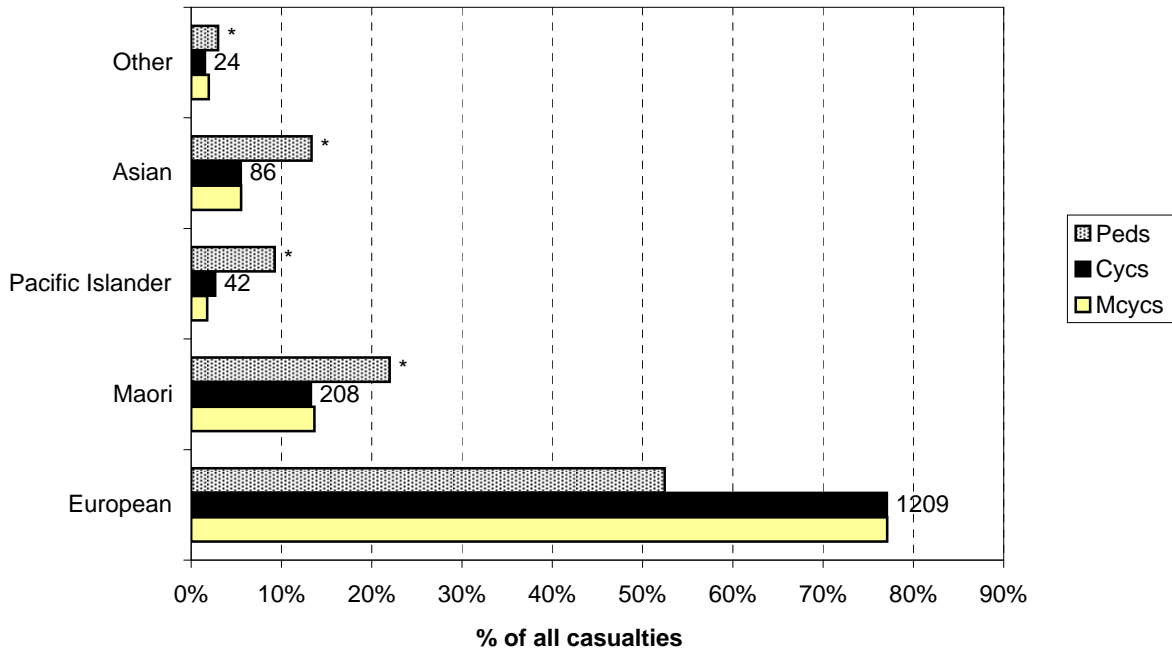
**Figure 3.23 Pedestrian casualty age VRUs - Cyclists (2005-2009)**



**Figure 3.24 Cyclist casualty age VRUs - Cyclists (2005-2009)**

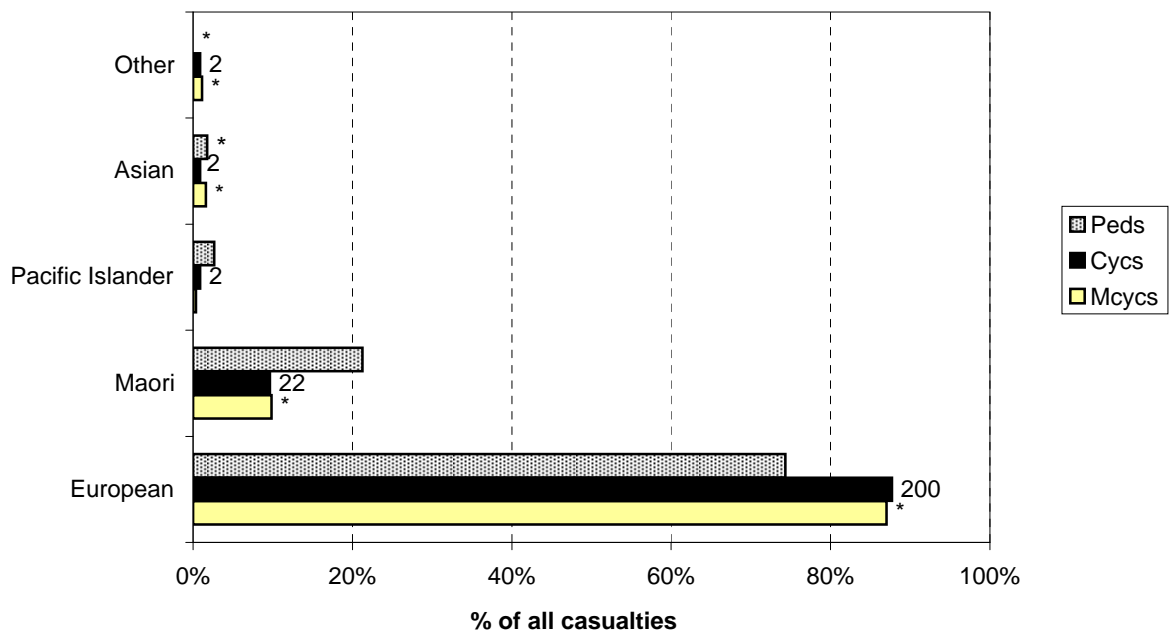


**Figure 3.25 Casualty ethnicity - urban  
VRUs - Cyclists (2005-2009)**



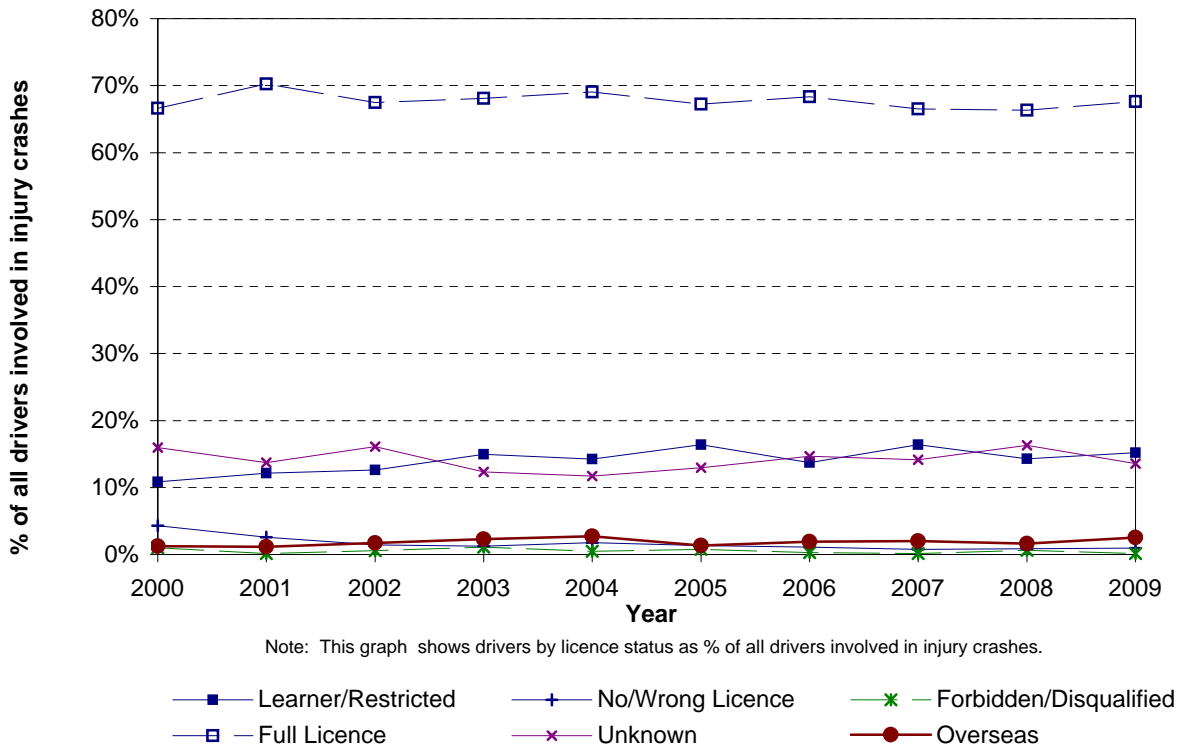
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.26 Casualty ethnicity - rural  
VRUs - Cyclists (2005-2009)**

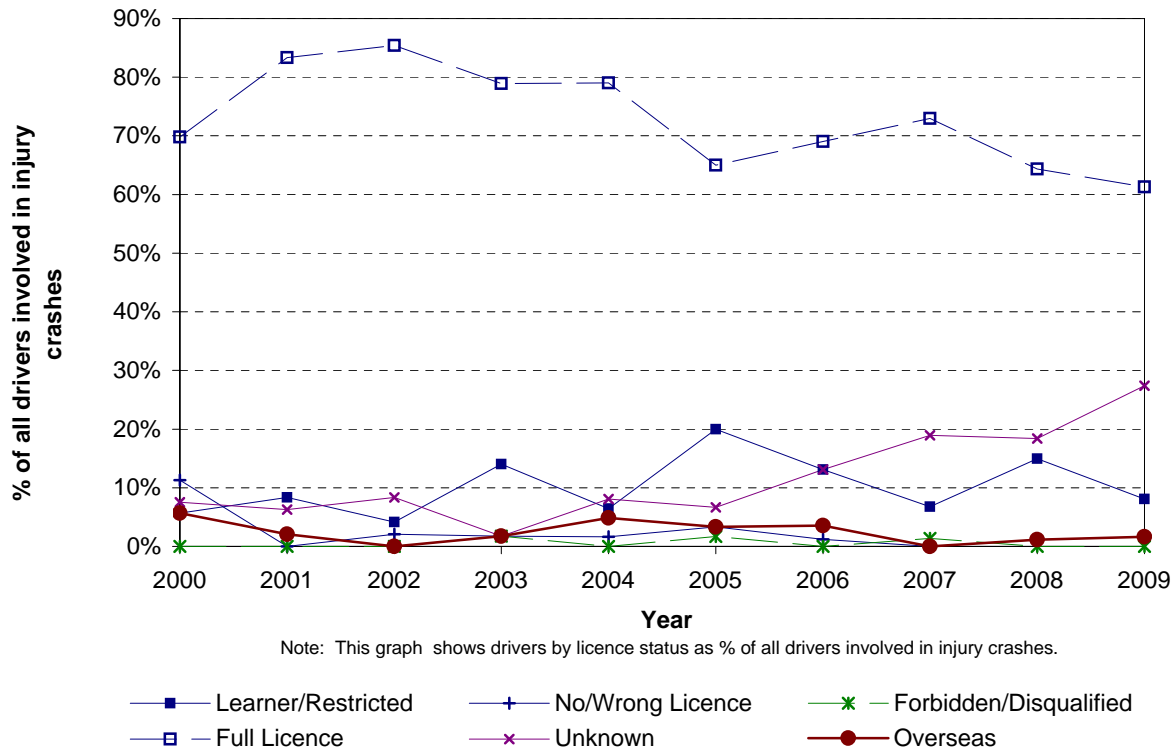


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.27 Licence status - urban  
VRUs - Cyclists**



**Figure 3.28 Licence status - rural  
VRUs - Cyclists**

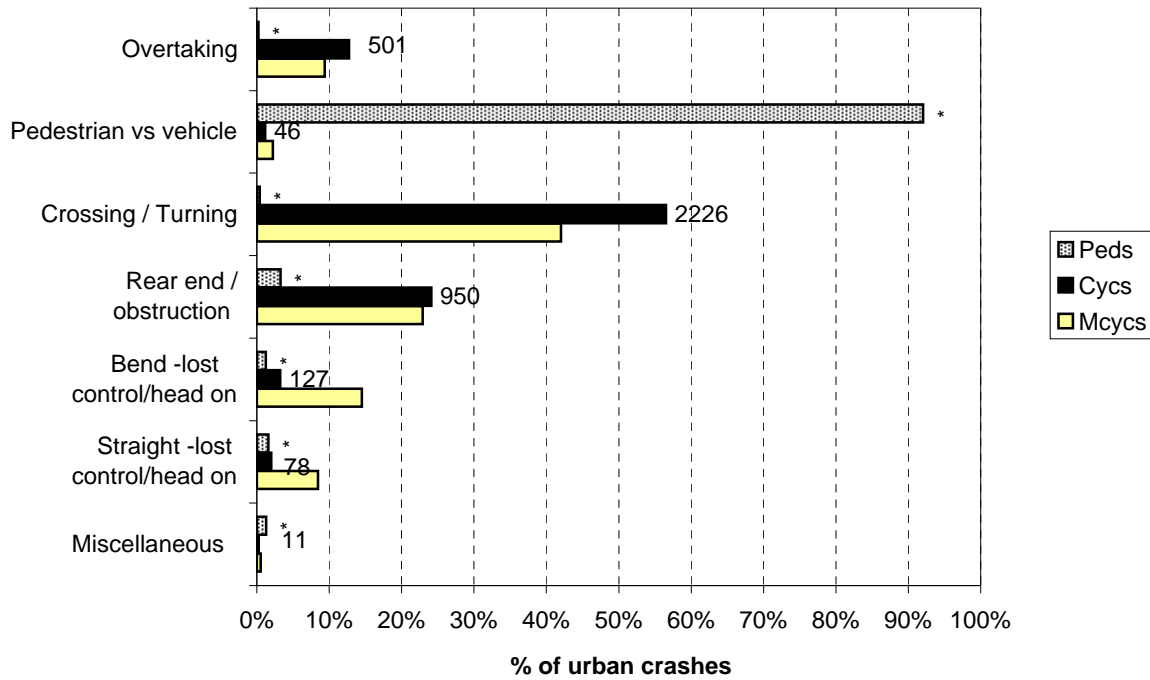


# *Crash Type Statistics*



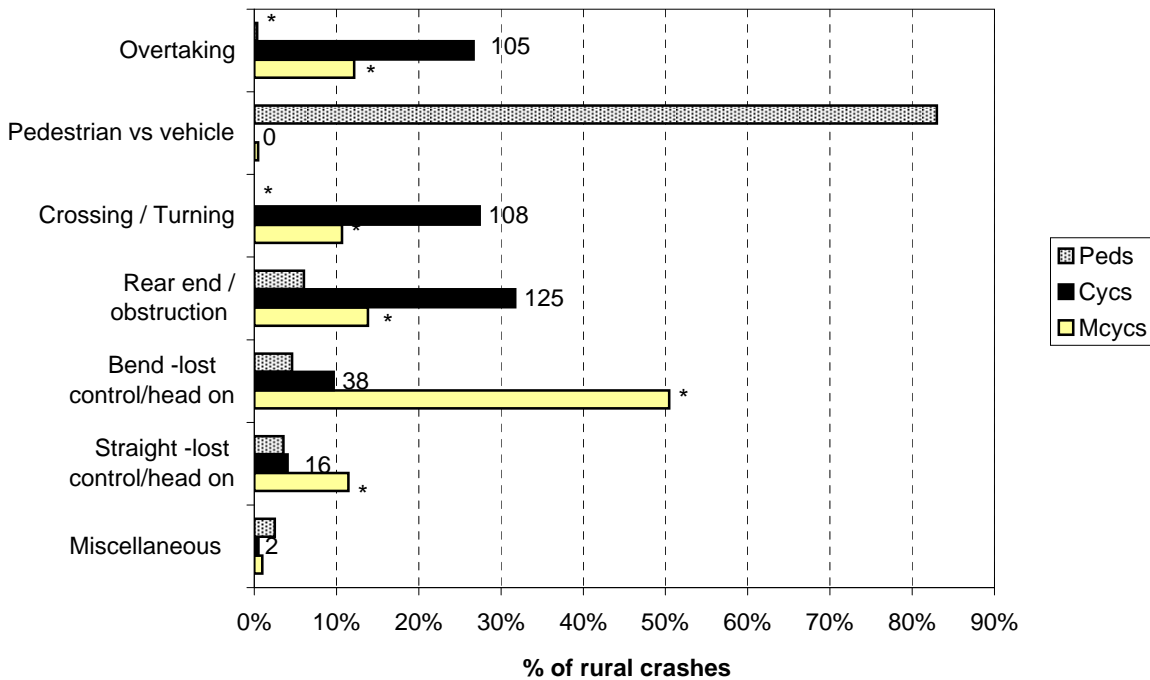


**Figure 4.1 Crash movement type - urban  
VRUs - Cyclists (2005-2009)**



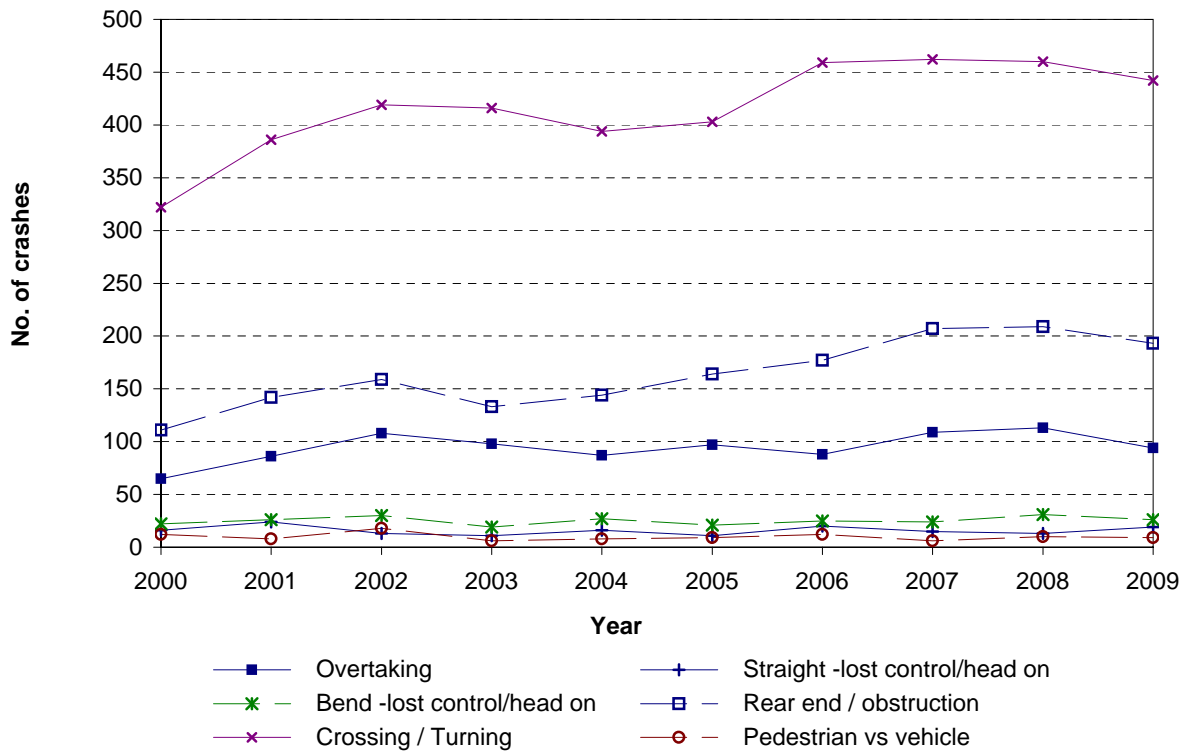
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 4.2 Crash movement type - rural  
VRUs - Cyclists roads (2005-2009)**

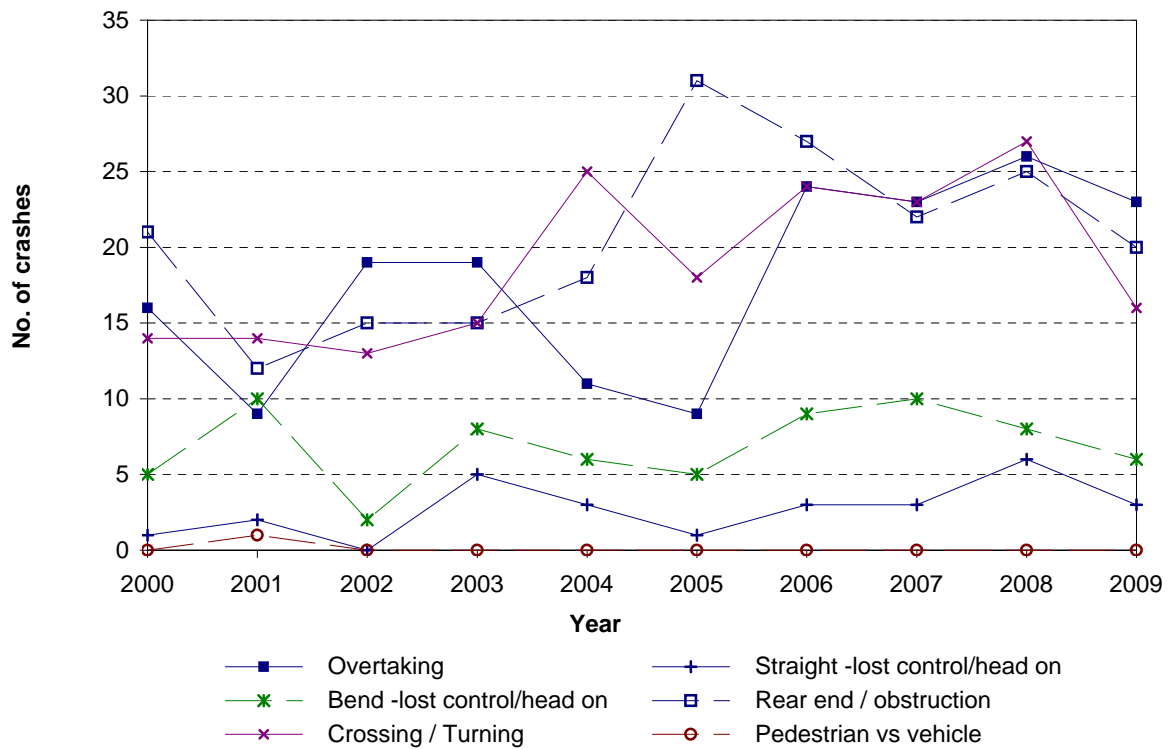


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

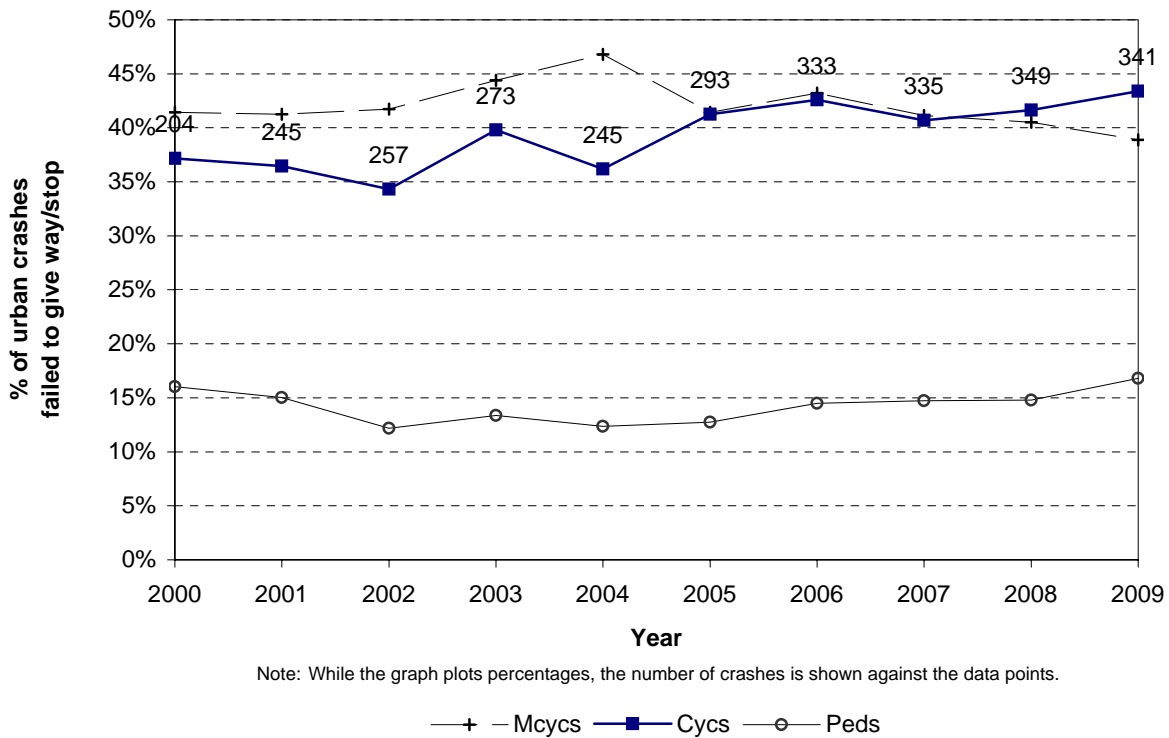
**Figure 4.3 Crash movement type - trends  
VRUs - Cyclists - urban roads**



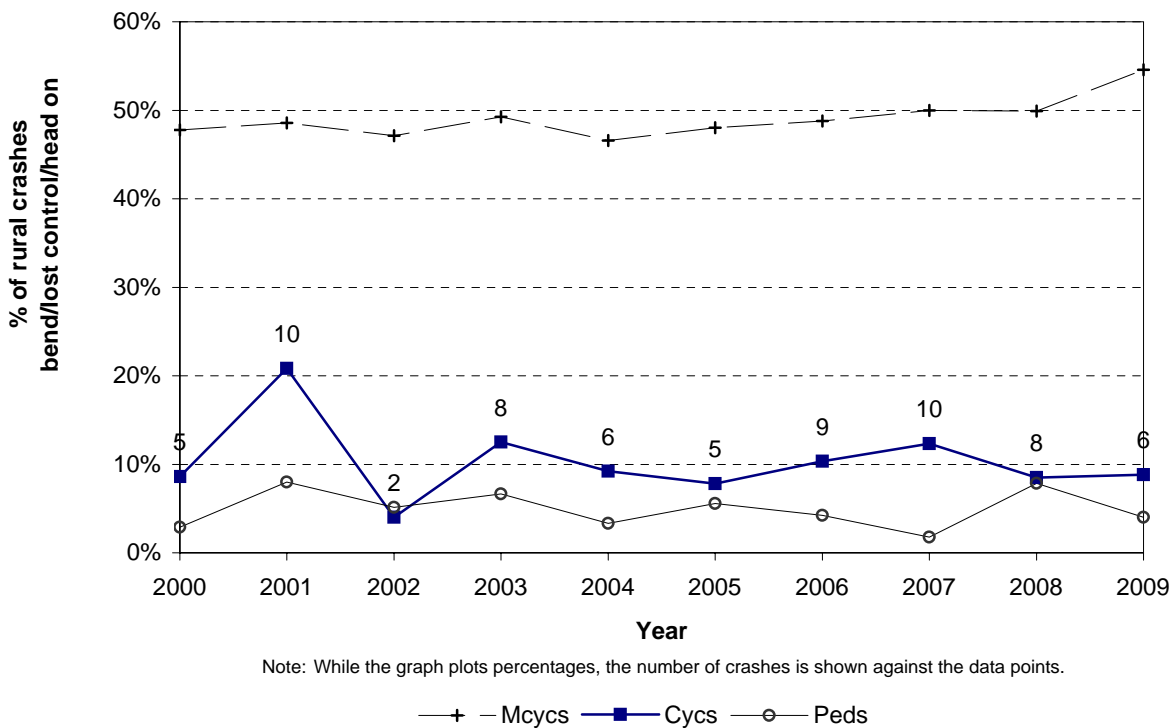
**Figure 4.4 Crash movement type - trends  
VRUs - Cyclists - rural roads**



**Figure 4.5 Failed to give way / stop  
VRUs - Cyclists - urban roads**



**Figure 4.6 Bend - lost control / head - on  
VRUs - Cyclists - rural roads**

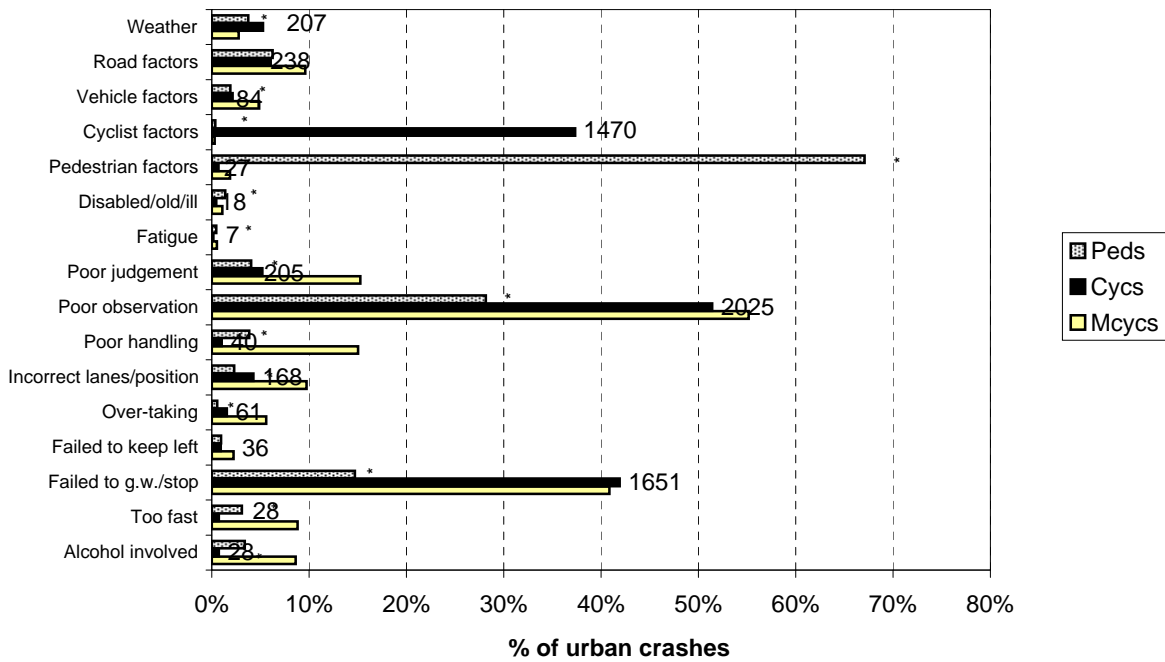




# *Crash Factor Statistics*

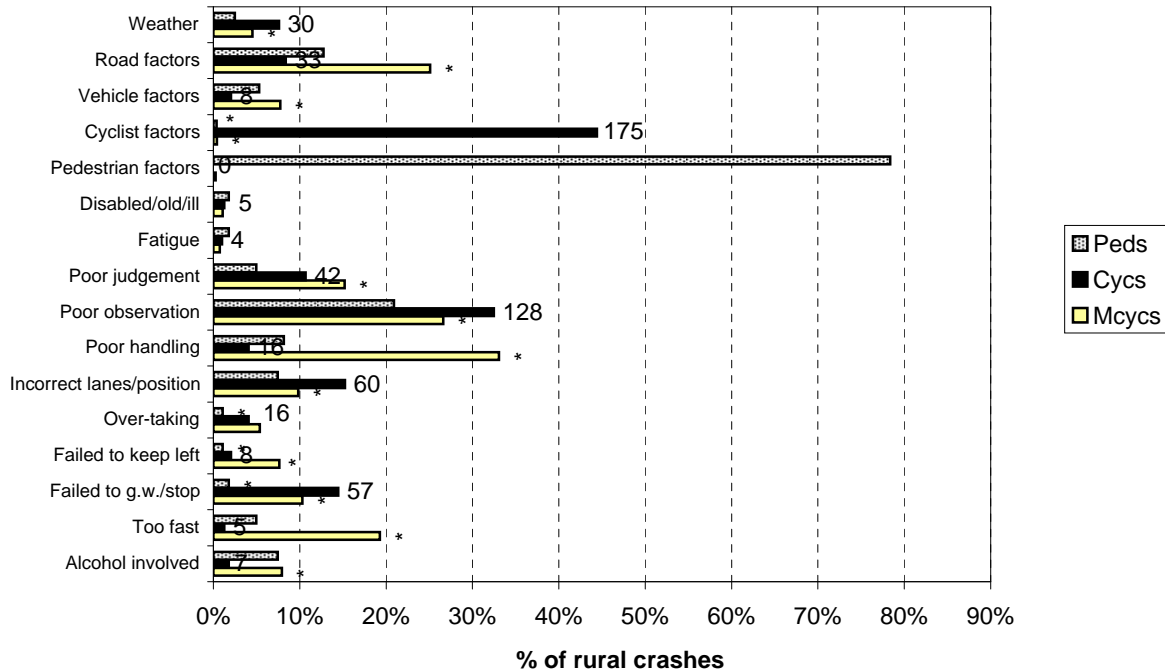


**Figure 5.1 Contributing factors - urban VRUs - Cyclists (2005-2009)**



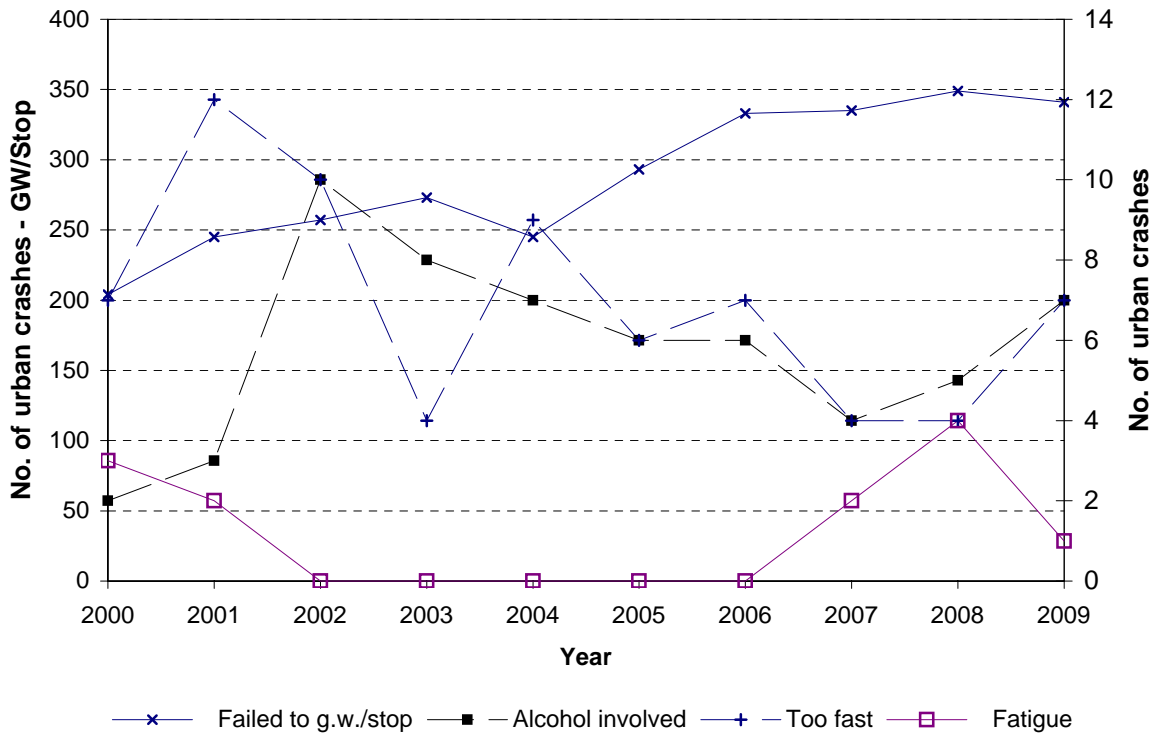
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 5.2 Contributing factors - rural VRUs - Cyclists (2005-2009)**

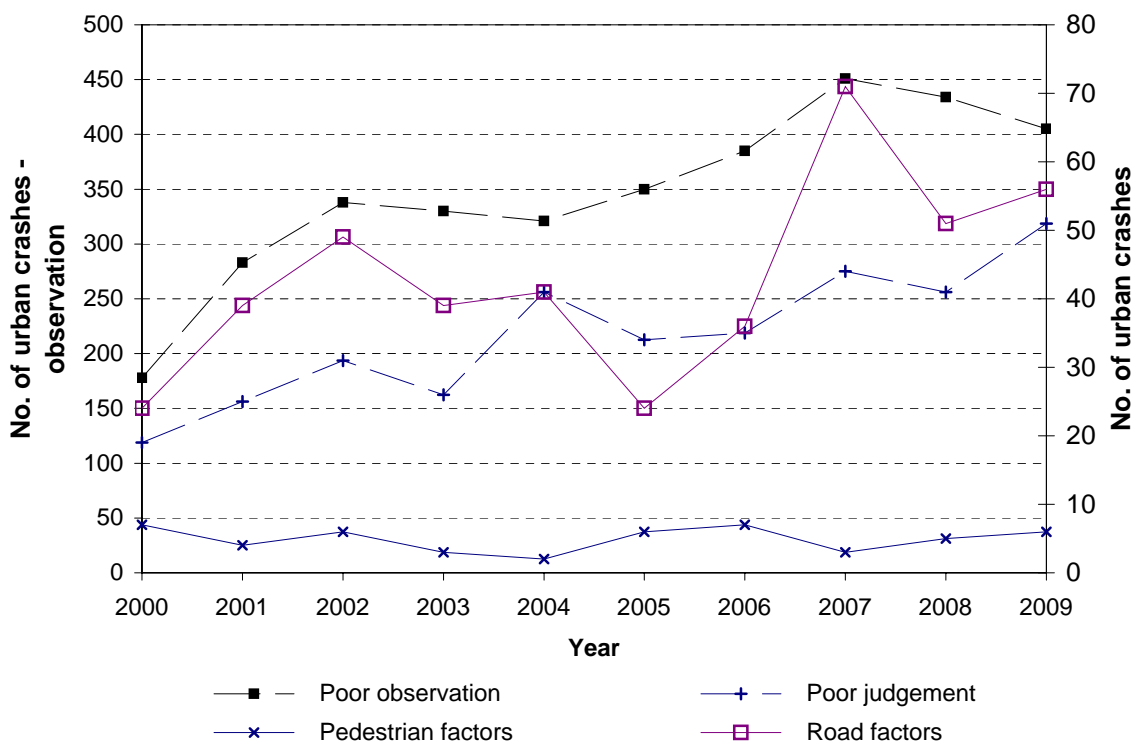


Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 5.3 Contributing factor trends  
VRUs - Cyclists - urban roads**

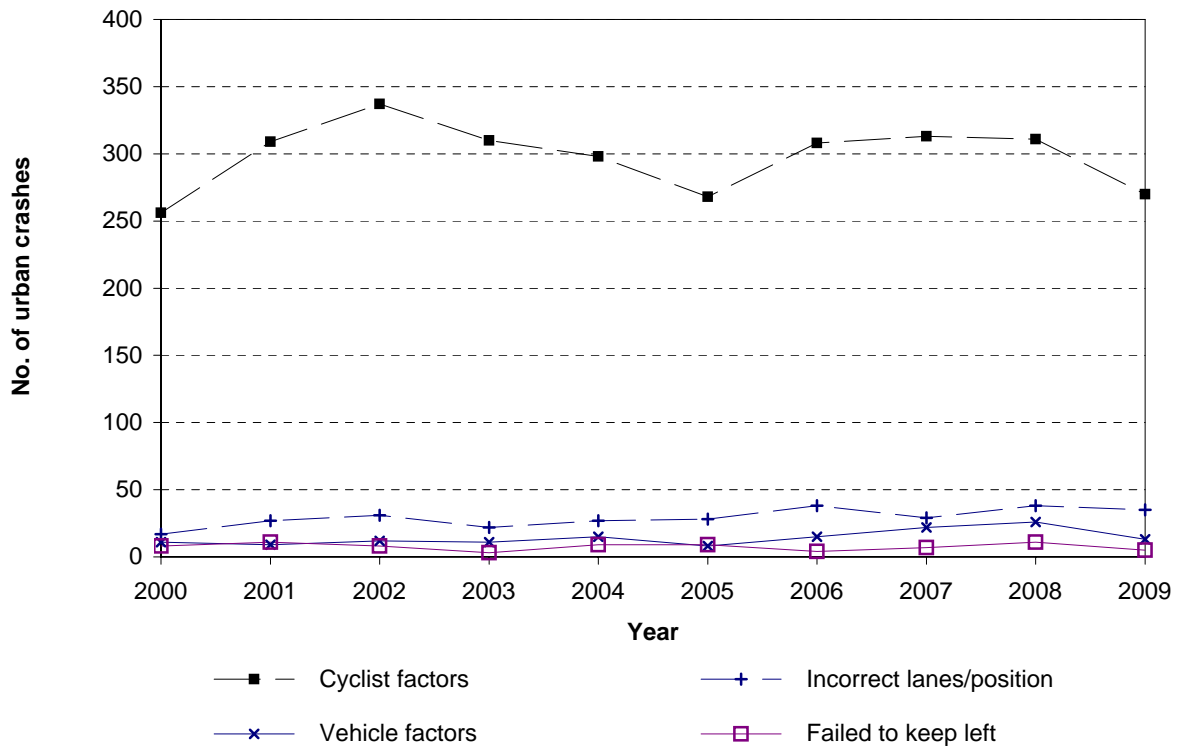


**Figure 5.4 Contributing factor trends  
VRUs - Cyclists - urban roads**

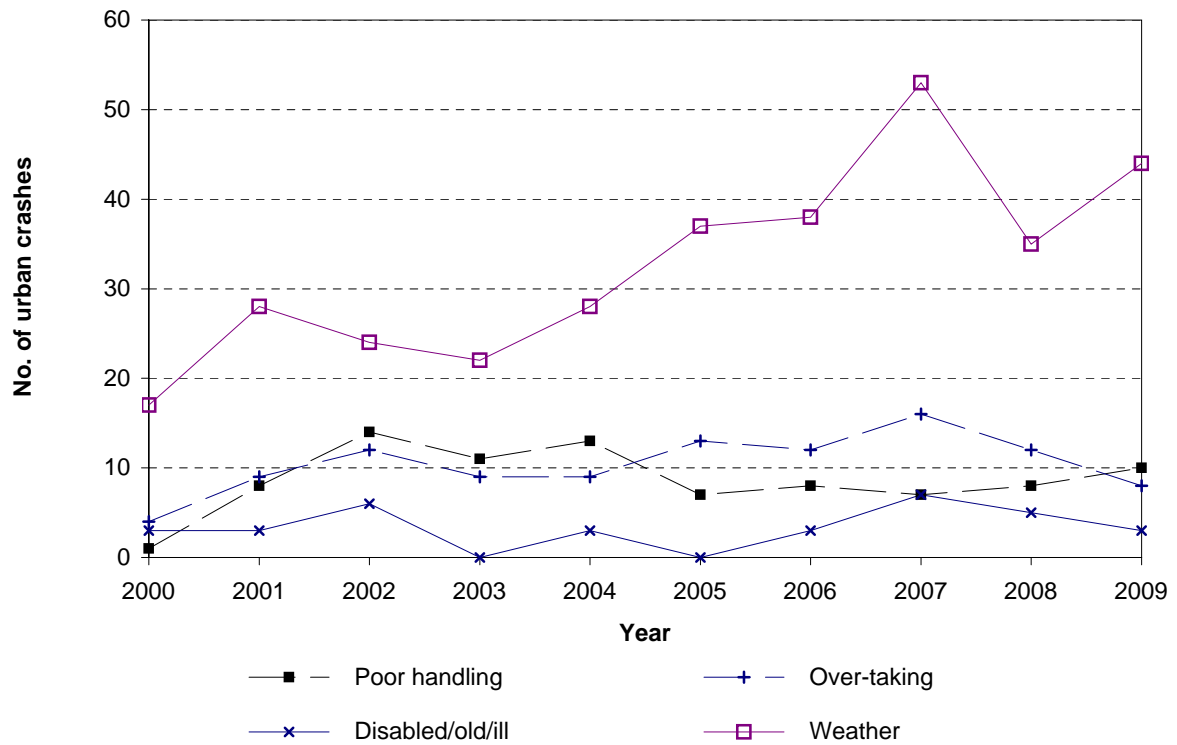




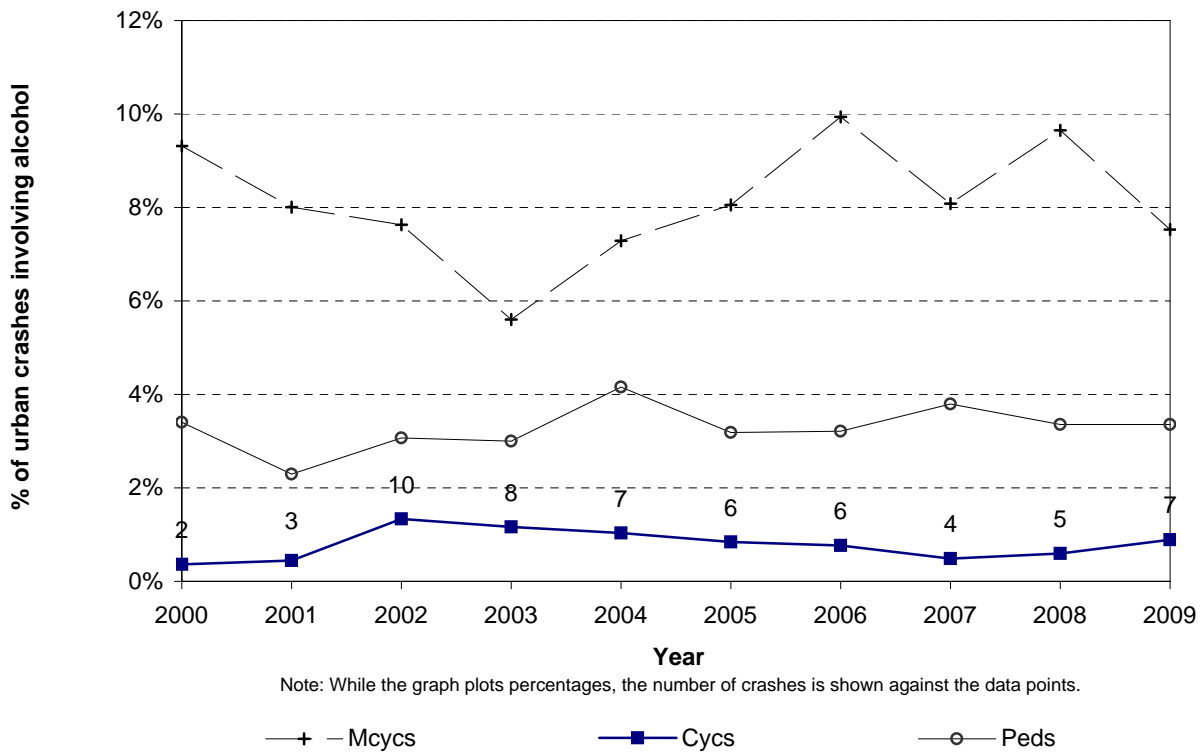
**Figure 5.5 Contributing factor trends  
VRUs - Cyclists - urban roads**



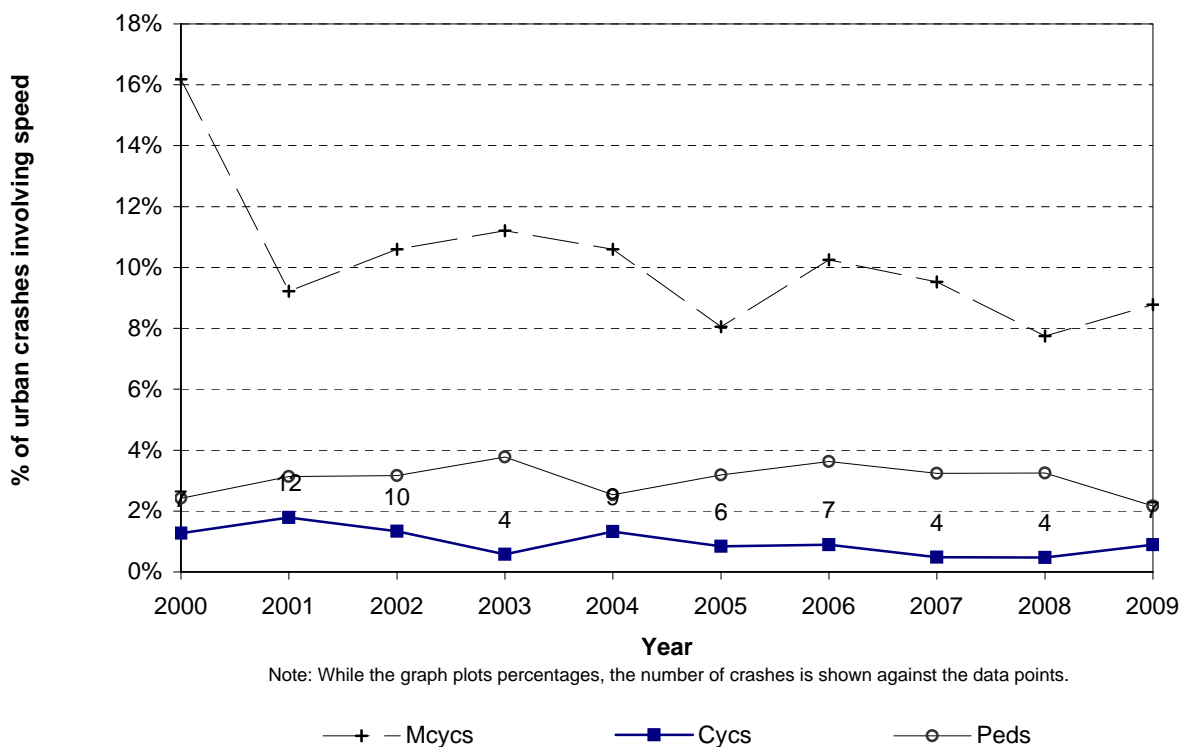
**Figure 5.6 Contributing factor trends  
VRUs - Cyclists - urban roads**



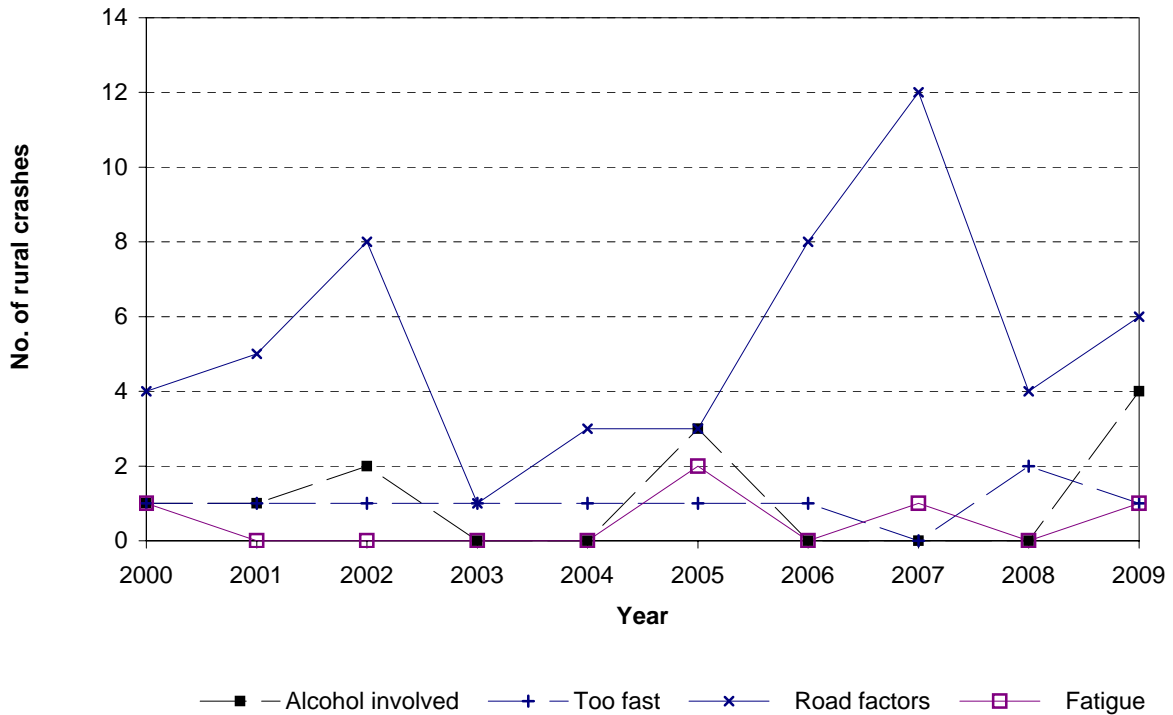
**Figure 5.7 Alcohol involved trend  
VRUs - Cyclists - urban roads**



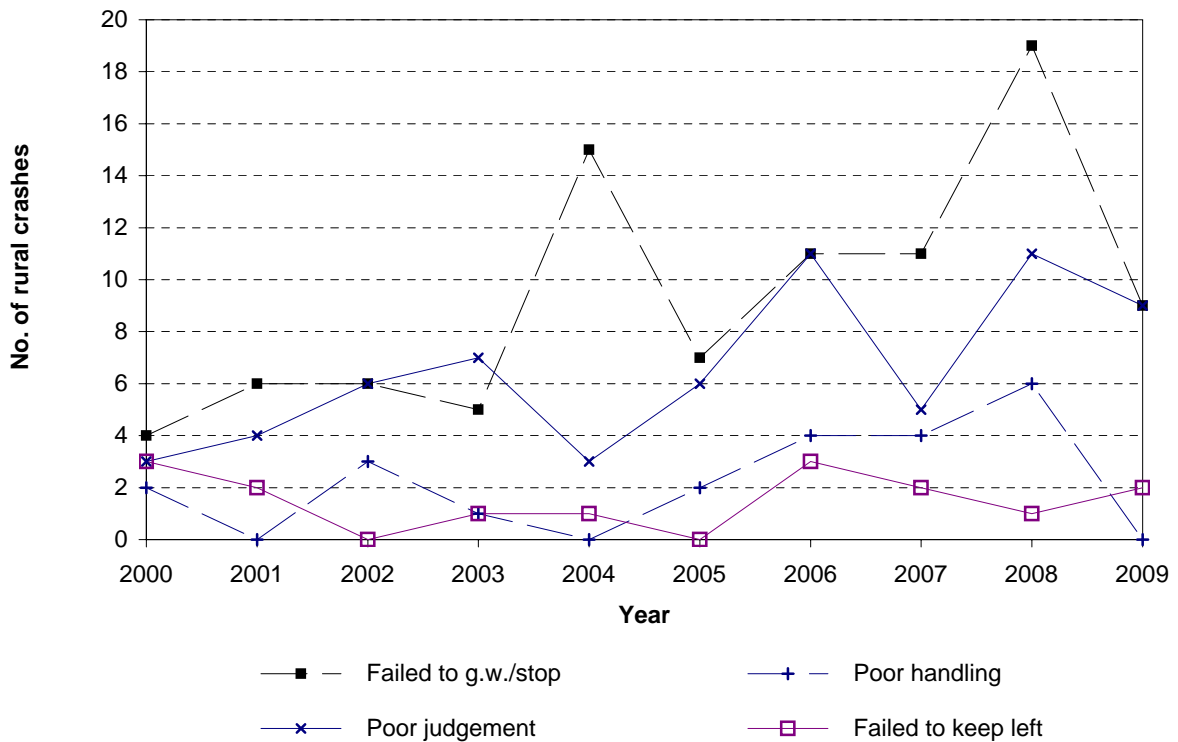
**Figure 5.8 Speed involved trend  
VRUs - Cyclists - urban roads**



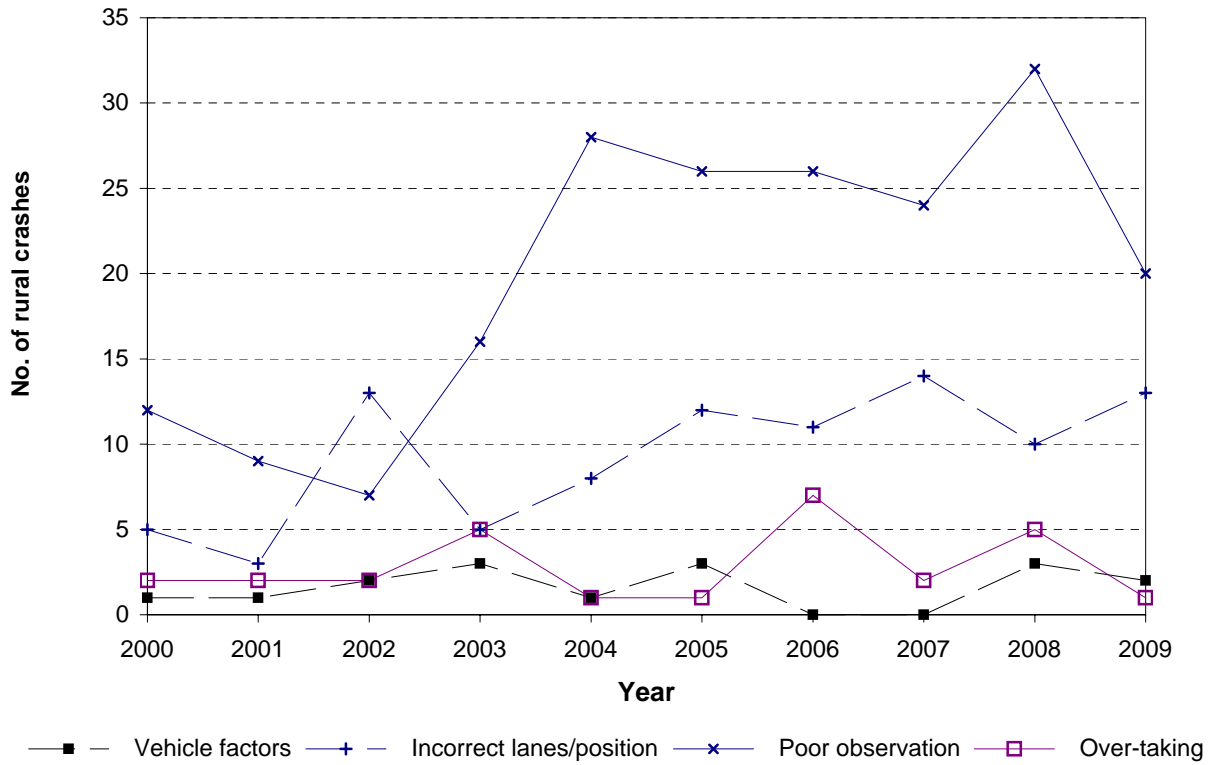
**Figure 5.9 Contributing factor trends  
VRUs - Cyclists - rural roads**



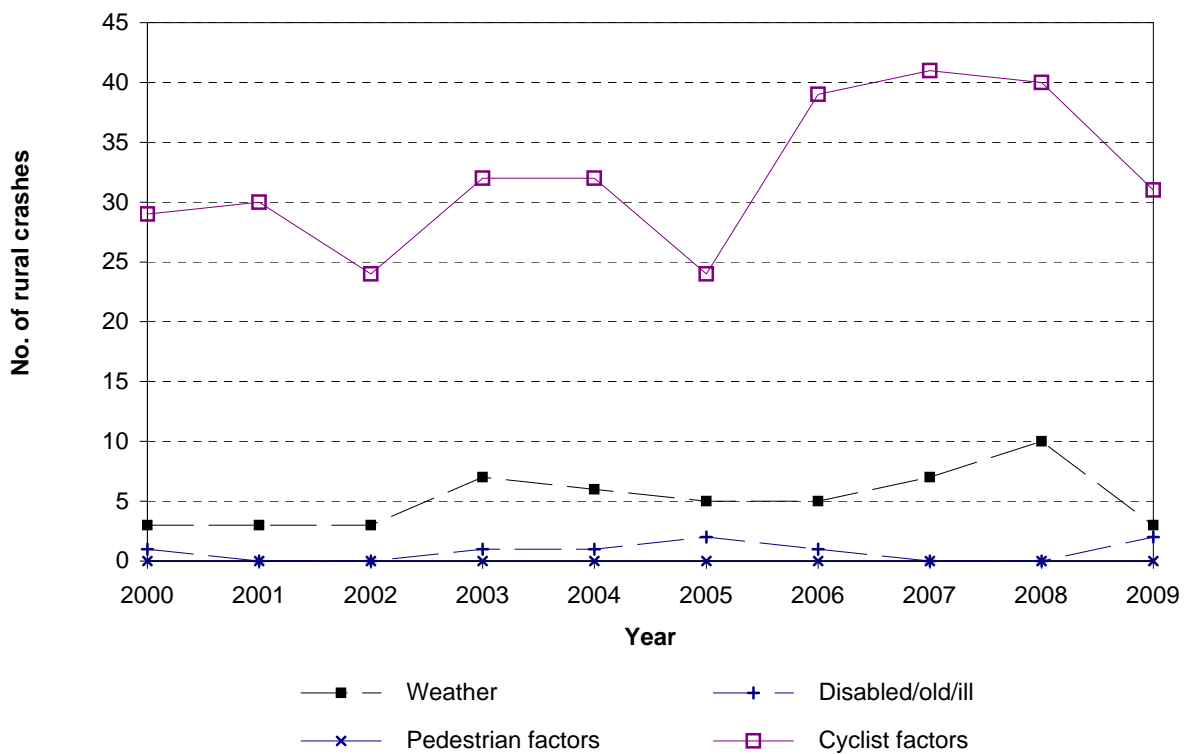
**Figure 5.10 Contributing factor trends  
VRUs - Cyclists - rural roads**



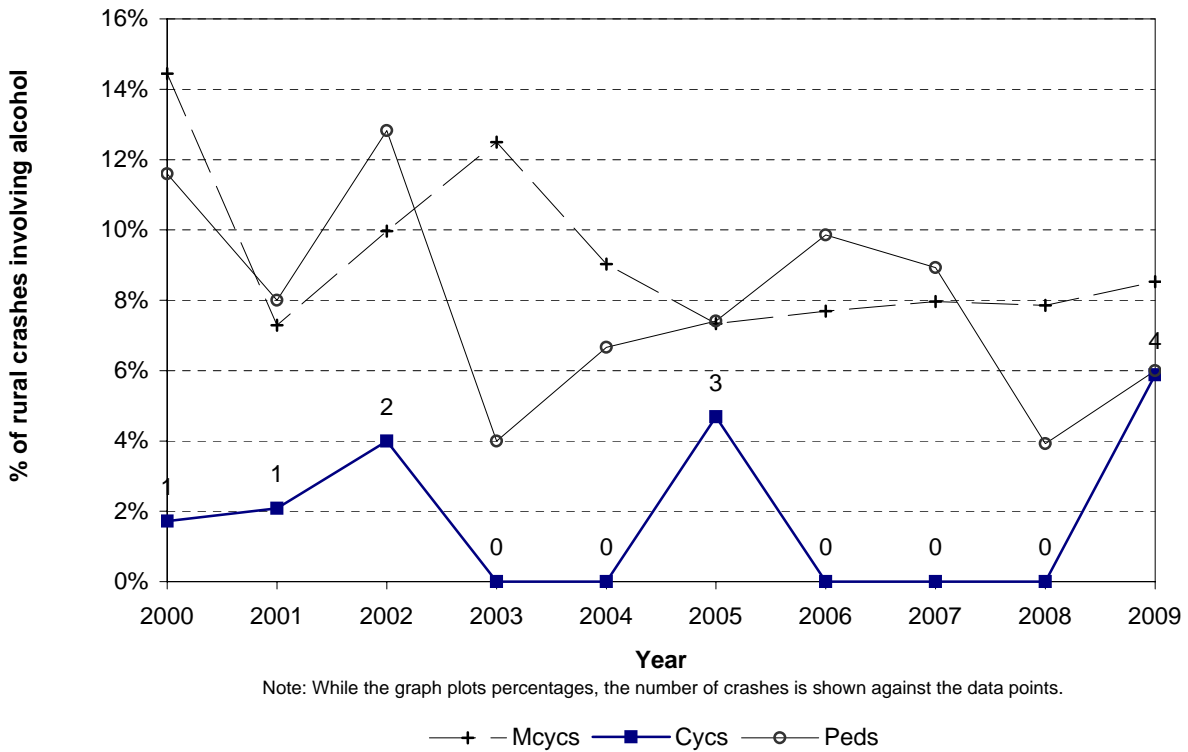
**Figure 5.11 Contributing factor trends  
VRUs - Cyclists - rural roads**



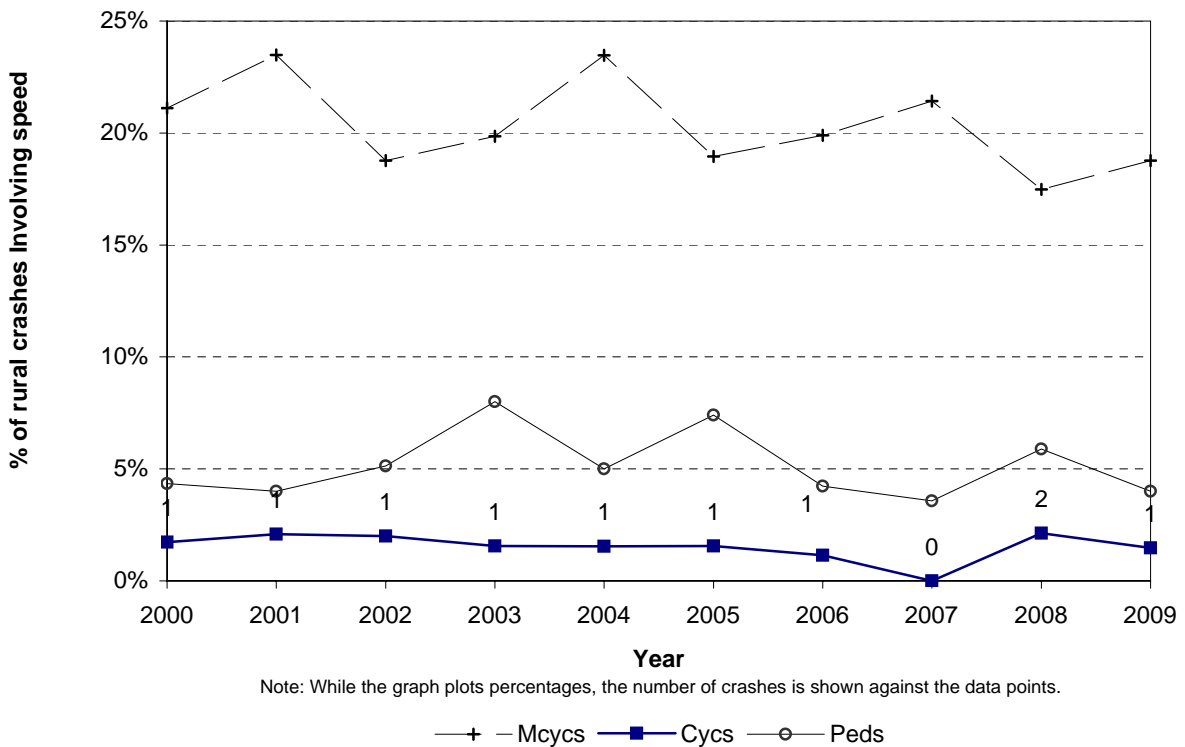
**Figure 5.12 Contributing factor trends  
VRUs - Cyclists - rural roads**



**Figure 5.13 Alcohol involved trend  
VRUs - Cyclists - rural roads**



**Figure 5.14 Speed involved trend  
VRUs - Cyclists - rural roads**



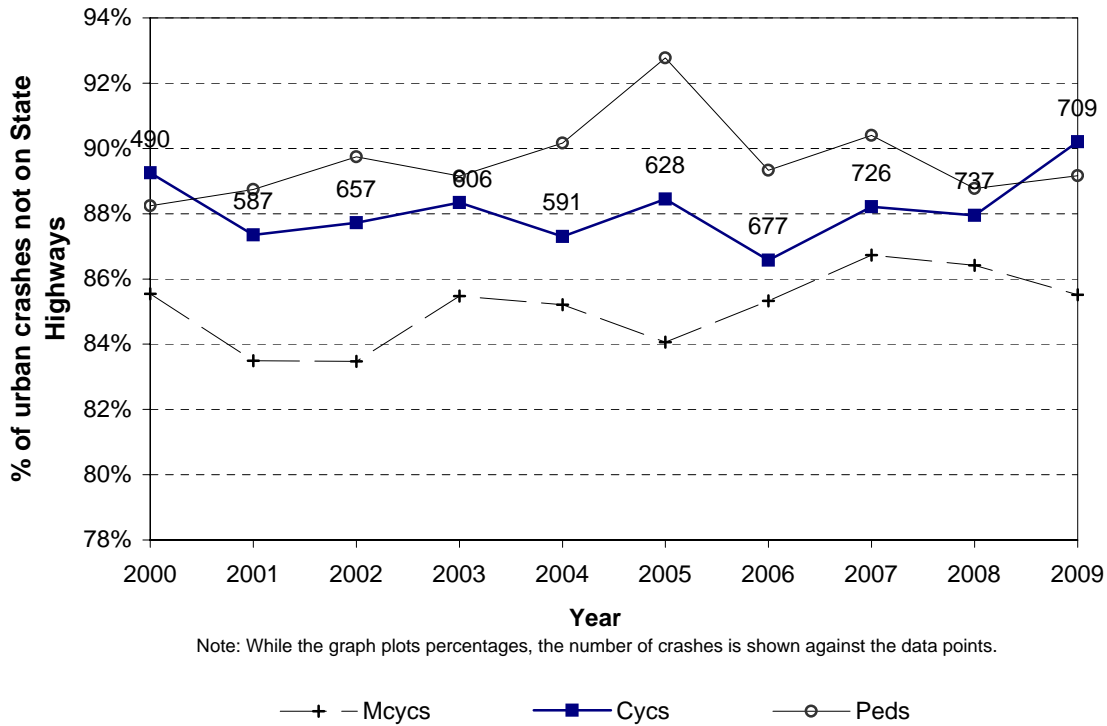


# *Environmental Statistics*

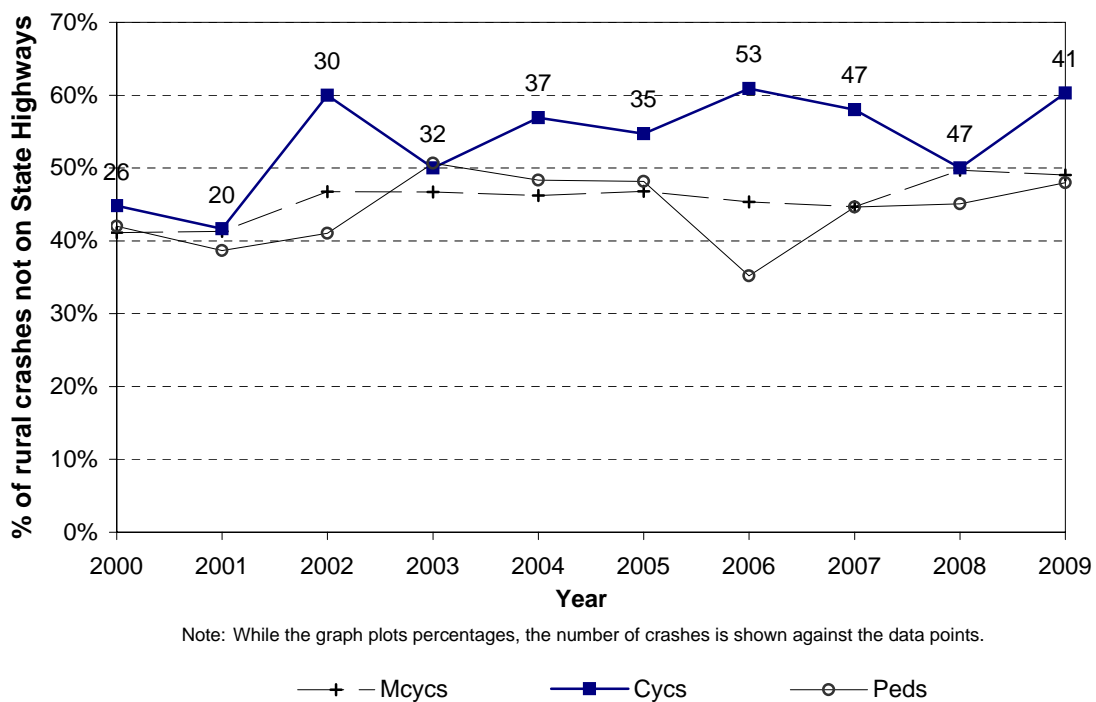




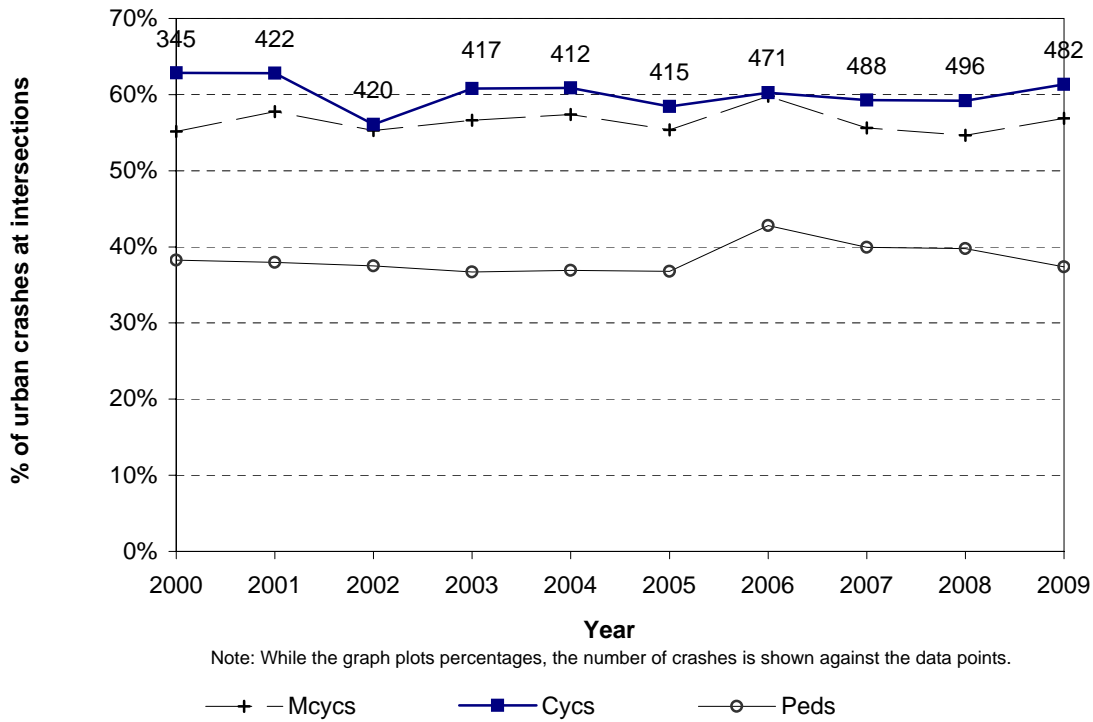
**Figure 6.1 Crashes not on state highways  
VRUs - Cyclists - urban roads**



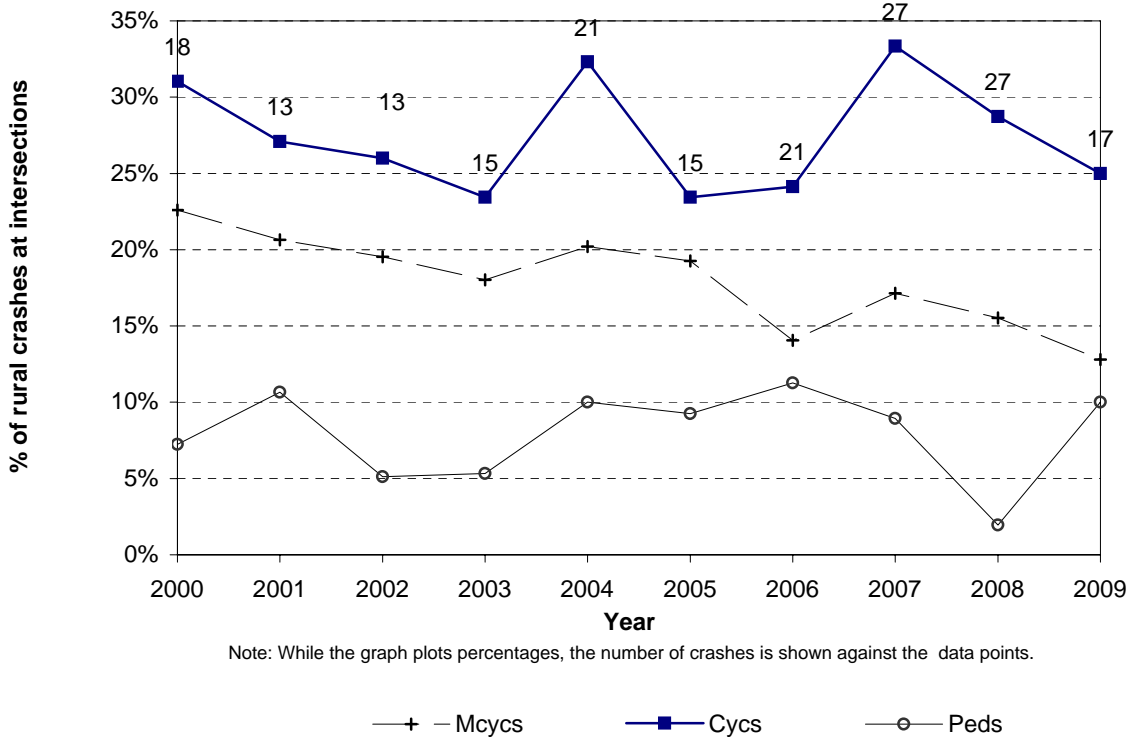
**Figure 6.2 Crashes not on state highways  
VRUs - Cyclists - rural roads**



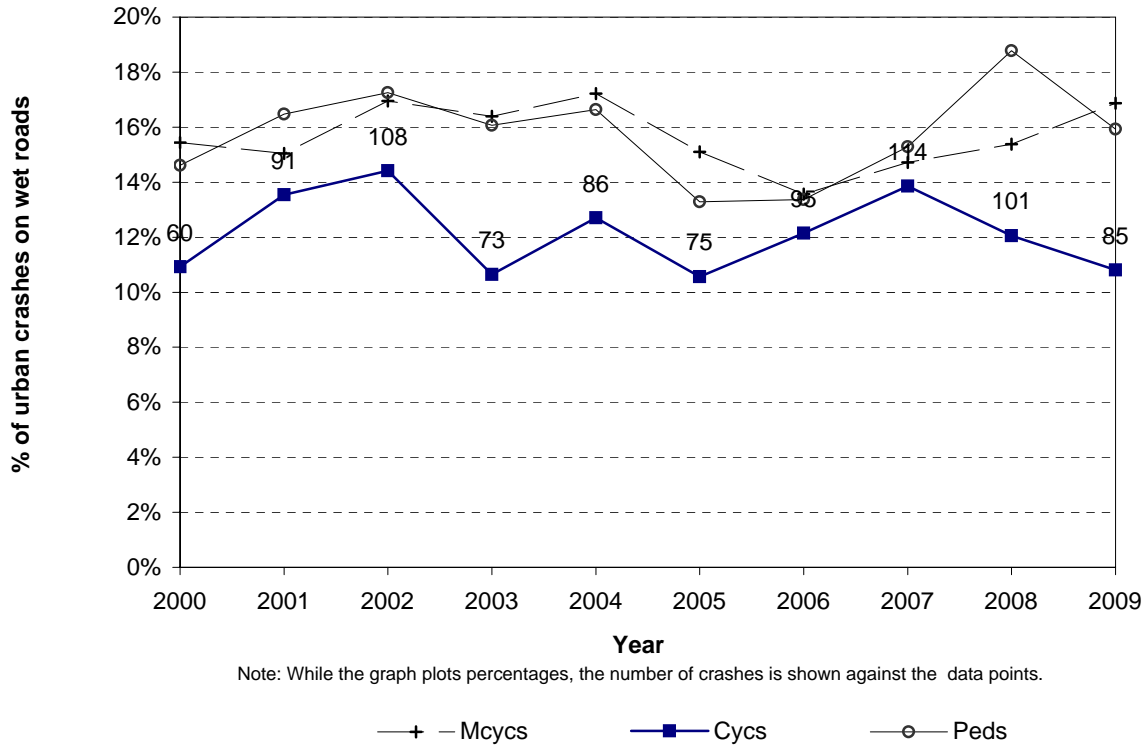
**Figure 6.3 Intersection crashes  
VRUs - Cyclists - urban roads**



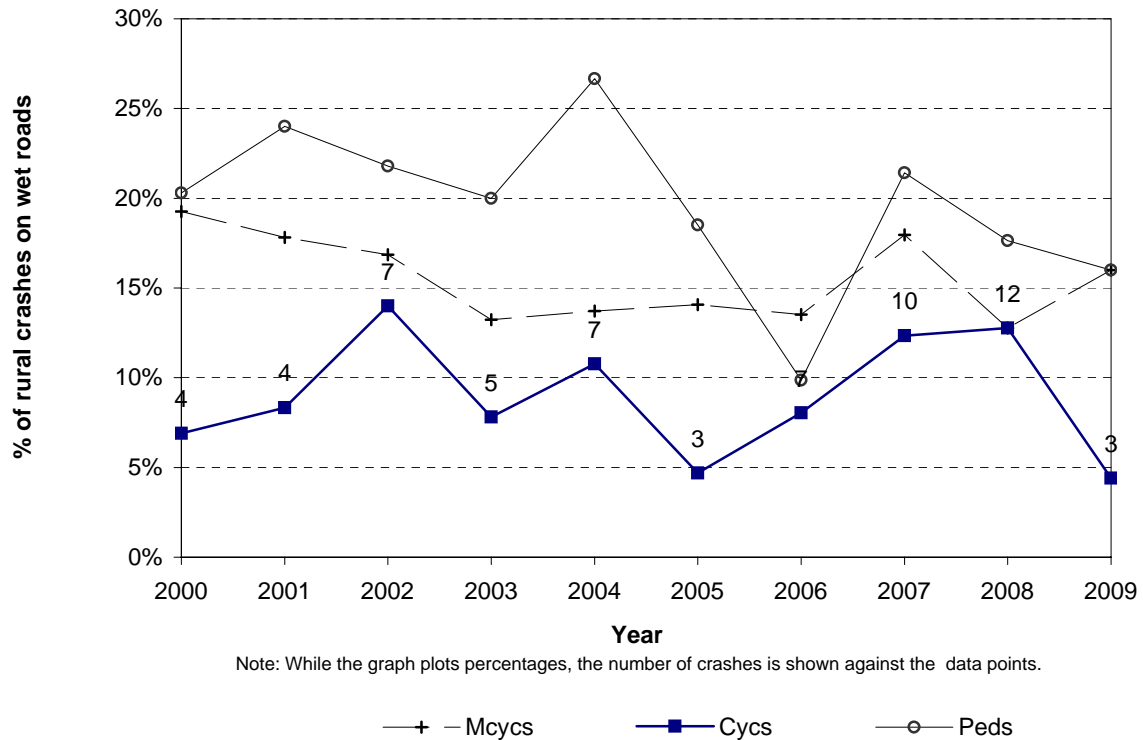
**Figure 6.4 Intersection crashes  
VRUs - Cyclists - rural roads**



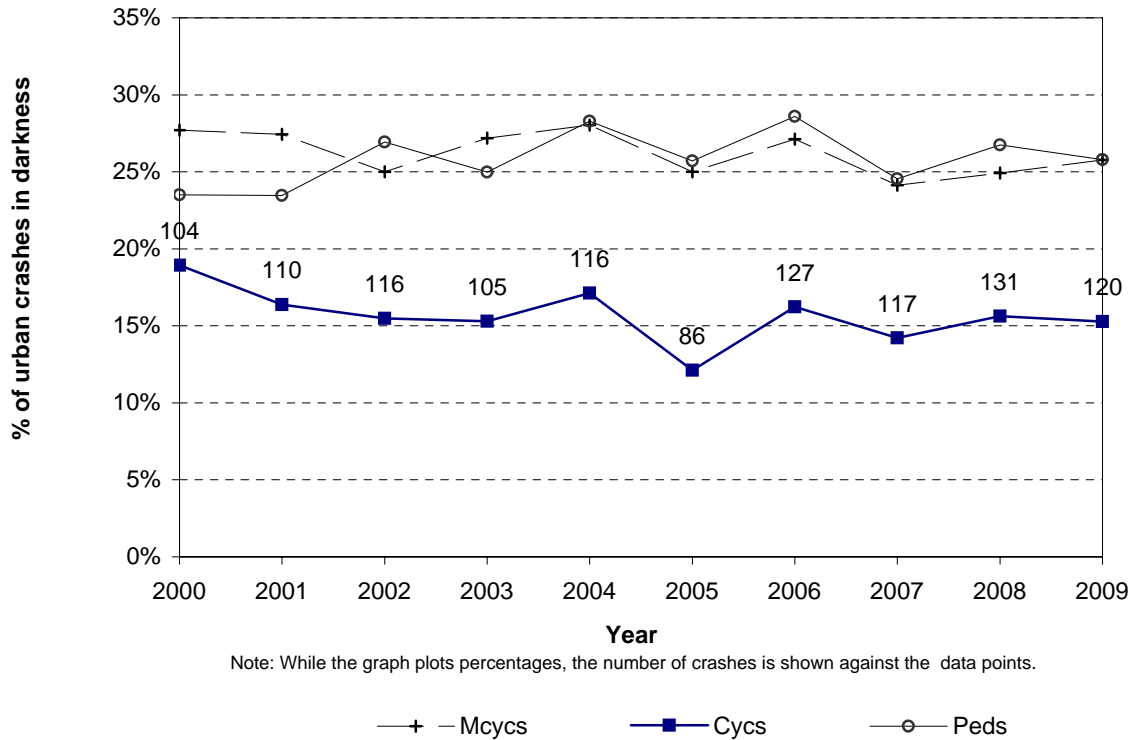
**Figure 6.5 Wet road crashes  
VRUs - Cyclists - urban roads**



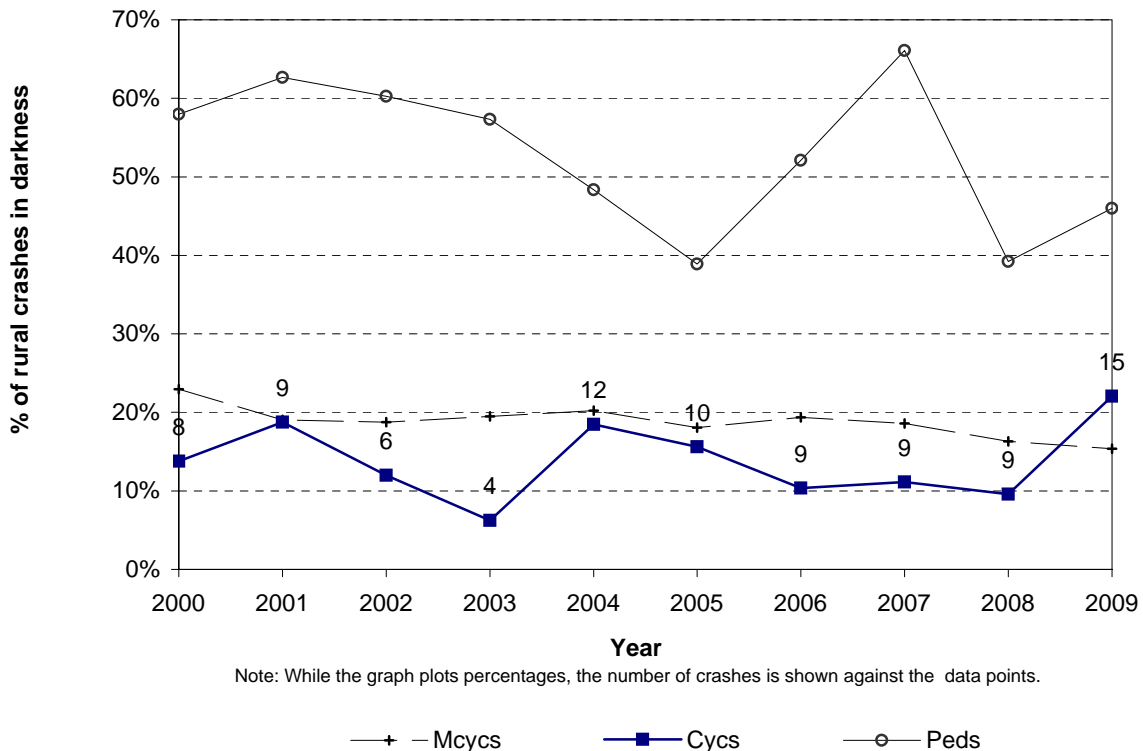
**Figure 6.6 Wet road crashes  
VRUs - Cyclists - rural roads**



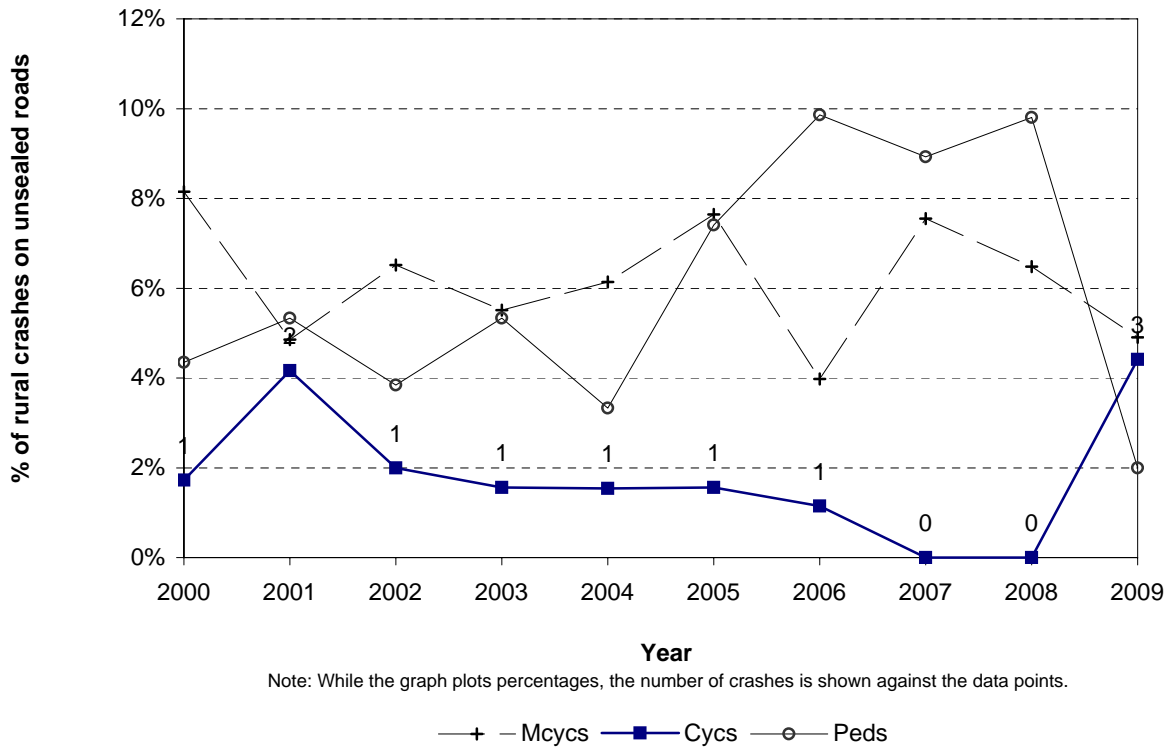
**Figure 6.7 Crashes in darkness  
VRUs - Cyclists - urban roads**



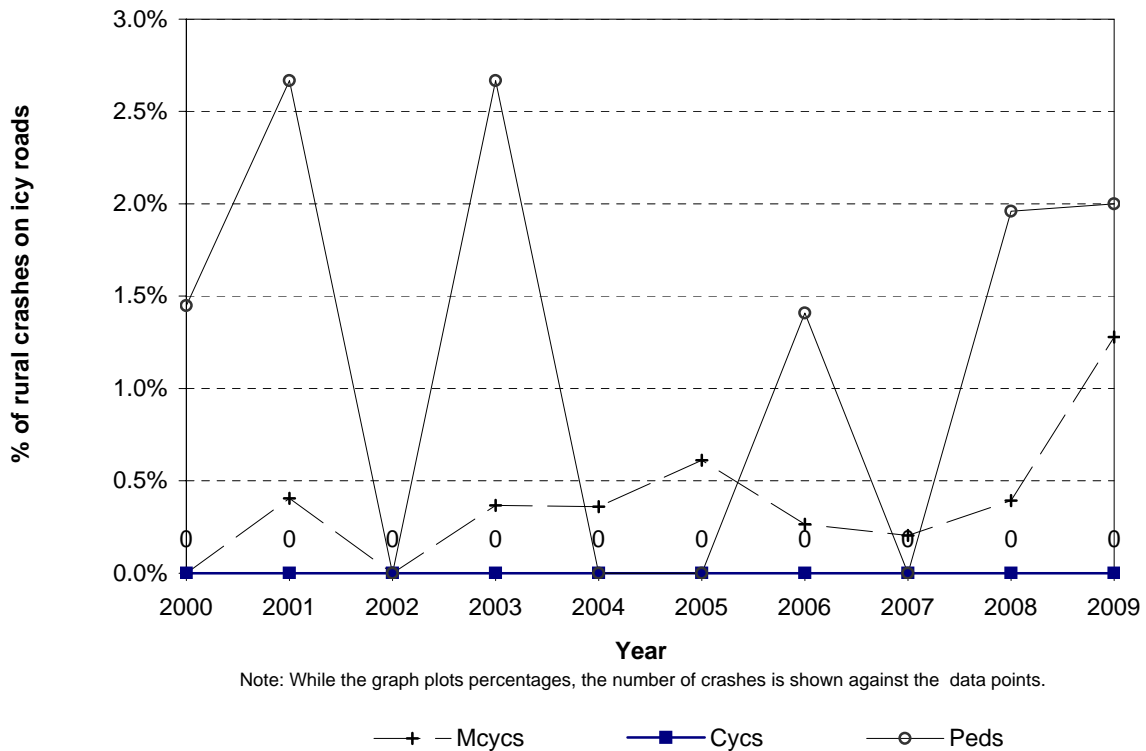
**Figure 6.8 Crashes in darkness  
VRUs - Cyclists - rural roads**



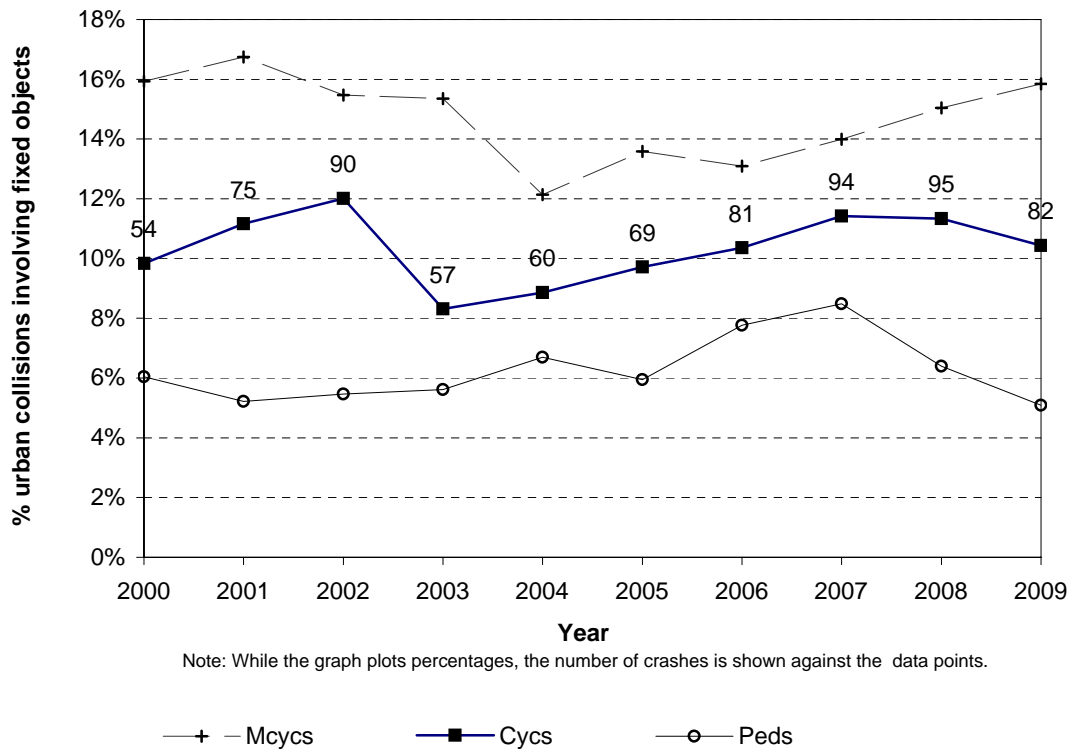
**Figure 6.9 Unsealed road crashes  
VRUs - Cyclists - rural roads**



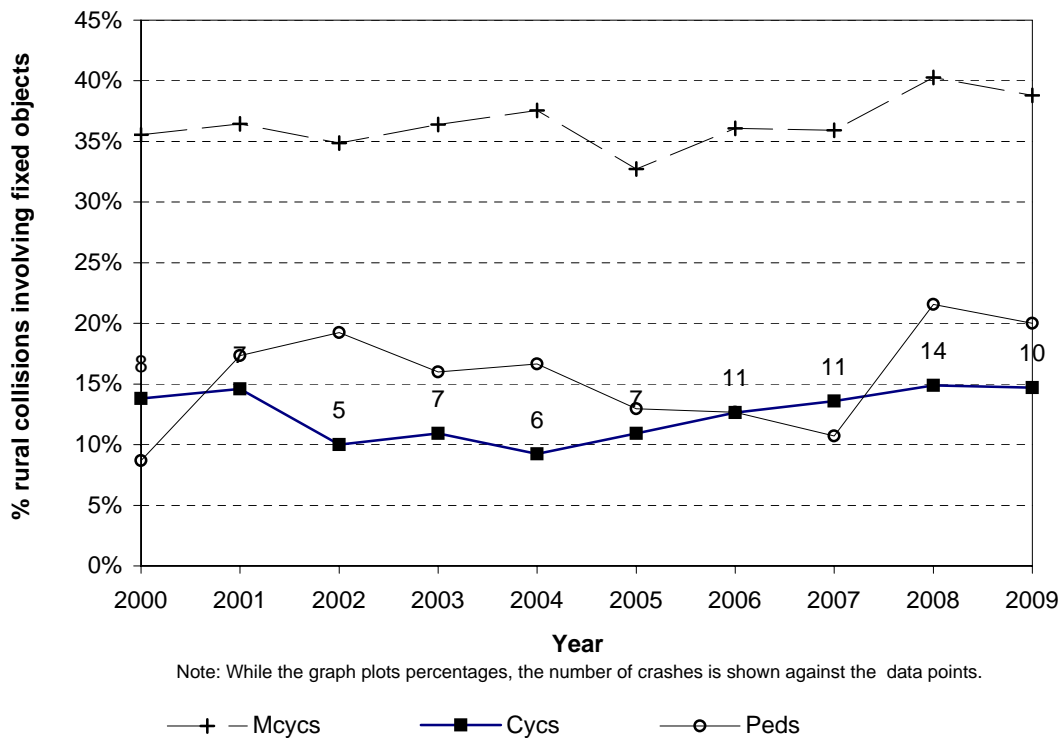
**Figure 6.10 Icy road crashes  
VRUs - Cyclists - rural roads**



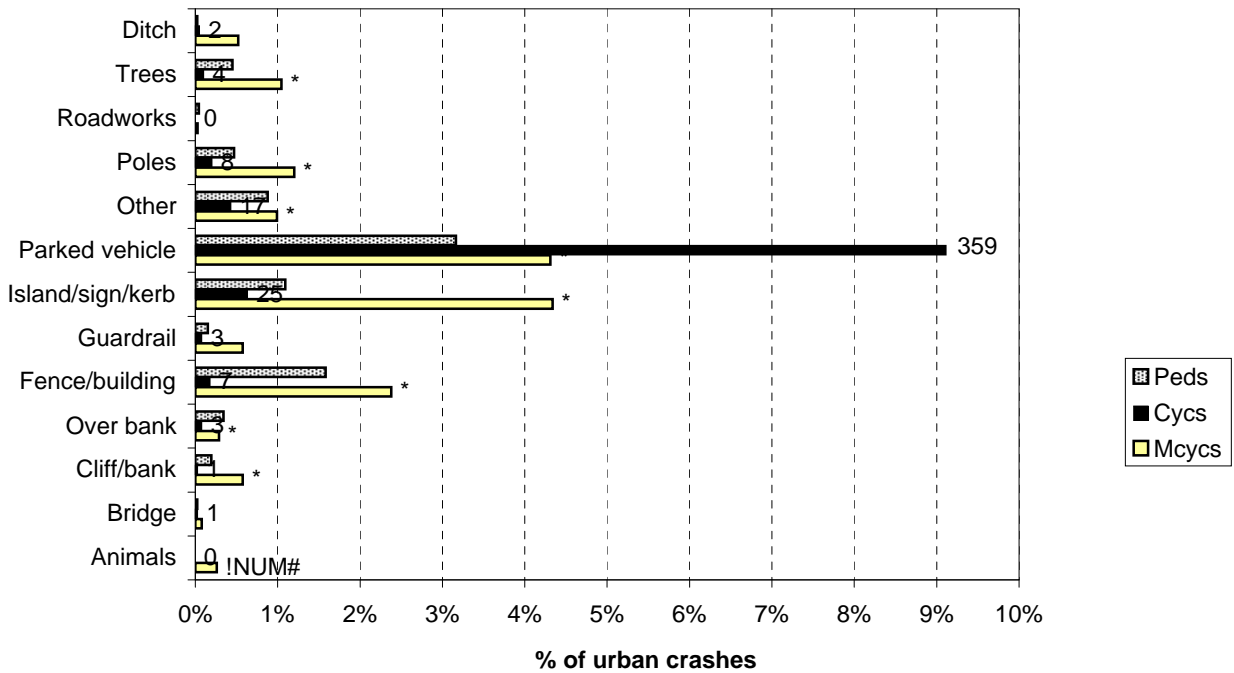
**Figure 6.11 Collisions with objects  
VRUs - Cyclists - urban roads**



**Figure 6.12 Collisions with objects  
VRUs - Cyclists - rural roads**

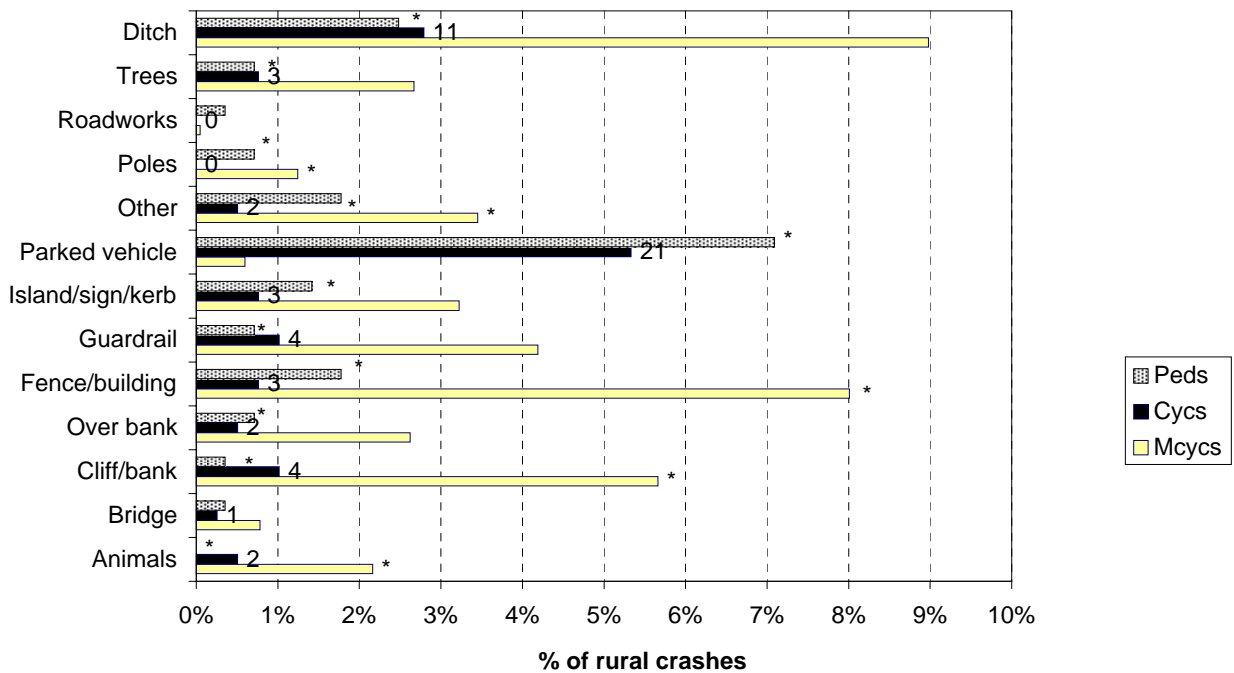


**Figure 6.13 Objects struck - urban  
VRUs - Cyclists (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 6.14 Objects struck - rural  
VRUs - Cyclists (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

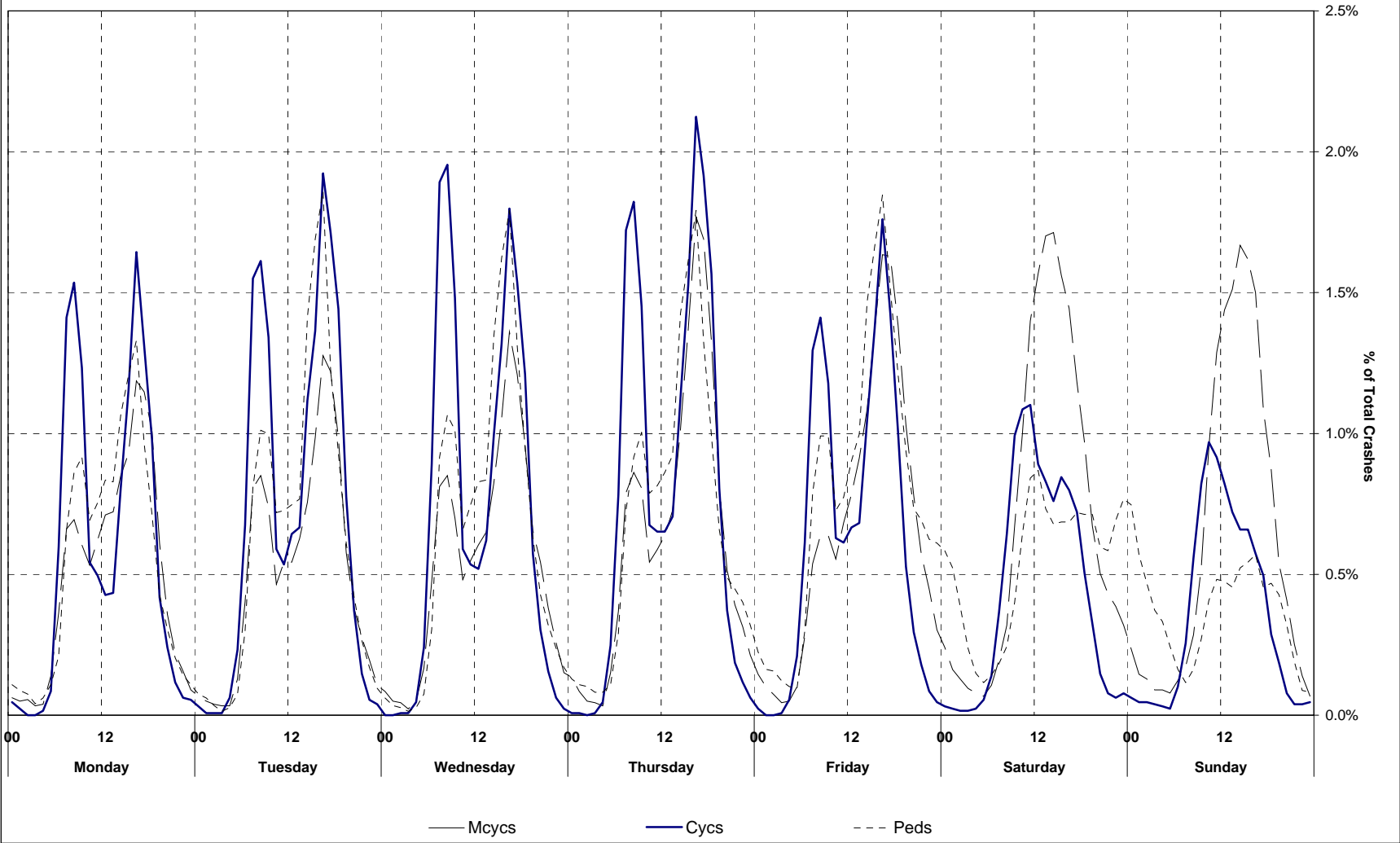




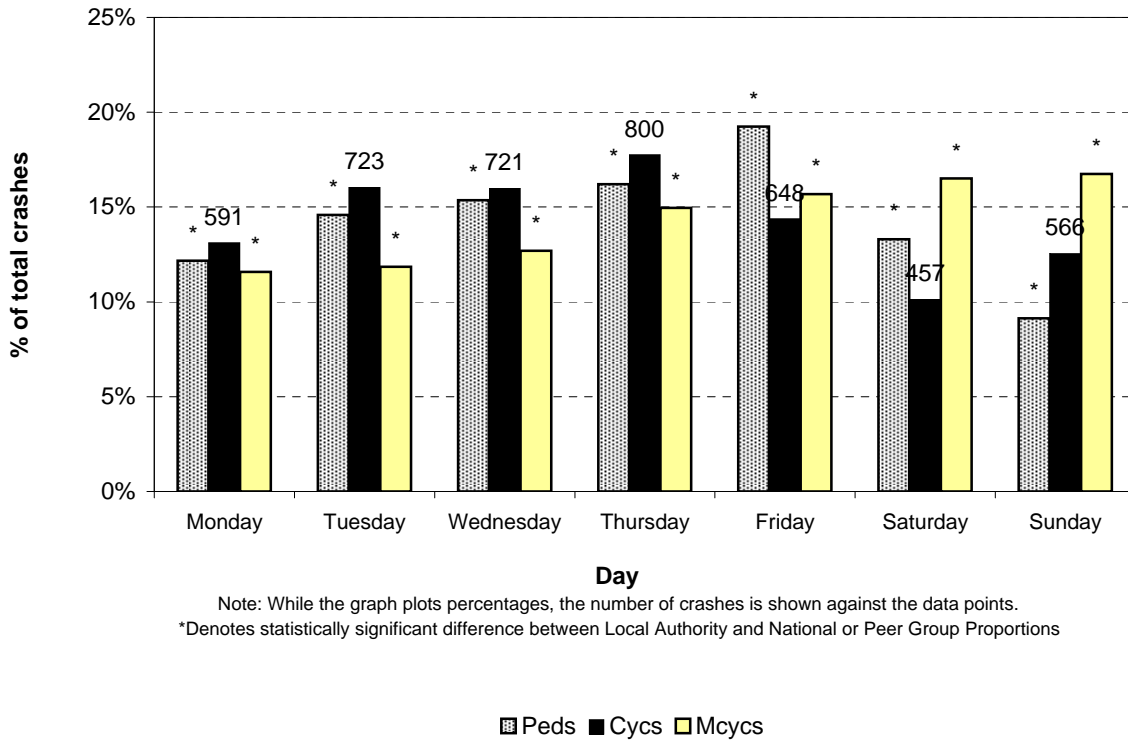
# *Date and Time Statistics*



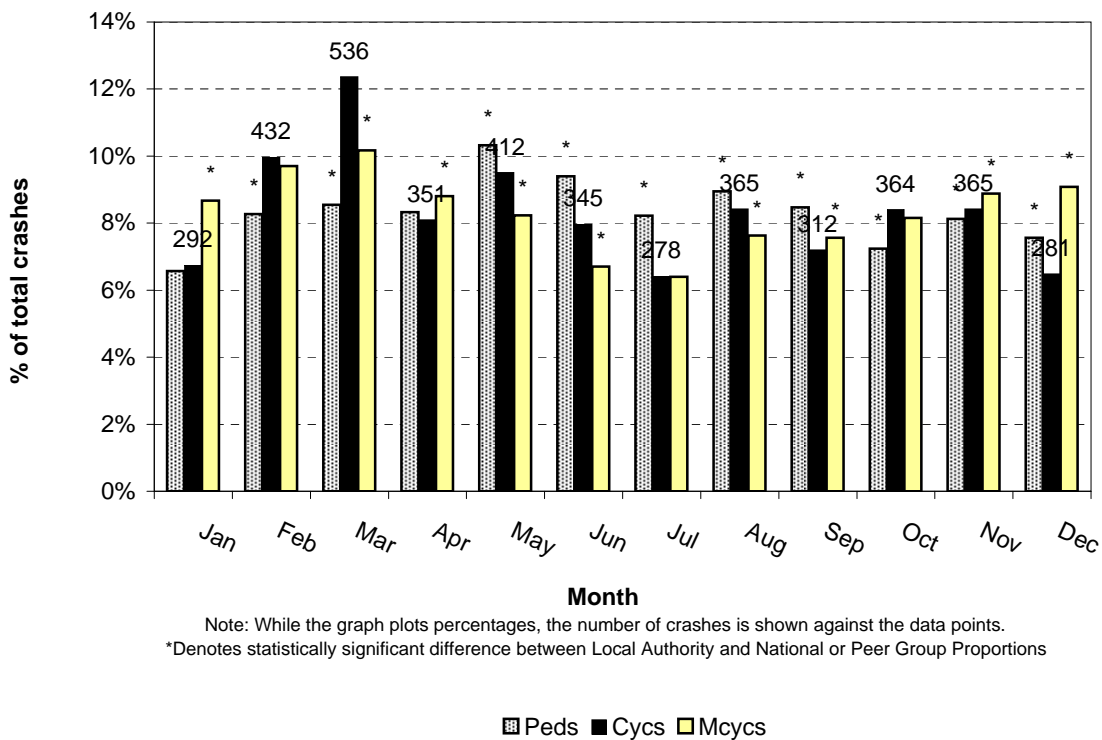
Figure 7.1 Time pattern over average week  
VRUs - Cyclists (2005-2009)



**Figure 7.2 Day of week (6 a.m. to 6 a.m.)  
VRUs - Cyclists (2005-2009)**



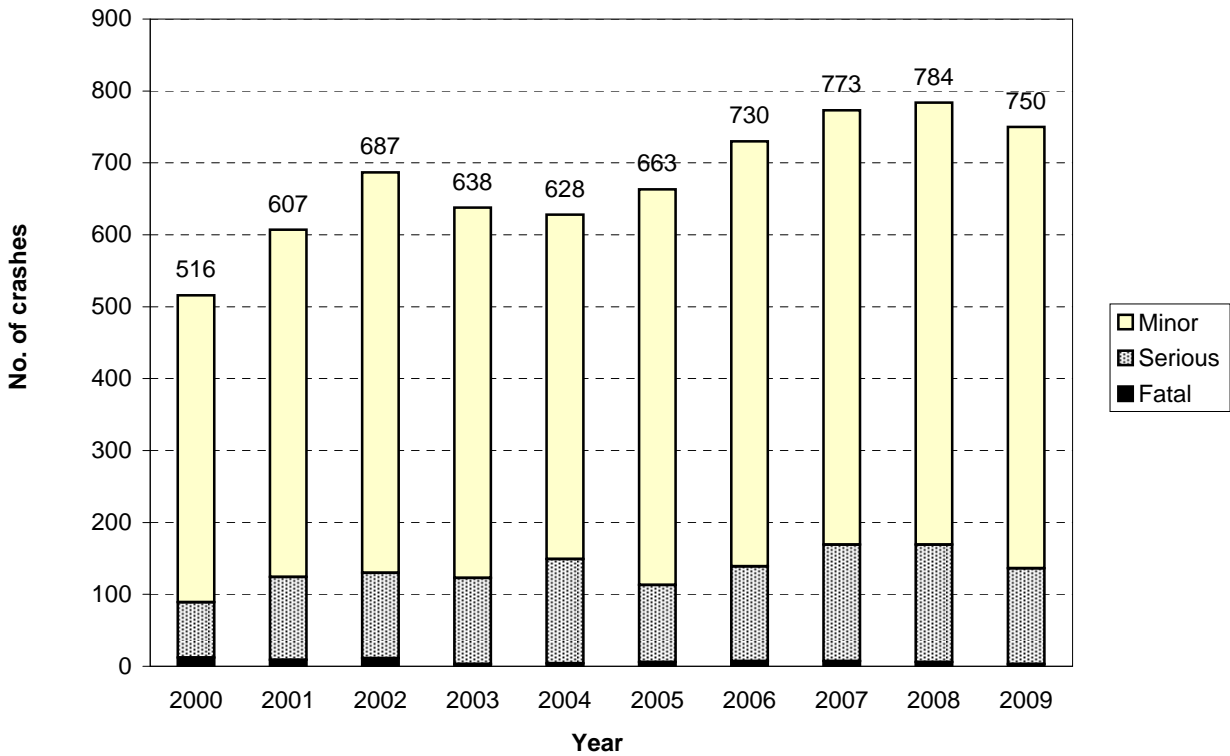
**Figure 7.3 Month of year  
VRUs - Cyclists (2005-2009)**



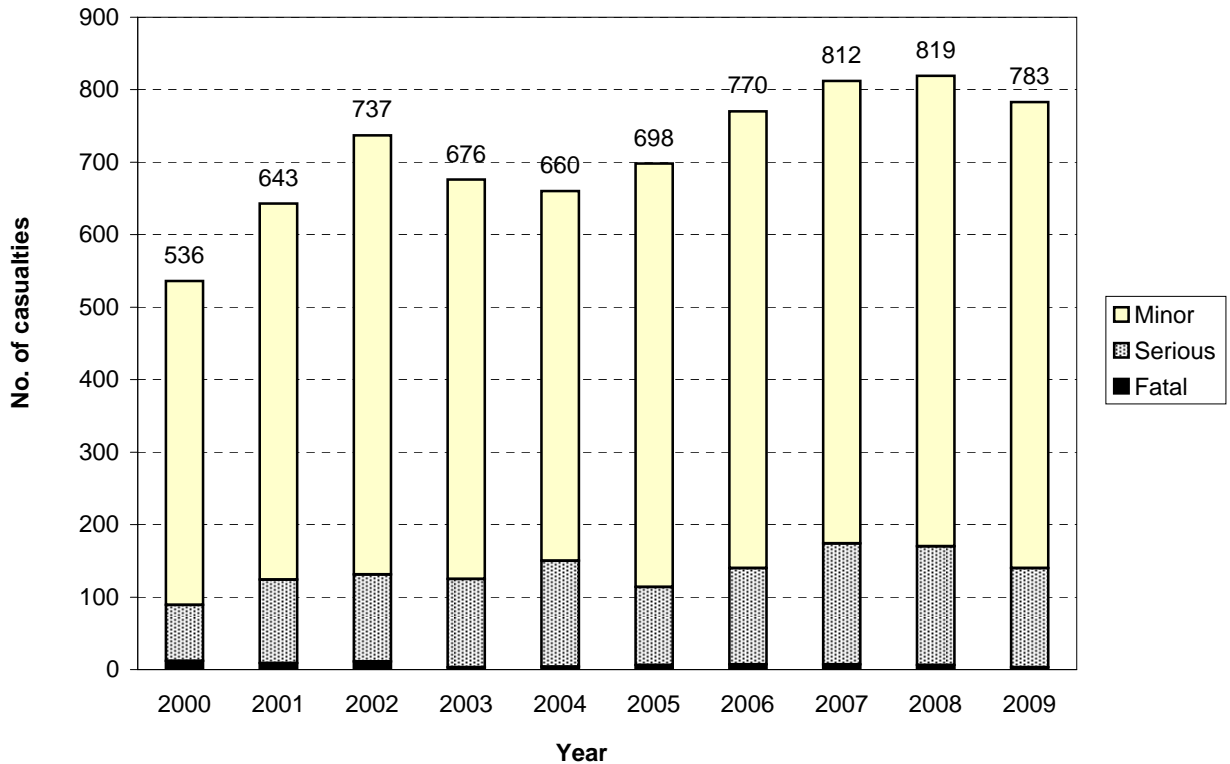
# *Local Road Statistics*



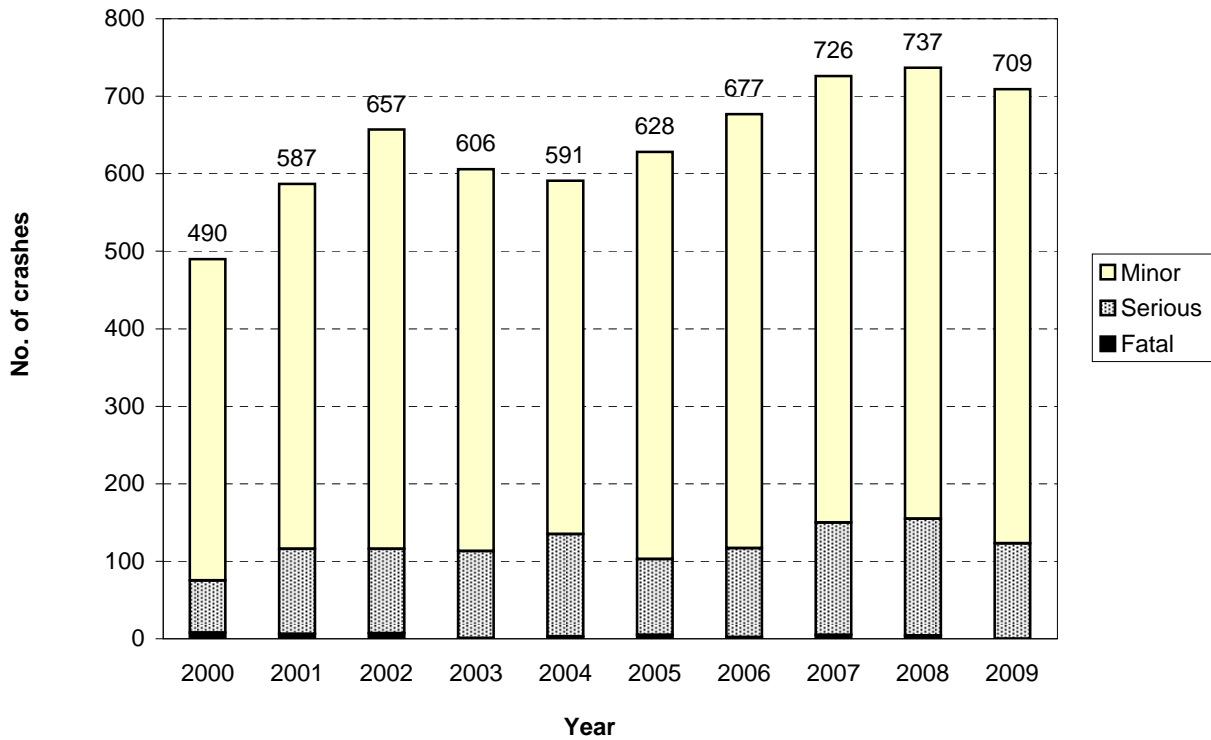
**Figure 8.1 Number of injury crashes**  
VRUs - Cyclists - council roads (urban & rural)



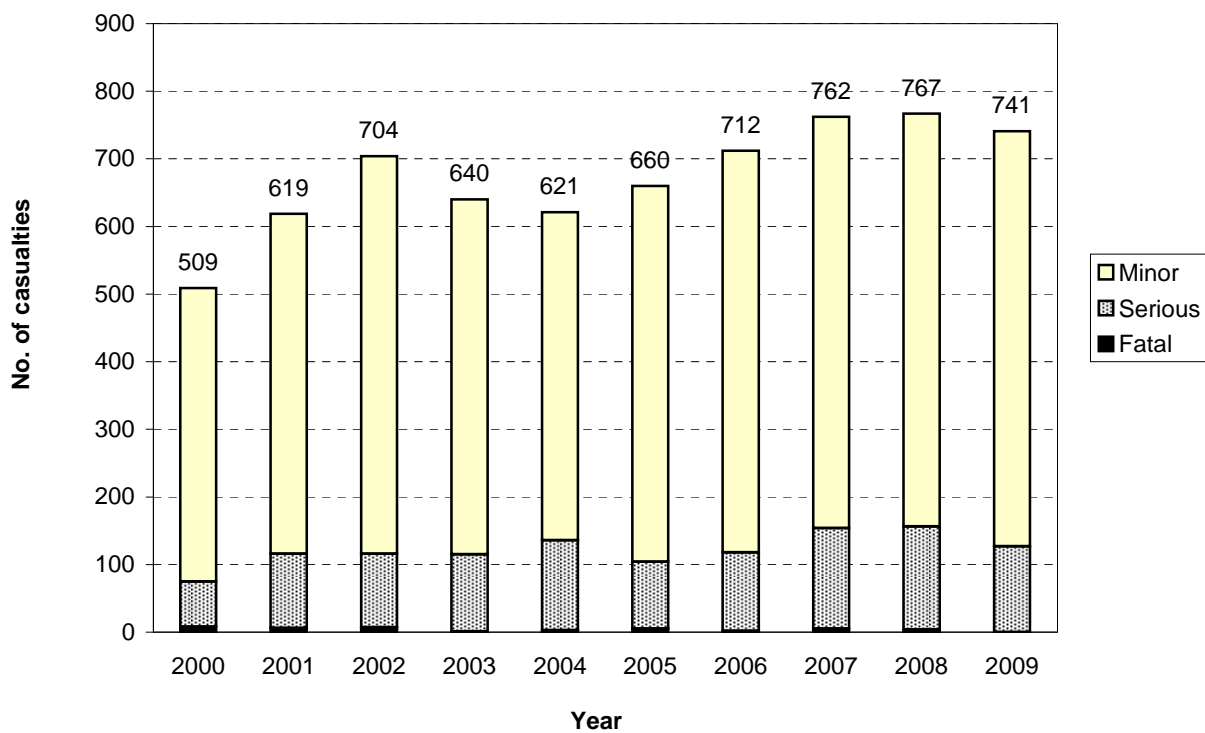
**Figure 8.2 Number of casualties**  
VRUs - Cyclists - council roads (urban & rural)



**Figure 8.3 Number of injury crashes  
VRUs - Cyclists - urban council roads**

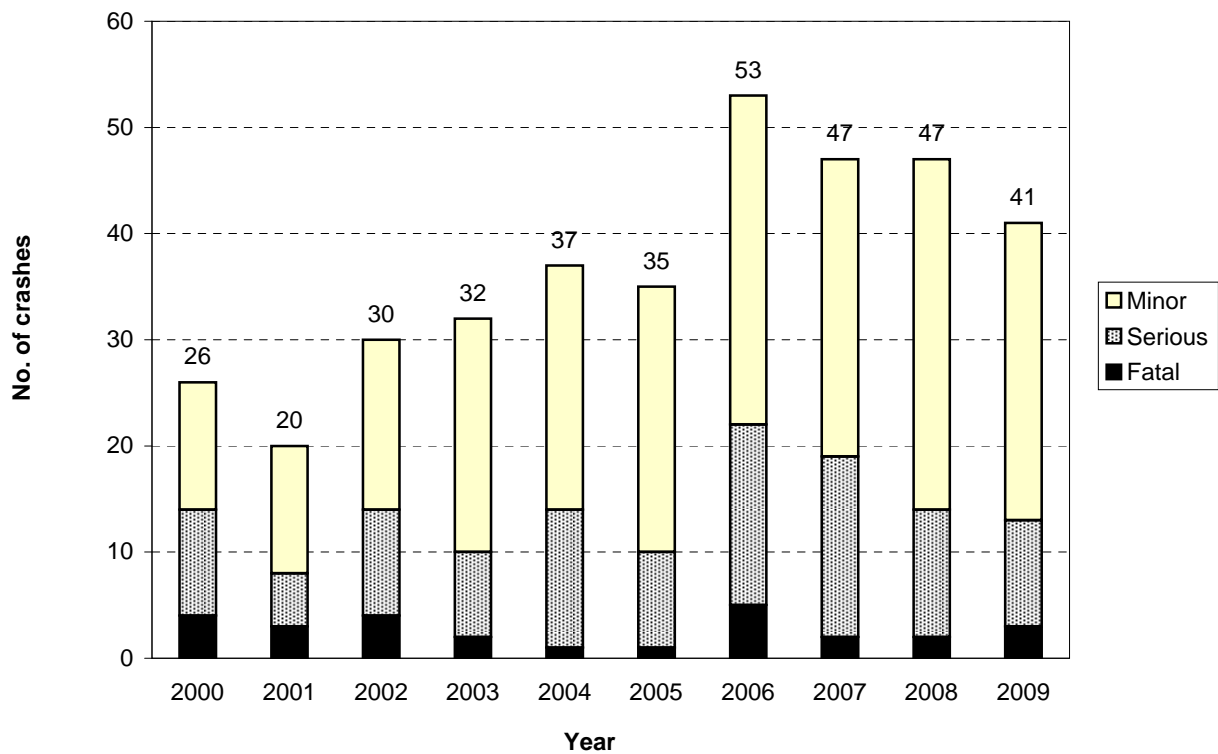


**Figure 8.4 Number of casualties  
VRUs - Cyclists - urban council roads**

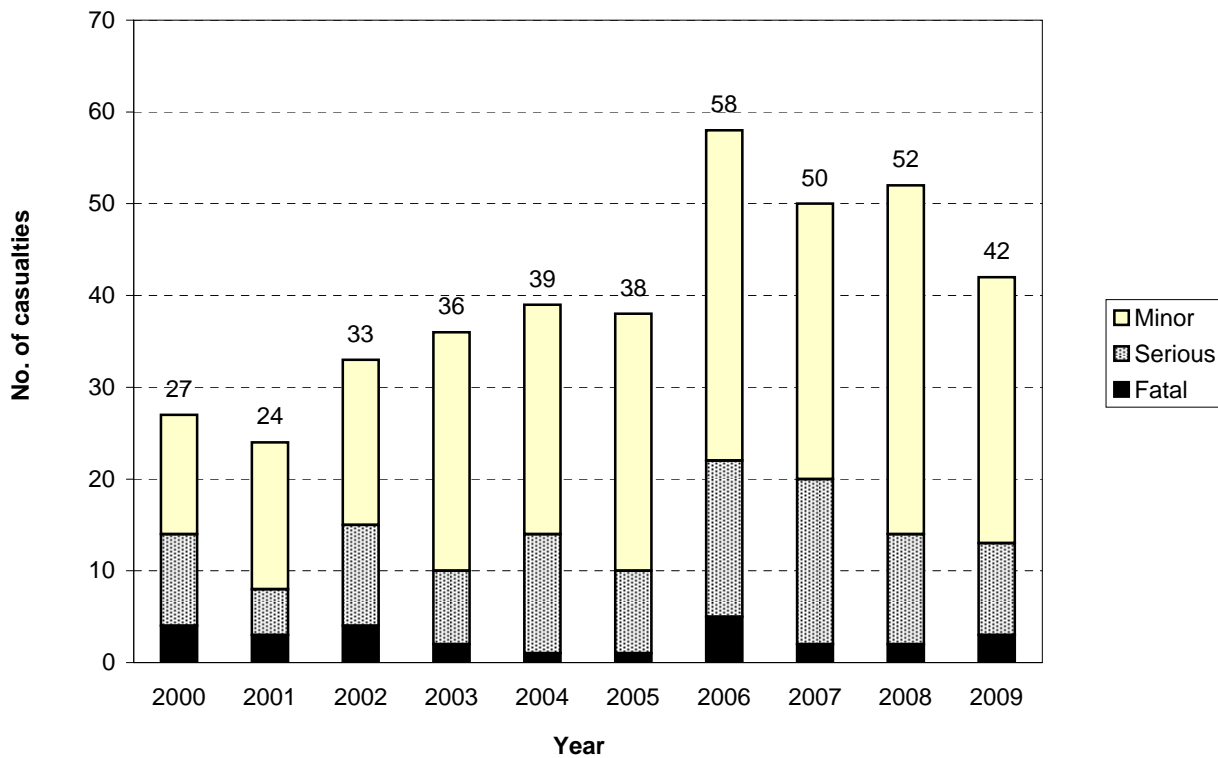




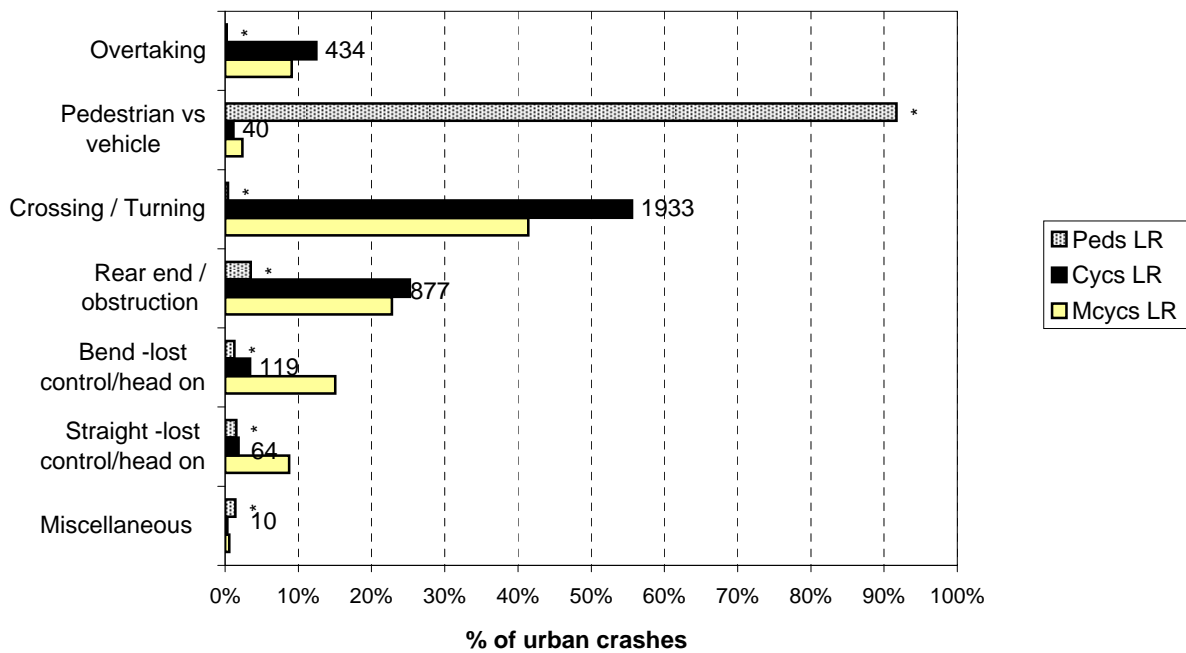
**Figure 8.5 Number of injury crashes  
VRUs - Cyclists - rural council roads**



**Figure 8.6 Number of casualties  
VRUs - Cyclists - rural council roads**

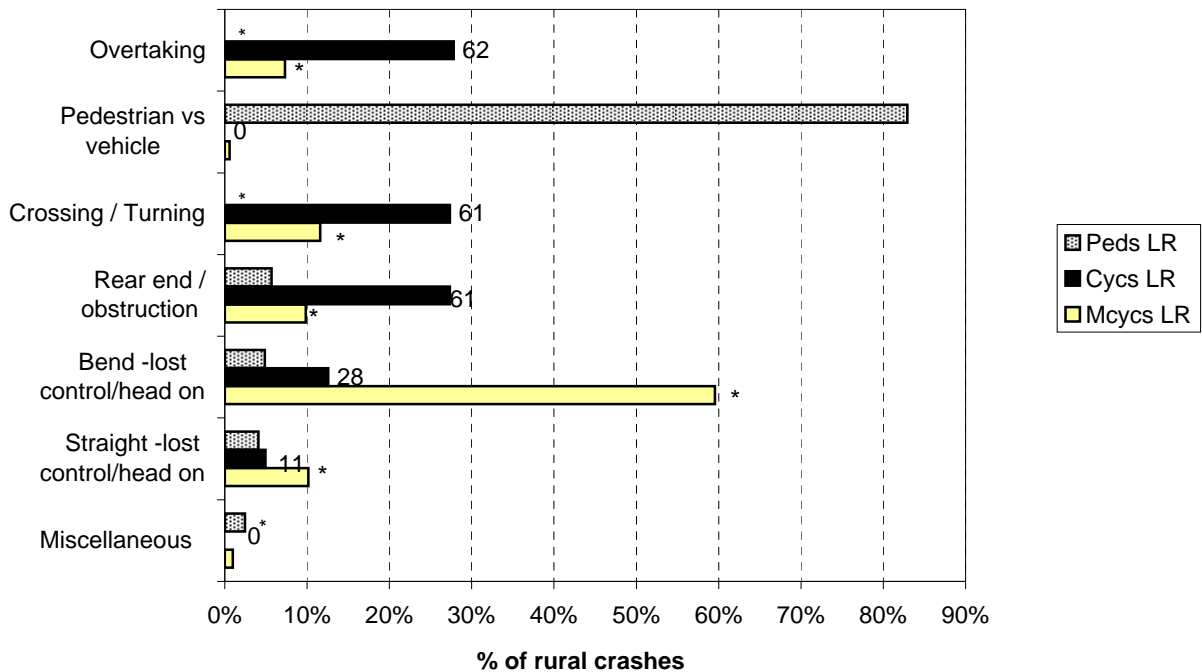


**Figure 8.7 Crash movement type - urban  
VRUs - Cyclists council roads (2005-2009)**



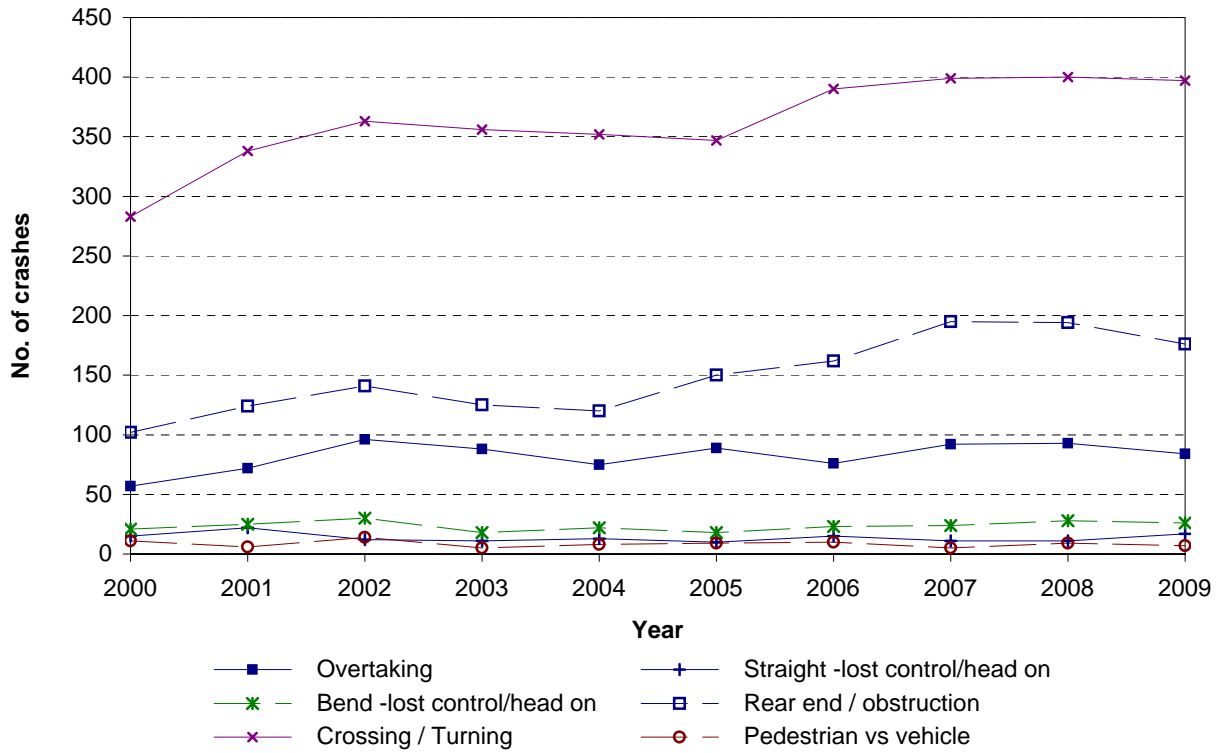
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.8 Crash movement type - rural  
VRUs - Cyclists council roads (2005-2009)**

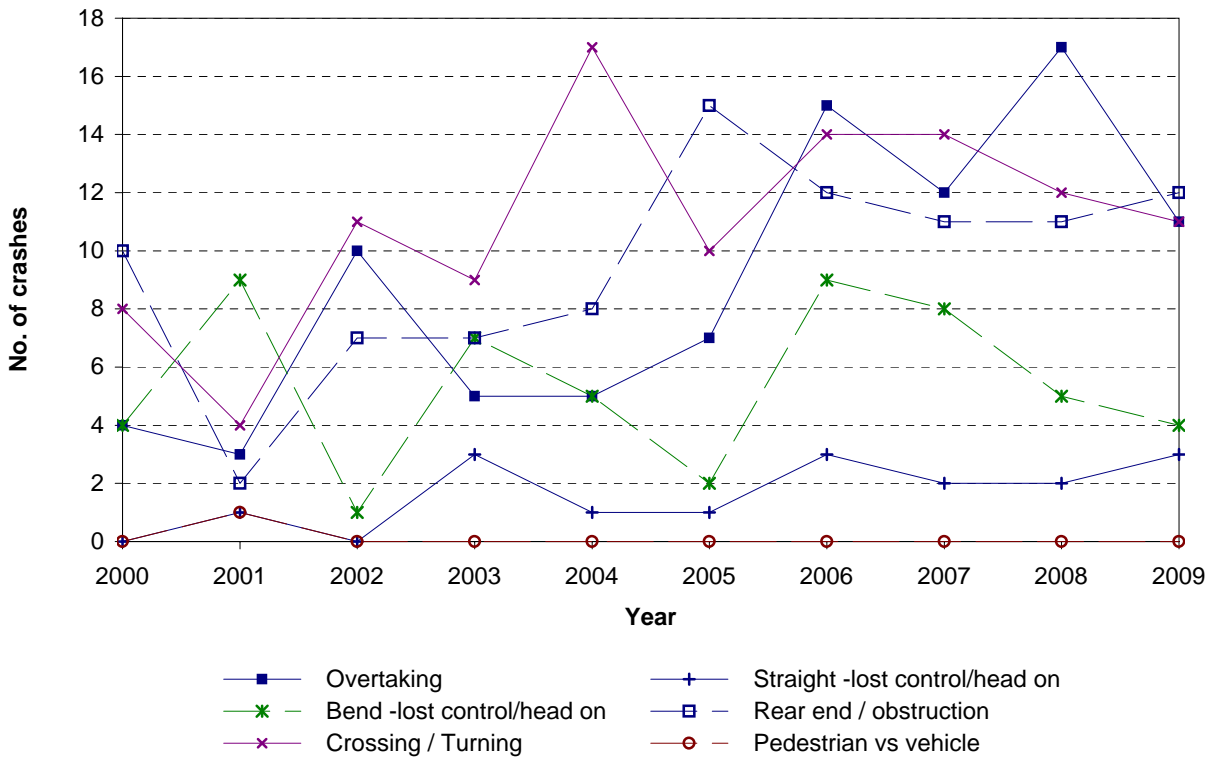


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

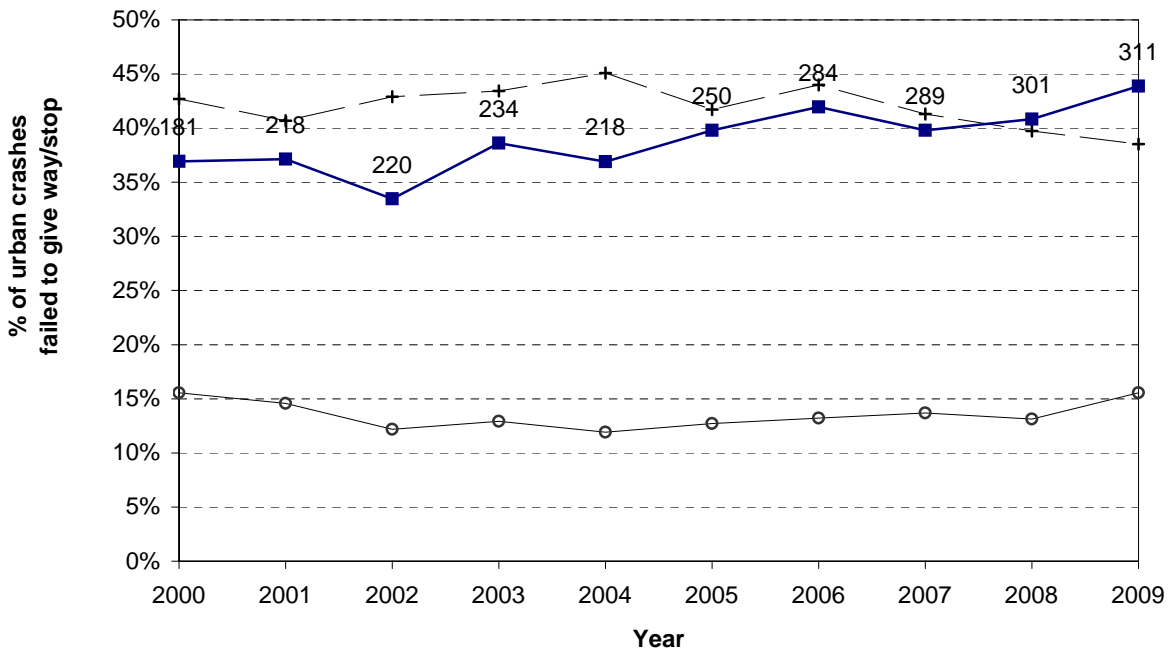
**Figure 8.9 Crash movement type - Trends  
VRUs - Cyclists - urban council roads**



**Figure 8.10 Crash movement type - Trends  
VRUs - Cyclists - rural council roads**



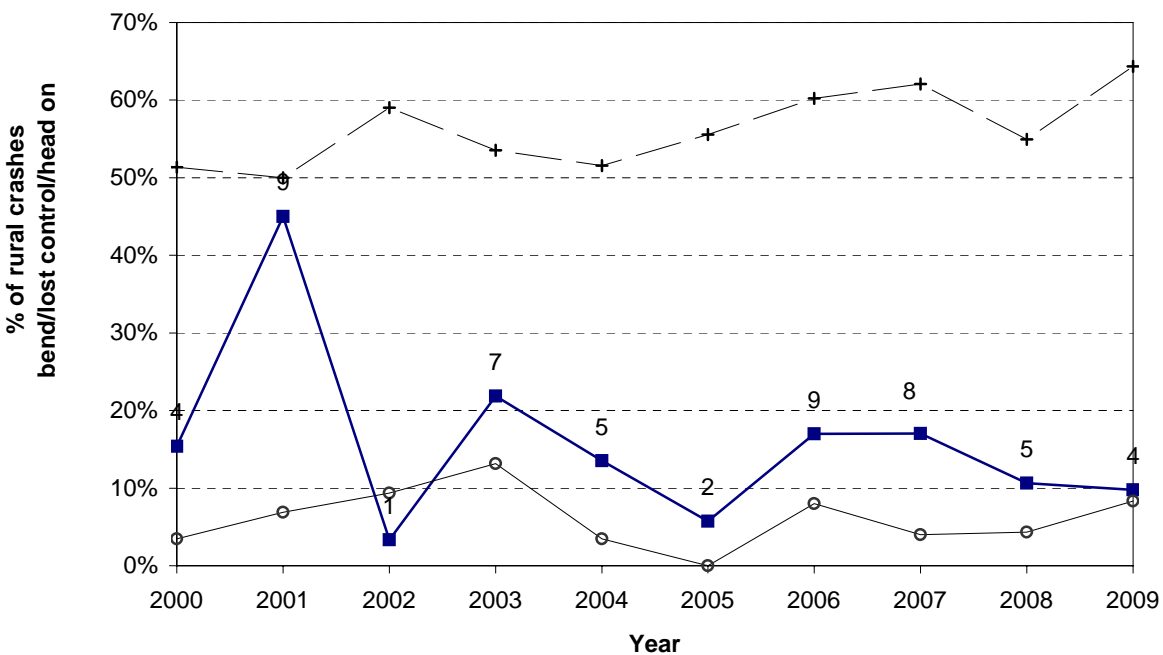
**Figure 8.11 Failed to give way/stop  
VRUs - Cyclists - urban council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Mccys LR —■— Cyps LR —○— Peds LR

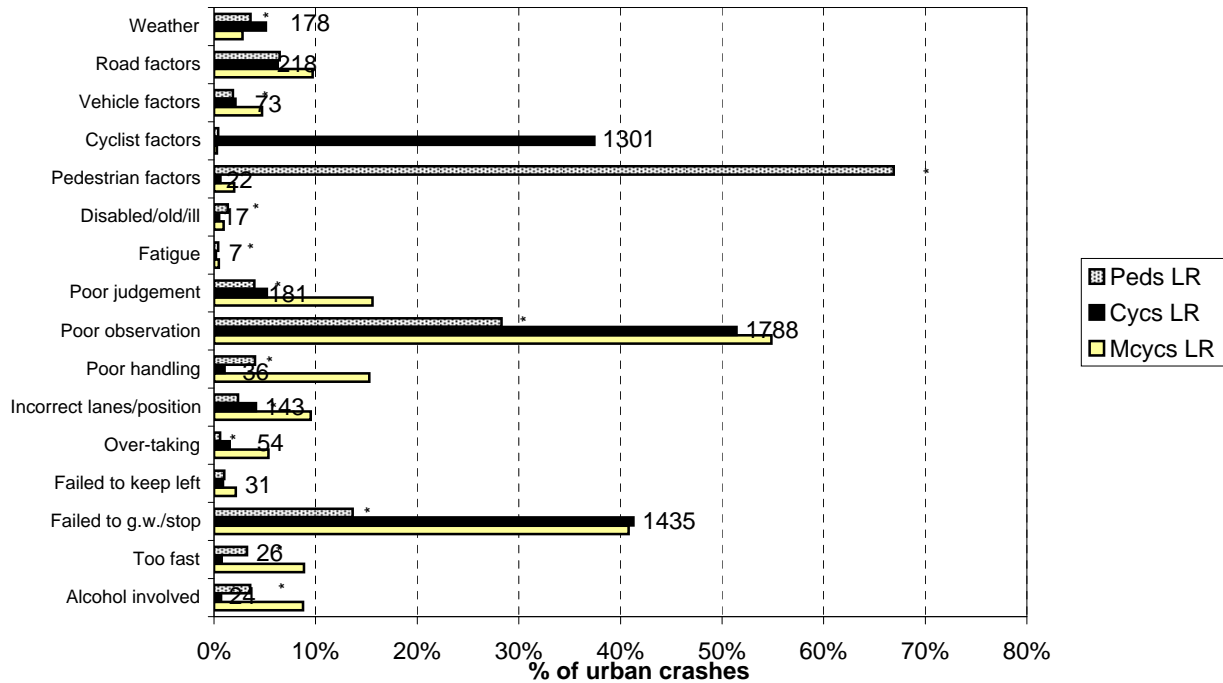
**Figure 8.12 Bend - lost control / head - on  
VRUs - Cyclists - rural council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

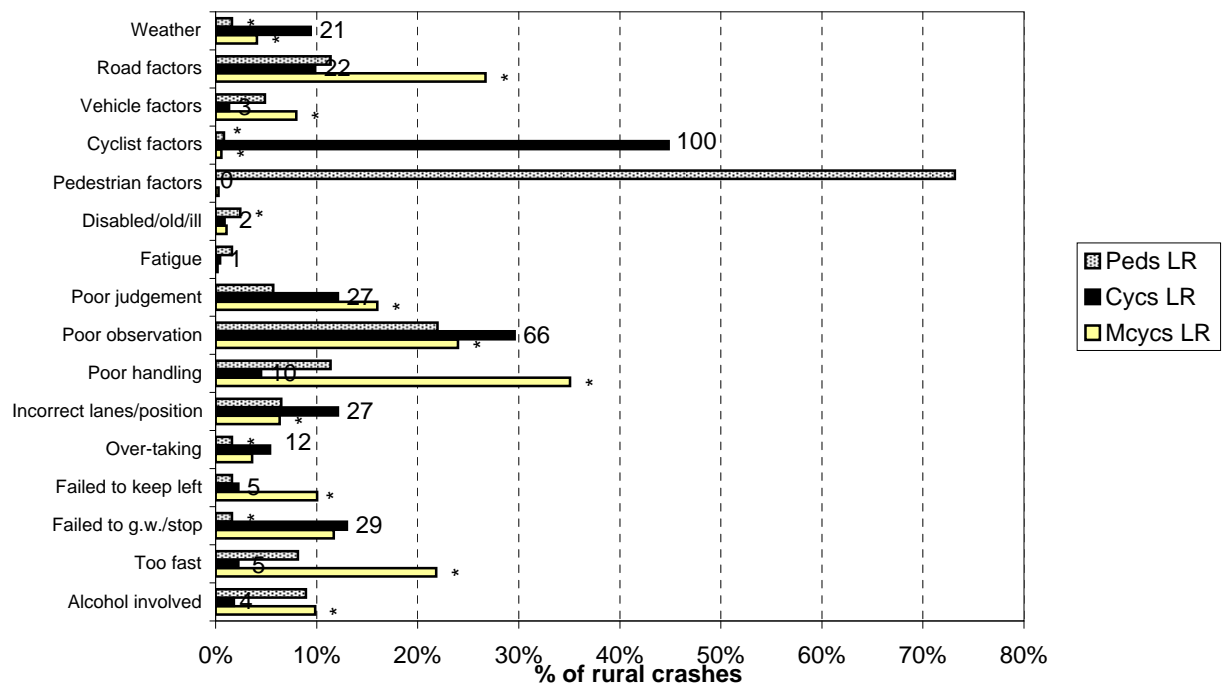
—+— Mccys LR —■— Cyps LR —○— Peds LR

**Figure 8.13 Contributing factors - urban  
VRUs - Cyclists council roads (2005-2009)**



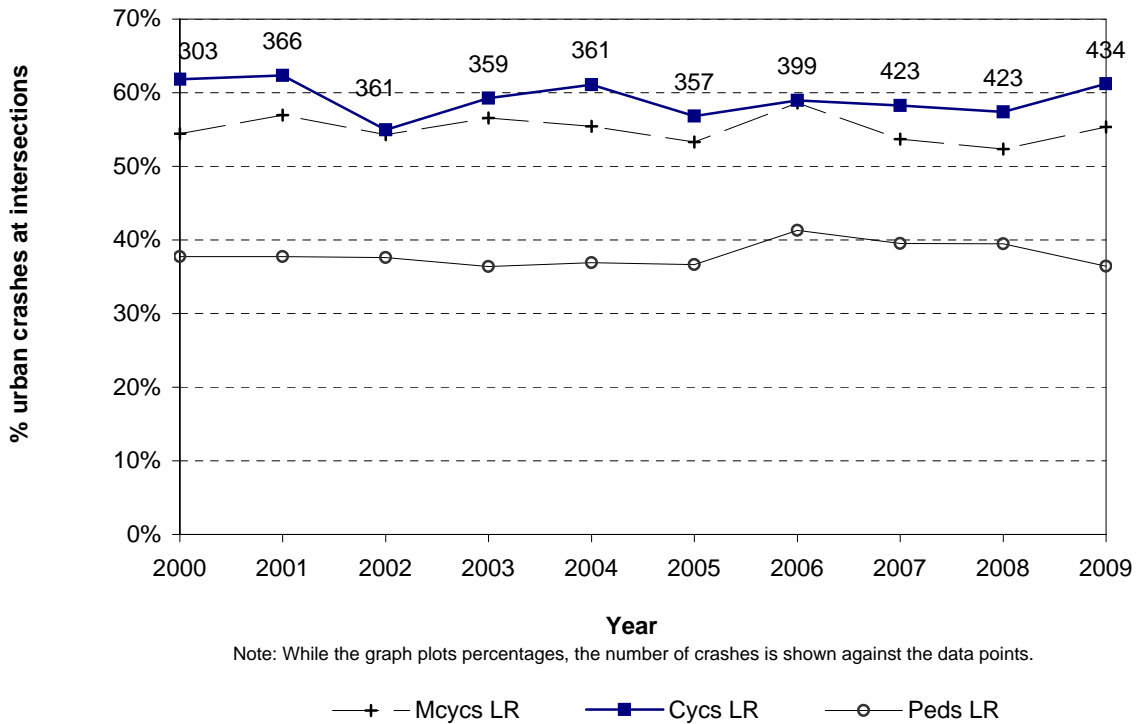
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.14 Contributing factors - rural  
VRUs - Cyclists council roads (2005-2009)**

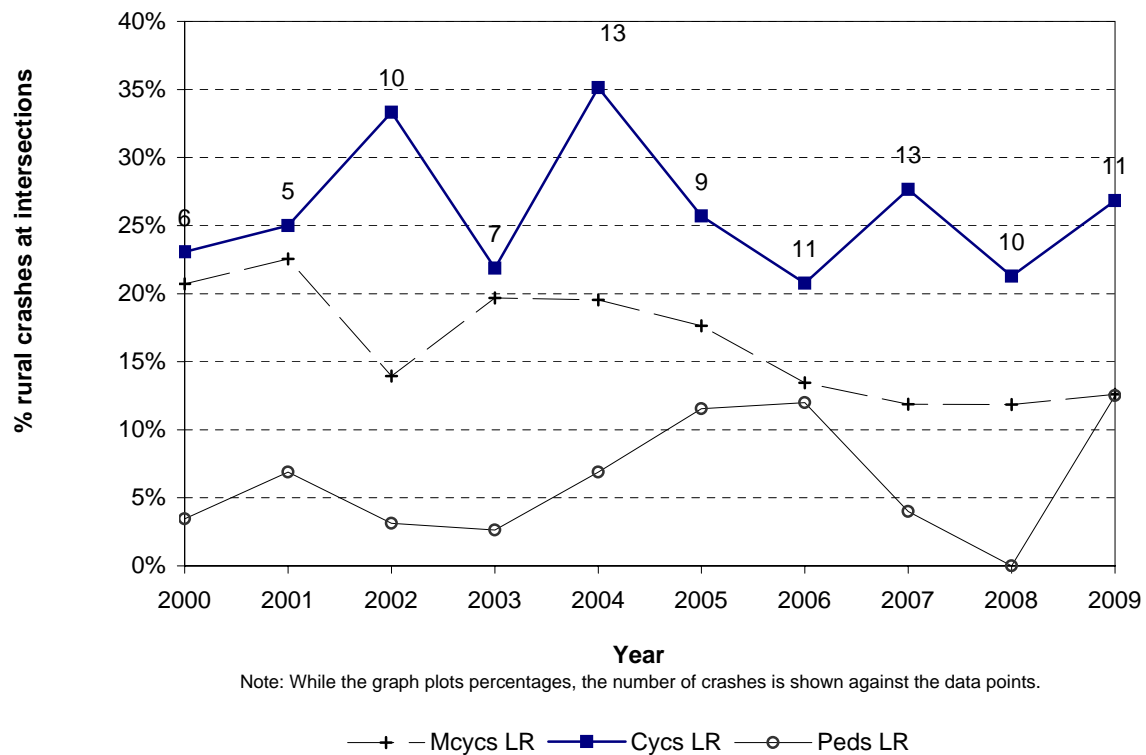


Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

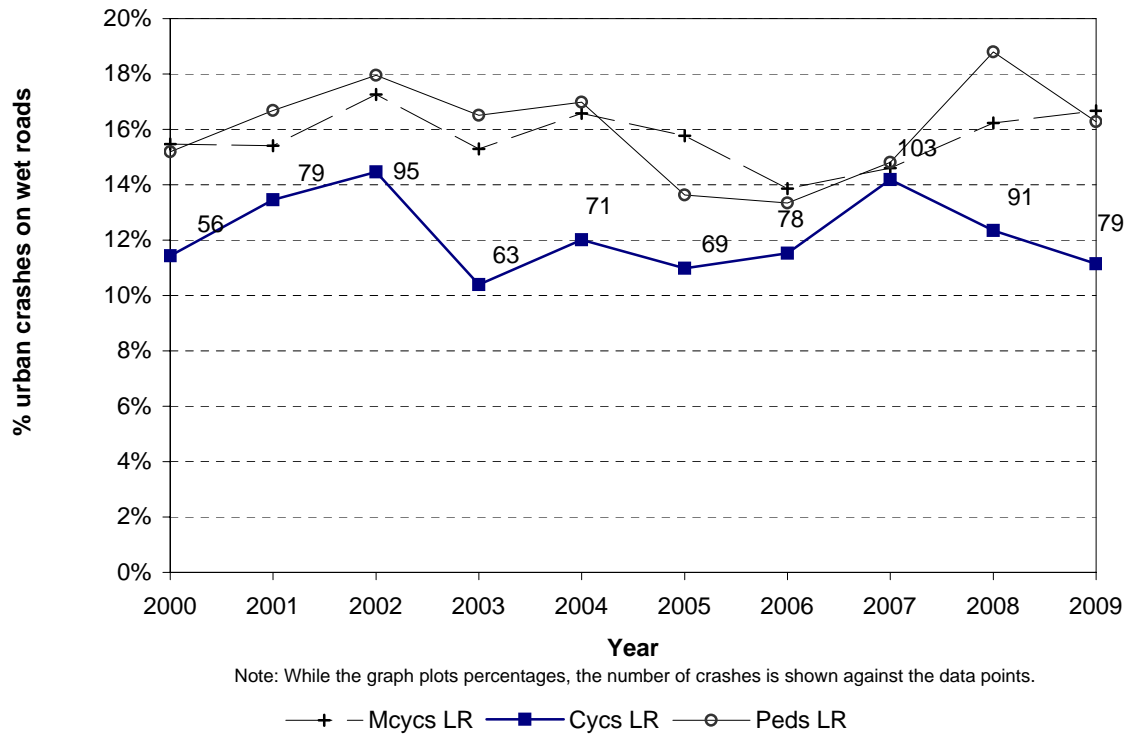
**Figure 8.15 Intersection crashes  
VRUs - Cyclists - urban council roads**



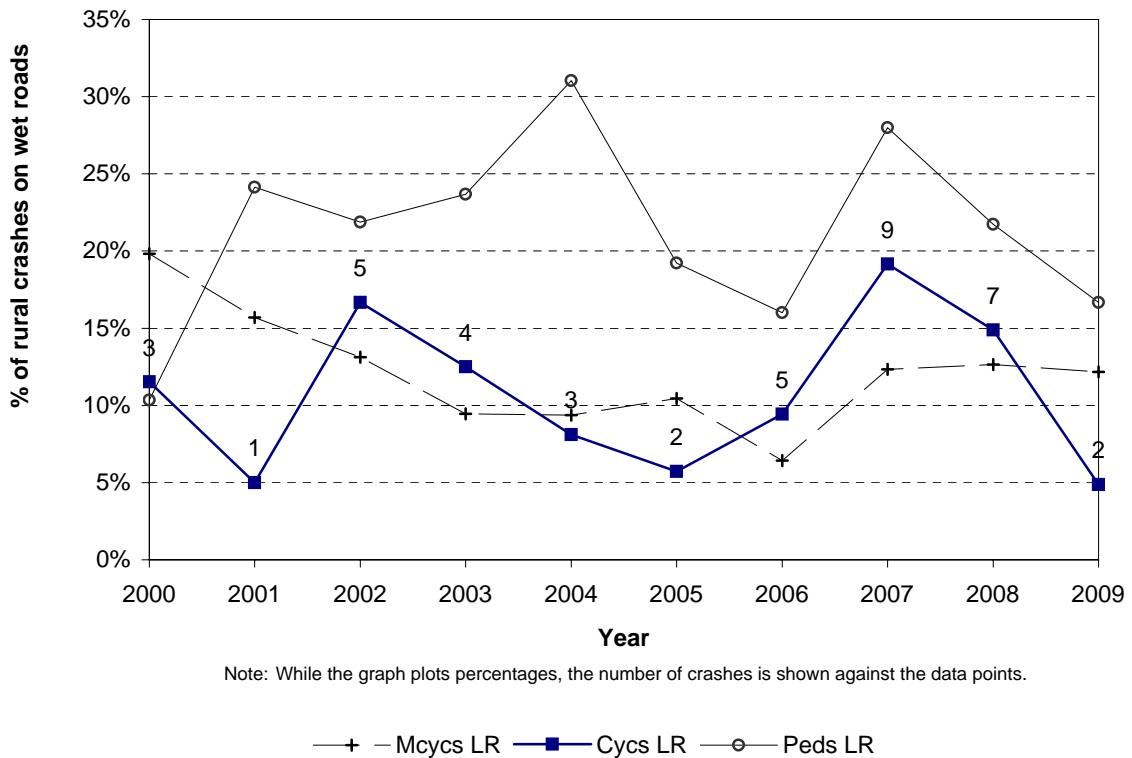
**Figure 8.16 Intersection crashes  
VRUs - Cyclists - rural council roads**



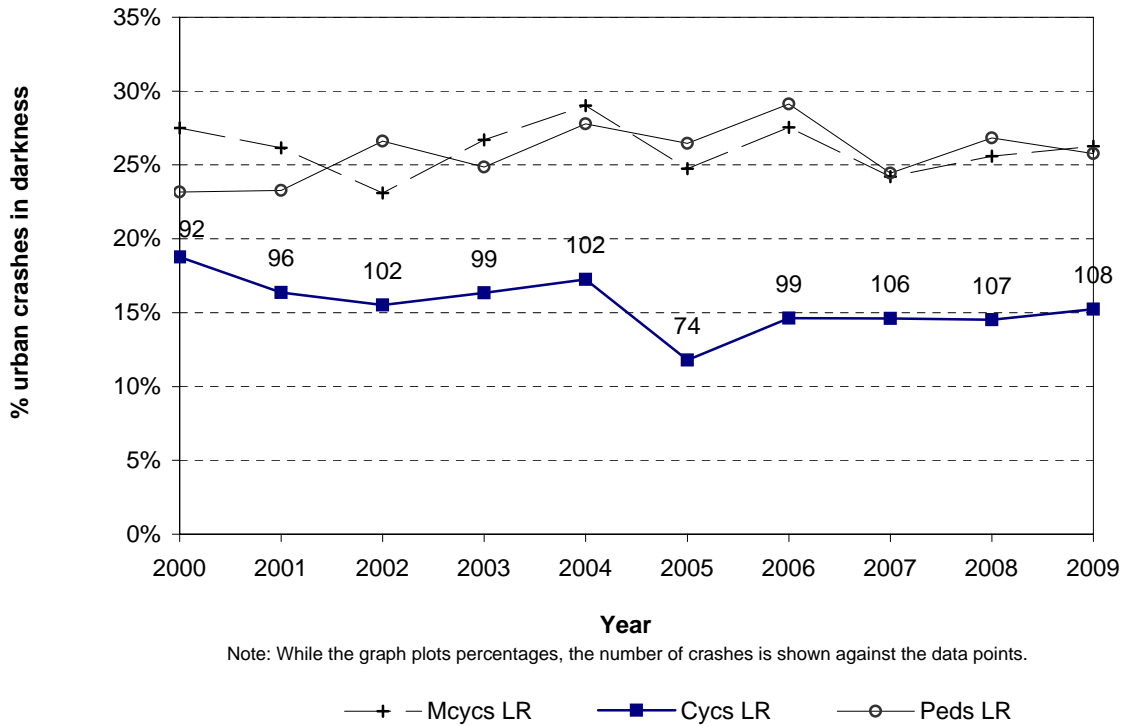
**Figure 8.17 Wet road crashes  
VRUs - Cyclists - urban council roads**



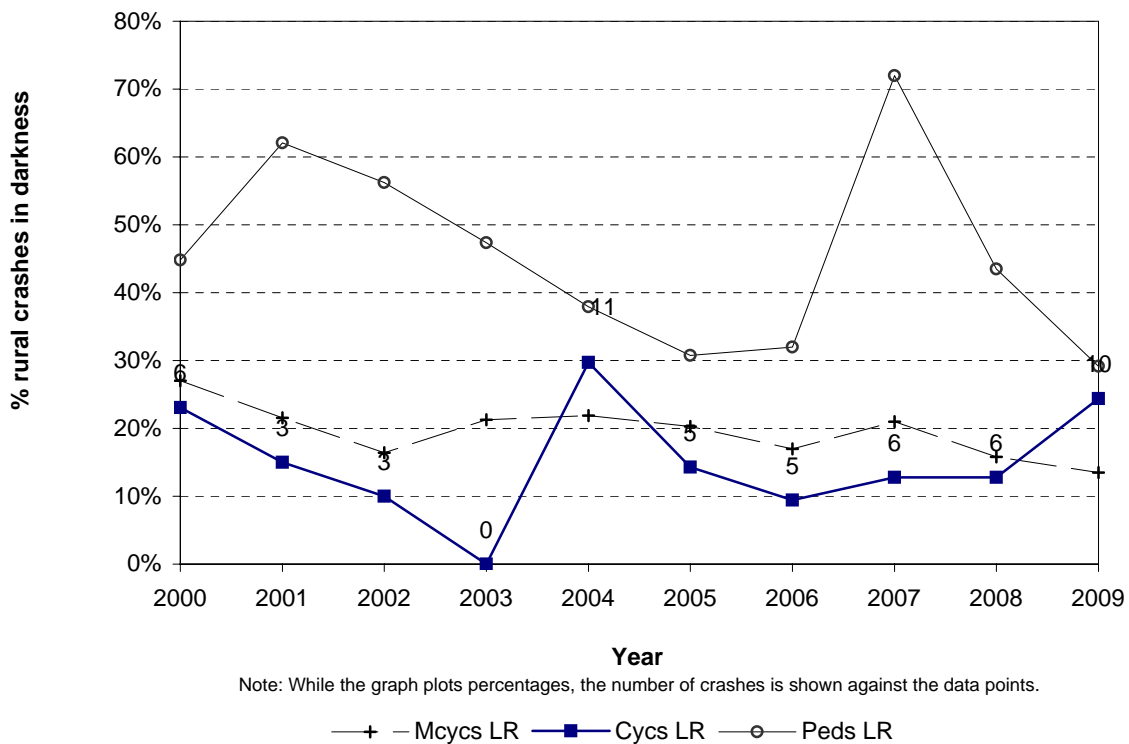
**Figure 8.18 Wet road crashes  
VRUs - Cyclists - rural council roads**



**Figure 8.19 Crashes in darkness  
VRUs - Cyclists - urban council roads**

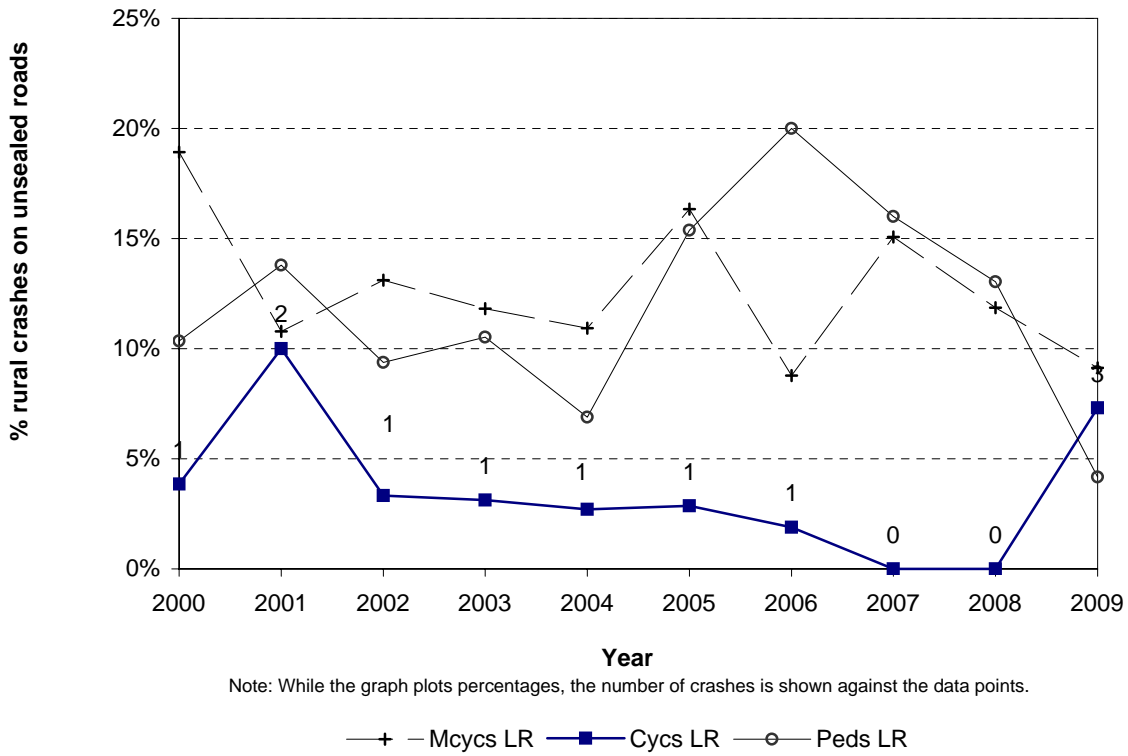


**Figure 8.20 Crashes in darkness  
VRUs - Cyclists - rural council roads**

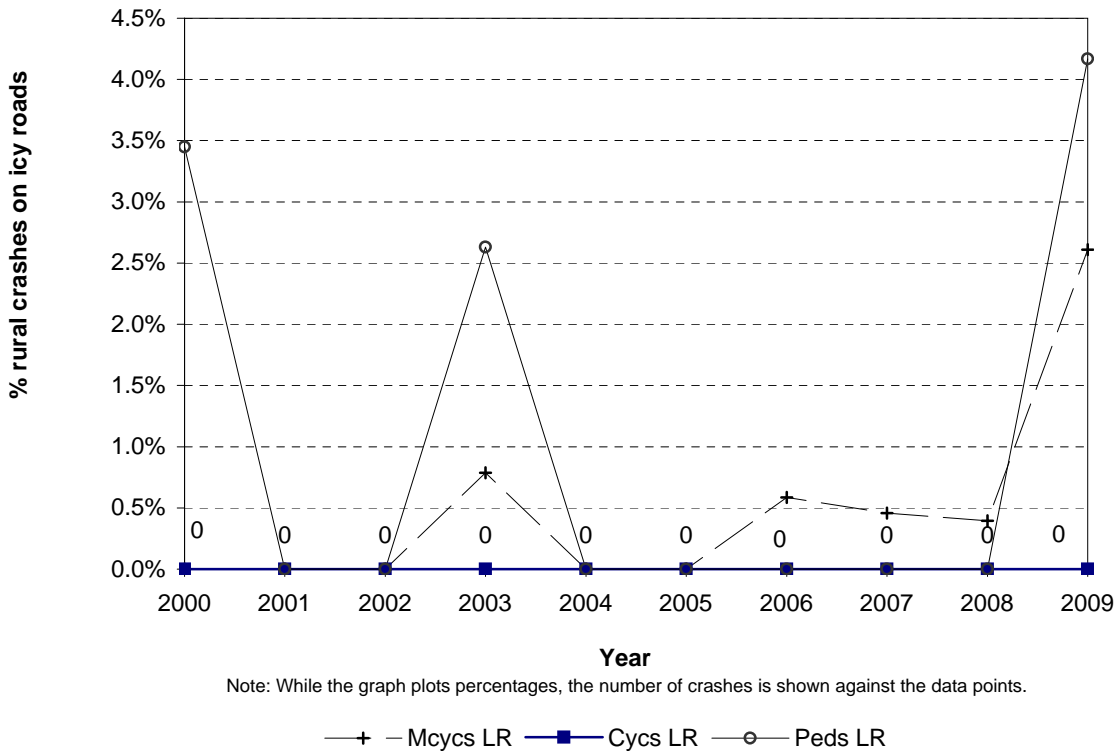




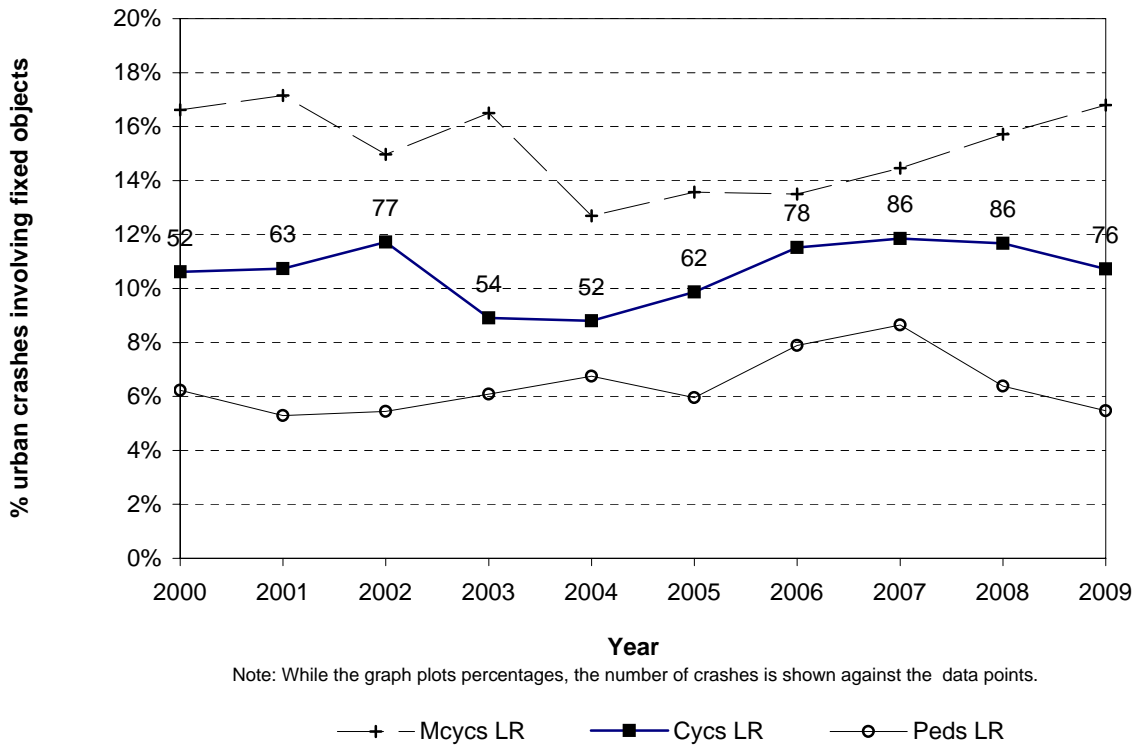
**Figure 8.21 Crashes on unsealed roads  
VRUs - Cyclists - rural council roads**



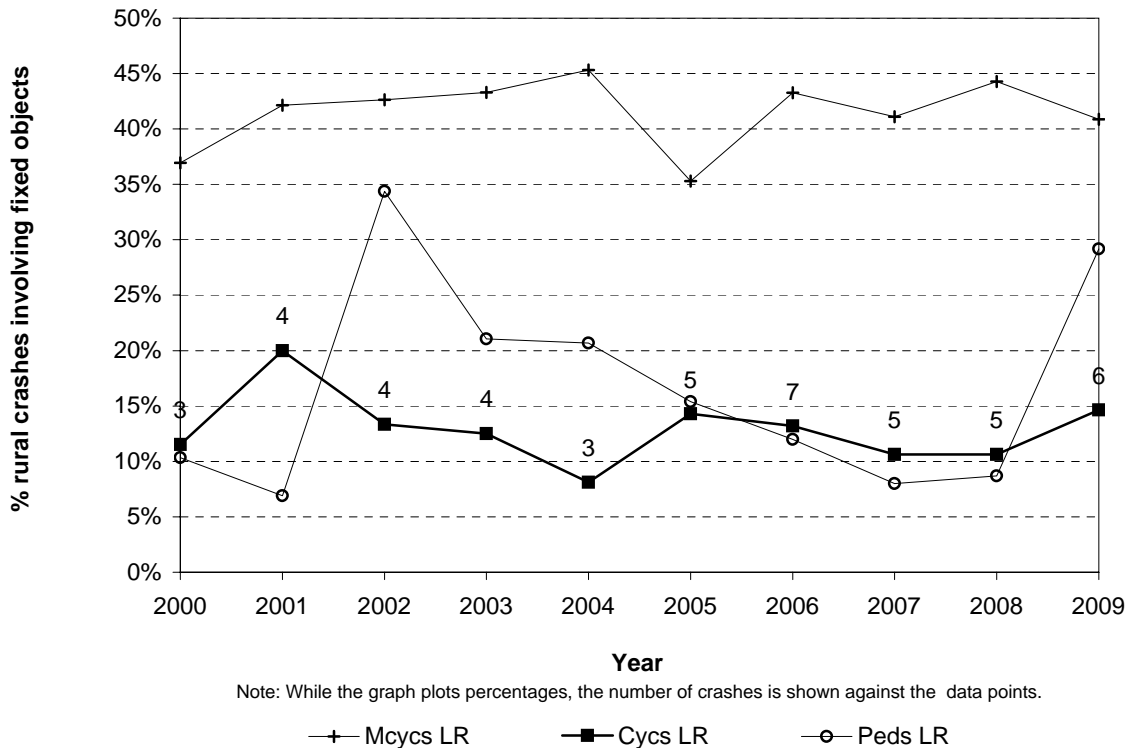
**Figure 8.22 Icy road crashes  
VRUs - Cyclists - rural council roads**



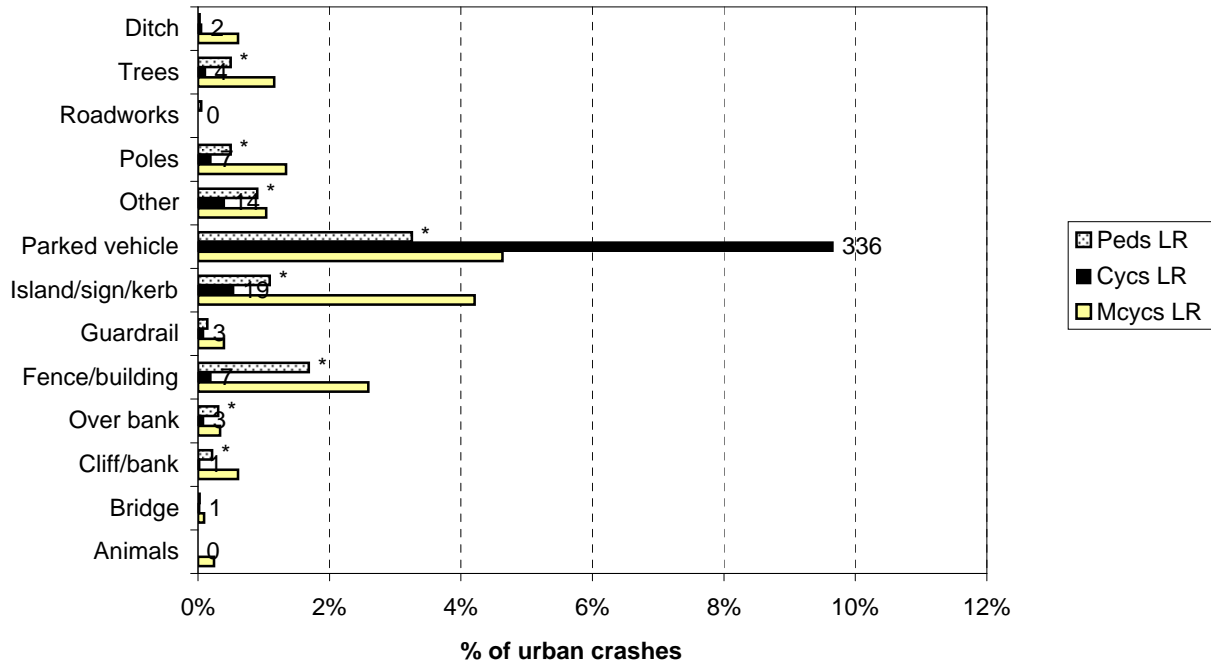
**Figure 8.23 Collisions with objects  
VRUs - Cyclists - urban council roads**



**Figure 8.24 Collisions with objects  
VRUs - Cyclists - rural council roads**

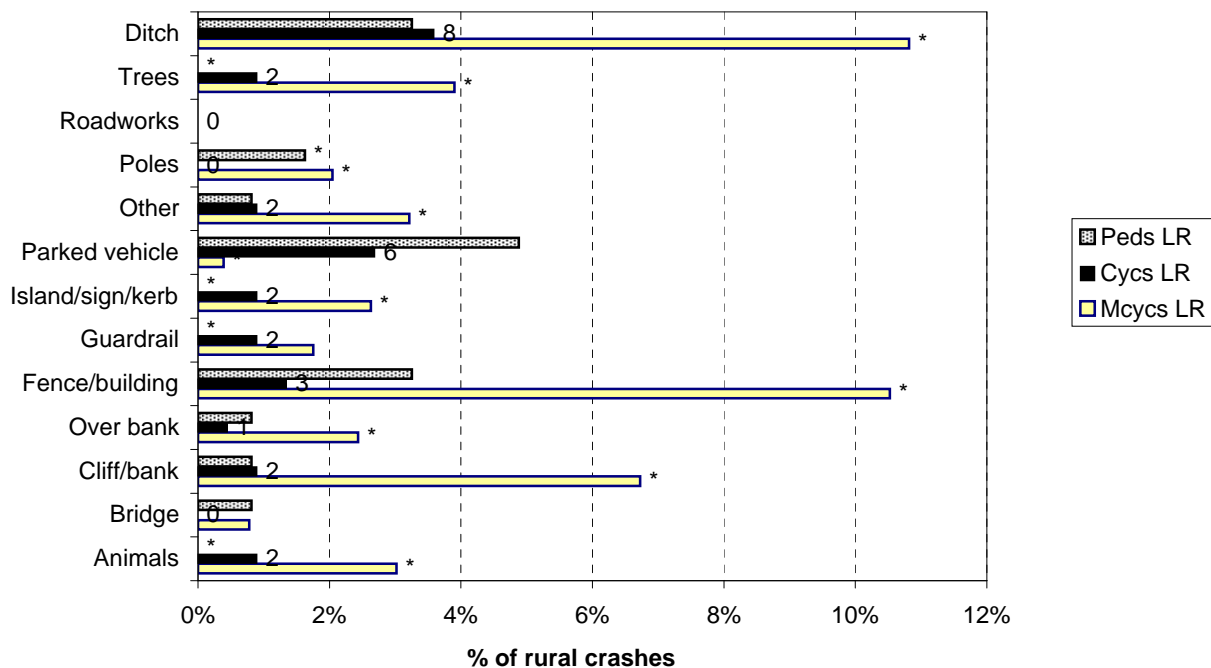


**Figure 8.25 Objects struck - urban  
VRUs - Cyclists council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.26 Objects struck - rural  
VRUs - Cyclists council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



# *Crash Location Statistics*



**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Auckland City	TAMAKI DRIVE/NGAPIPI ROAD	13	12	4
Napier City	KENNEDY ROAD/KENNEDY OFF NBD	11	10	2
Gisborne District	ORMOND ROAD/FITZHERBERT ST	7	7	1
Marlborough District	MAXWELL ROAD/SEYMOUR ST	7	7	1
Palmerston North City	RUAHINE ST/CHURCH ST	7	6	0
Wellington City	THORNDON QUAY/MOORE ST	6	6	1
Nelson City	ANNESBROOK DRIVE/MAIN ROAD STOKE	6	6	1
Porirua City	TITAHĪ BAY ROAD/TE HIKO ST	5	5	2
Marlborough District	SH 1S/SH 6	5	5	0
Palmerston North City	ALBERT ST/CHURCH ST	5	5	0
Nelson City	HAVEN ROAD/HALIFAX ST	5	5	0
Christchurch City	HEATON ST/ROSSALL ST	5	5	1
Wellington City	CENTENNIAL SBD/HUTT ON NBD	6	5	0
Wellington City	KELBURN PARADE/KELBURN ROAD	5	5	0
Auckland City	GREAT NORTH ROAD/BULLOCK TRACK	5	4	1
North Shore City	WAIRAU ROAD/ELLICE ROAD	6	4	1
Marlborough District	SH 6/HUTCHESON ST	4	4	0
New Plymouth District	SH 3/LEMON ST	4	4	0
Kapiti Coast District	SH 1N/KAPITI ROAD	4	4	1
Gisborne District	LYTTON ROAD/NELSON ROAD	4	4	2
Wellington City	FEATHERSTON ST/BUNNY ST	6	4	2
Palmerston North City	CHURCH ST/VICTORIA AVENUE	4	4	0
Nelson City	SH 6/HAY ST	4	4	0
Wanganui District	PARSONS ST/SPRINGVALE ROAD	6	4	0
Wellington City	ADELAIDE ROAD/ALFRED ST	5	4	2
Wellington City	ADELAIDE ROAD/DRUMMOND ST	4	4	1
Christchurch City	RICCARTON ROAD/WAIMAIRI ROAD	4	4	0
Wellington City	COURTENAY PLACE/TORY ST	6	4	1
Rotorua District	SH 5/DEVON ST WEST	4	4	1

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Manukau City	PUHINUI ROAD/ROSCOMMON ROAD	4	4	2
Wellington City	CUSTOMHOUSE QUAY/JERVOIS QUAY	4	4	0
Gisborne District	DERBY ST/PALMERSTON ROAD	4	4	0
Christchurch City	RICCARTON ROAD/CLARENCE ST	4	4	0
Christchurch City	CENTAURUS ROAD/AYNSLEY TERRACE	5	4	2
Christchurch City	BARRINGTON ST/STOURBRIDGE ST	4	4	0
Hastings District	PORTER DRIVE/TE AUTE ROAD	4	4	2
Hamilton City	BRIDGE ST/VICTORIA ST	4	4	0
Auckland City	TANIWHA ST/ELSTREE AVENUE	6	4	3
Wellington City	HUTT ROAD/RANGIORA AVENUE	4	4	1



**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Auckland City	TAMAKI DRIVE	77
Christchurch City	FERRY ROAD	45
Christchurch City	RICCARTON ROAD	38
North Shore City	EAST COAST ROAD	31
Auckland City	GREAT NORTH ROAD	30
Tauranga City	CAMERON ROAD	30
Napier City	KENNEDY ROAD	29
Nelson City	SH 6	28
Wellington City	HUTT ROAD	27
Christchurch City	COLOMBO ST	25
Auckland City	MOUNT EDEN ROAD	24
Wellington City	THORNDON QUAY	24
Wellington City	ADELAIDE ROAD	23
Dunedin City	SH 1S	21
Auckland City	QUEEN ST	20
Auckland City	MANUKAU ROAD	20
Wellington City	ORIENTAL PARADE	20
Upper Hutt City	FERGUSSON DRIVE	20
Wellington City	SH 1N	20
Hamilton City	SH 1N	19
Christchurch City	MAIN ROAD	19
Auckland City	MOUNT ALBERT ROAD	18
Hamilton City	VICTORIA ST	18
North Shore City	WAIRAU ROAD	18
Auckland City	BROADWAY	18
Gisborne District	ORMOND ROAD	18
Gisborne District	GLADSTONE ROAD	18
Masterton District	SH 2	18
Auckland City	DOMINION ROAD	17

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Nelson City	WAIMEA ROAD	17
Christchurch City	SH 74	17
Manukau City	GREAT SOUTH ROAD	16
Auckland City	REMUERA ROAD	16
Whangarei District	SH 1N	16
Auckland City	NEW NORTH ROAD	16
Auckland City	GREAT SOUTH ROAD	16
Christchurch City	PAPANUI ROAD	16
Manukau City	PAKURANGA ROAD	15
North Shore City	LAKE ROAD	15
Palmerston North City	SH 3	15
Marlborough District	MAXWELL ROAD	15
Waitakere City	GREAT NORTH ROAD	15
Auckland City	SYMONDS ST	14
Palmerston North City	ALBERT ST	14
Christchurch City	SH 73	14
Christchurch City	CENTAURUS ROAD	14
North Shore City	BEACH ROAD	13
Kapiti Coast District	SH 1N	13
Napier City	SH 50	13
Marlborough District	SH 6	13
Palmerston North City	RUAHINE ST	13
New Plymouth District	SH 45	13
Christchurch City	LINWOOD AVENUE	13
Christchurch City	BARRINGTON ST	13
Invercargill City	ELLES ROAD	13
Wellington City	EVANS BAY PARADE	13
Waitakere City	SWANSON ROAD	12
Auckland City	QUAY ST	12

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
New Plymouth District	SH 3	12
Wellington City	FEATHERSTON ST	12
Invercargill City	TWEED ST	12
Hamilton City	CLYDE ST	12
Christchurch City	ARMAGH ST	12
Tauranga City	SH 29	11
Hutt City	SH 2	11
Wellington City	THE TERRACE	11
Marlborough District	SH 1S	11
Gisborne District	SH 35	11
Wellington City	CUSTOMHOUSE QUAY	11
Upper Hutt City	SH 2	11
Christchurch City	MAIN NORTH ROAD	11
Hamilton City	HUKANUI ROAD	11
Palmerston North City	FEATHERSTON ST	11
Tasman District	SH 60	11
Christchurch City	BLenheim ROAD	11
Auckland City	MOUNT SMART ROAD	10
Hamilton City	BRIDGE ST	10
Hastings District	OMAHU ROAD	10
Nelson City	NAYLAND ROAD	10
Wellington City	VICTORIA ST	10
Nelson City	MAIN ROAD STOKE	10
Invercargill City	SH 1S	10
Christchurch City	NEW BRIGHTON ROAD	10
Christchurch City	WAIMAIRI ROAD	10
Christchurch City	BEALEY AVENUE	10
Christchurch City	HEREFORD ST	10
Auckland City	ONEHUNGA MALL	10

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Christchurch City	LINCOLN ROAD	10
Napier City	SH 2	10
Timaru District	SH 1S	10
Tauranga City	OCEANBEACH ROAD	9
Taupo District	SH 1N	9
Auckland City	TANIWHA ST	9
Waitakere City	DON BUCK ROAD	9
North Shore City	KITCHENER ROAD	9
Hamilton City	PEACHGROVE ROAD	9
Whangarei District	SH 14	9
Tauranga City	FRASER ST	9
Tasman District	SALISBURY ROAD	9
Hutt City	THE ESPLANADE	9
Tasman District	SH 6	9
Hastings District	HERETAUNGA ST WEST	9
Hutt City	HIGH ST	9
Christchurch City	CASHMERE ROAD	9
Christchurch City	TUAM ST	9
Christchurch City	DYERS PASS ROAD	9
Waitaki District	SH 1S	9
Christchurch City	STANMORE ROAD	9
Rodney District	SH 17	9
Rotorua District	SH 30	9
Palmerston North City	TREMAINE AVENUE	9
Dunedin City	NORTH ROAD	9
Wellington City	TARANAKI ST	9
Taupo District	SPA ROAD	8
Rotorua District	MALFROY ROAD	8
North Shore City	ANZAC ST	8

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Tauranga City	WELCOME BAY ROAD	8
Thames-Coromandel District	SH 25	8
Wanganui District	VICTORIA AVENUE	8
Wellington City	COURTENAY PLACE	8
Porirua City	TITAHI BAY ROAD	8
Dunedin City	KING EDWARD ST	8
Christchurch City	HAREWOOD ROAD	8
Invercargill City	QUEENS DRIVE	8
Timaru District	WAI-ITI ROAD	8
Palmerston North City	FERGUSON ST	8
Timaru District	CHURCH ST	8
Rodney District	SH 16	8
Auckland City	CARRINGTON ROAD	8
Hastings District	ST AUBYN ST WEST	8
Nelson City	ANNESBROOK DRIVE	8
Hamilton City	GREY ST	8
Auckland City	KARANGAHAPE ROAD	8
Wellington City	CENTENNIAL SBD	8
North Shore City	SH 17	7
Manukau City	PUHINUI ROAD	7
Rotorua District	SH 5	7
North Shore City	GLENFIELD ROAD	7
Hastings District	SH 2	7
Nelson City	RUTHERFORD ST	7
Wellington City	KARORI ROAD	7
Hastings District	HERETAUNGA ST EAST	7
Palmerston North City	CHURCH ST	7
Nelson City	VANGUARD ST	7
Central Otago District	SH 8	7

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Christchurch City	WAIRAKEI ROAD	7
Dunedin City	PRINCES ST	7
Christchurch City	HEATON ST	7
Christchurch City	MOORHOUSE AVENUE	7
Christchurch City	MANCHESTER ST	7
Tauranga City	SH 2	7
Whangarei District	KAMO ROAD	7
Gisborne District	CHILDERS ROAD	7
Tauranga City	PAPAMOA BEACH ROAD	7
Hamilton City	SH 3	7
Wellington City	RIDDIFORD ST	7
Christchurch City	SH 73 YALDHURST	7
Christchurch City	PAGES ROAD	7
Dunedin City	PORTOBELLO ROAD	7
Manukau City	TE IRIRANGI DRIVE	7
Marlborough District	SCOTT ST	7
Dunedin City	SH 88	7
Nelson City	COLLINGWOOD ST	7
Auckland City	MOUNTAIN ROAD	6
North Shore City	ROSEDALE ROAD	6
Tauranga City	MAUNGANUI ROAD	6
Hamilton City	TE AROHA ST	6
Papakura District	GREAT SOUTH ROAD	6
Tauranga City	WAIHI ROAD	6
Auckland City	POINT CHEVALIER ROAD	6
Waitakere City	TE ATATU ROAD	6
North Shore City	TAHAROTO ROAD	6
Hutt City	HUTT ROAD	6
Wellington City	KELBURN PARADE	6

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Gisborne District	LYTTON ROAD	6
Wanganui District	PARSONS ST	6
Hastings District	ST AUBYN ST EAST	6
Nelson City	HAVEN ROAD	6
Napier City	GLOUCESTER ST	6
Wellington City	MIRAMAR AVENUE	6
Wellington City	THE ESPLANADE	6
Dunedin City	SH 87	6
Christchurch City	SH 74 MAIN NORTH	6
Queenstown-Lakes District	SH 6	6
Christchurch City	FENDALTON ROAD	6
Christchurch City	MADRAS ST	6
Christchurch City	GREERS ROAD	6
Hamilton City	NORTON ROAD	6
Tauranga City	OTUMOETAI ROAD	6
Hamilton City	RIVER ROAD	6
Hamilton City	HEAPHY TERRACE	6
Rotorua District	RANOLF ST	6
Wellington City	SH 1N VIVIAN	6
Christchurch City	WORCESTER ST	6
Tauranga City	DEVONPORT ROAD	6
Auckland City	SH 16	6
Hamilton City	ULSTER ST	6
Hamilton City	FOREST LAKE ROAD	6
Auckland City	KHYBER PASS ROAD	6
Manukau City	TI RAKAU DRIVE	6
Auckland City	GLADSTONE ROAD	6
Auckland City	PARNELL ROAD	6
Marlborough District	REDWOOD ST	6

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Hastings District	PORTER DRIVE	6
Kapiti Coast District	KAPITI ROAD	6
Palmerston North City	PIONEER HIGHWAY	6
Wellington City	TINAKORI ROAD	6
Invercargill City	SH 6	6
Dunedin City	MAIN SOUTH ROAD	6
Christchurch City	SHIRLEY ROAD	6
Timaru District	OTIPUA ROAD	6
Rotorua District	FENTON ST	6
Hamilton City	WAIRERE DRIVE	6
Waitakere City	SH 18	6
Hastings District	TOMOANA ROAD	6
Christchurch City	FITZGERALD AVENUE	6
Rodney District	WHANGAPARAOA ROAD	6
Auckland City	ROSEBANK ROAD	5
Waitakere City	LINCOLN ROAD	5
Auckland City	SANDRINGHAM ROAD	5
Auckland City	RICHARDSON ROAD	5
Auckland City	BLOCKHOUSE BAY ROAD	5
Tauranga City	SH 2A	5
Auckland City	PONSONBY ROAD	5
Auckland City	POINT ENGLAND ROAD	5
Porirua City	SH 1N	5
Palmerston North City	COLLEGE ST	5
Hastings District	SOUTHAMPTON ST WEST	5
Hutt City	KNIGHTS ROAD	5
Hutt City	NAENAE ROAD	5
Wanganui District	SOMME PARADE	5
Wellington City	WILLIS ST	5

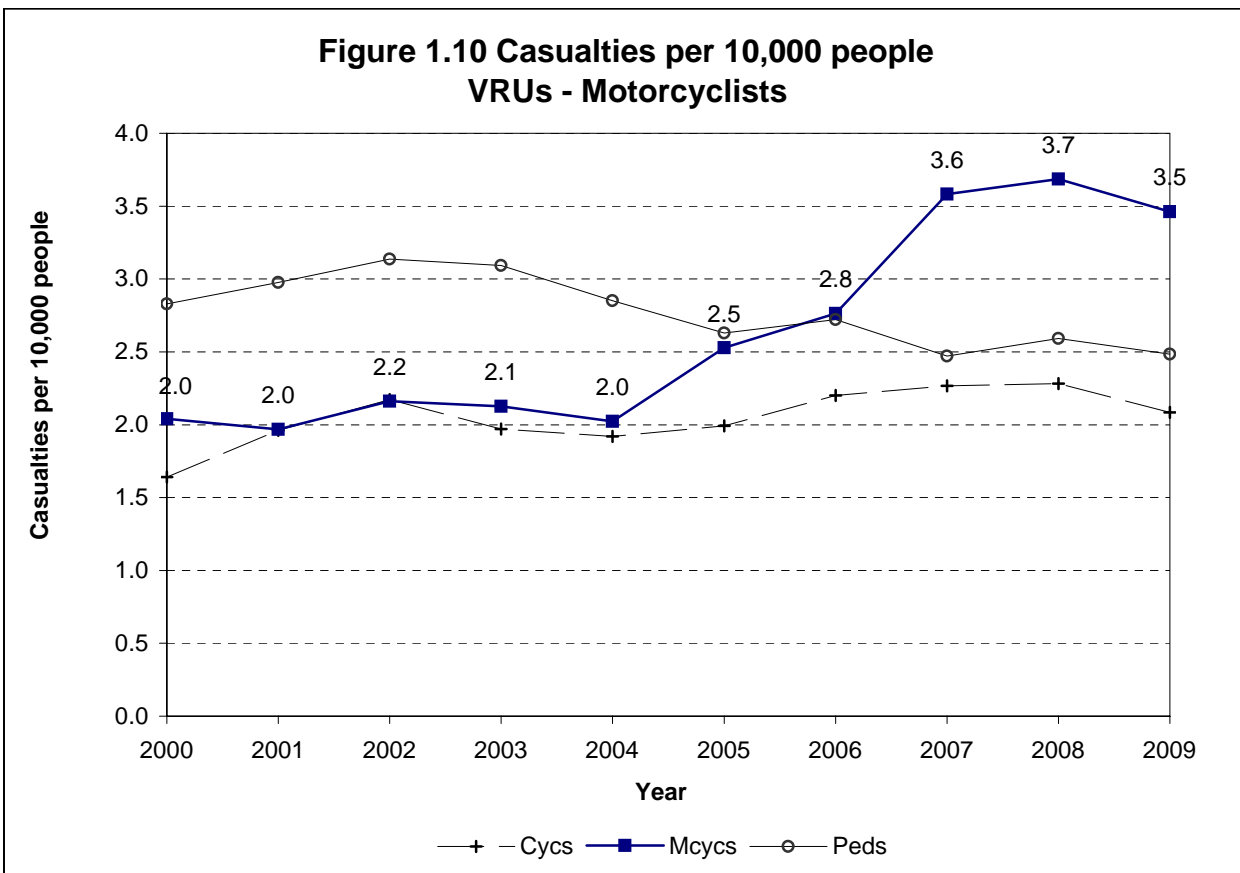
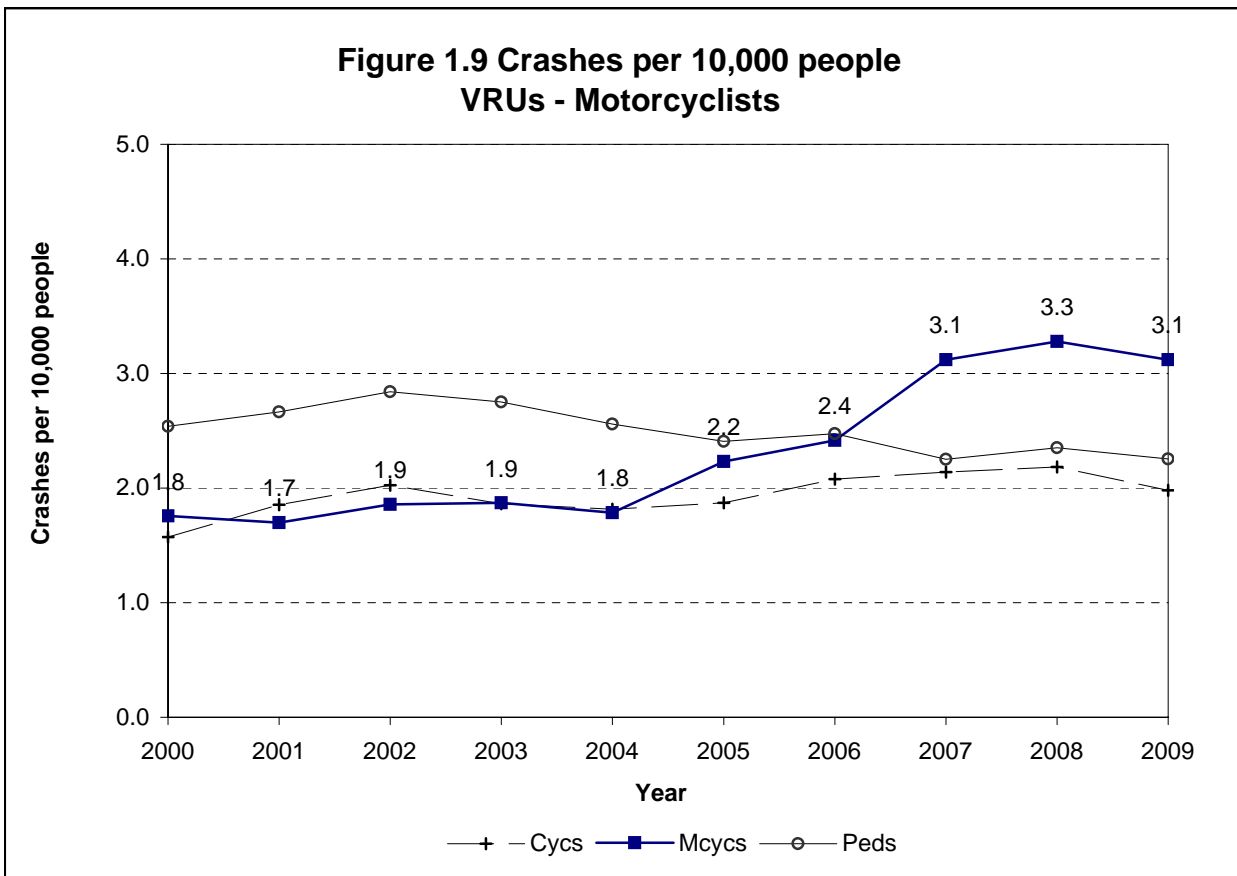


**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Christchurch City	CLARENCE ST	5
Dunedin City	HIGH ST	5
Christchurch City	MAIDSTONE ROAD	5
Christchurch City	AVONSIDE DRIVE	5
Christchurch City	WHITELEIGH AVENUE	5
Hamilton City	BOUNDARY ROAD	5
Waitakere City	CENTRAL PARK DRIVE	5
Tauranga City	BELLEVUE ROAD	5
Whangarei District	RIVERSIDE DRIVE	5
Grey District	SH 6	5
Manukau City	CHAPEL ROAD	5
Wellington City	LAMBTON QUAY	5
Wellington City	BROOKLYN ROAD	5
Palmerston North City	BOTANICAL ROAD	5
Christchurch City	ST ASAPH ST	5
Queenstown-Lakes District	SH 6A	5
Dunedin City	ANDERSONS BAY ROAD	5
Christchurch City	MERRIN ST	5
Christchurch City	LYTTELTON ST	5
Christchurch City	SPARKS ROAD	5
Manukau City	BROWNS ROAD	5
Hamilton City	TE RAPA ROAD	5
Rotorua District	MALFROY ROAD WEST	5
Whakatane District	HINEMOA ST	5
Christchurch City	CASHEL ST	5
Wellington City	WAKEFIELD ST	5
Christchurch City	RICCARTON AVENUE	5
Christchurch City	OWLES TERRACE	5
Christchurch City	ANTIGUA ST	5

# Part 3: Motorcyclists



**Figure 1.11 Social cost of crashes in VRUs - Motorcyclists in 2009**

		VRUs - Motorcyclists	All VRUs
Council roads	urban	\$224.75	\$625.49
	rural	\$168.23	\$215.80
State Highways	urban	\$52.17	\$111.07
	rural	\$170.34	\$232.27
<b>Total</b>		<b>\$615.49</b>	<b>\$1,184.63</b>

Note: Crash costs are in \$ millions

The social costs of a road crash and the associated injuries include a number of different elements:

- Loss of life and life quality
- Loss of output due to temporary incapacitation
- Medical costs
- Legal costs
- Property damage costs

The average value of a loss of life due to a road crash is estimated by the amount of money the New Zealand population would be willing to pay for a safety improvement that would result in the expected avoidance of one premature death. This is the willingness to pay based value of statistical life or VOSL. The VOSL was established at \$2 million in 1991. This has been indexed to the average hourly earnings (ordinary time) to express the value in current dollars. The updated VOSL is \$3.5 million (in June 2009 dollars). Based on several international and New Zealand studies on VOSL, the average loss of life quality for permanent impairments due to a serious and a minor injury were estimated to be 10% and 0.4% of the VOSL respectively.

Crash rates can vary due to reporting rates. These are adjusted on a regional basis in this report by comparing with hospitalisation rates.

The other social cost components are estimated based on a number of studies conducted during the early to mid-1990s and are updated for price changes by indexing to an appropriate price index.

For a detail discussion on this, please refer to 'The social cost of road crashes and injuries: June 2009 update', available at the Ministry of Transport's website:

<http://www.transport.govt.nz/assets/NewPDFs/NewFolder/Social-Cost-June-2009-update-final.pdf>

The average social cost per reported crash (in June 2009 dollars) are estimated at:

Rural fatal crash	\$4,260,000
Rural serious crash	\$820,000
Rural minor crash	\$91,000
Urban fatal crash	\$3,775,000
Urban serious crash	\$699,000
Urban minor crash	\$82,000

These values include an allowance for non-reported injury crashes, and the totals in Fig. 1.11 also include an allowance for non-injury crashes.



# *Crash Counts*



Figure 2.1: Crash numbers and severity 2005 to 2009 - whole Country

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	36	38	40	50	49	213	4%	3%
Serious crashes	324	376	443	445	444	2032	34%	27%
Minor crashes	563	597	836	905	853	3754	63%	70%
Total injury crashes	923	1011	1319	1400	1346	5999	100%	100%
Non-injury crashes	334	327	368	438	448	1915		

Figure 2.2: Crash numbers and severity 2005 to 2009 - urban roads

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	8	10	10	16	14	58	2%	2%
Serious crashes	172	197	231	234	235	1069	28%	24%
Minor crashes	416	427	588	641	628	2700	71%	74%
Total injury crashes	596	634	829	891	877	3827	100%	100%
Non-injury crashes	271	256	294	345	336	1502		

Figure 2.3: Crash numbers and severity 2005 to 2009 - rural roads

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal crashes	28	28	30	34	35	155	7%	9%
Serious crashes	152	179	212	211	209	963	44%	42%
Minor crashes	147	170	248	264	225	1054	49%	49%
Total injury crashes	327	377	490	509	469	2172	100%	100%
Non-injury crashes	63	71	74	93	112	413		

Figure 2.4: Casualty numbers and severity 2005 to 2009 - whole Country

	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	39	40	46	53	51	229	3%	3%
Serious casualties	345	411	474	474	474	2178	32%	26%
Minor casualties	661	705	995	1046	969	4376	65%	71%
Total casualties	1045	1156	1515	1573	1494	6783	100%	100%

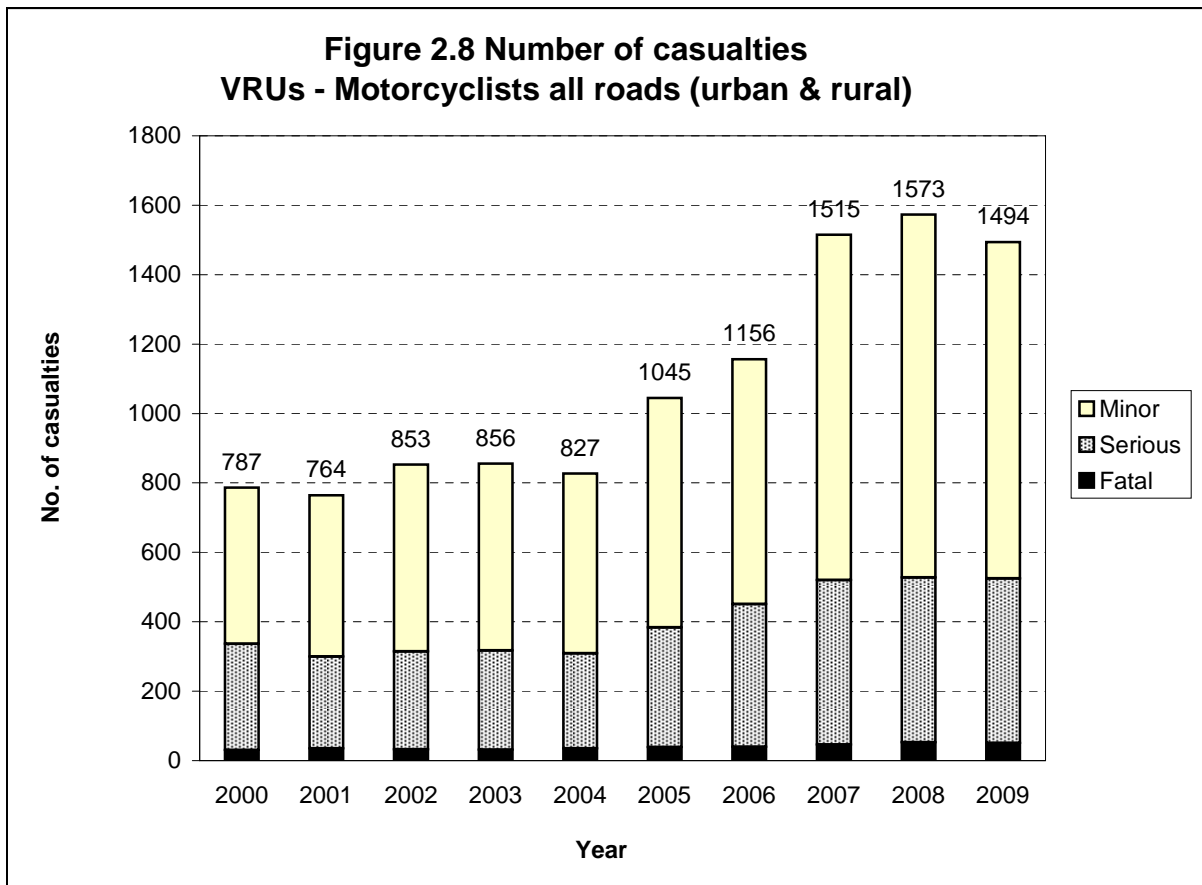
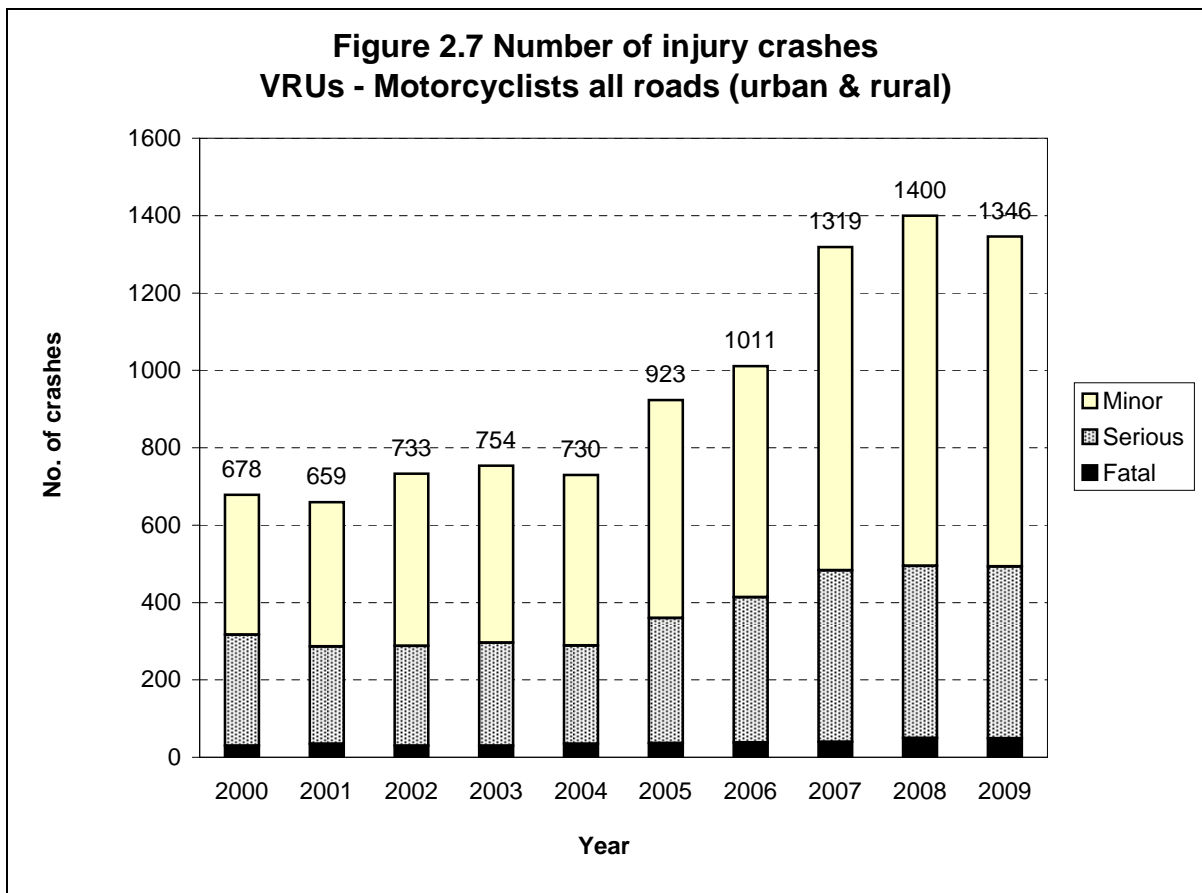
Figure 2.5: Casualty numbers and severity 2005 to 2009 - urban roads

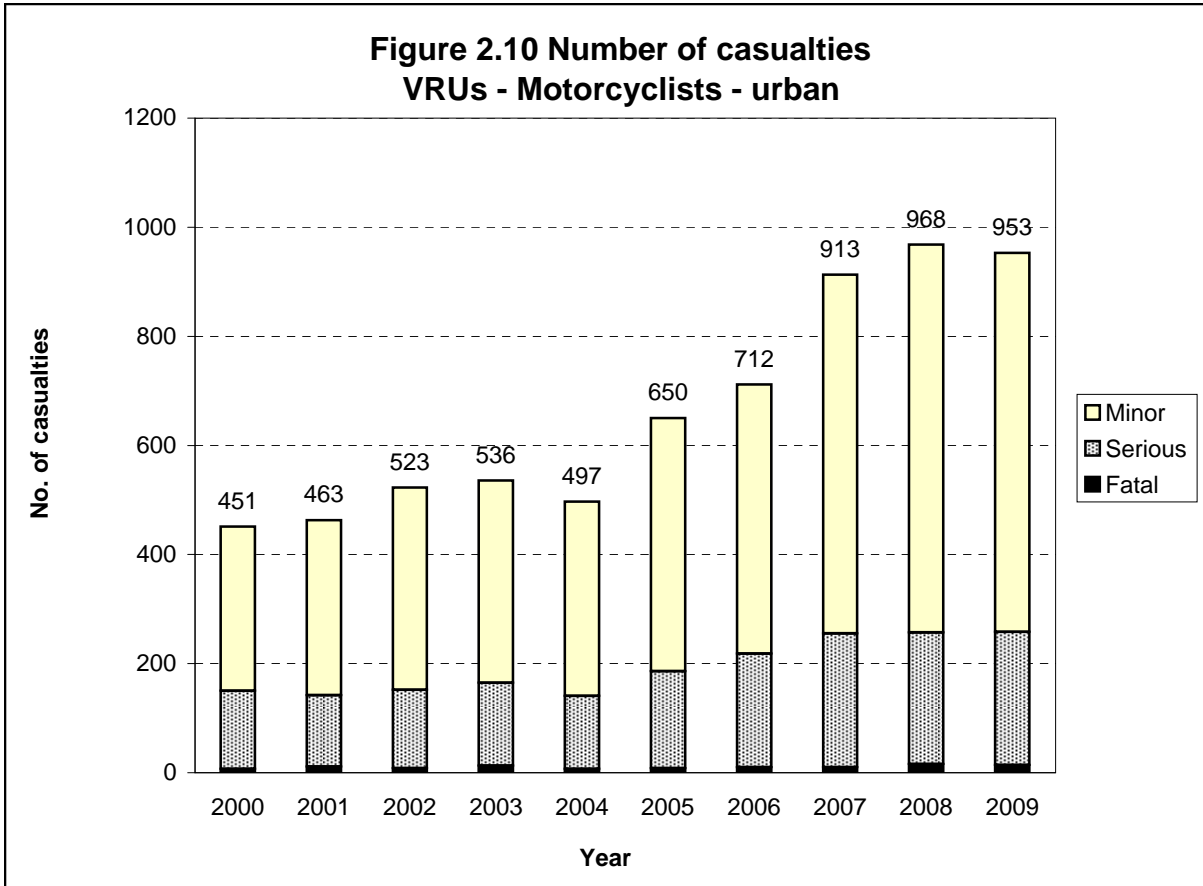
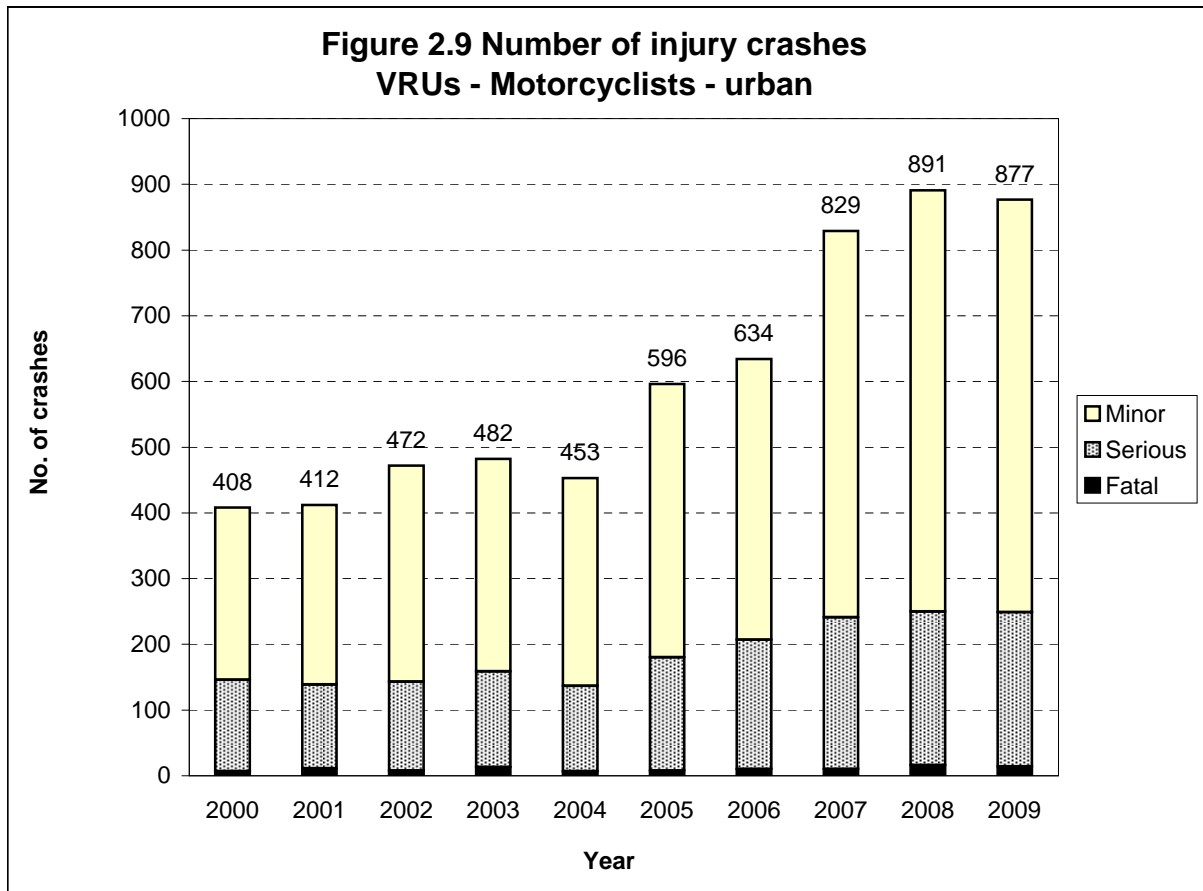
	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	8	10	10	16	14	58	1%	2%
Serious casualties	178	208	245	241	244	1116	27%	23%
Minor casualties	464	494	658	711	695	3022	72%	76%
Total casualties	650	712	913	968	953	4196	100%	100%

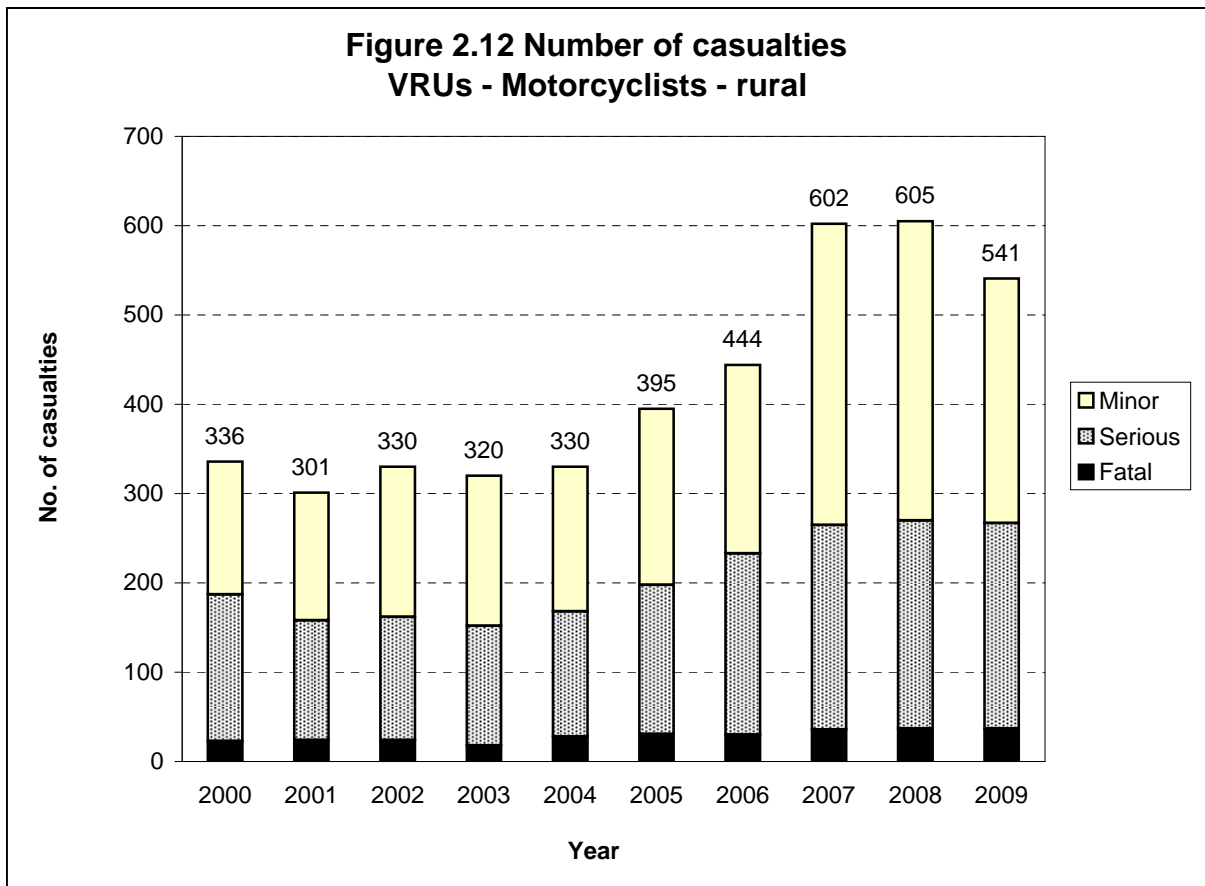
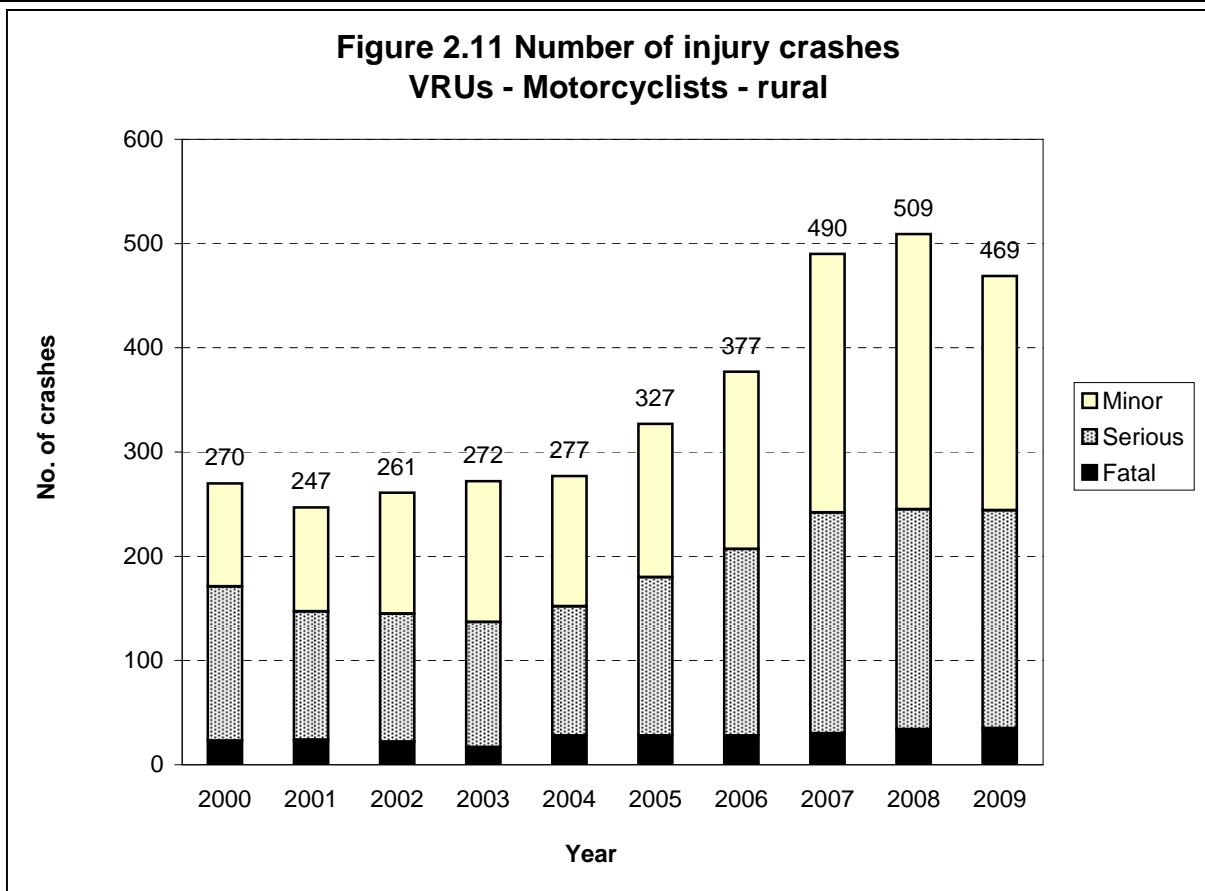
Figure 2.6: Casualty numbers and severity 2005 to 2009 - rural roads

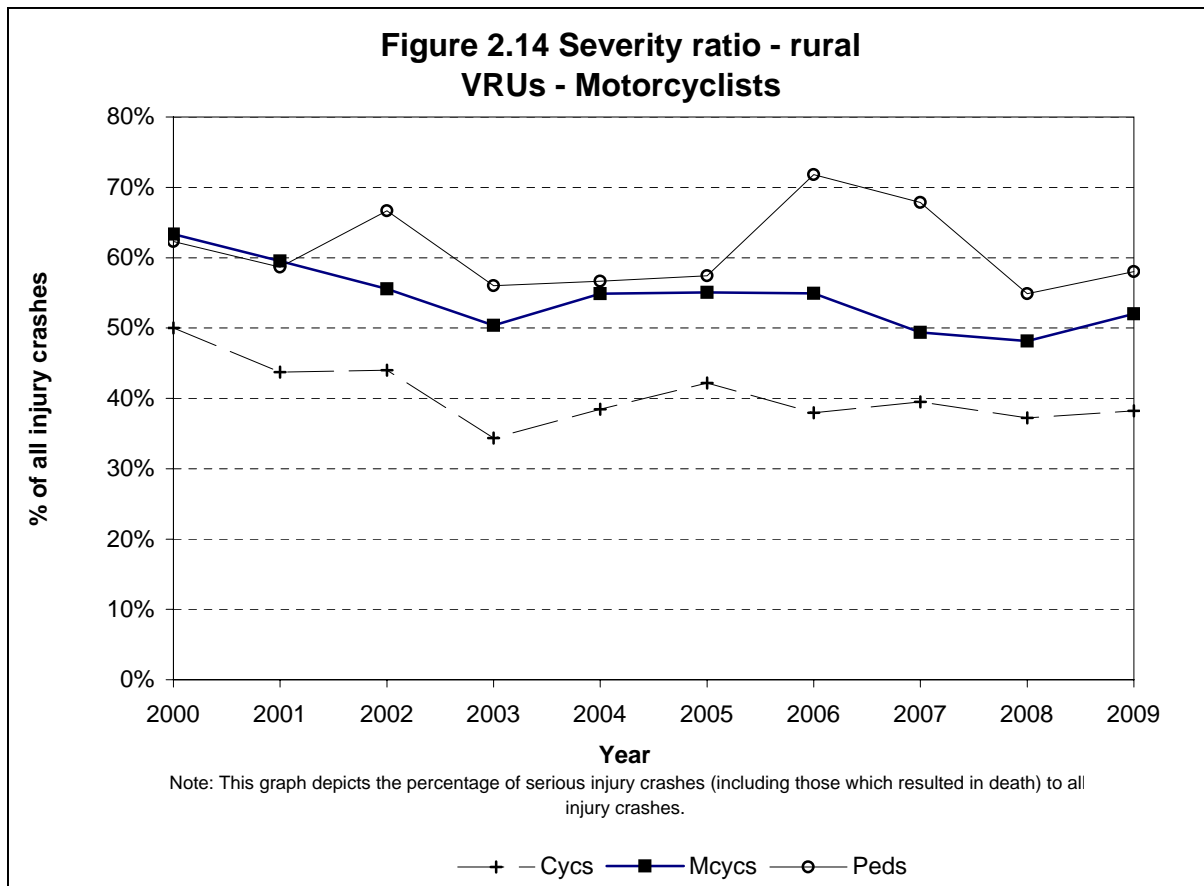
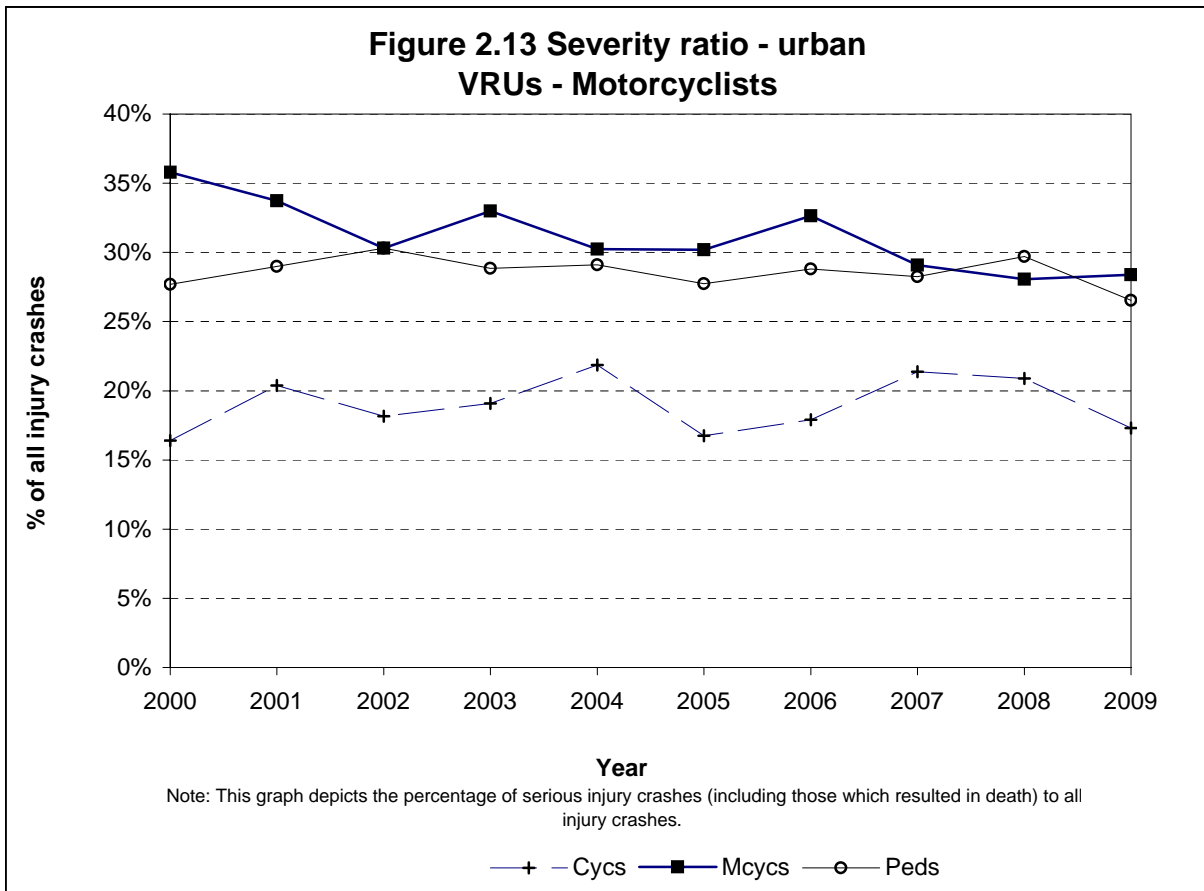
	2005	2006	2007	2008	2009	Total	%	All VRUs
Fatal casualties	31	30	36	37	37	171	7%	8%
Serious casualties	167	203	229	233	230	1062	41%	39%
Minor casualties	197	211	337	335	274	1354	52%	53%
Total casualties	395	444	602	605	541	2587	100%	100%









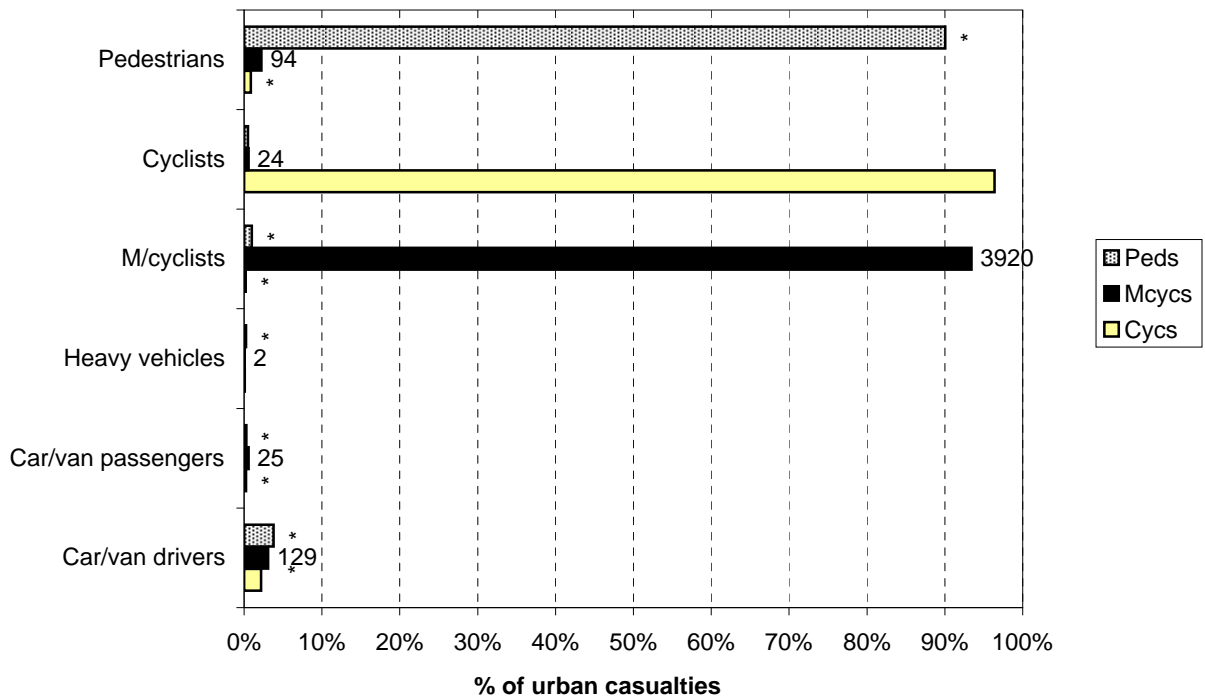




# *Road User Statistics*

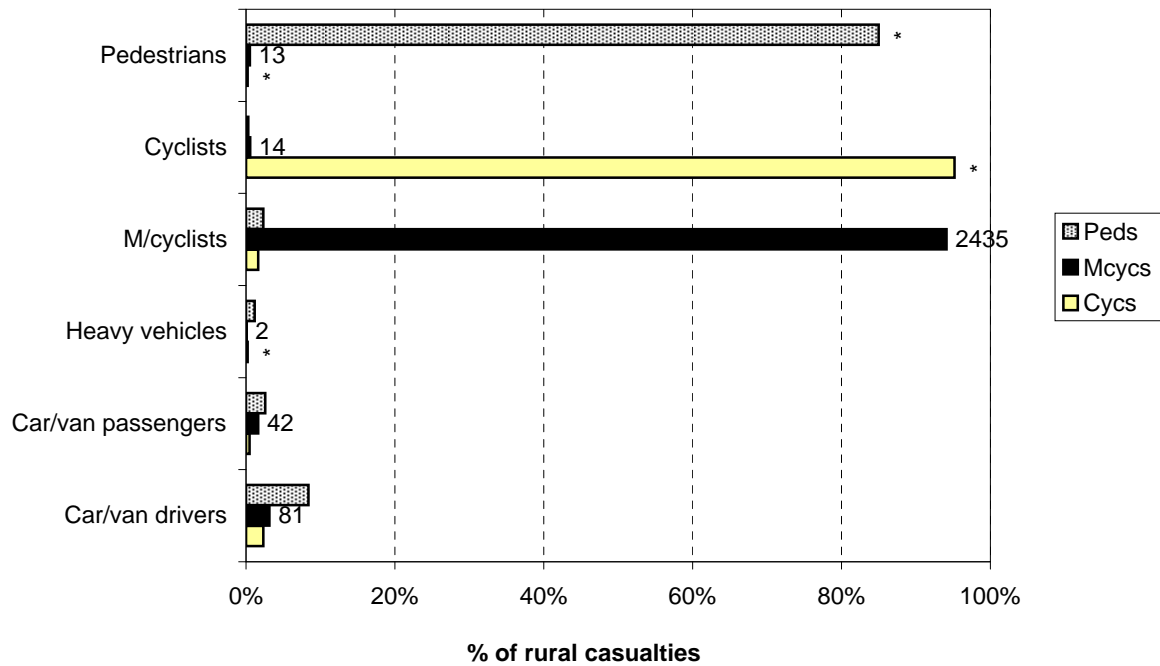


**Figure 3.1 Road user casualties - urban  
VRUs - Motorcyclists (2005-2009)**



Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

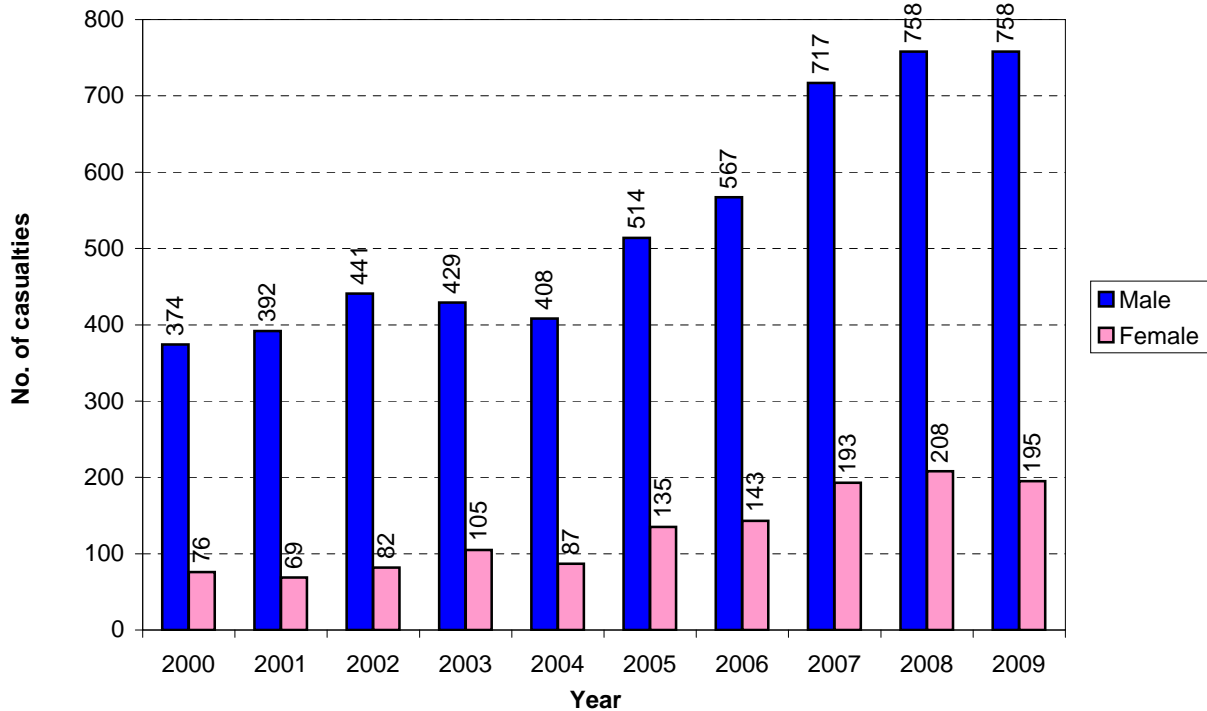
**Figure 3.2 Road user casualties - rural  
VRUs - Motorcyclists (2005-2009)**



Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

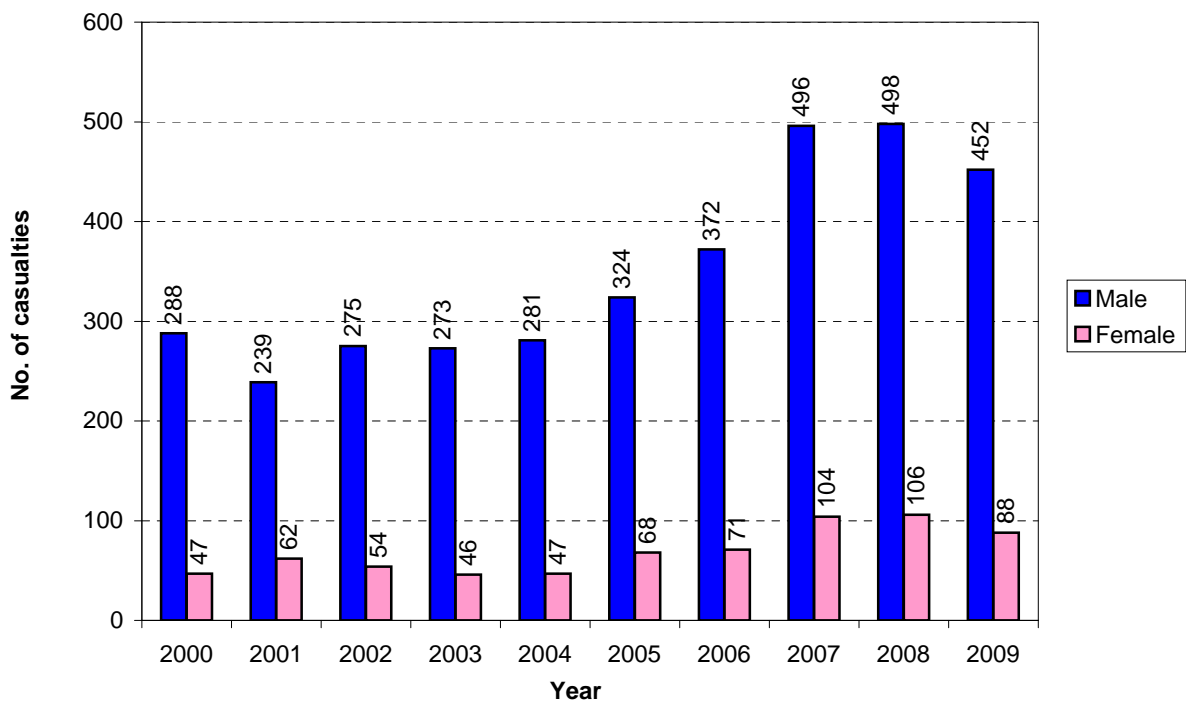


**Figure 3.3 Male/female casualties - urban  
VRUs - Motorcyclists**



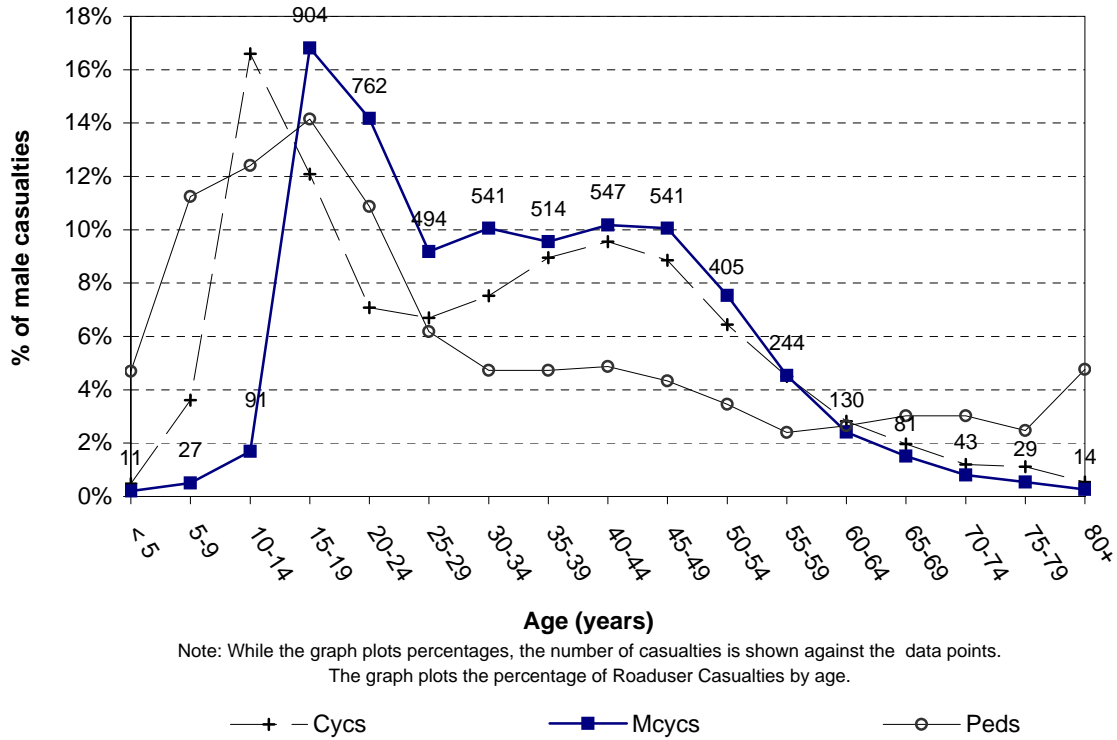
Note: This graph shows the number of male and female roadusers injured

**Figure 3.4 Male/female casualties - rural  
VRUs - Motorcyclists**

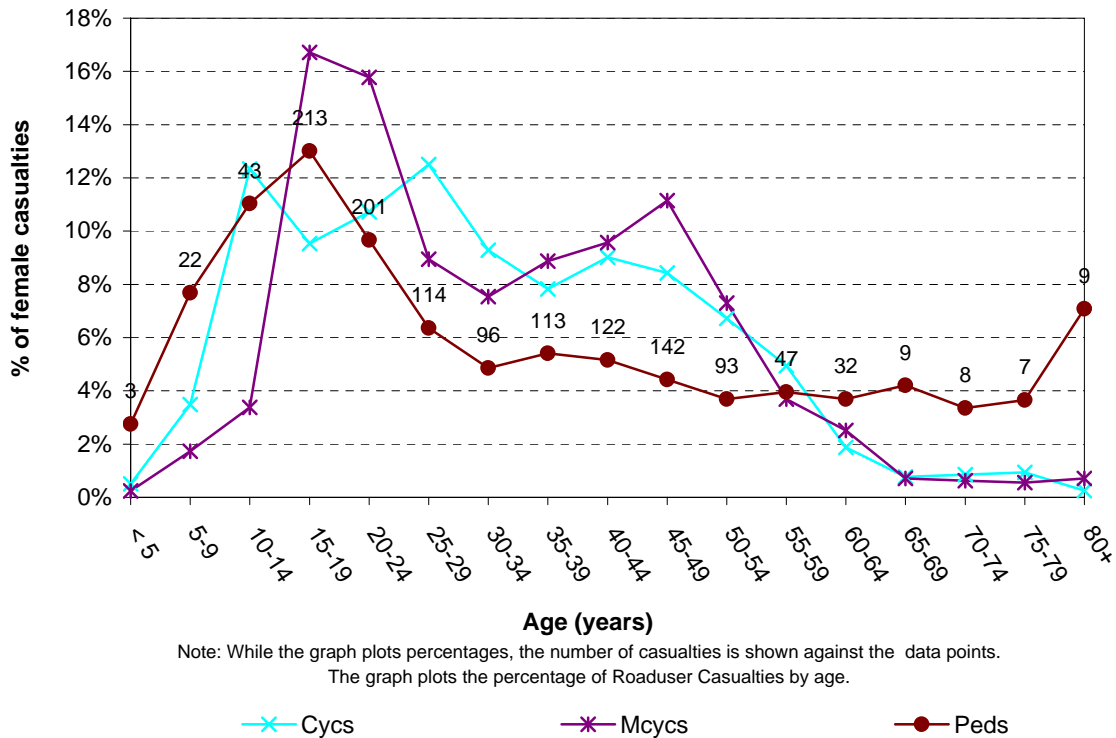


Note: This graph shows the number of male and female roadusers injured

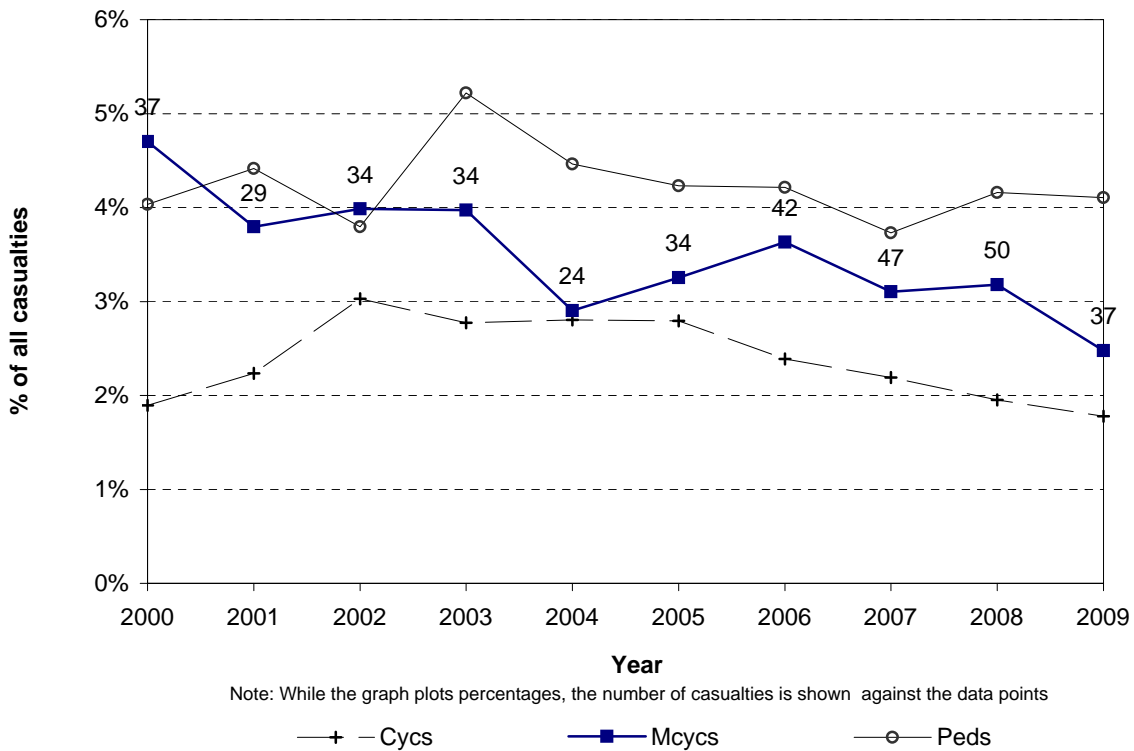
**Figure 3.5 Male casualties by age  
VRUs - Motorcyclists (2005-2009)**



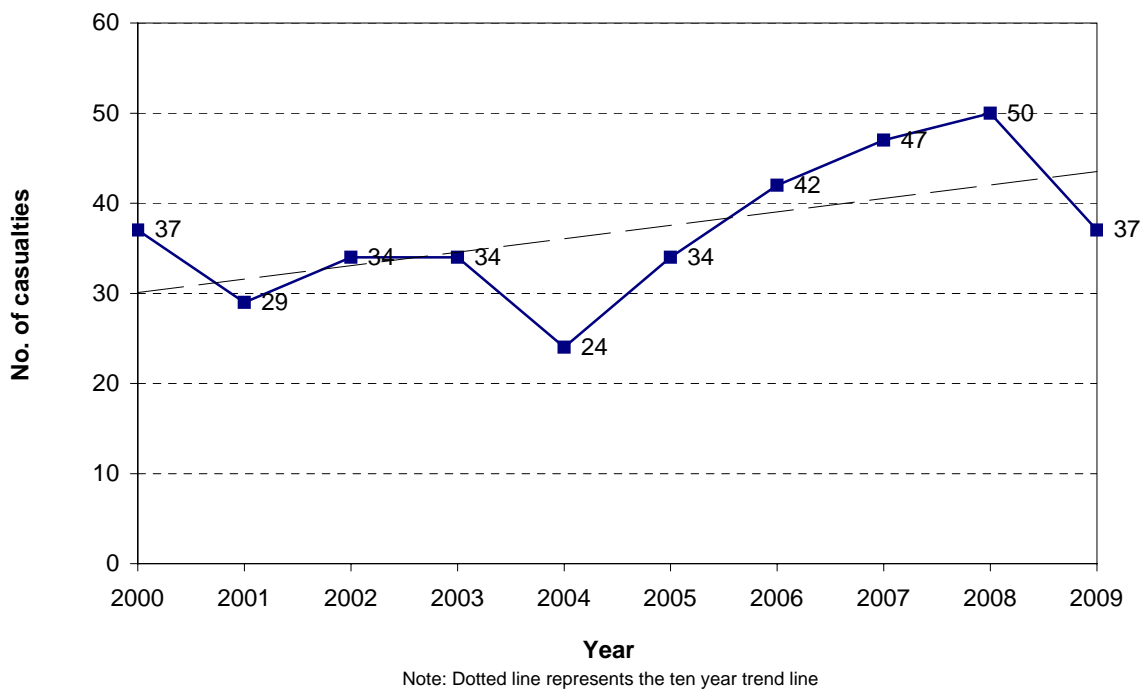
**Figure 3.6 Female casualties by age  
VRUs - Motorcyclists (2005-2009)**



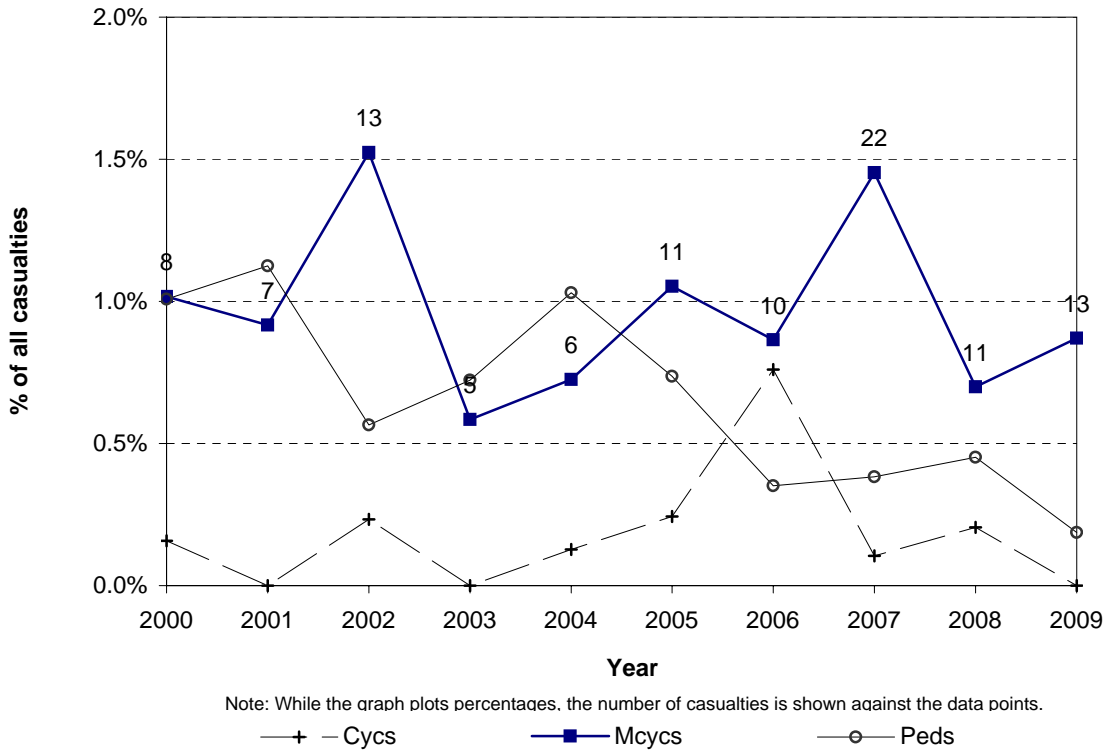
**Figure 3.7 Car/van driver casualties  
VRUs - Motorcyclists**



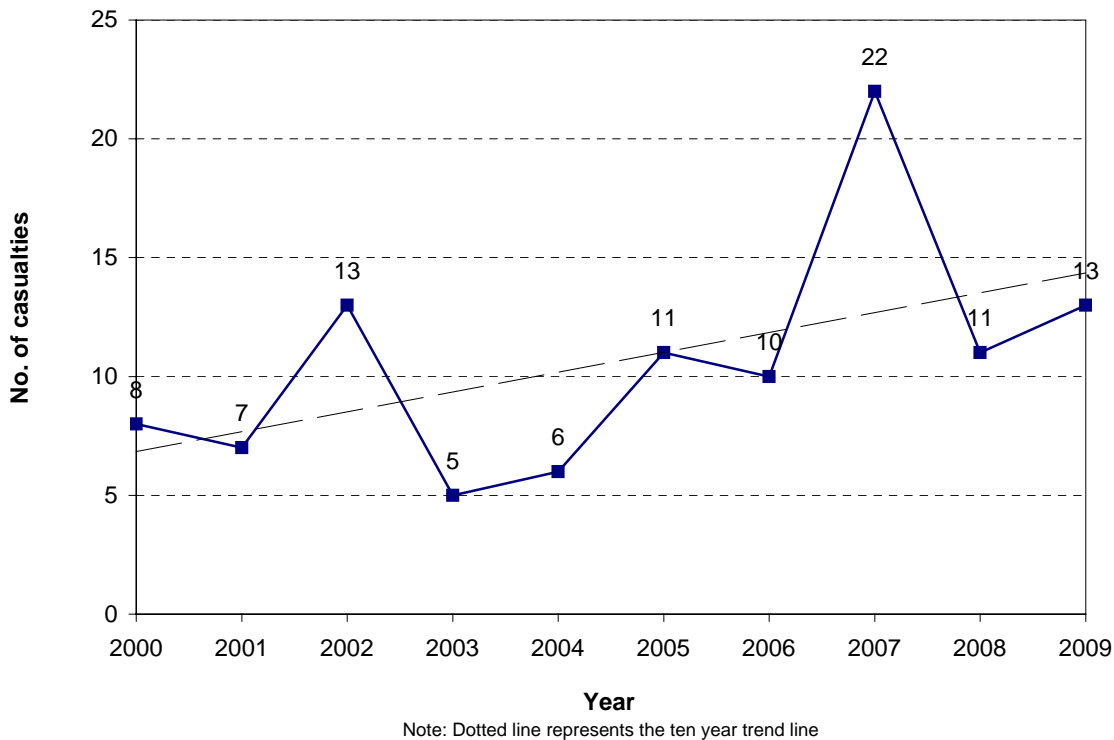
**Figure 3.8 Car/van driver casualties  
VRUs - Motorcyclists**



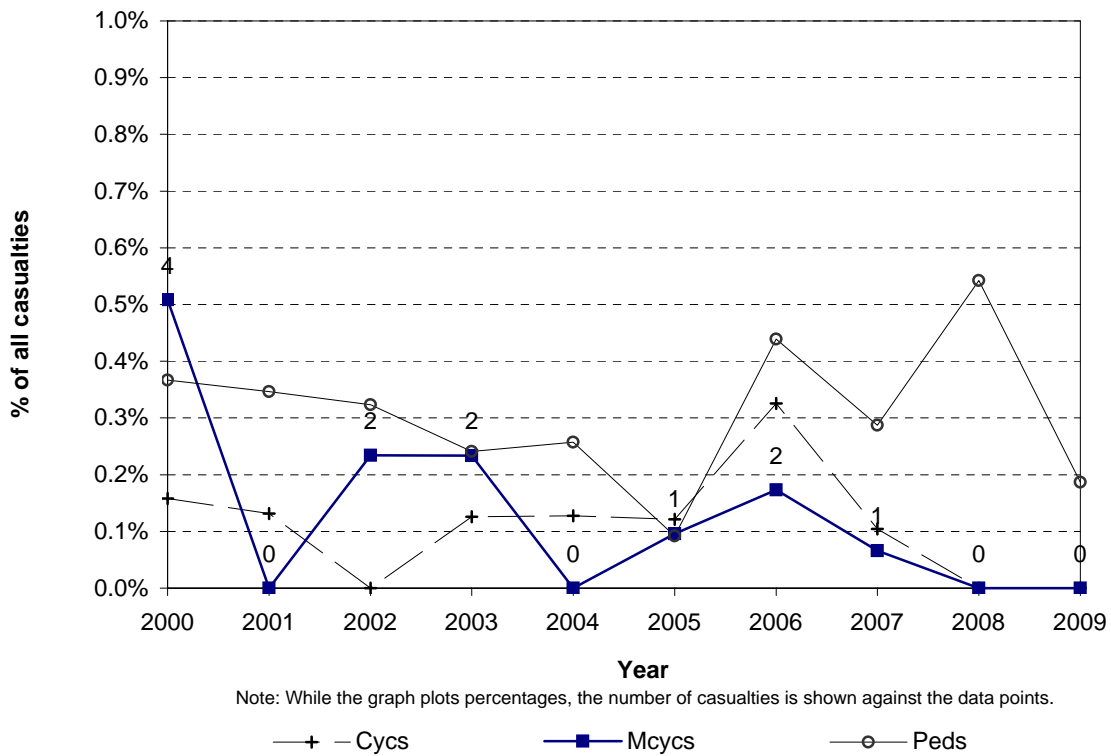
**Figure 3.9 Car/van passenger casualties  
VRUs - Motorcyclists**



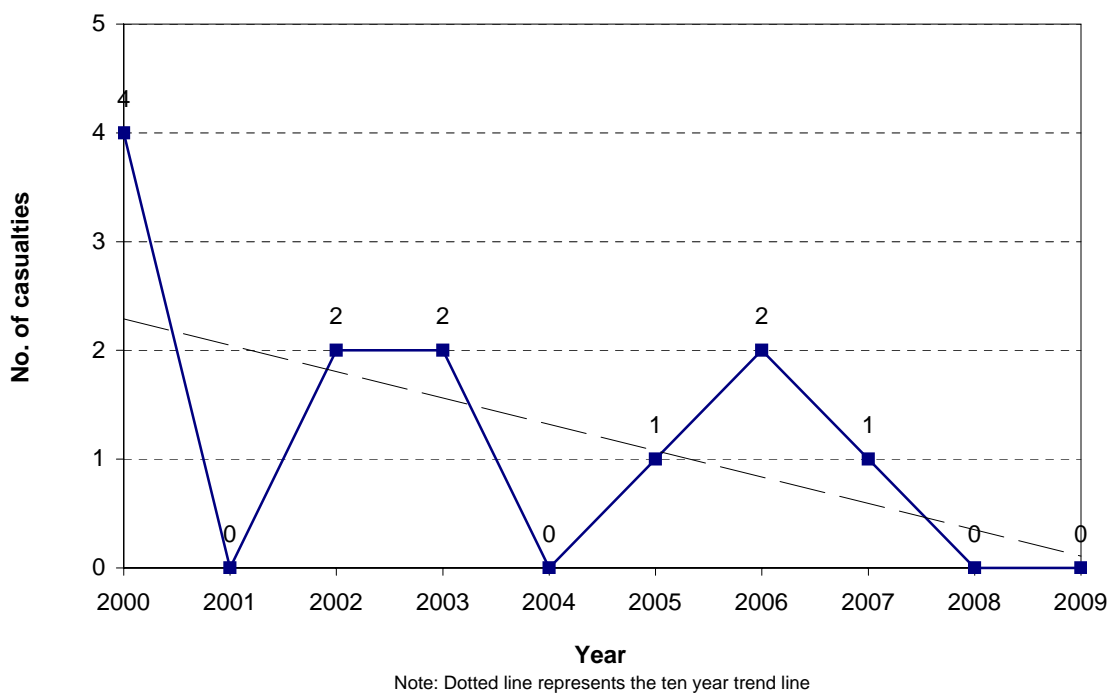
**Figure 3.10 Car/van passenger casualties  
VRUs - Motorcyclists**

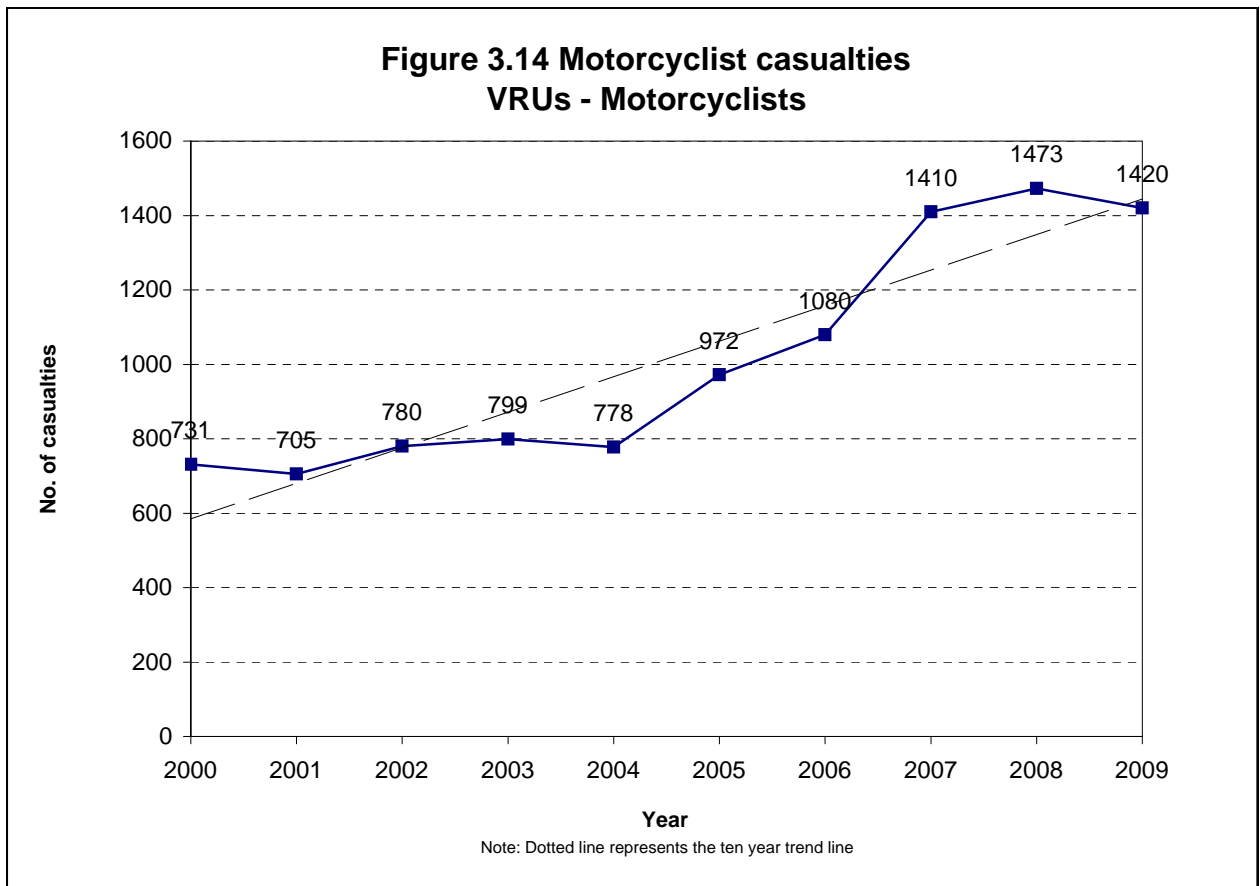
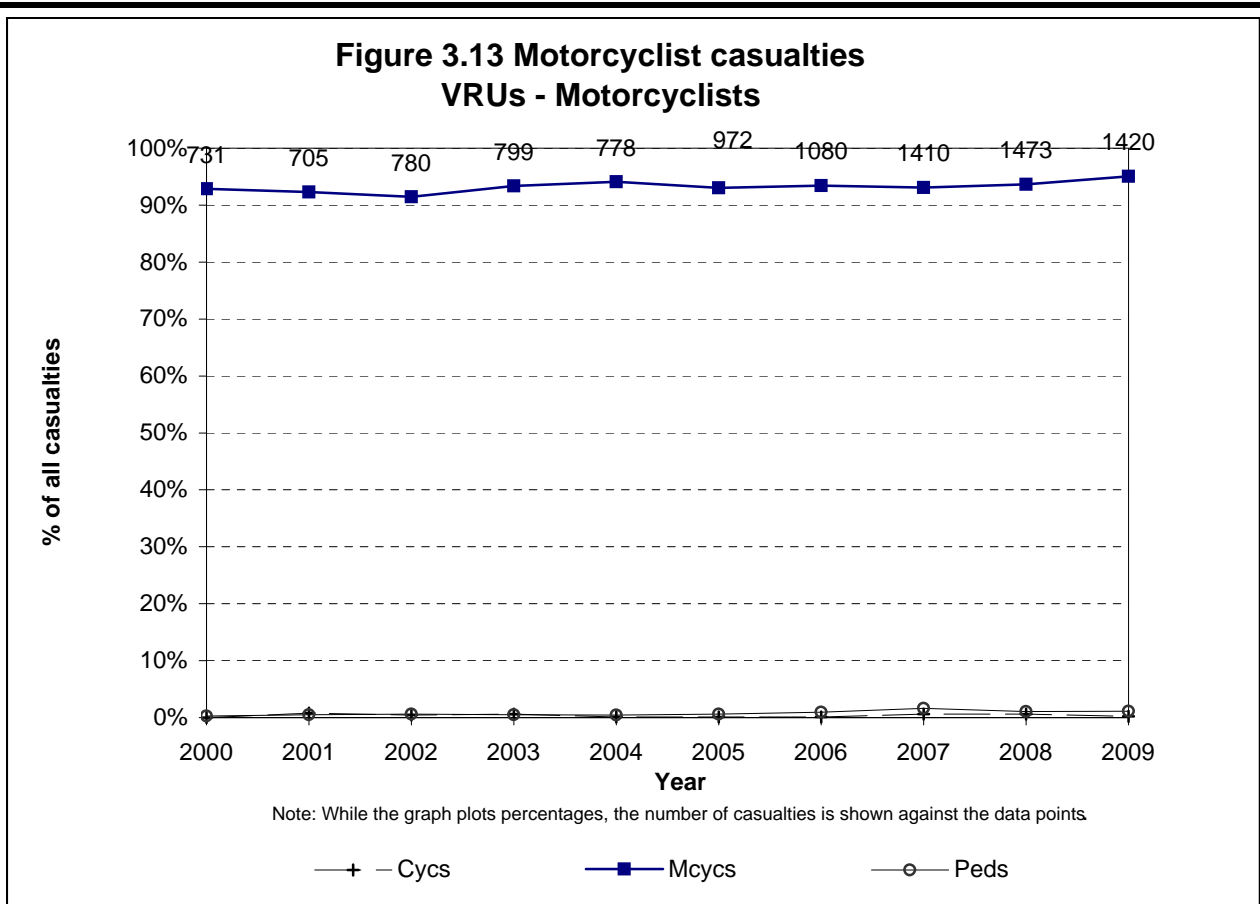


**Figure 3.11 Heavy vehicle casualties  
VRUs - Motorcyclists**

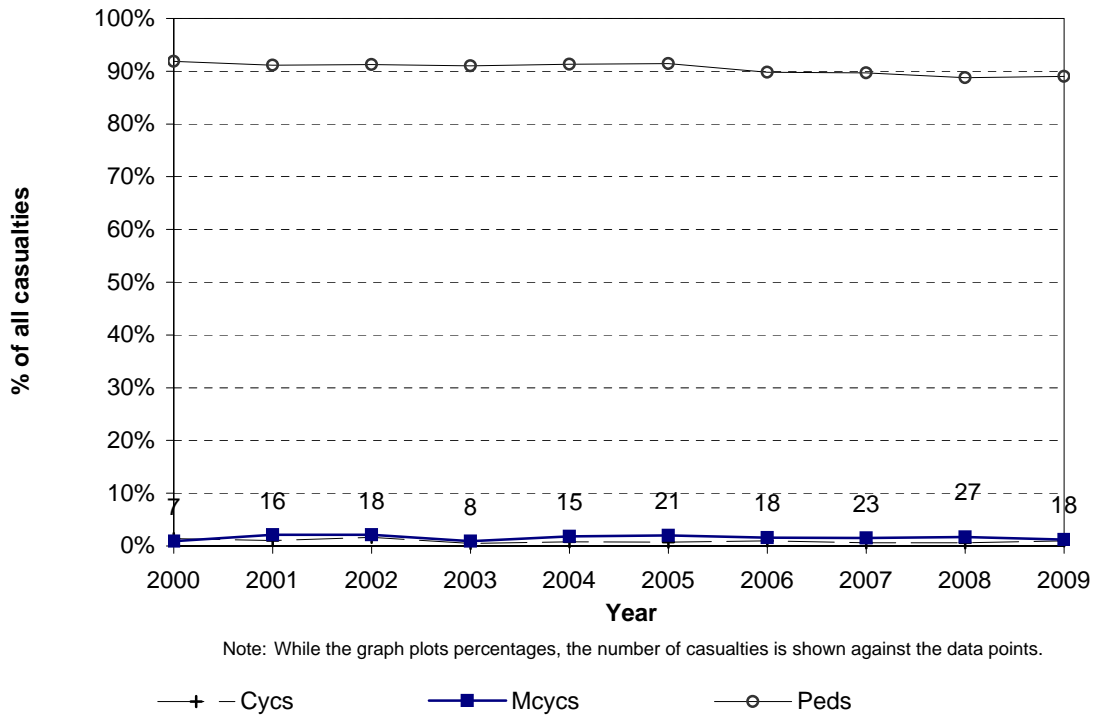


**Figure 3.12 Heavy vehicle casualties  
VRUs - Motorcyclists**

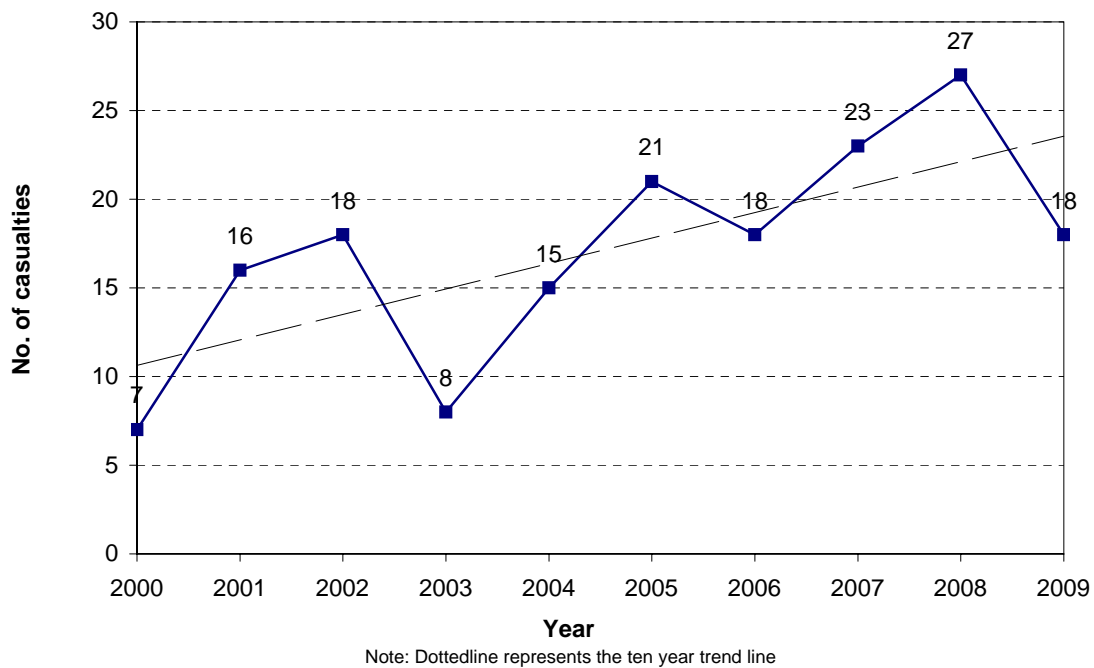




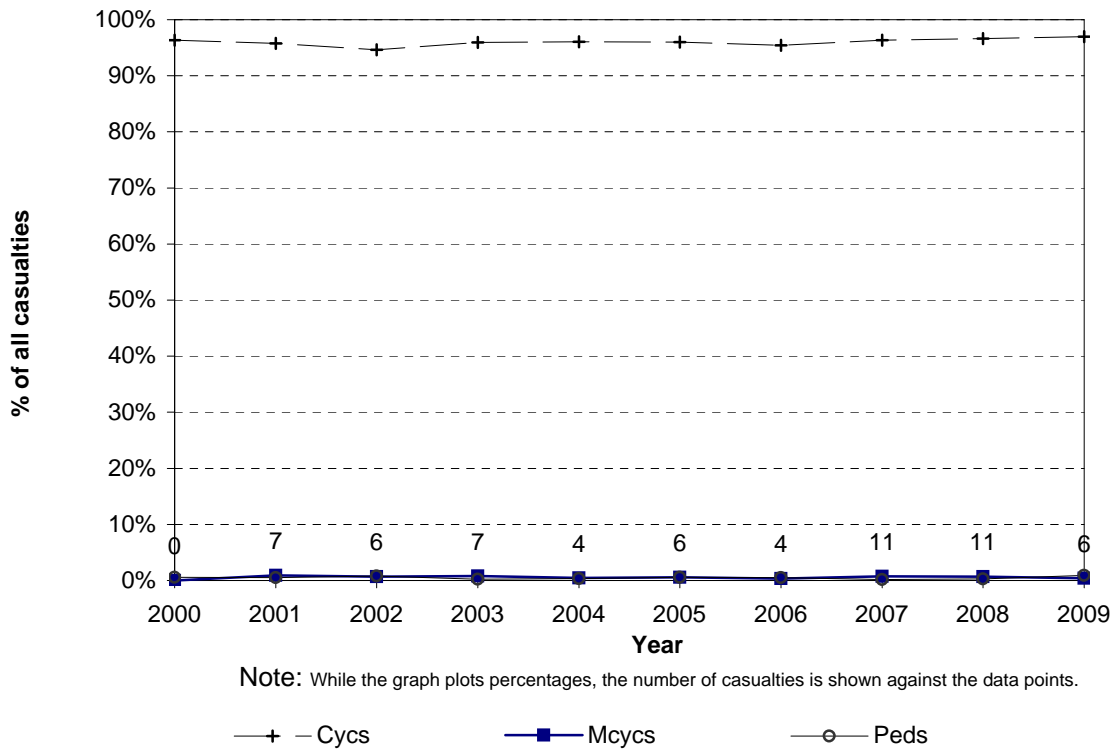
**Figure 3.15 Pedestrian casualties  
VRUs - Motorcyclists**



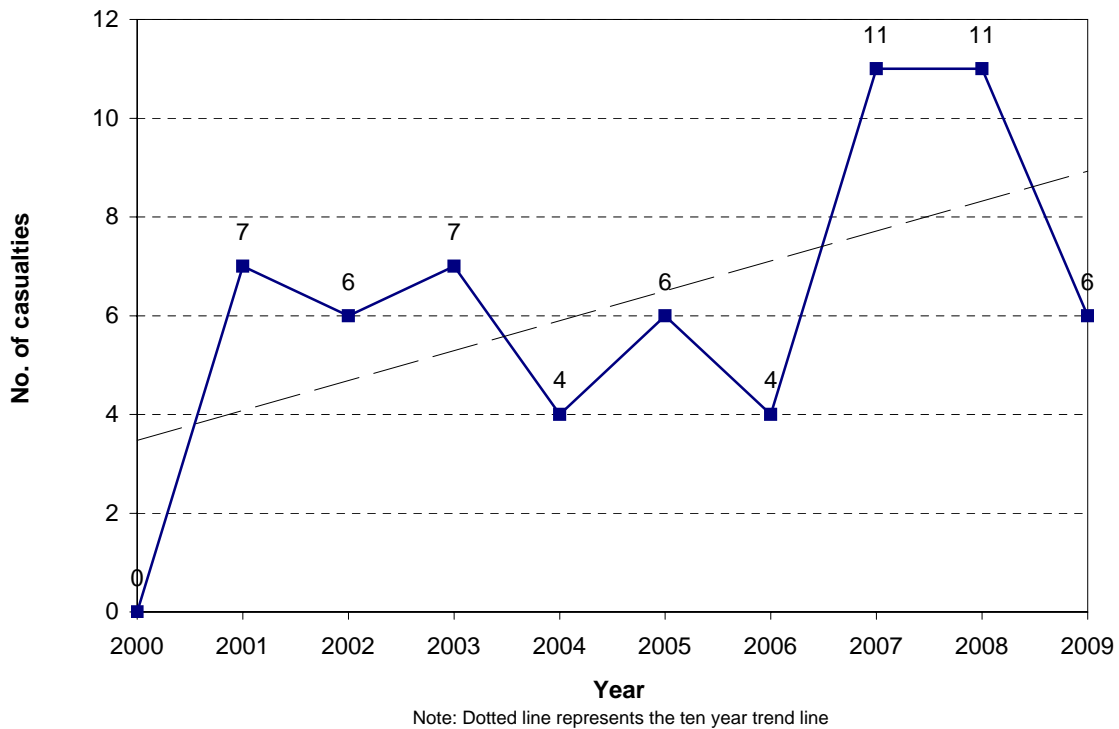
**Figure 3.16 Pedestrian casualties  
VRUs - Motorcyclists**



**Figure 3.17 Cyclist casualties  
VRUs - Motorcyclists**

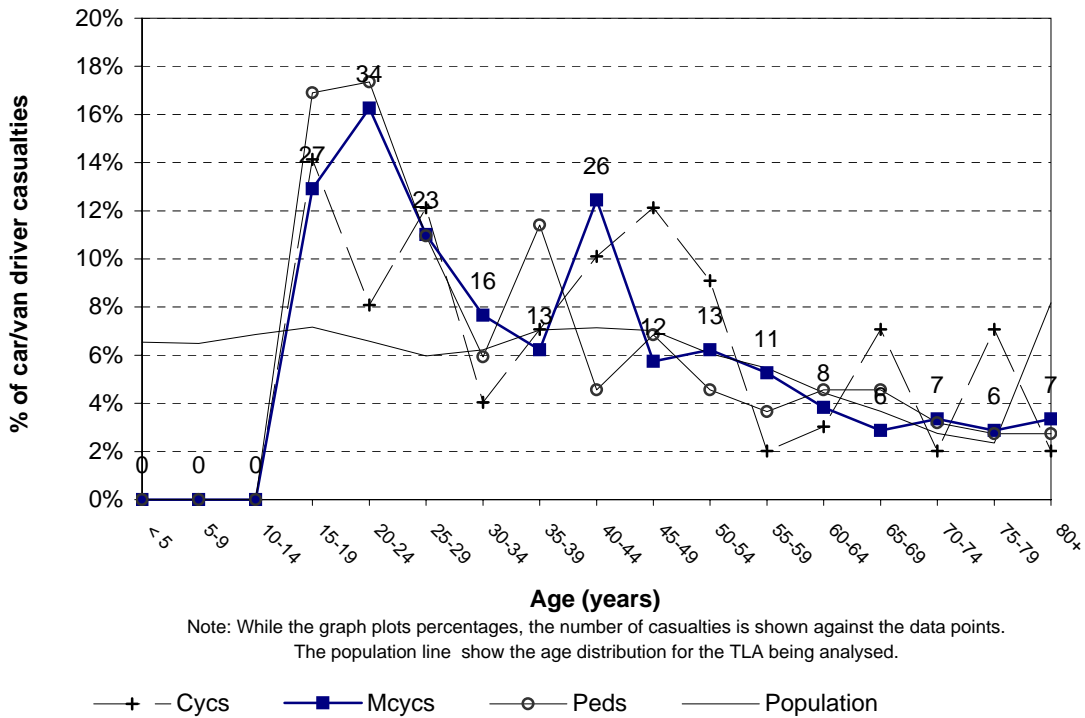


**Figure 3.18 Cyclist casualties  
VRUs - Motorcyclists**

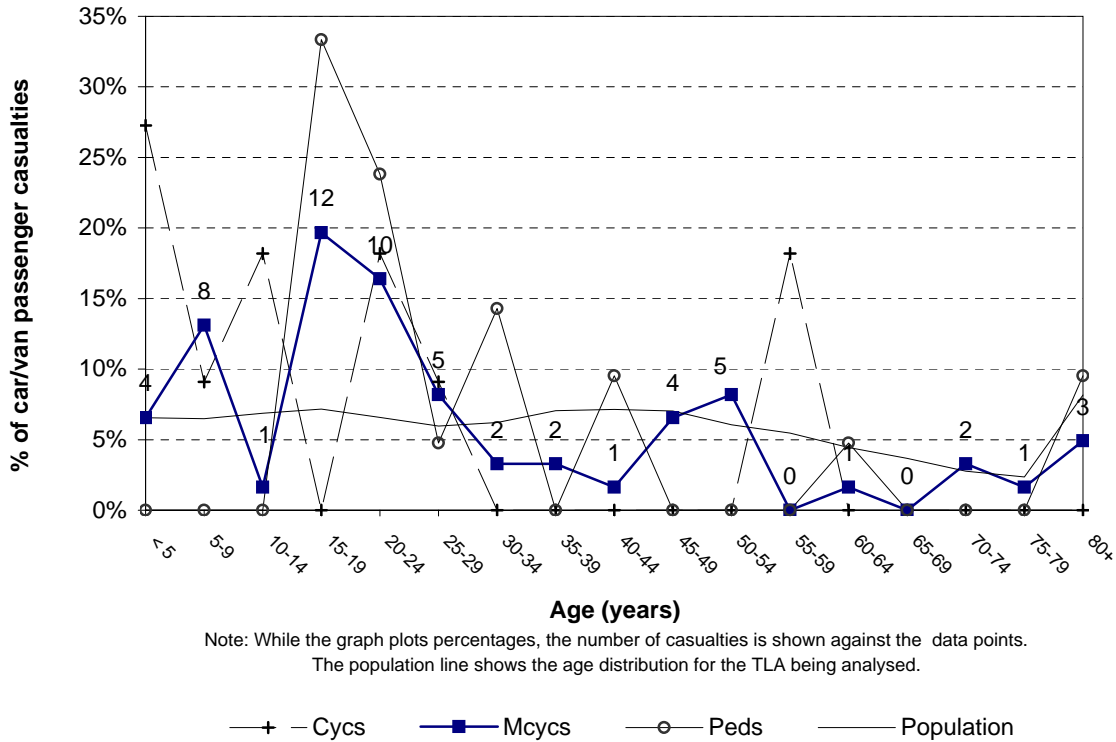




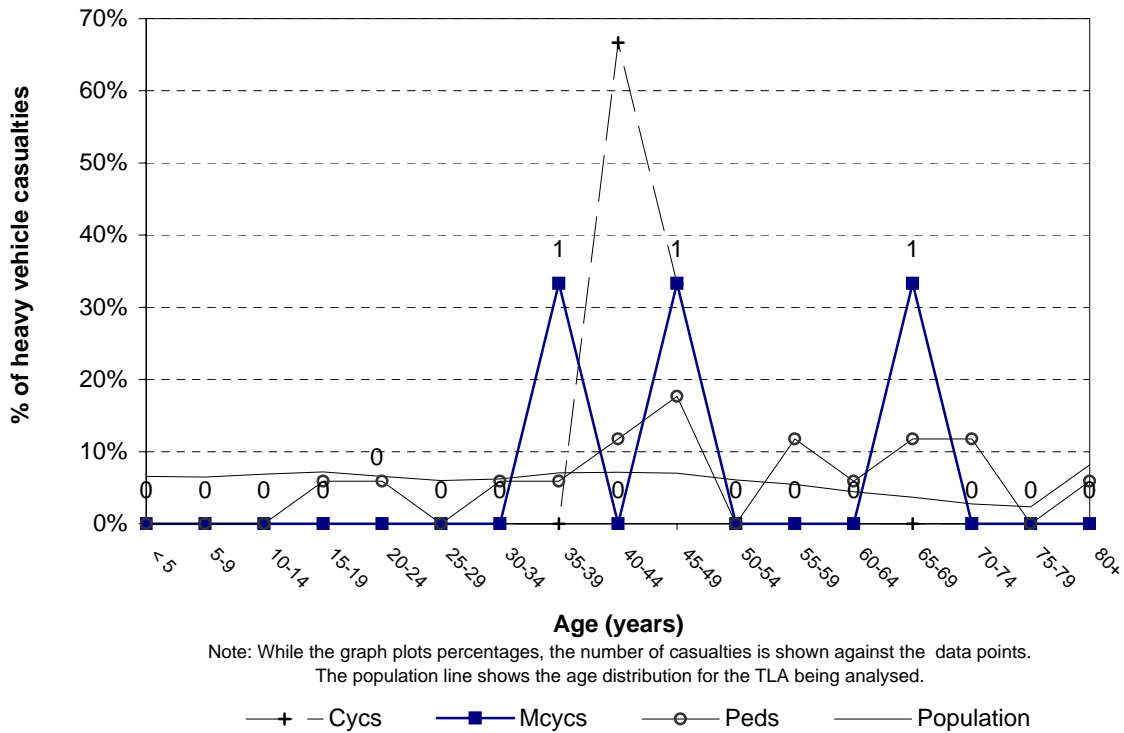
**Figure 3.19 Car/van driver casualty age VRUs - Motorcyclists (2005-2009)**



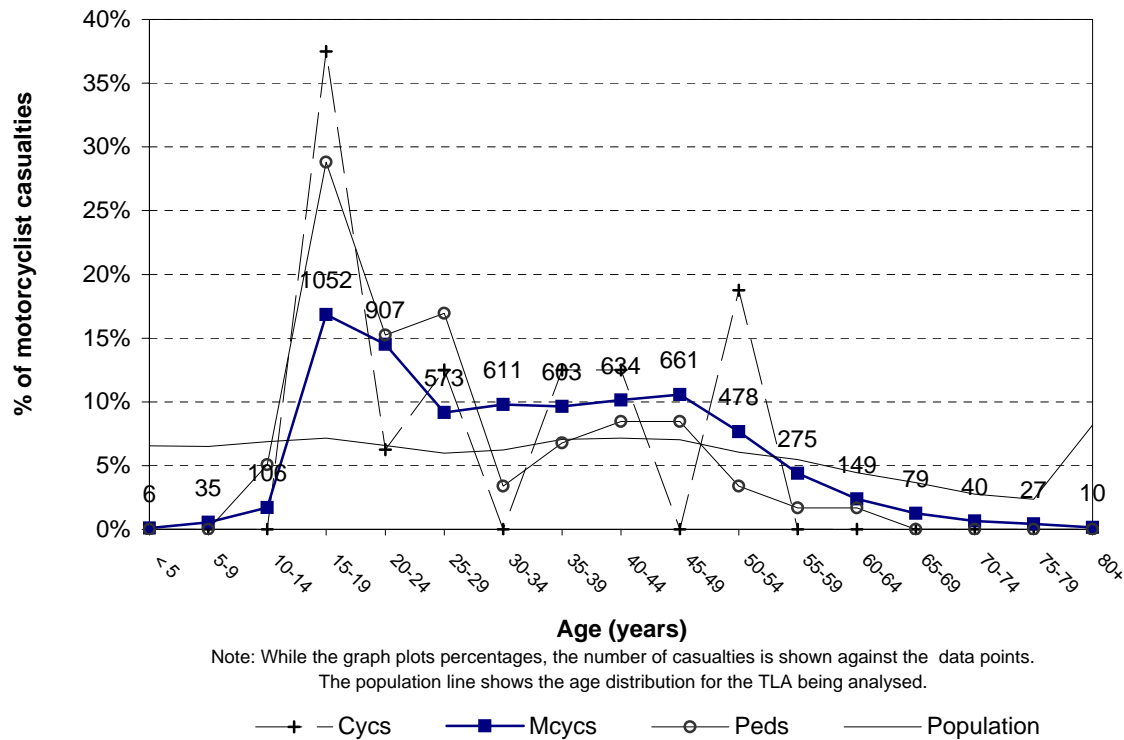
**Figure 3.20 Car/van passenger casualty age VRUs - Motorcyclists (2005-2009)**



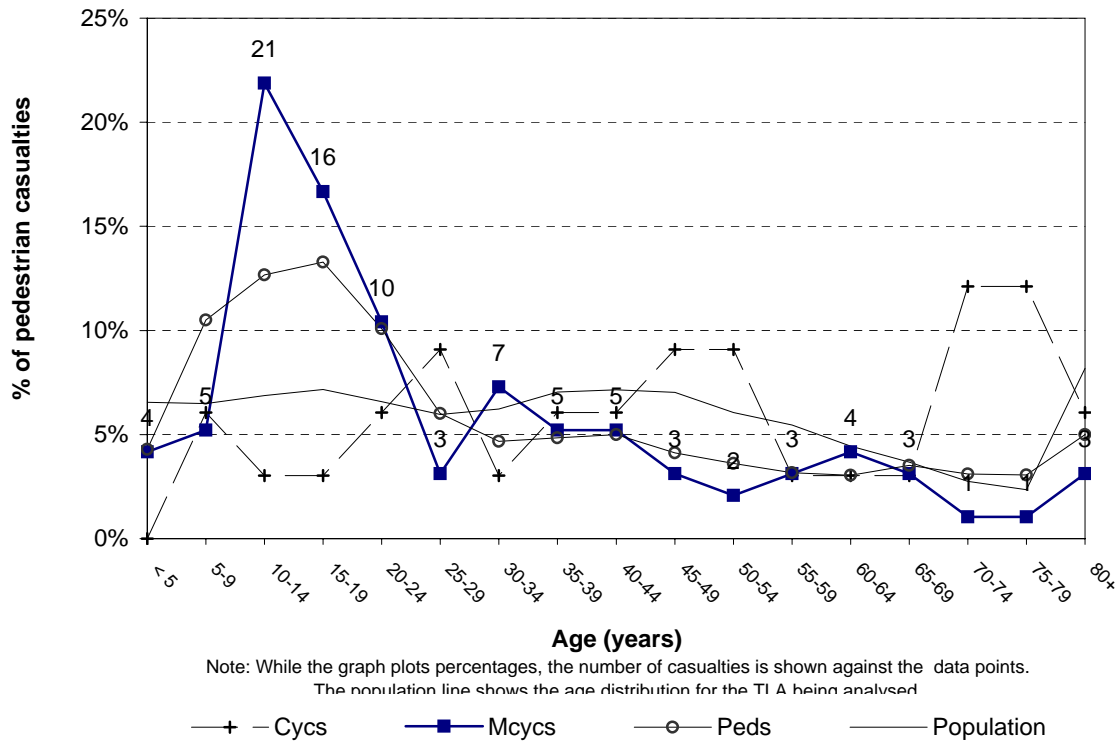
**Figure 3.21 Heavy vehicle casualty age  
VRUs - Motorcyclists (2005-2009)**



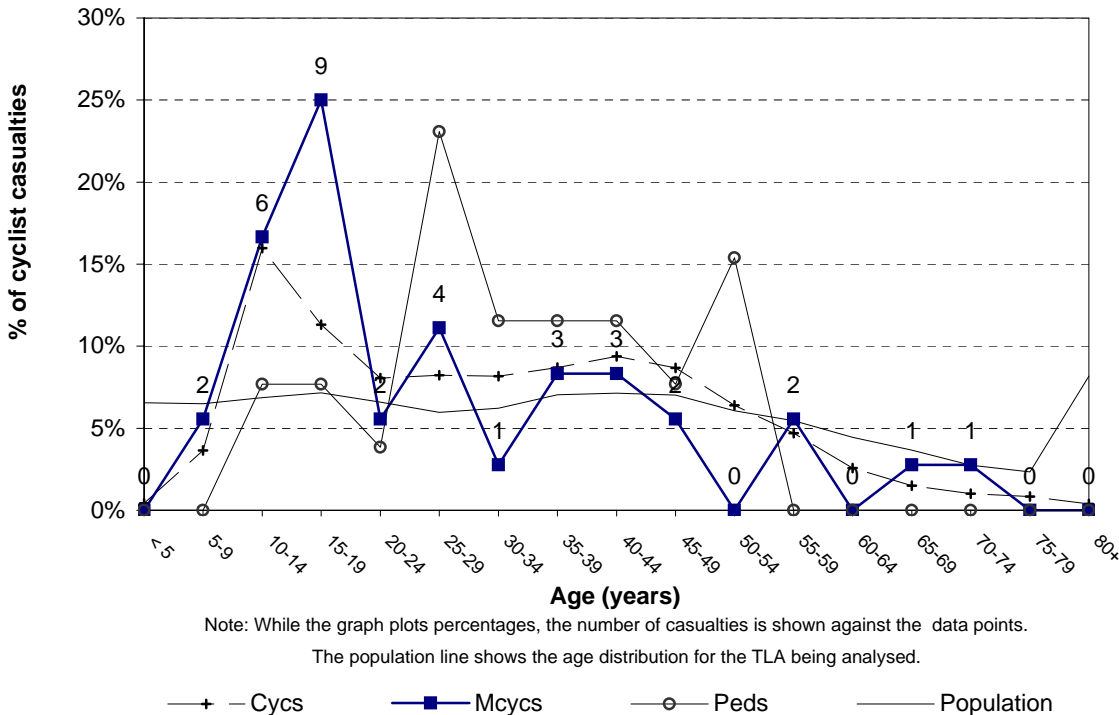
**Figure 3.22 Motorcyclist casualty age  
VRUs - Motorcyclists (2005-2009)**



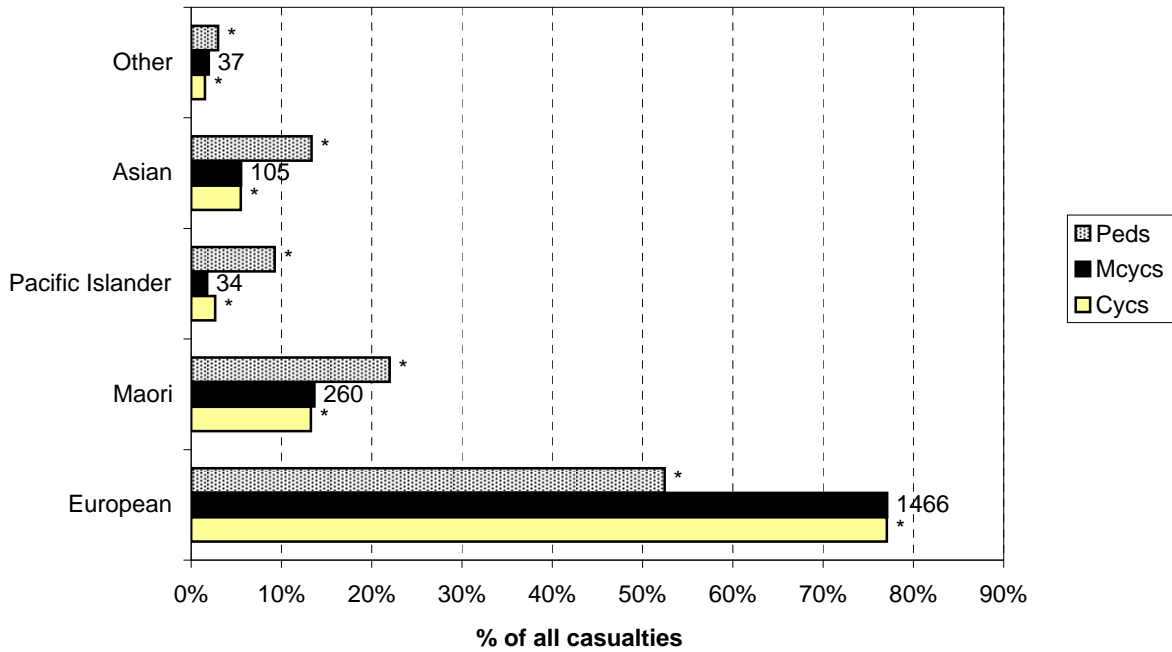
**Figure 3.23 Pedestrian casualty age VRUs - Motorcyclists (2005-2009)**



**Figure 3.24 Cyclist casualty age VRUs - Motorcyclists (2005-2009)**

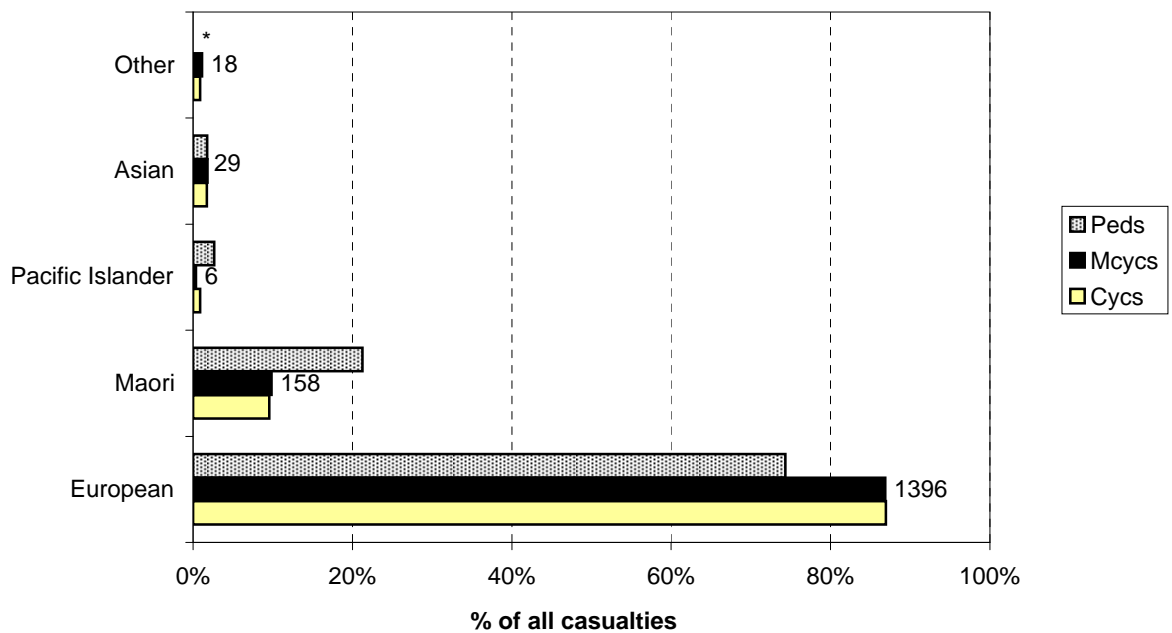


**Figure 3.25 Casualty ethnicity - urban  
VRUs - Motorcyclists (2005-2009)**



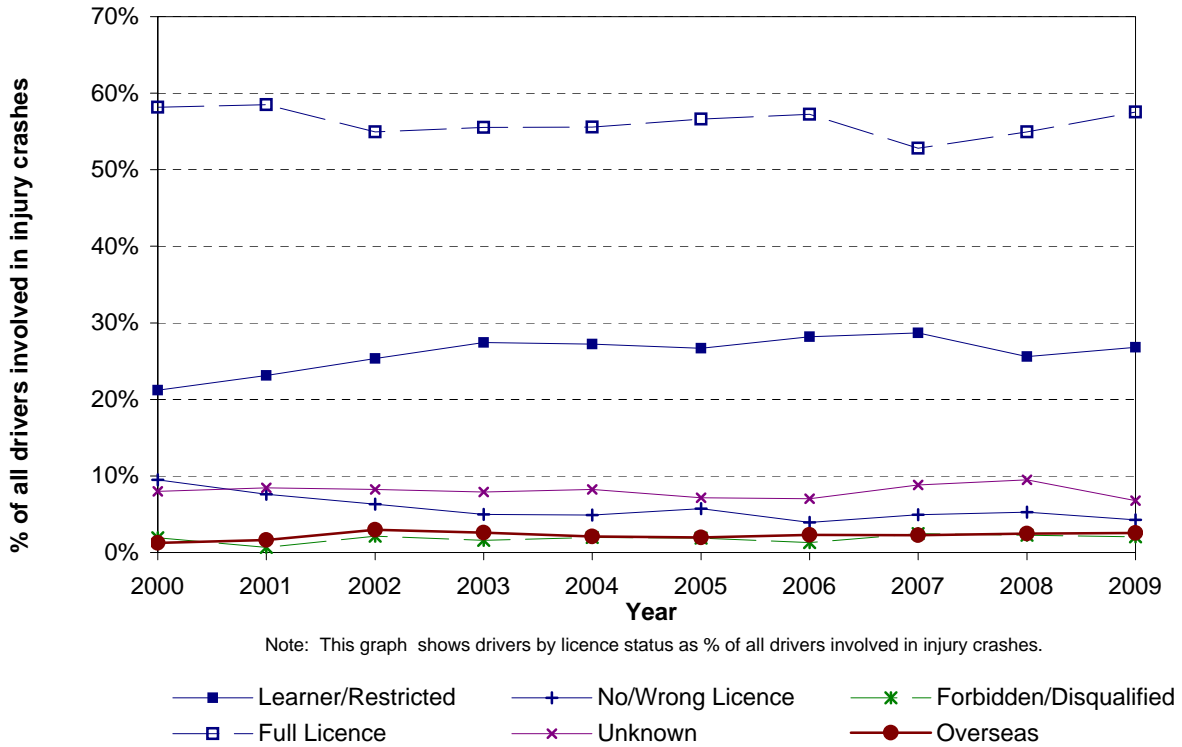
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.26 Casualty ethnicity - rural  
VRUs - Motorcyclists (2005-2009)**

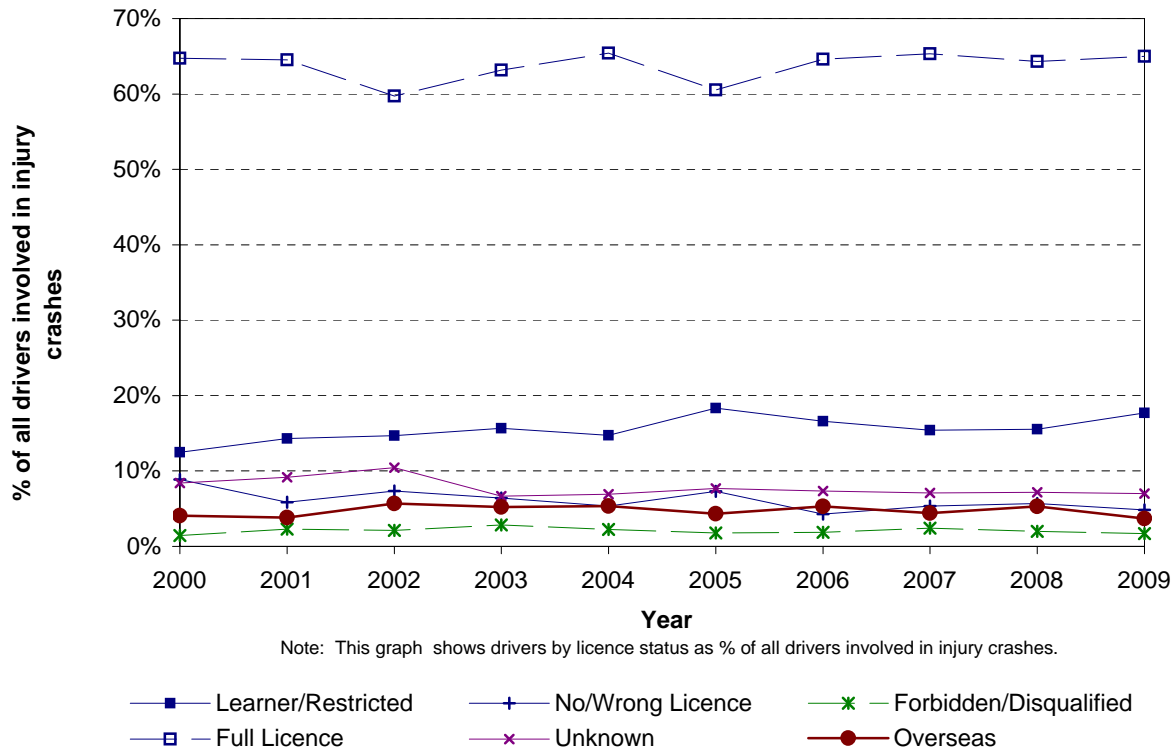


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.27 Licence status - urban  
VRUs - Motorcyclists**



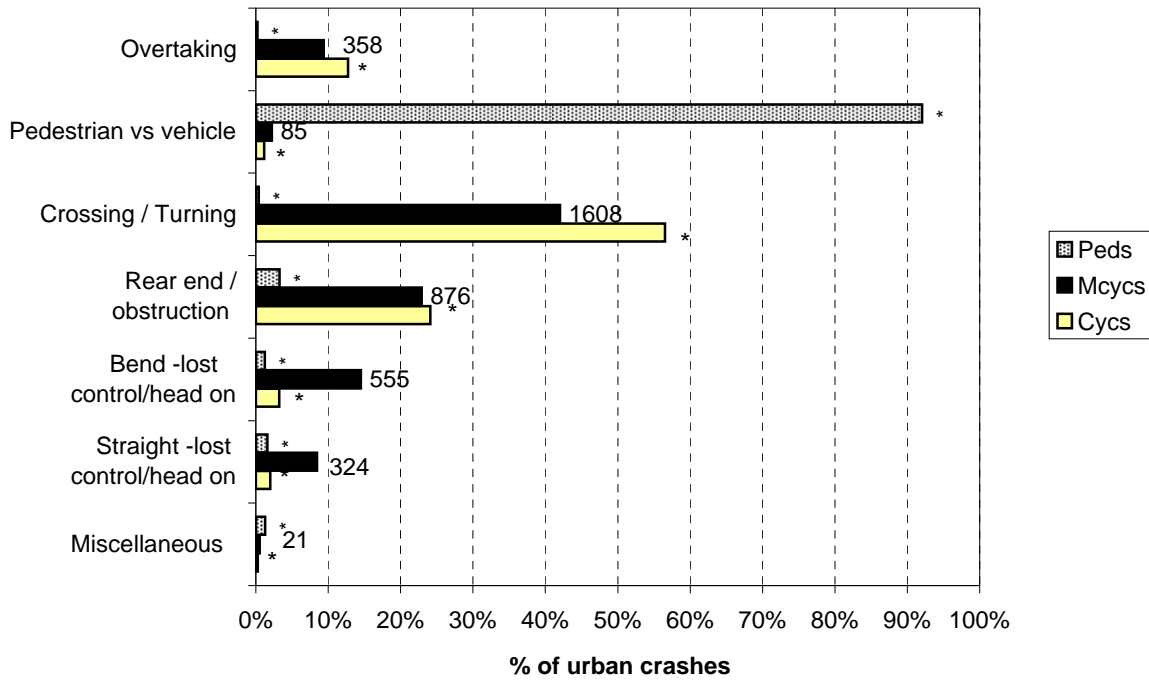
**Figure 3.28 Licence status - rural  
VRUs - Motorcyclists**



# *Crash Type Statistics*

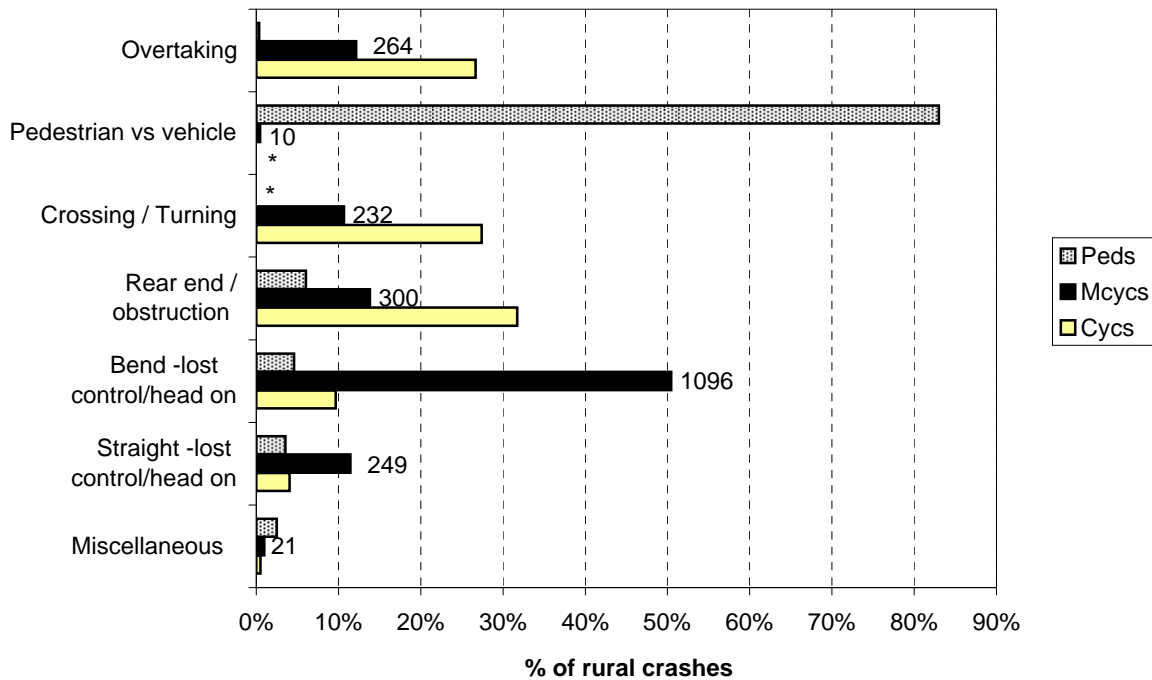


**Figure 4.1 Crash movement type - urban  
VRUs - Motorcyclists (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

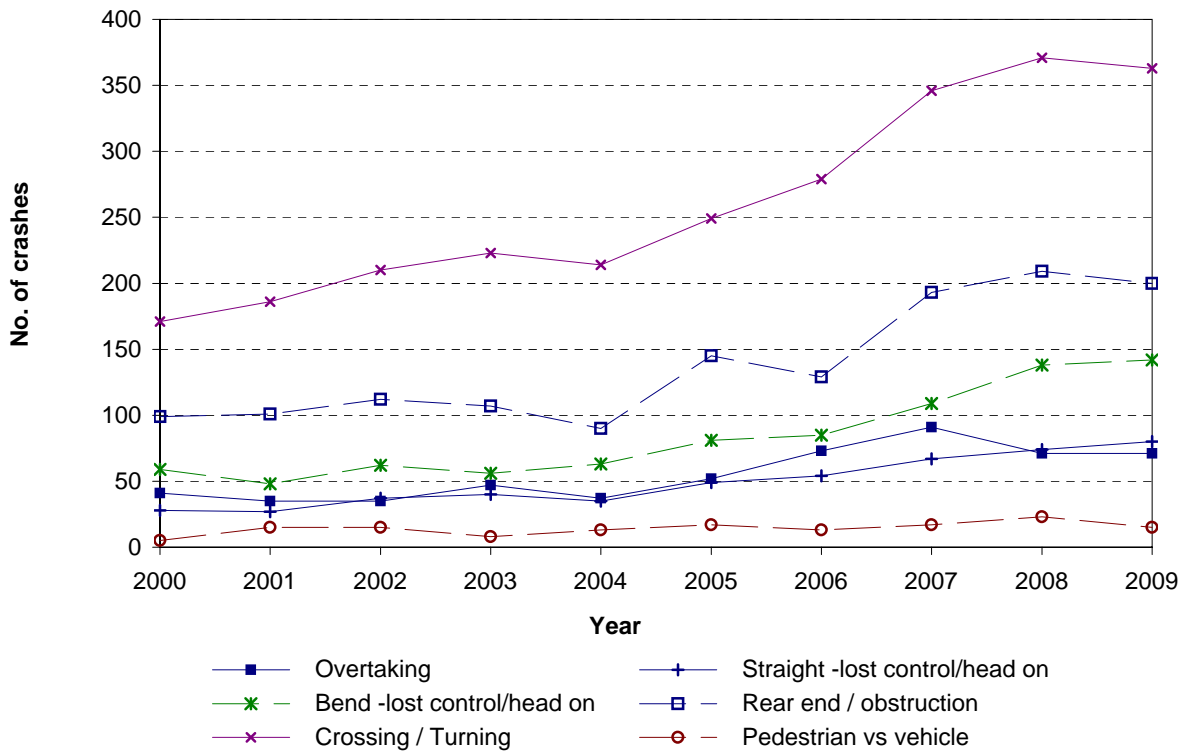
**Figure 4.2 Crash movement type - rural  
VRUs - Motorcyclists roads (2005-2009)**



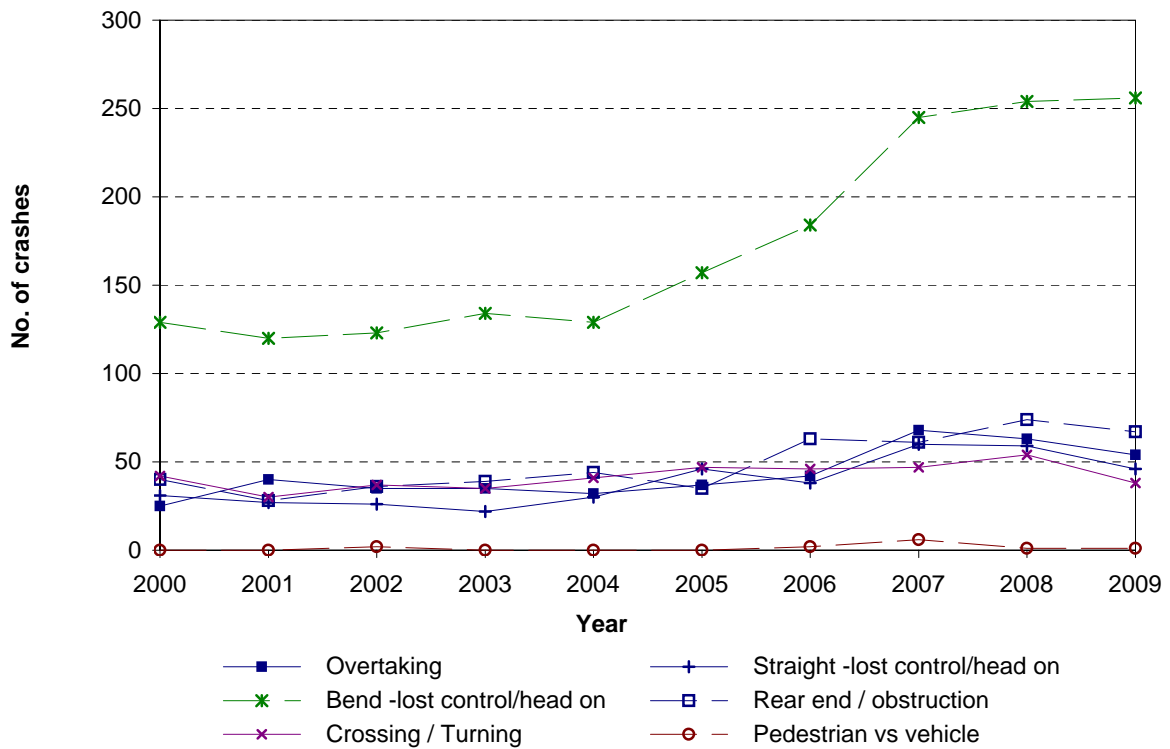
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



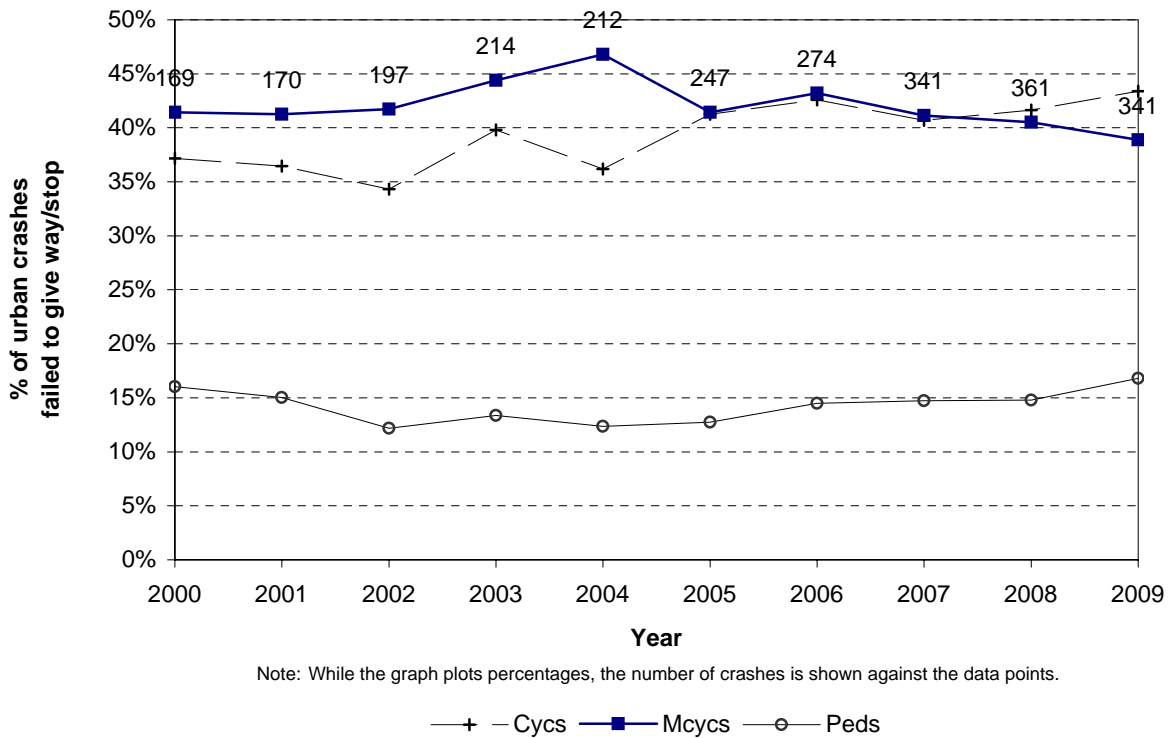
**Figure 4.3 Crash movement type - trends  
VRUs - Motorcyclists - urban roads**



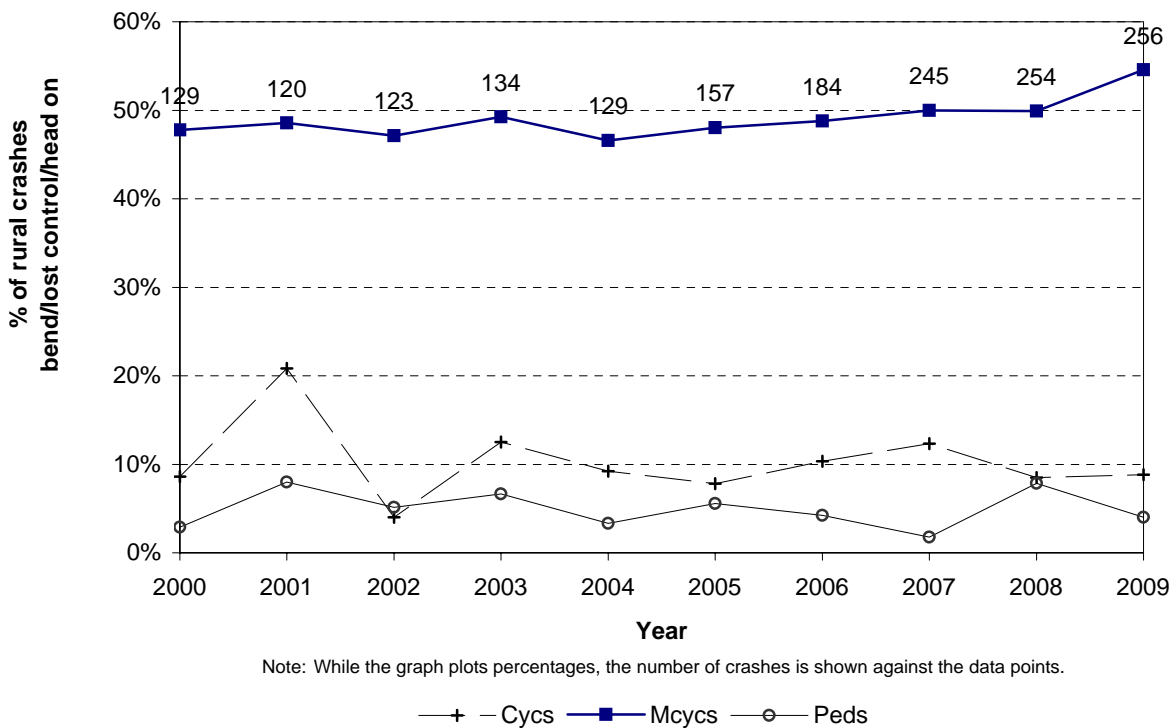
**Figure 4.4 Crash movement type - trends  
VRUs - Motorcyclists - rural roads**



**Figure 4.5 Failed to give way / stop  
VRUs - Motorcyclists - urban roads**



**Figure 4.6 Bend - lost control / head - on  
VRUs - Motorcyclists - rural roads**

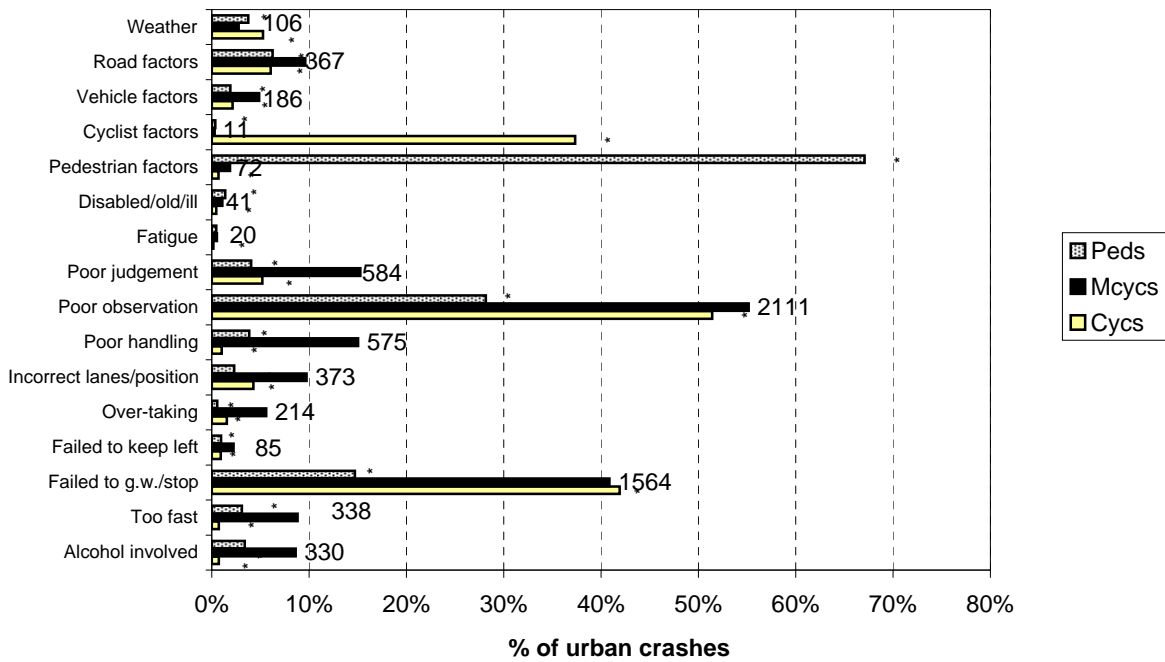




# *Crash Factor Statistics*

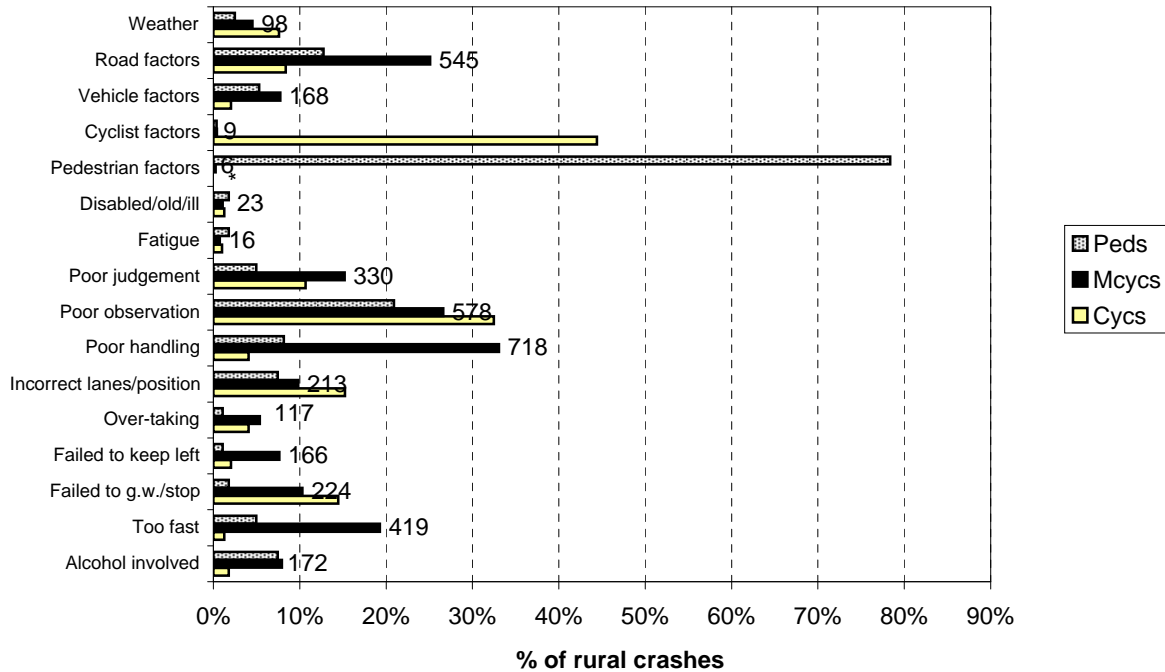


**Figure 5.1 Contributing factors - urban VRUs - Motorcyclists (2005-2009)**



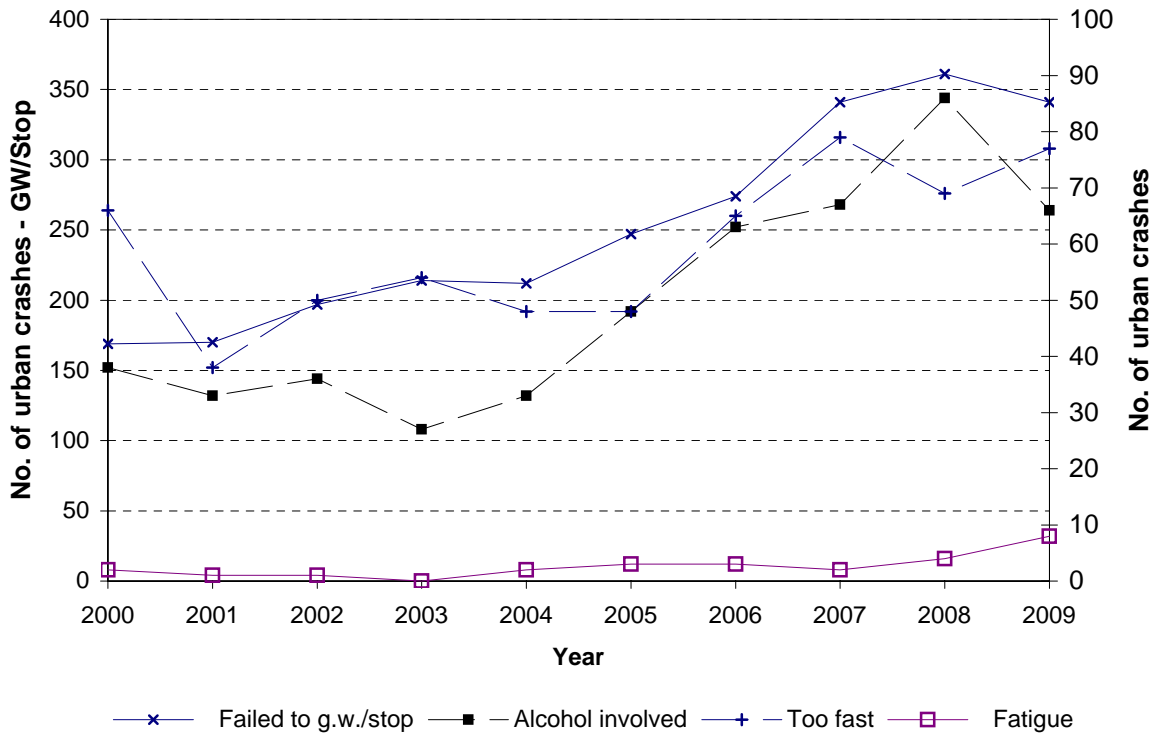
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 5.2 Contributing factors - rural VRUs - Motorcyclists (2005-2009)**

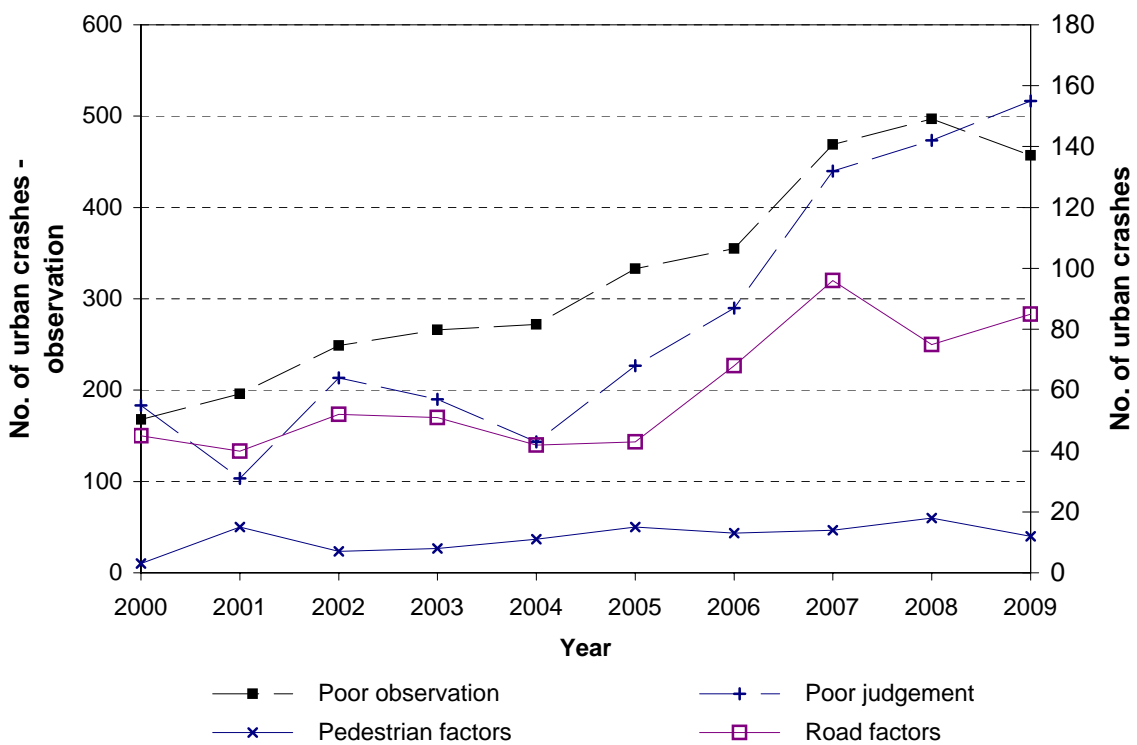


Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

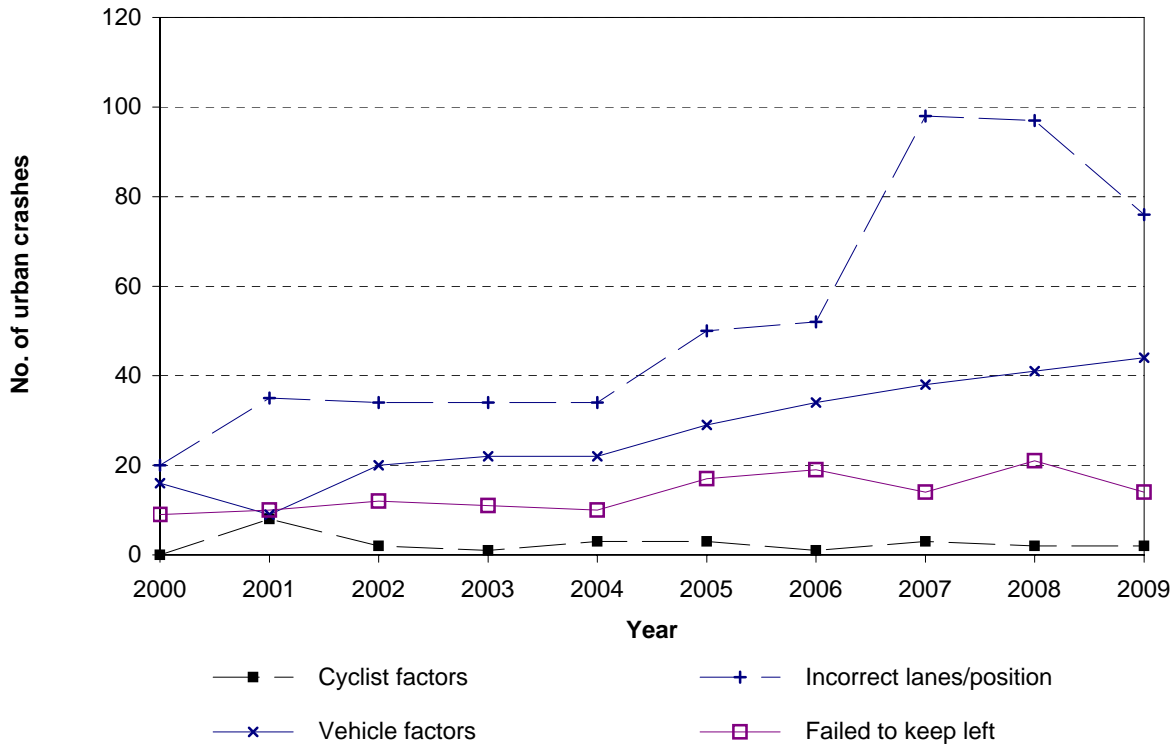
**Figure 5.3 Contributing factor trends  
VRUs - Motorcyclists - urban roads**



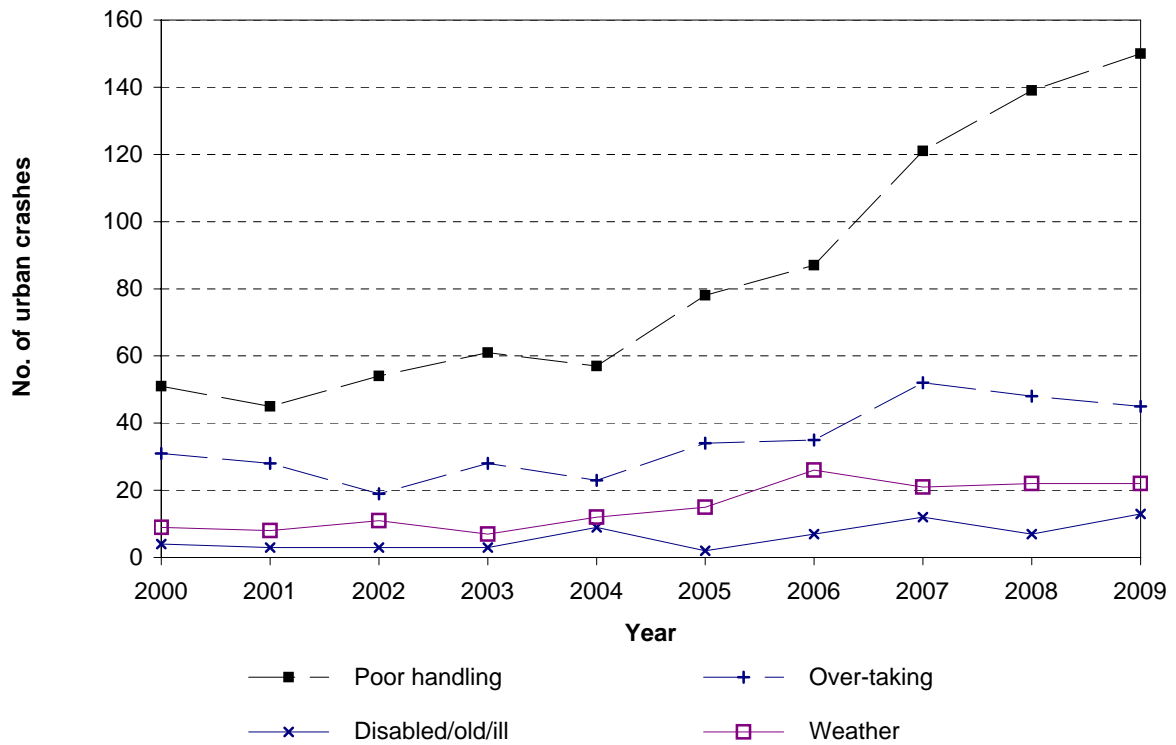
**Figure 5.4 Contributing factor trends  
VRUs - Motorcyclists - urban roads**



**Figure 5.5 Contributing factor trends  
VRUs - Motorcyclists - urban roads**

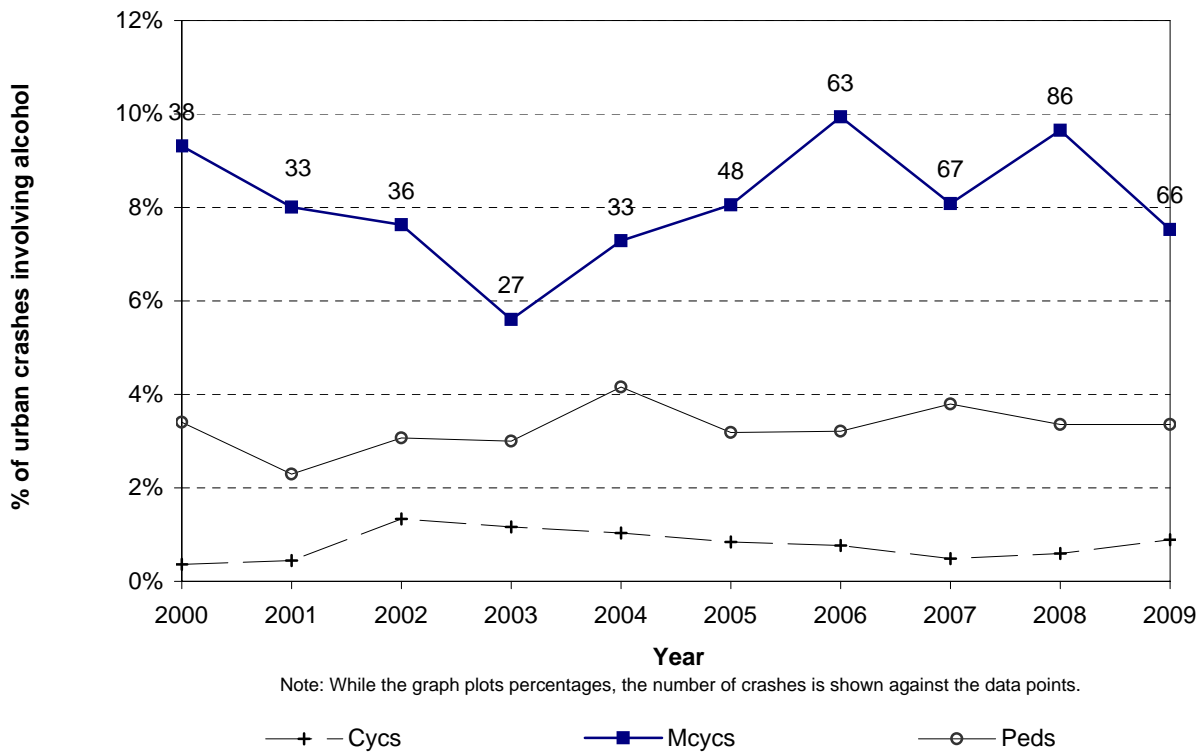


**Figure 5.6 Contributing factor trends  
VRUs - Motorcyclists - urban roads**

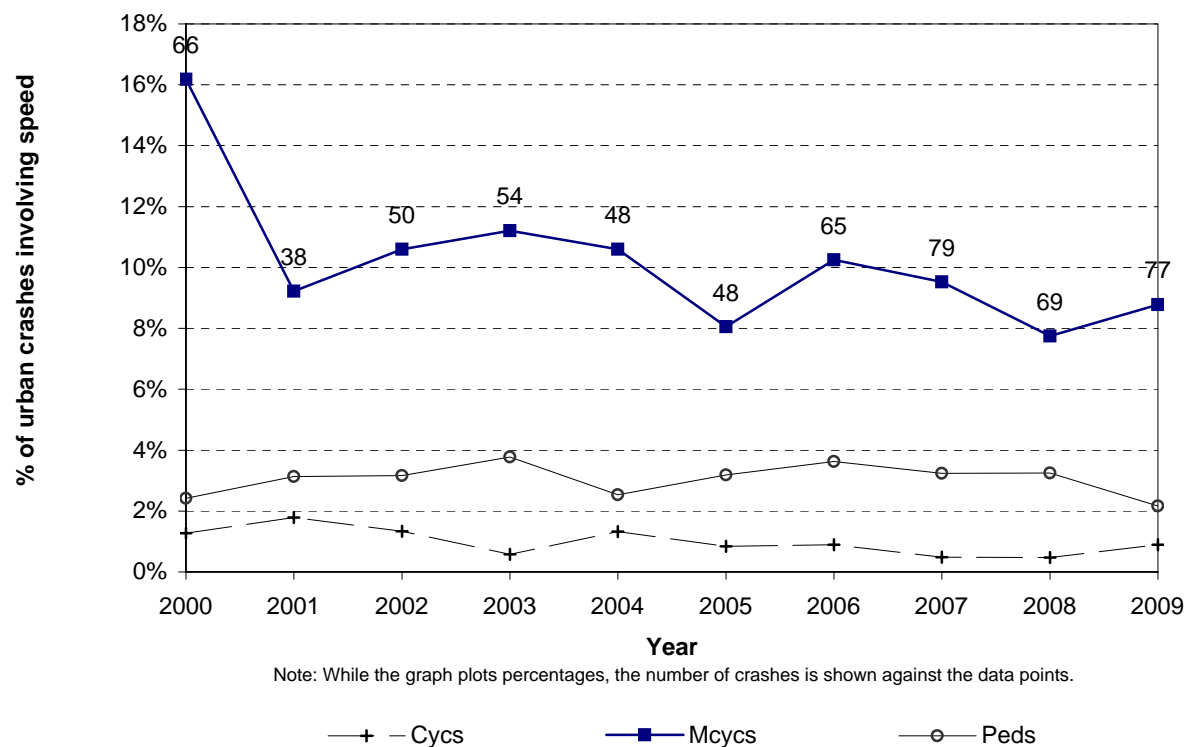




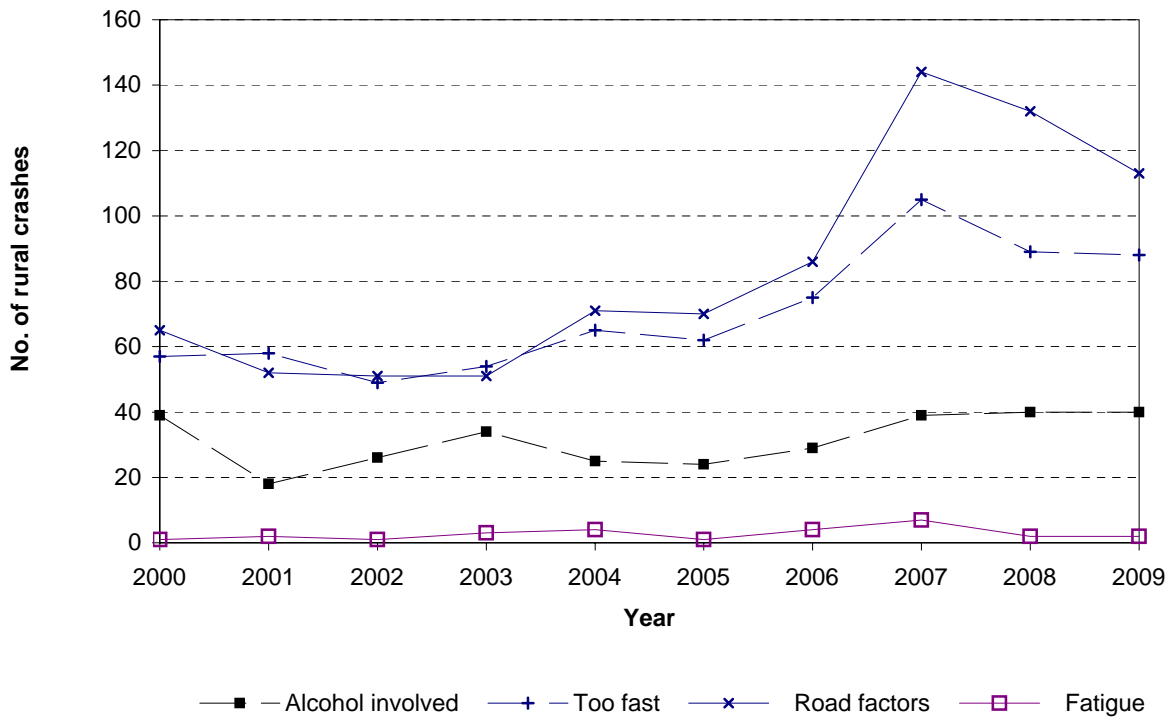
**Figure 5.7 Alcohol involved trend  
VRUs - Motorcyclists - urban roads**



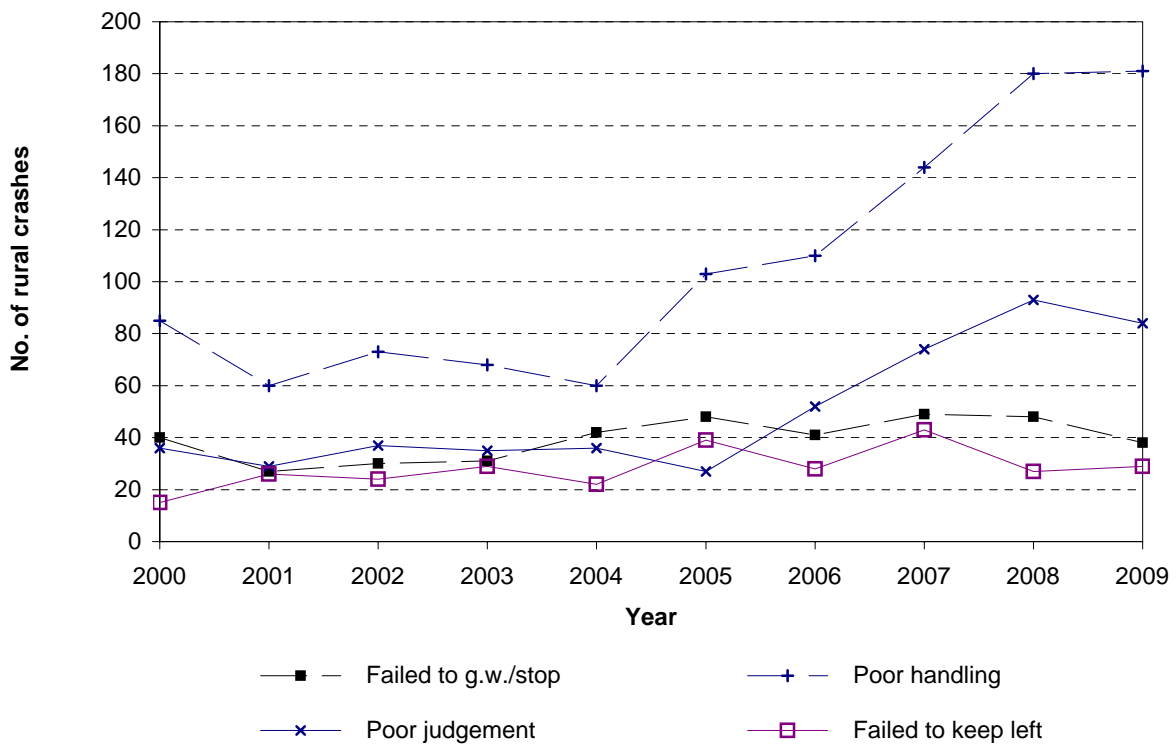
**Figure 5.8 Speed involved trend  
VRUs - Motorcyclists - urban roads**



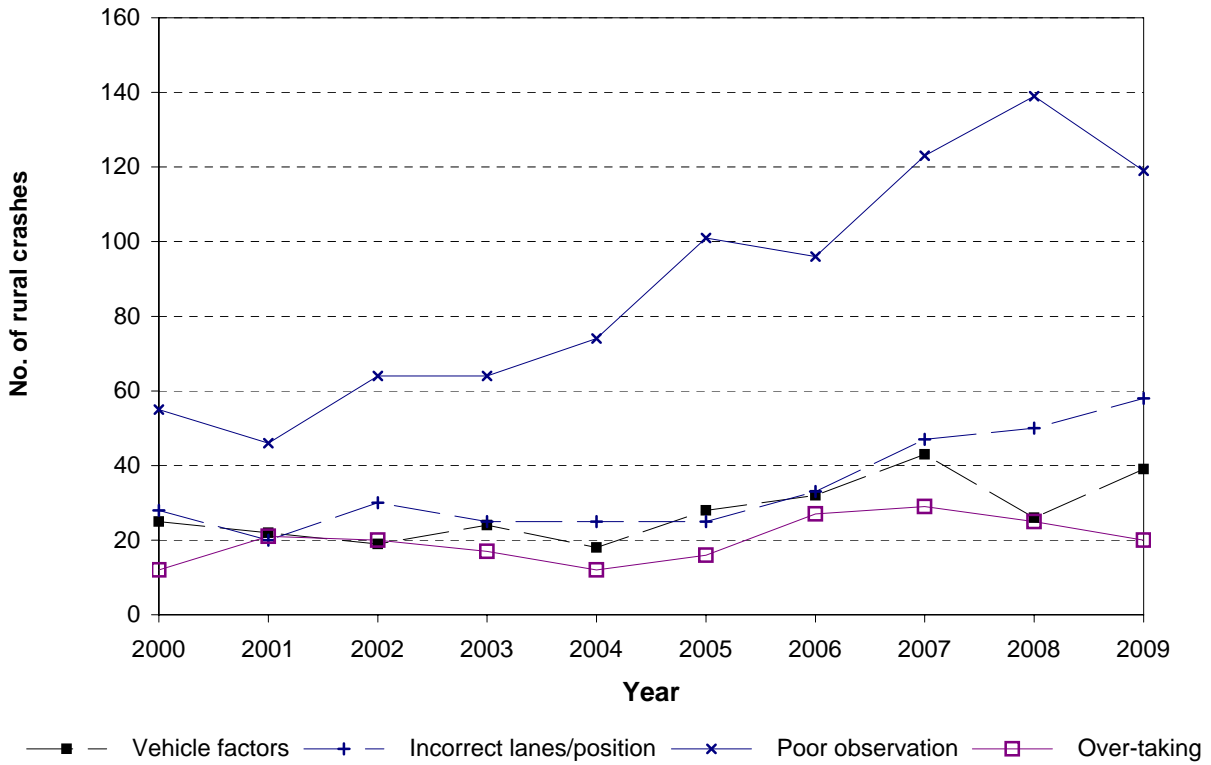
**Figure 5.9 Contributing factor trends  
VRUs - Motorcyclists - rural roads**



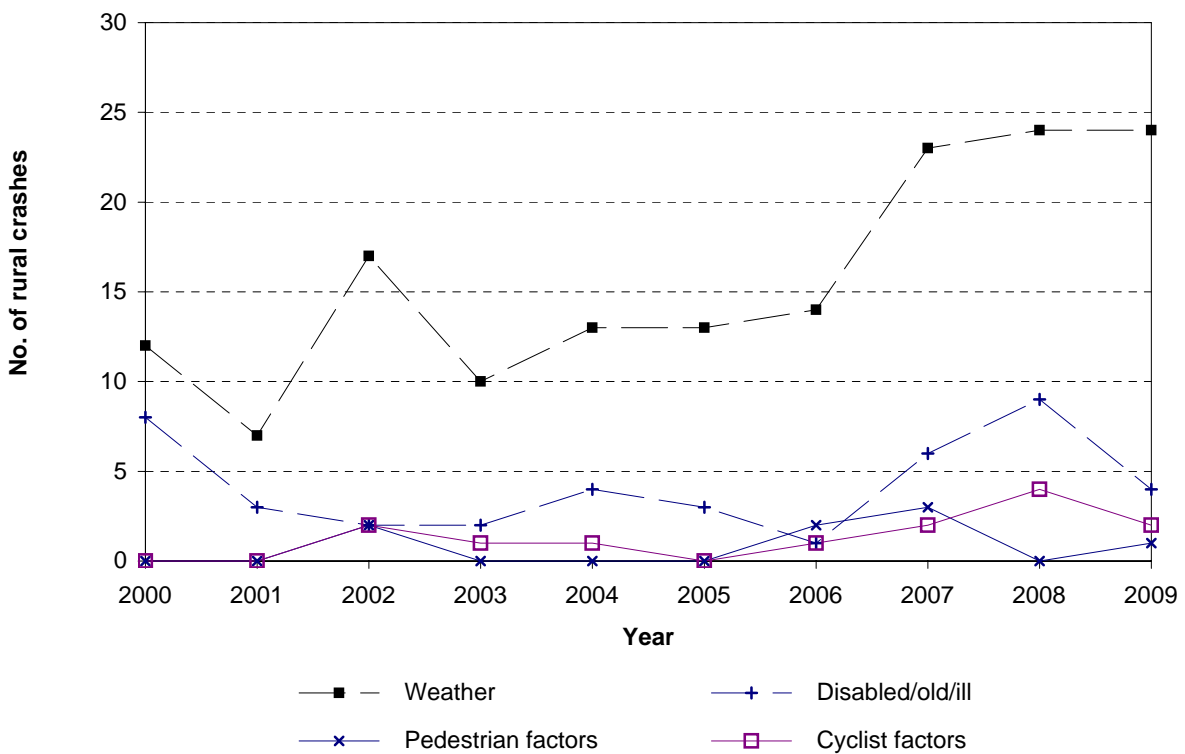
**Figure 5.10 Contributing factor trends  
VRUs - Motorcyclists - rural roads**



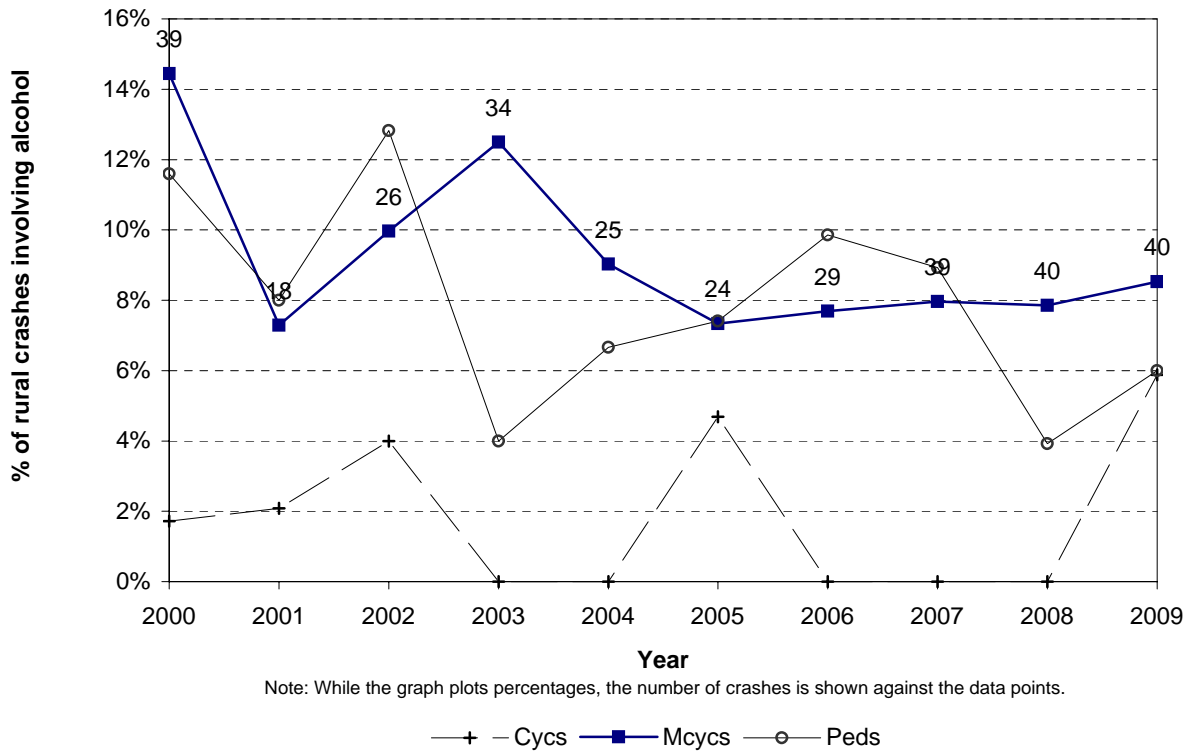
**Figure 5.11 Contributing factor trends  
VRUs - Motorcyclists - rural roads**



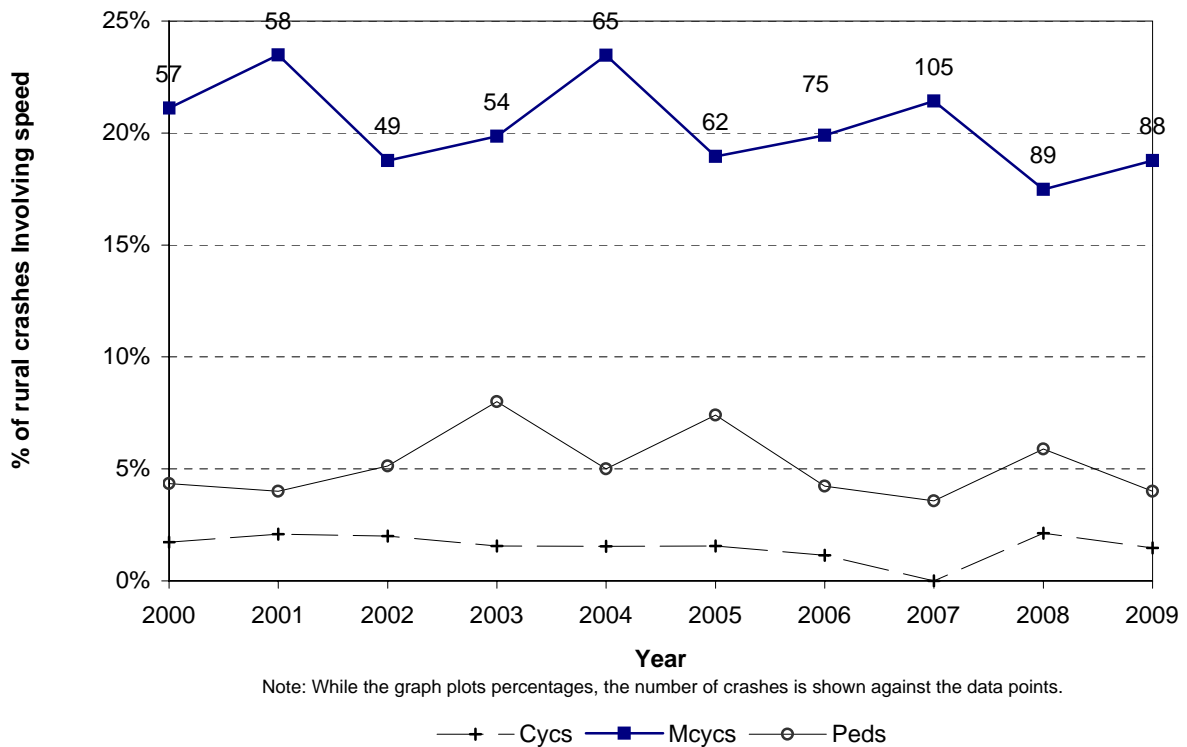
**Figure 5.12 Contributing factor trends  
VRUs - Motorcyclists - rural roads**



**Figure 5.13 Alcohol involved trend  
VRUs - Motorcyclists - rural roads**



**Figure 5.14 Speed involved trend  
VRUs - Motorcyclists - rural roads**

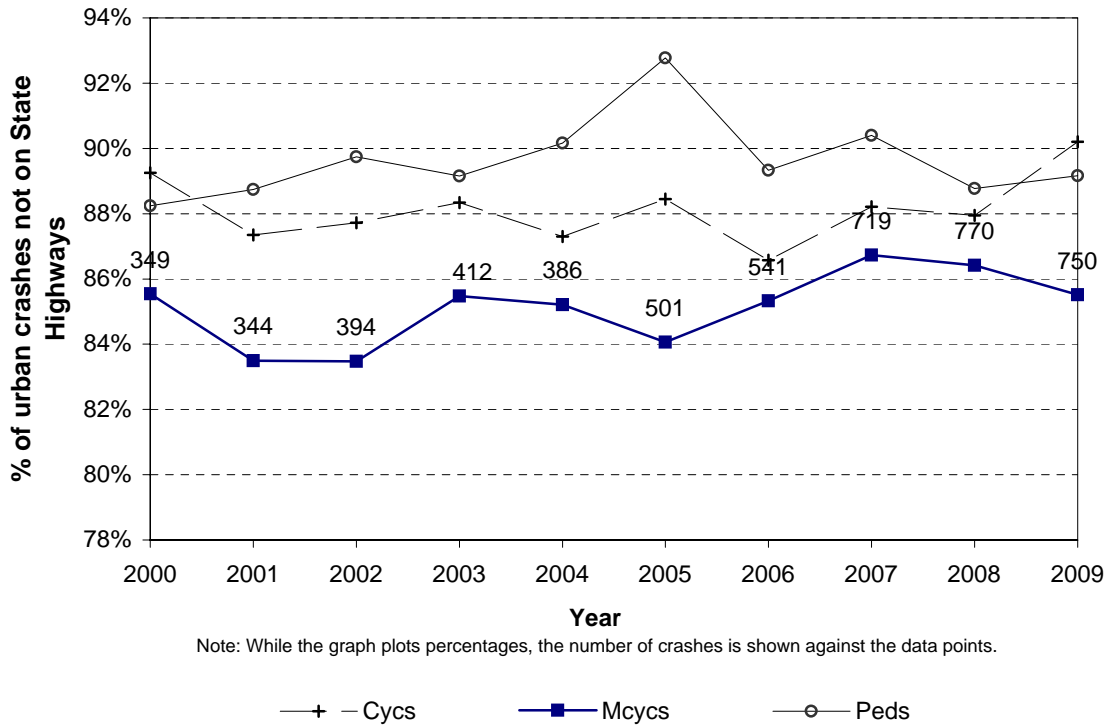




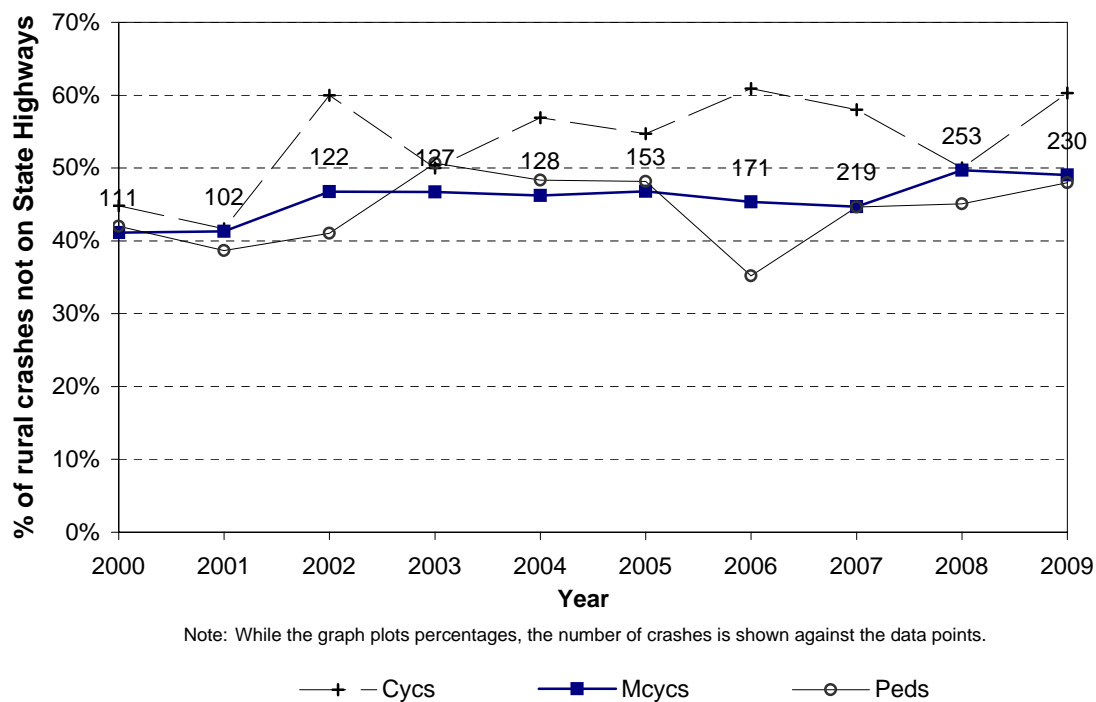
# *Environmental Statistics*



**Figure 6.1 Crashes not on state highways  
VRUs - Motorcyclists - urban roads**

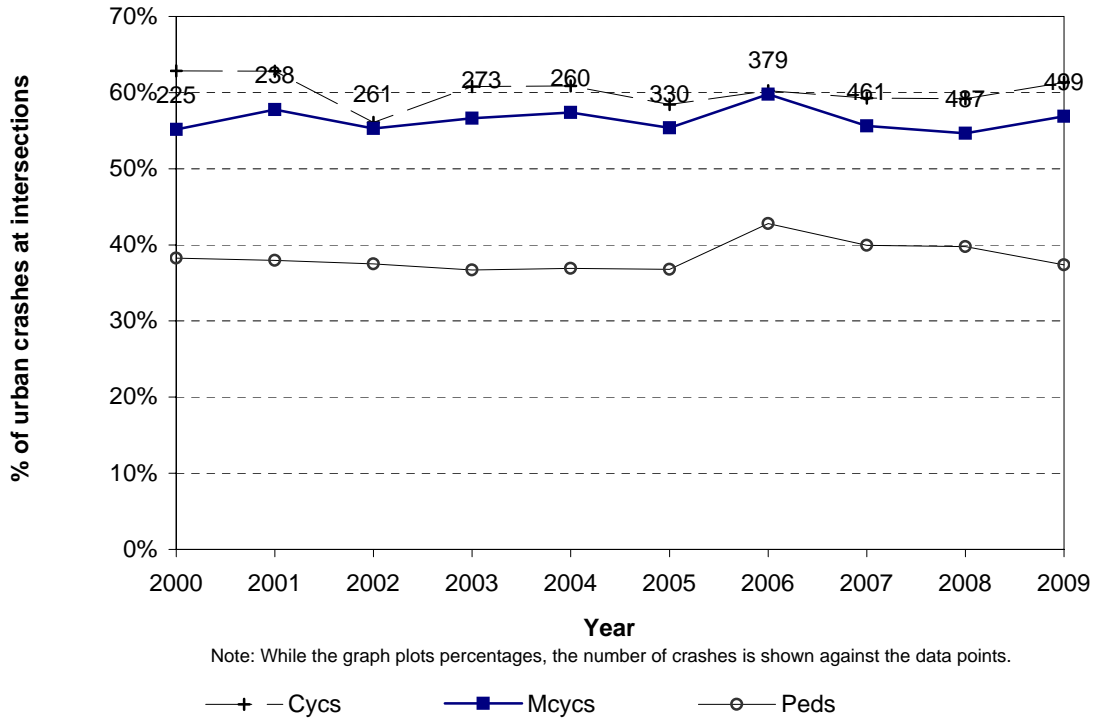


**Figure 6.2 Crashes not on state highways  
VRUs - Motorcyclists - rural roads**

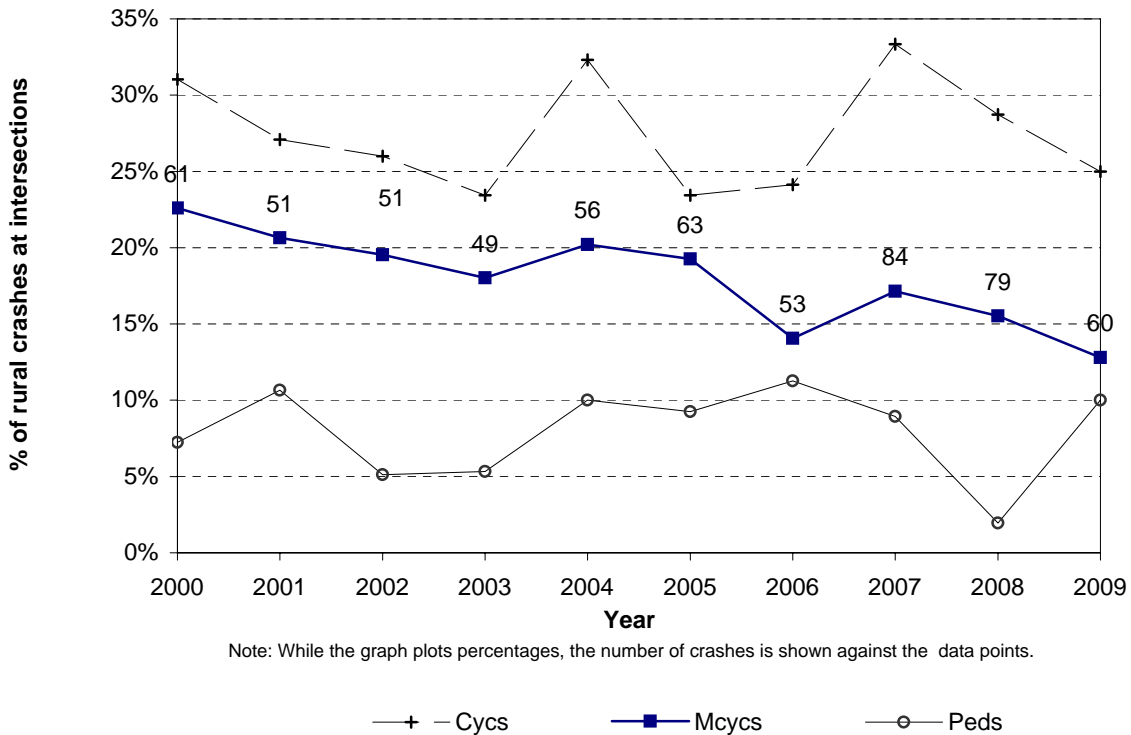




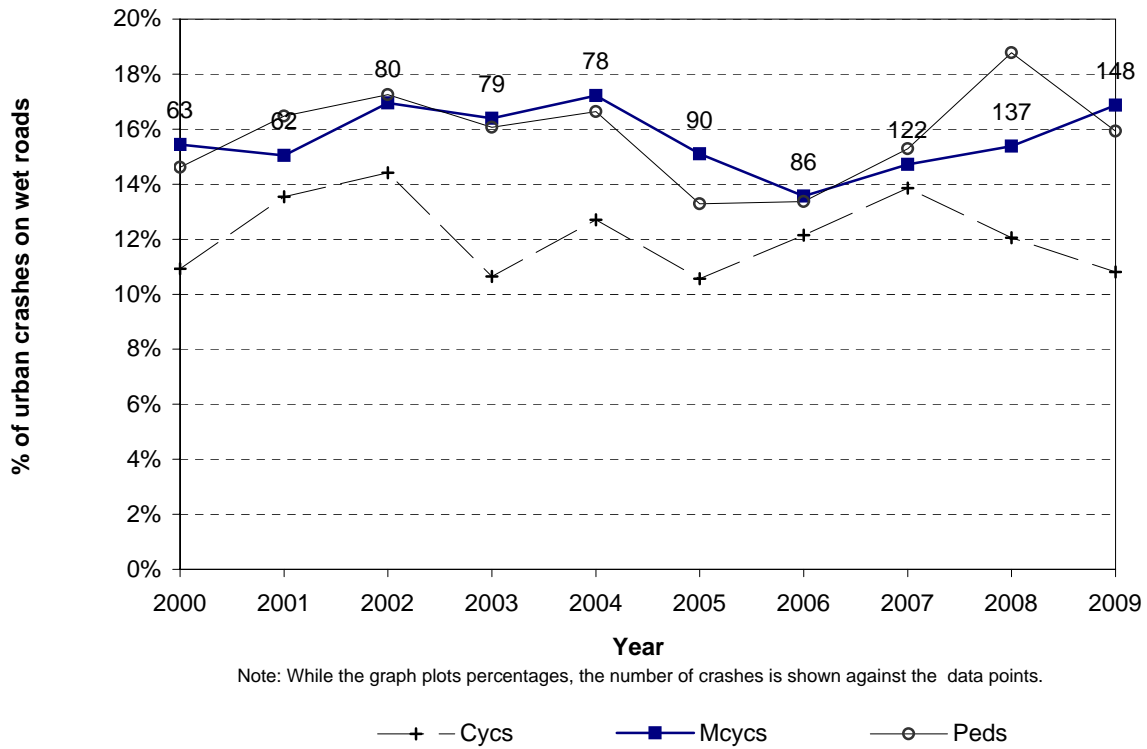
**Figure 6.3 Intersection crashes  
VRUs - Motorcyclists - urban roads**



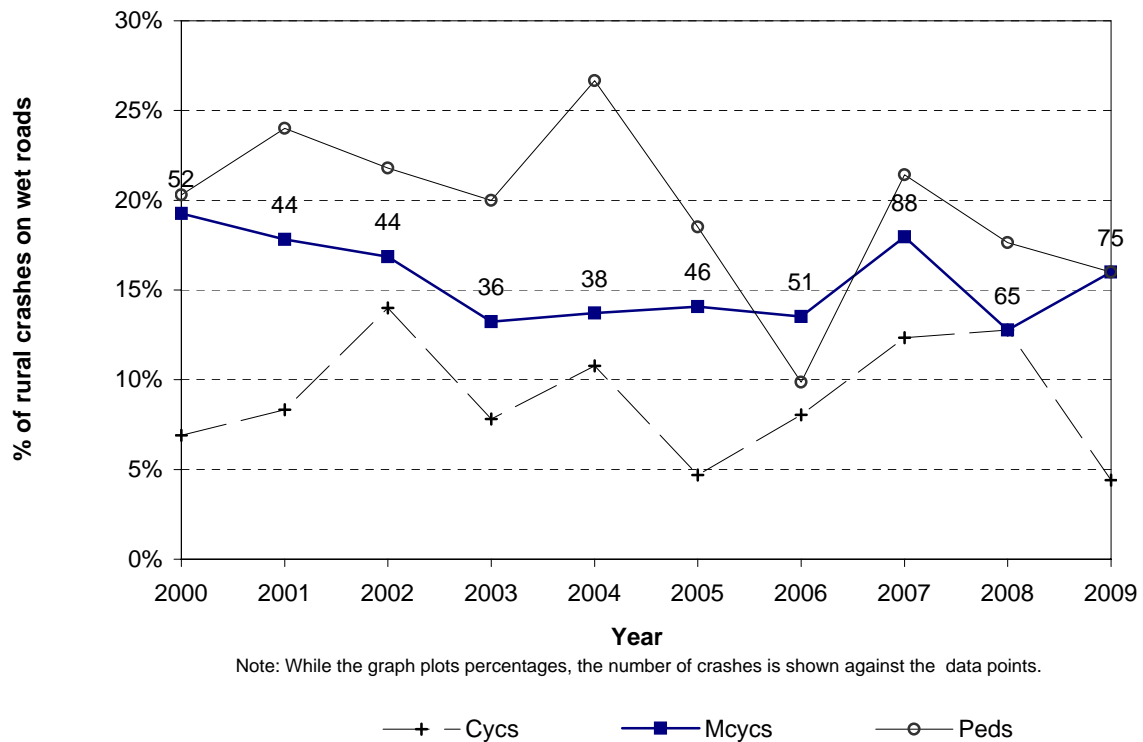
**Figure 6.4 Intersection crashes  
VRUs - Motorcyclists - rural roads**



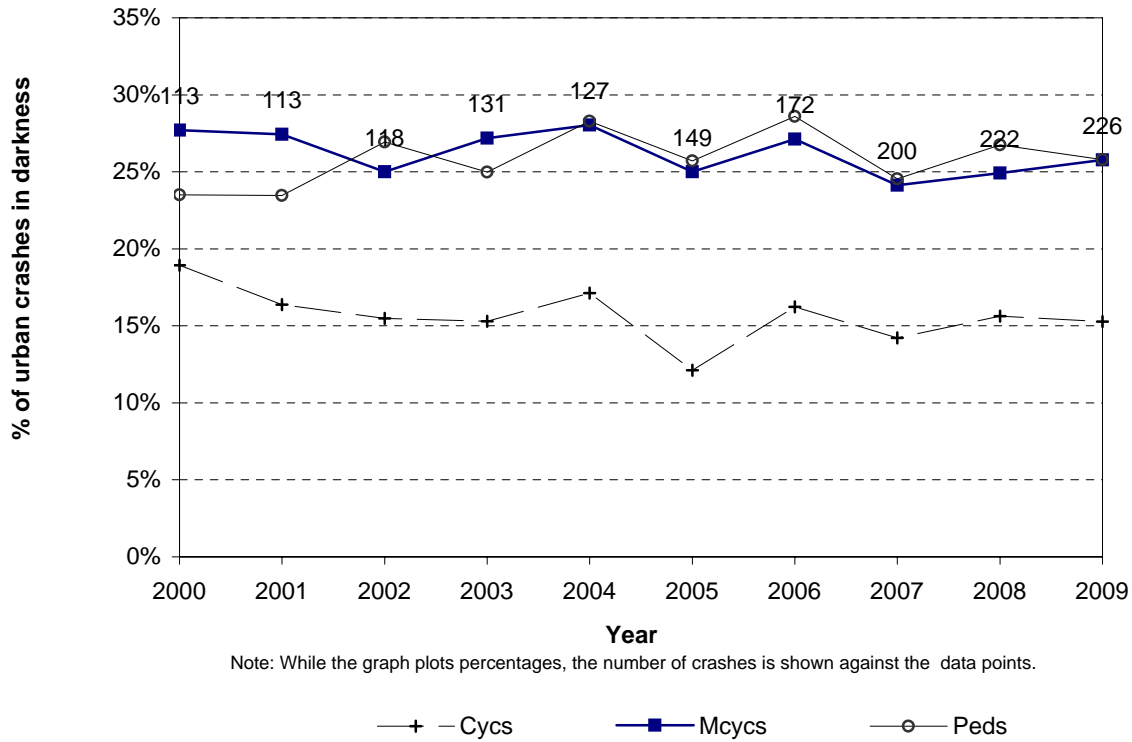
**Figure 6.5 Wet road crashes  
VRUs - Motorcyclists - urban roads**



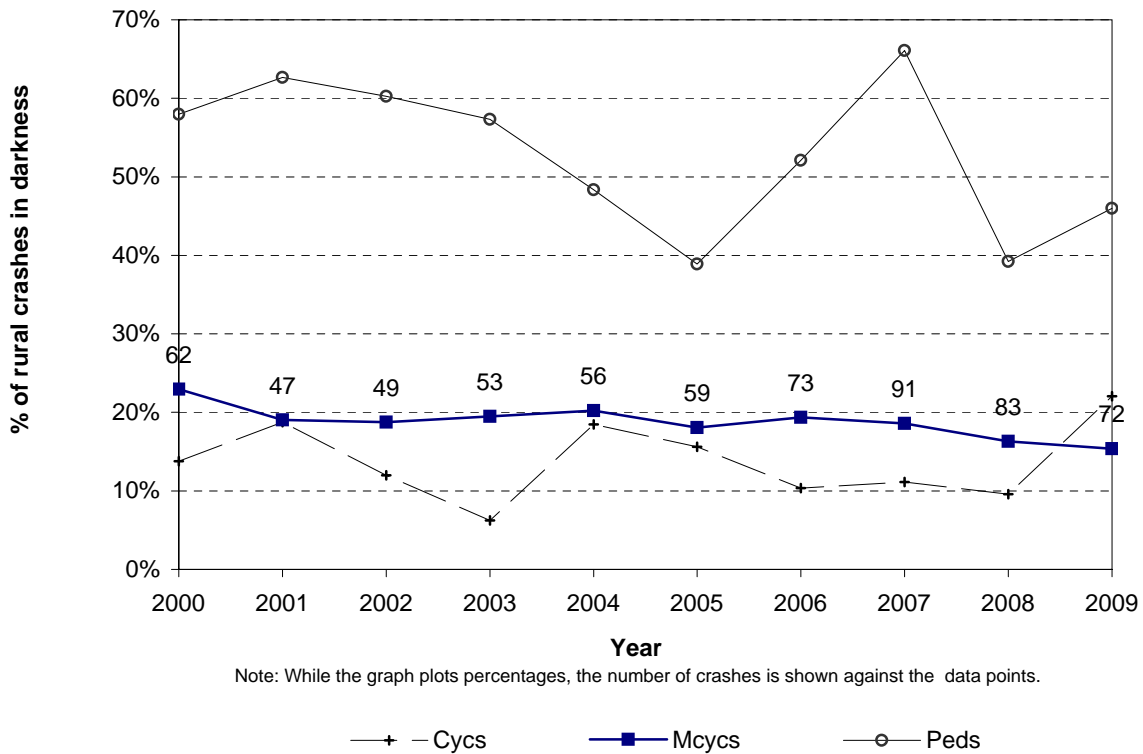
**Figure 6.6 Wet road crashes  
VRUs - Motorcyclists - rural roads**



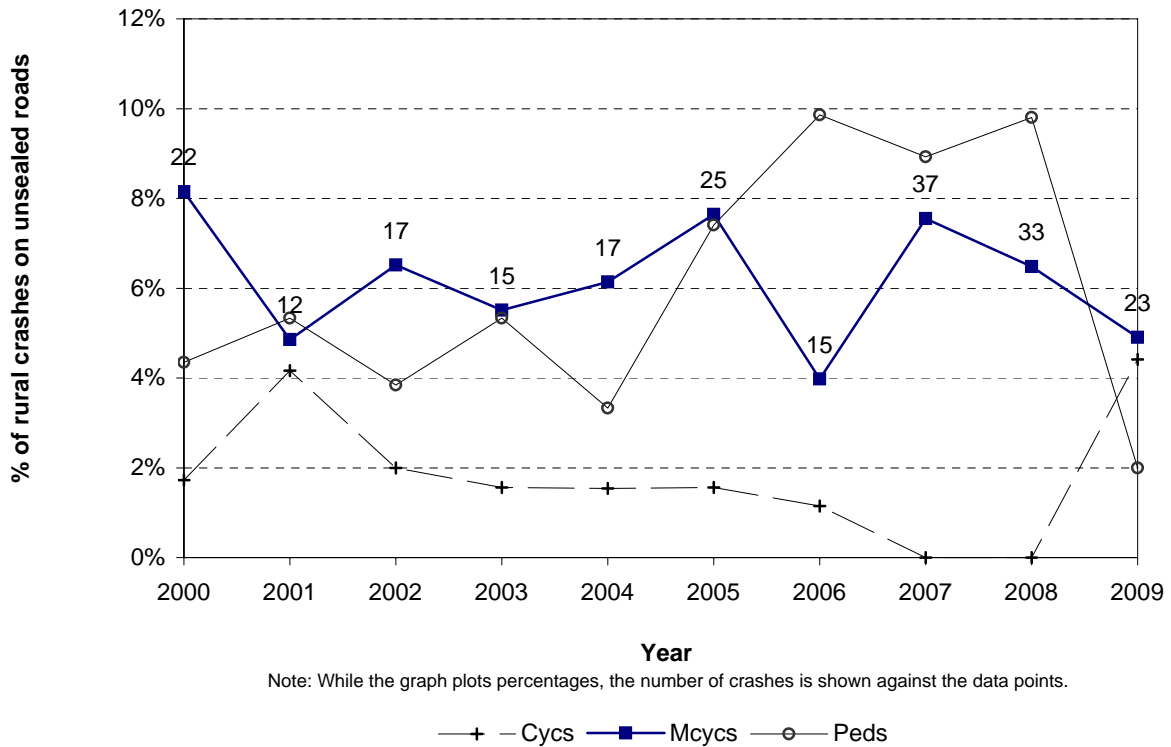
**Figure 6.7 Crashes in darkness  
VRUs - Motorcyclists - urban roads**



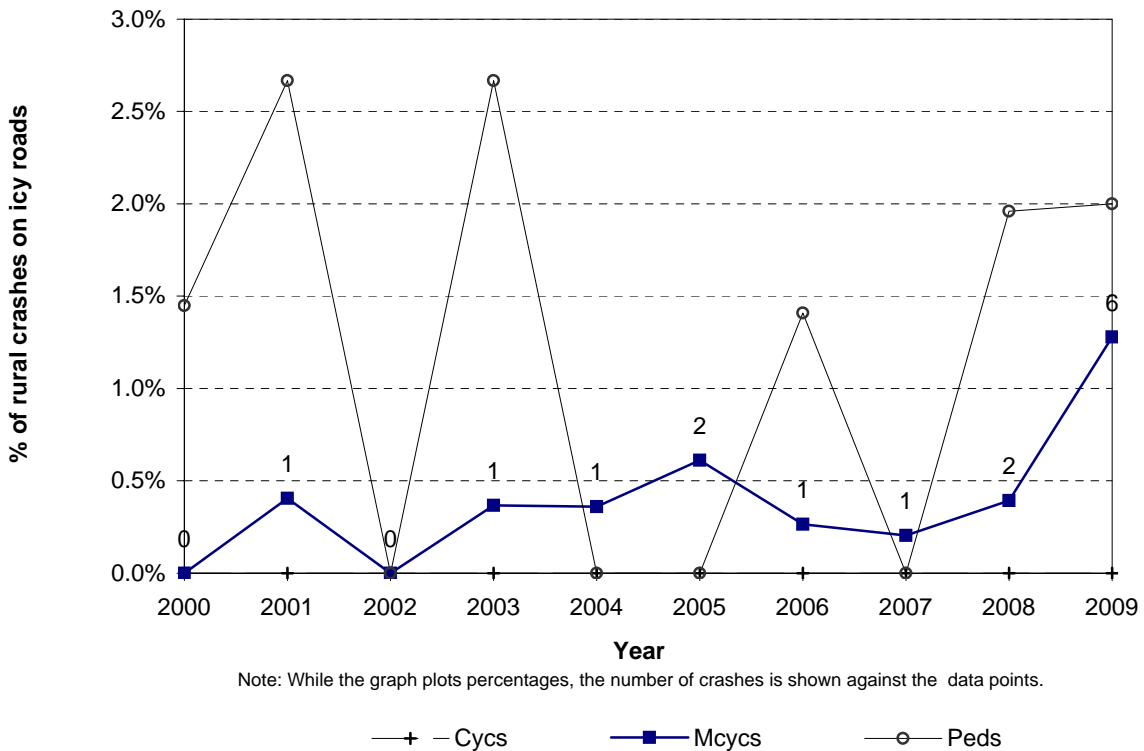
**Figure 6.8 Crashes in darkness  
VRUs - Motorcyclists - rural roads**



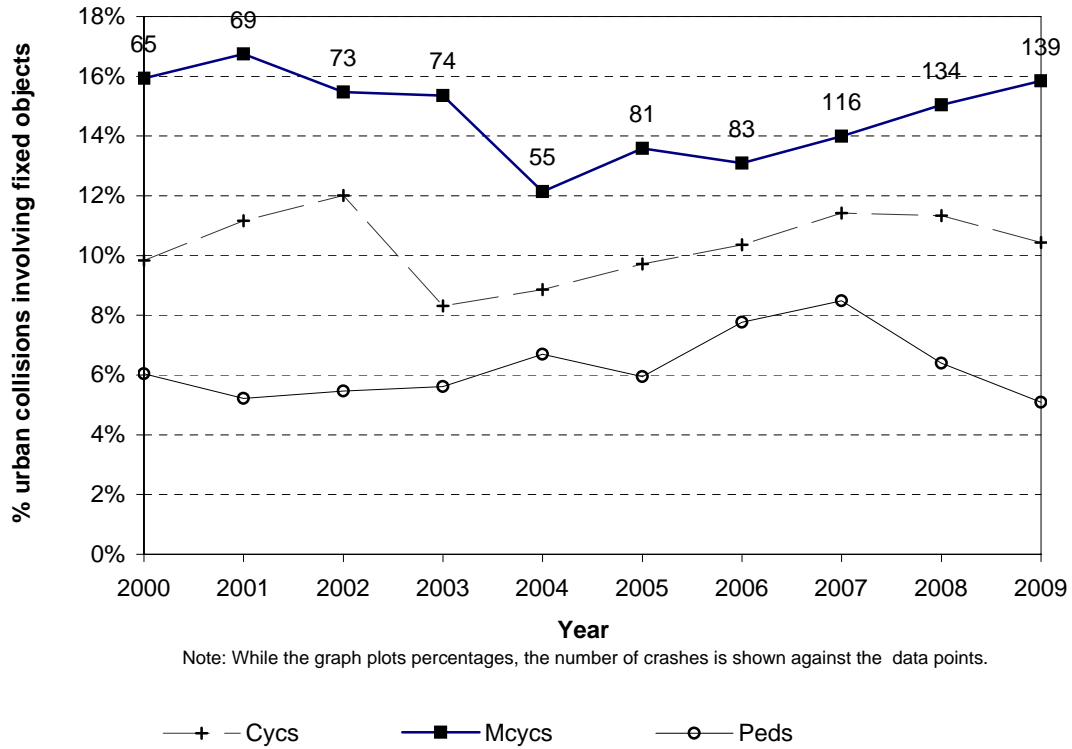
**Figure 6.9 Unsealed road crashes  
VRUs - Motorcyclists - rural roads**



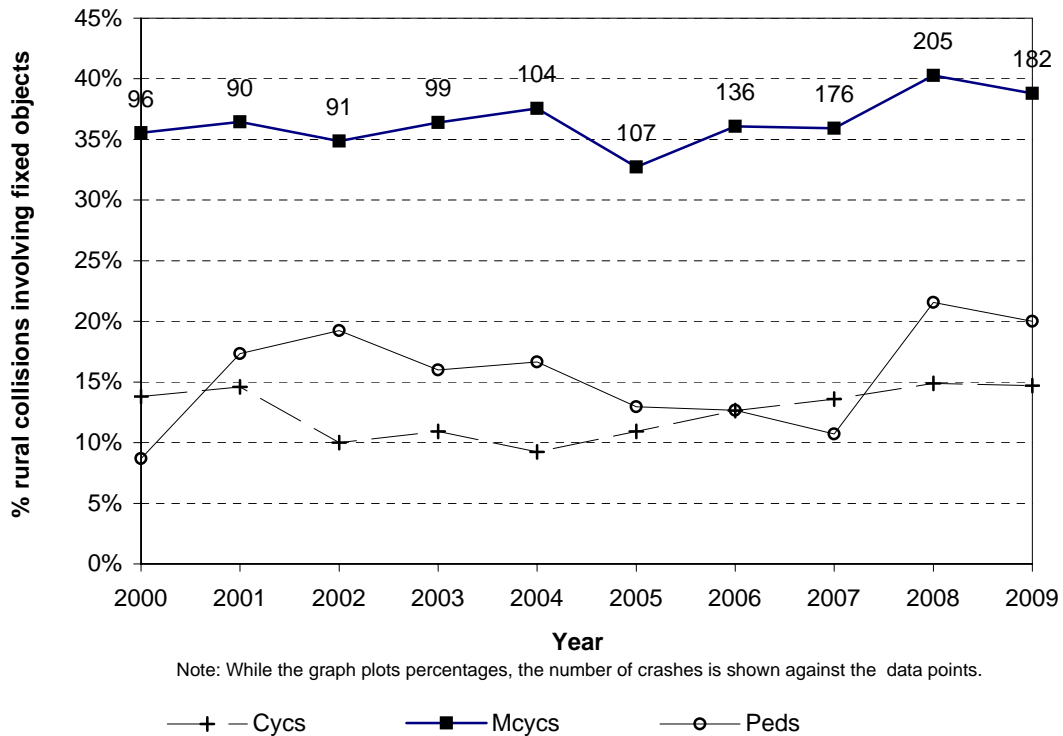
**Figure 6.10 Icy road crashes  
VRUs - Motorcyclists - rural roads**



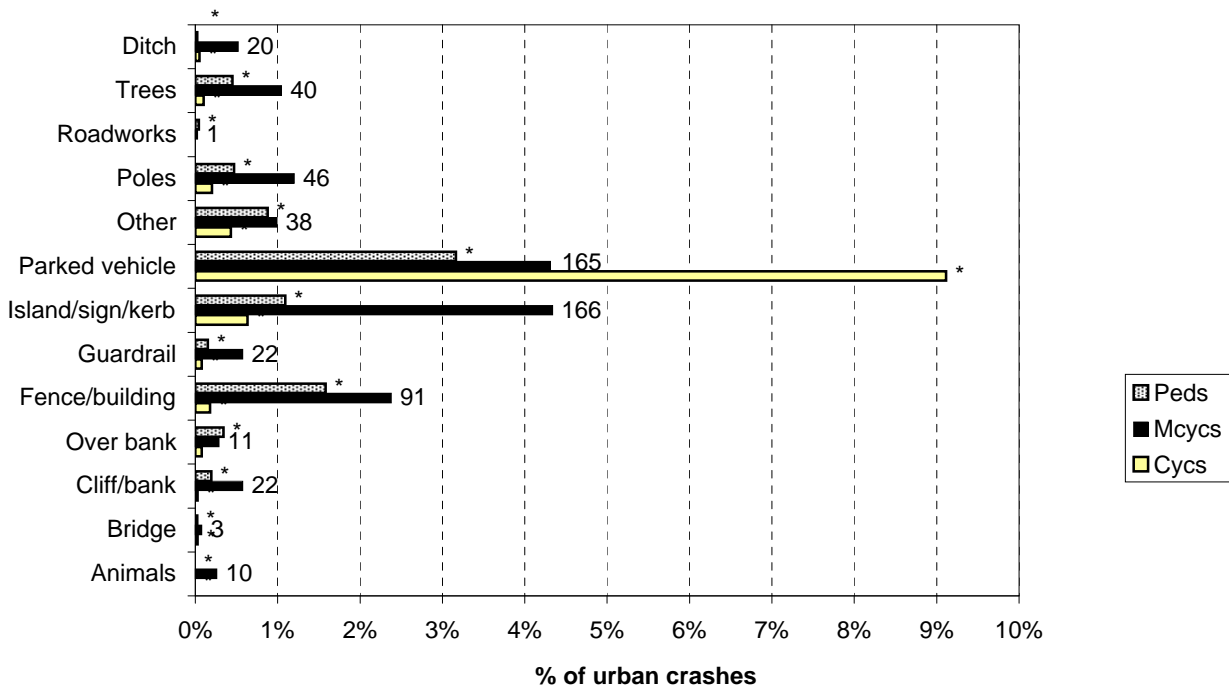
**Figure 6.11 Collisions with objects  
VRUs - Motorcyclists - urban roads**



**Figure 6.12 Collisions with objects  
VRUs - Motorcyclists - rural roads**

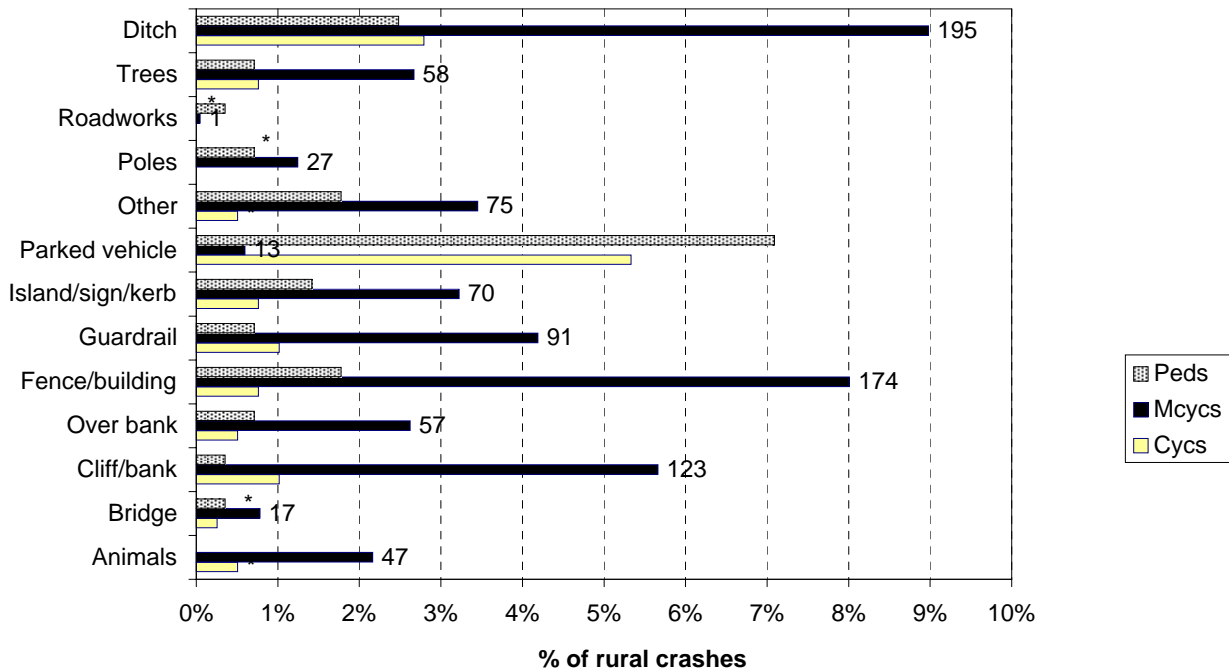


**Figure 6.13 Objects struck - urban  
VRUs - Motorcyclists (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 6.14 Objects struck - rural  
VRUs - Motorcyclists (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

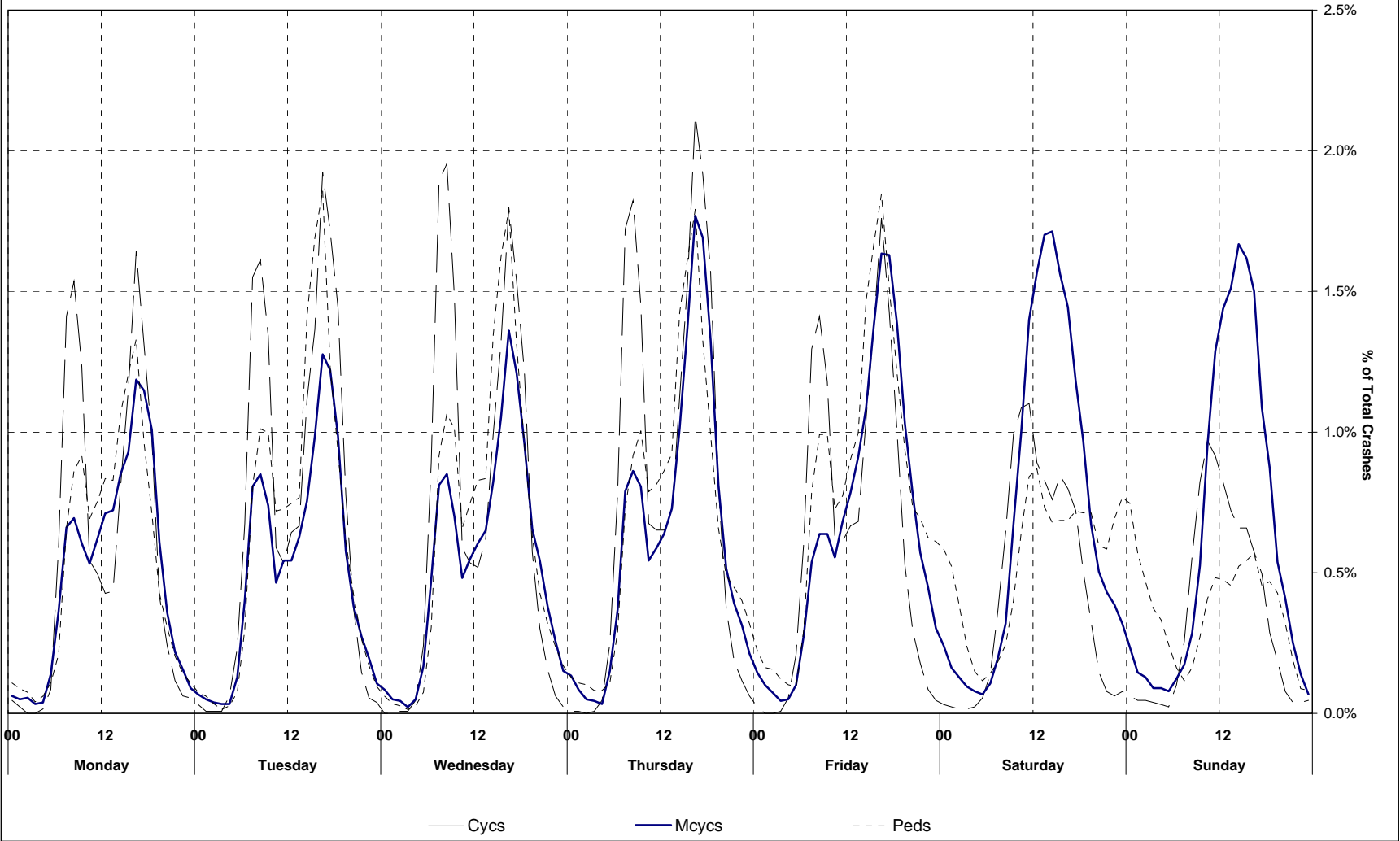


# *Date and Time Statistics*

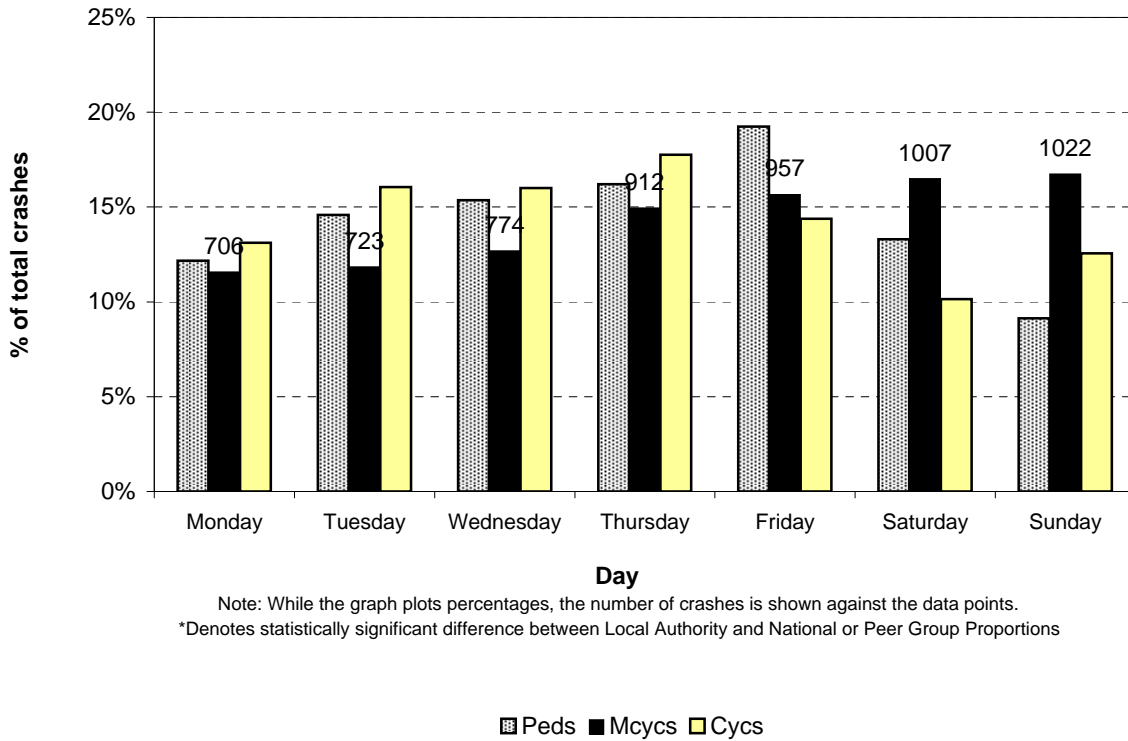




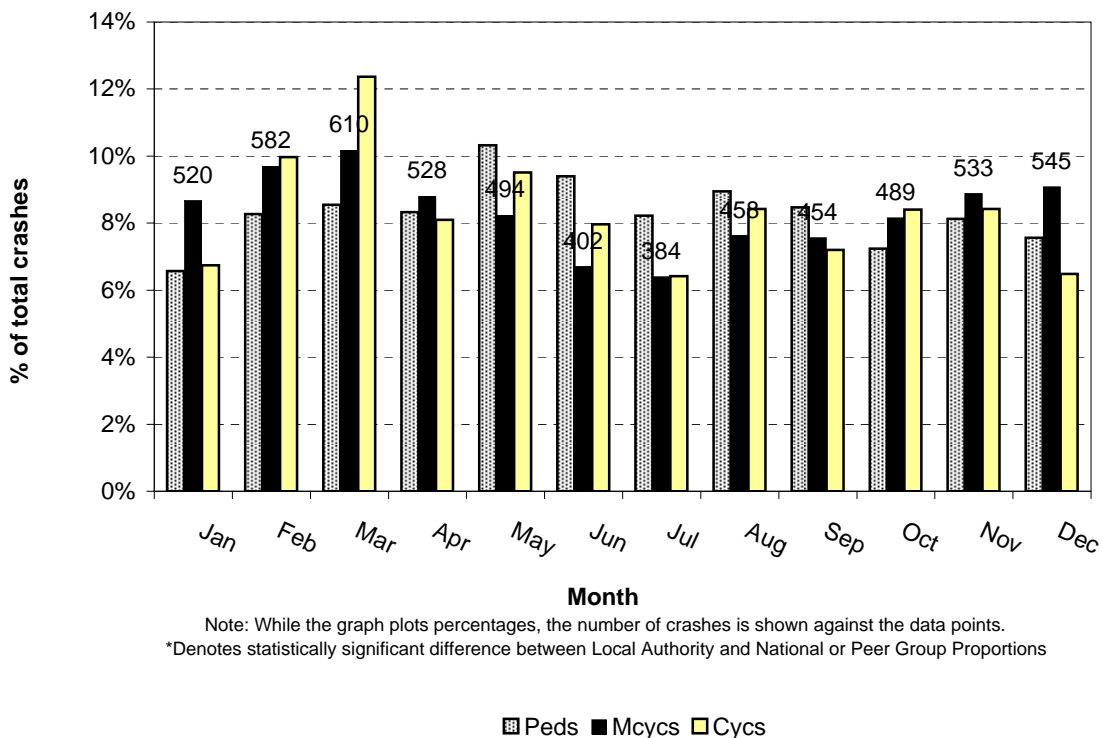
Figure 7.1 Time pattern over average week  
VRUs - Motorcyclists (2005-2009)



**Figure 7.2 Day of week (6 a.m. to 6 a.m.)  
VRUs - Motorcyclists (2005-2009)**



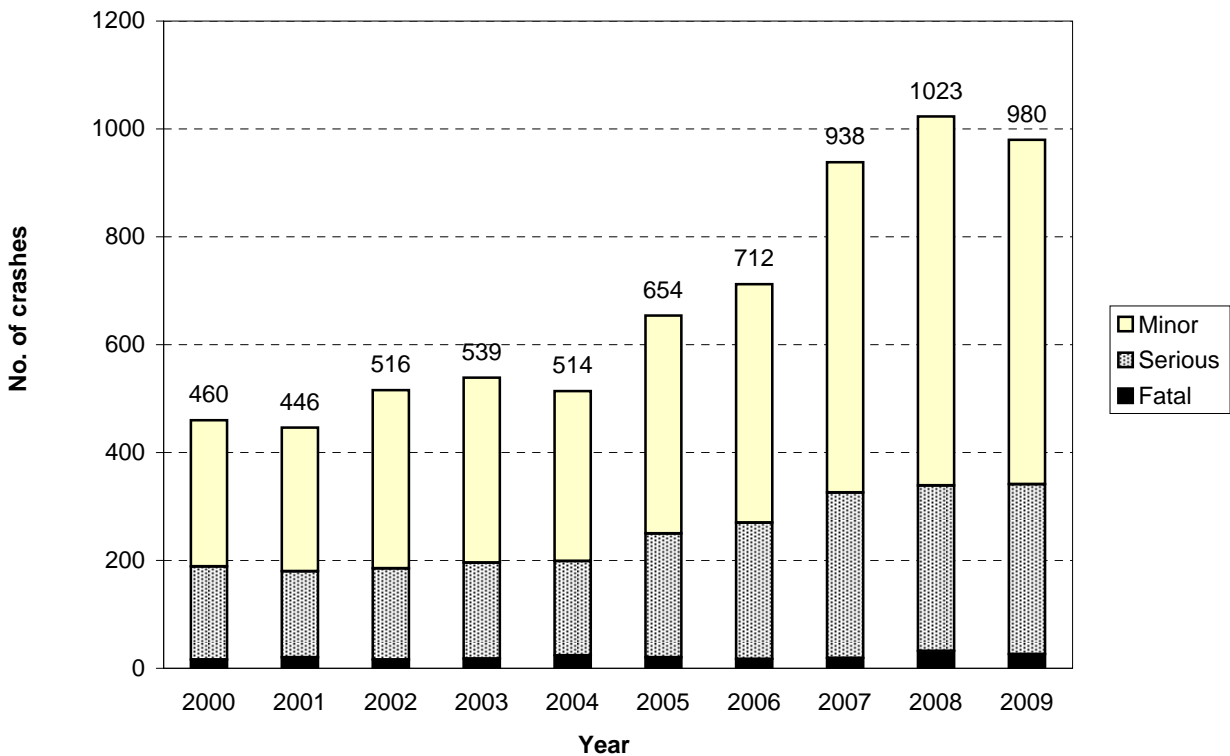
**Figure 7.3 Month of year  
VRUs - Motorcyclists (2005-2009)**



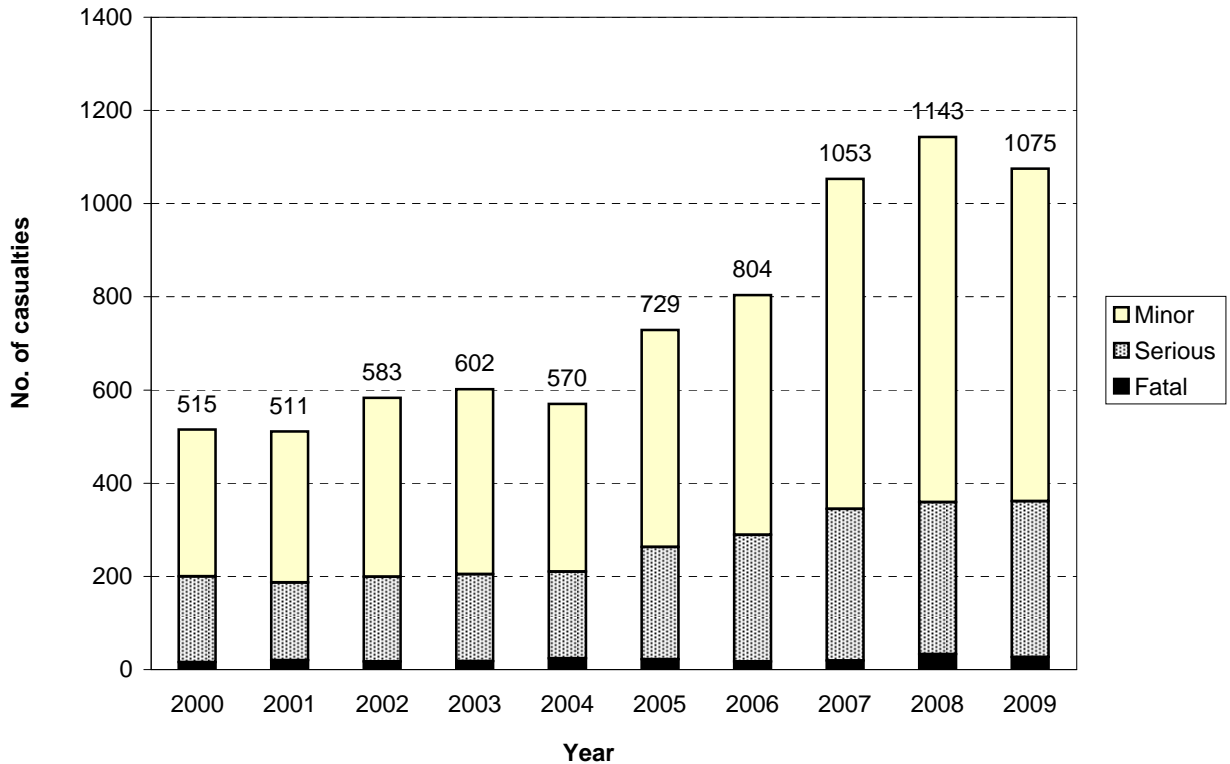
# *Local Road Statistics*



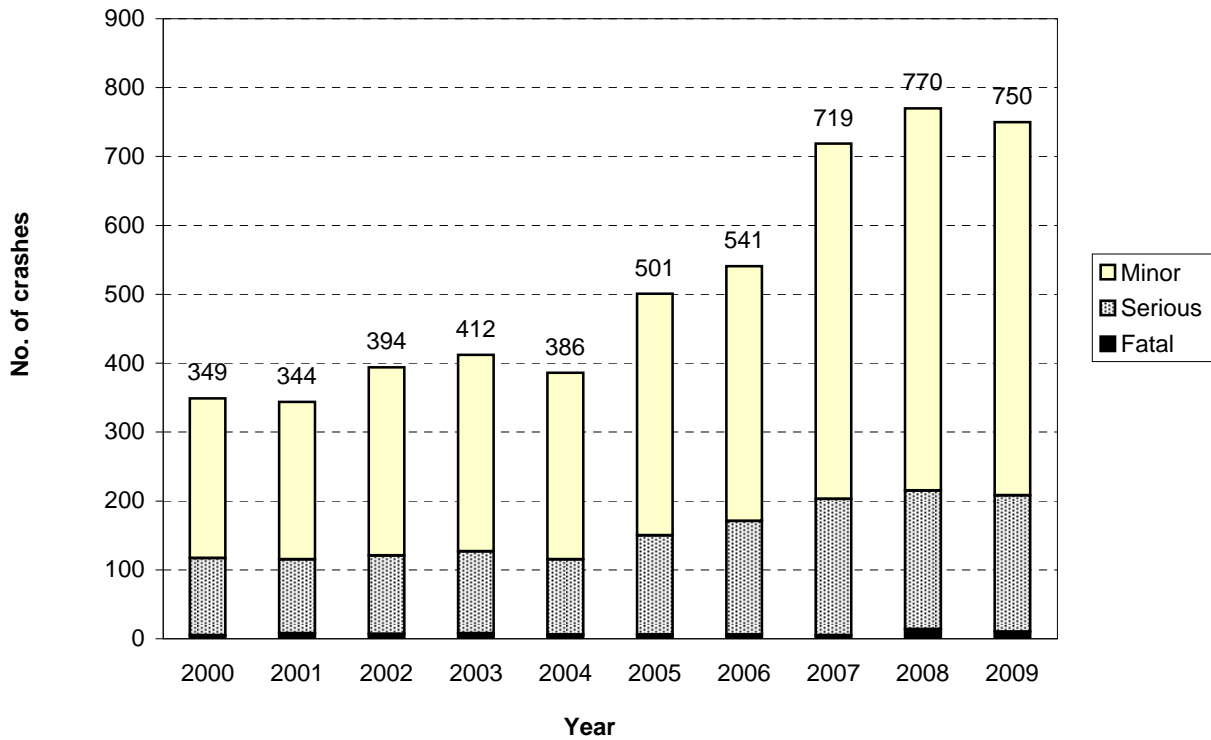
**Figure 8.1 Number of injury crashes**  
VRUs - Motorcyclists - council roads (urban & rural)



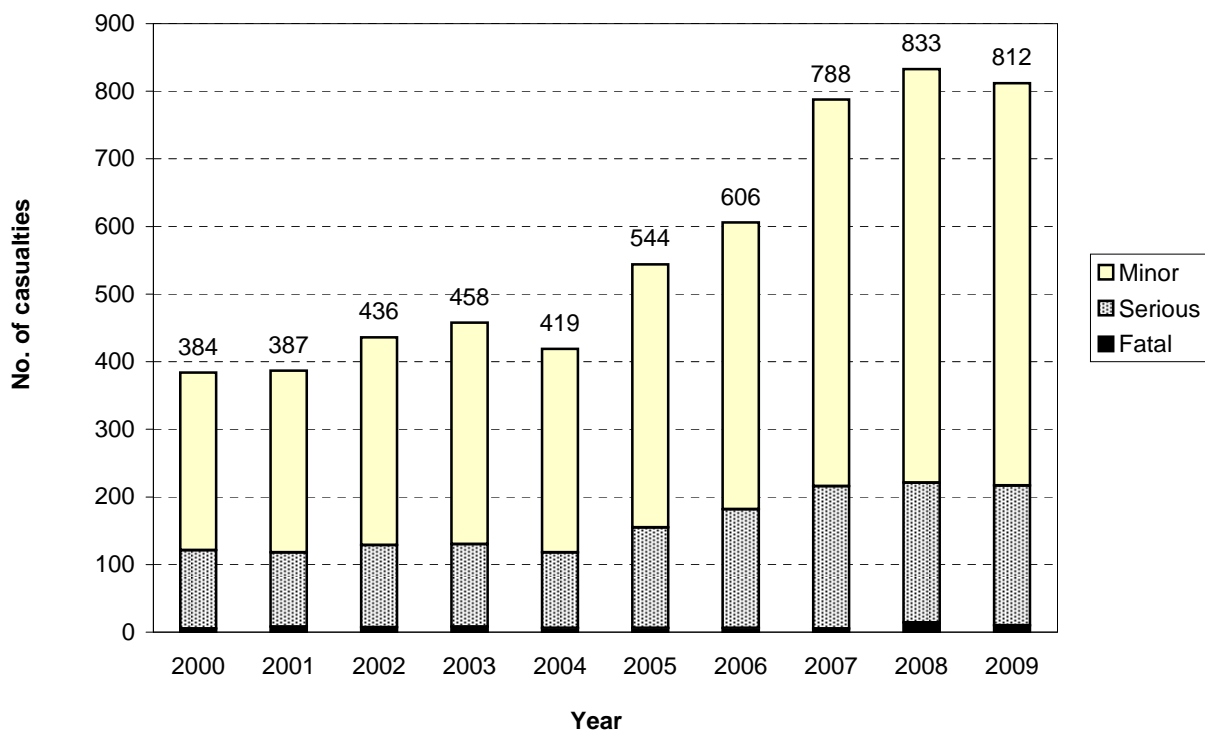
**Figure 8.2 Number of casualties**  
VRUs - Motorcyclists - council roads (urban & rural)



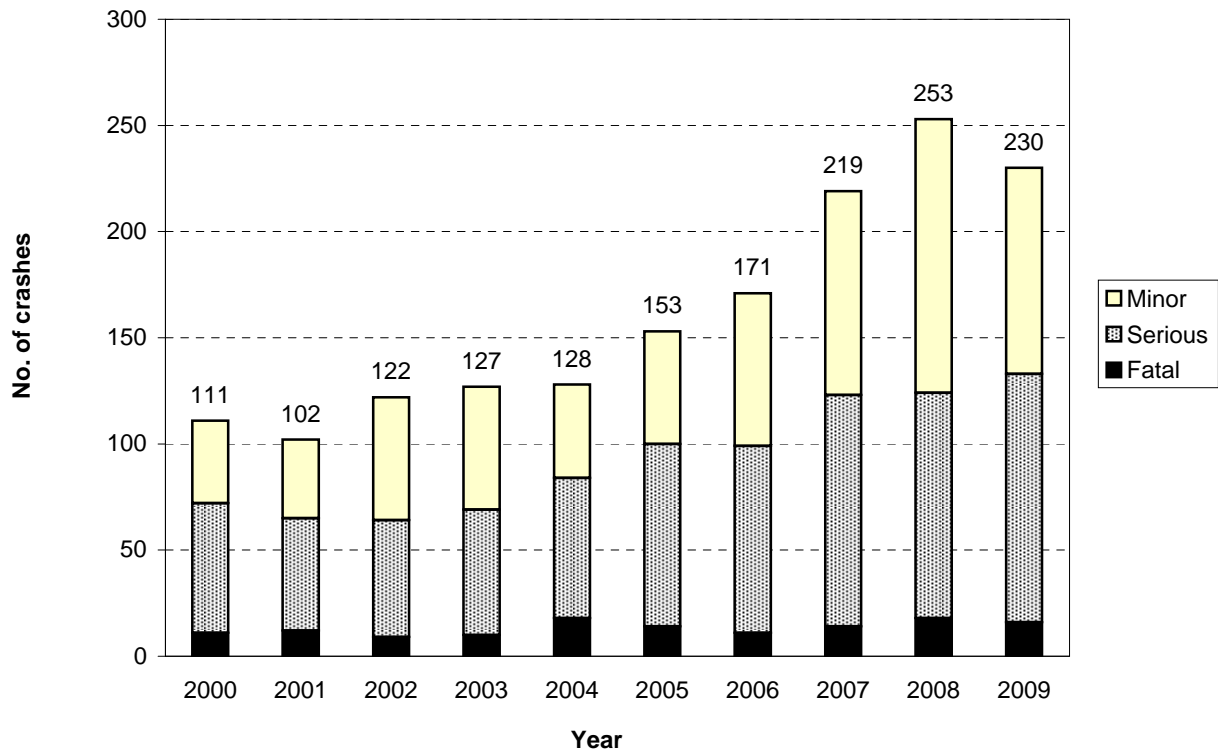
**Figure 8.3 Number of injury crashes**  
VRUs - Motorcyclists - urban council roads



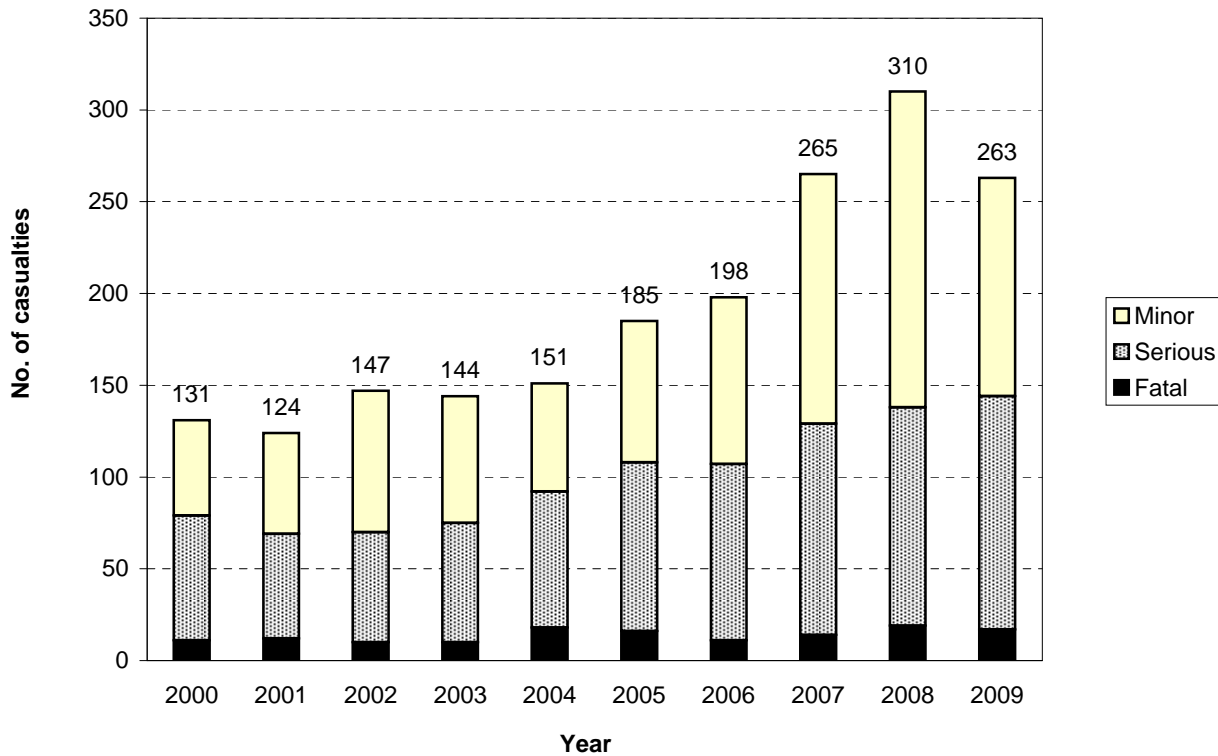
**Figure 8.4 Number of casualties**  
VRUs - Motorcyclists - urban council roads



**Figure 8.5 Number of injury crashes**  
VRUs - Motorcyclists - rural council roads

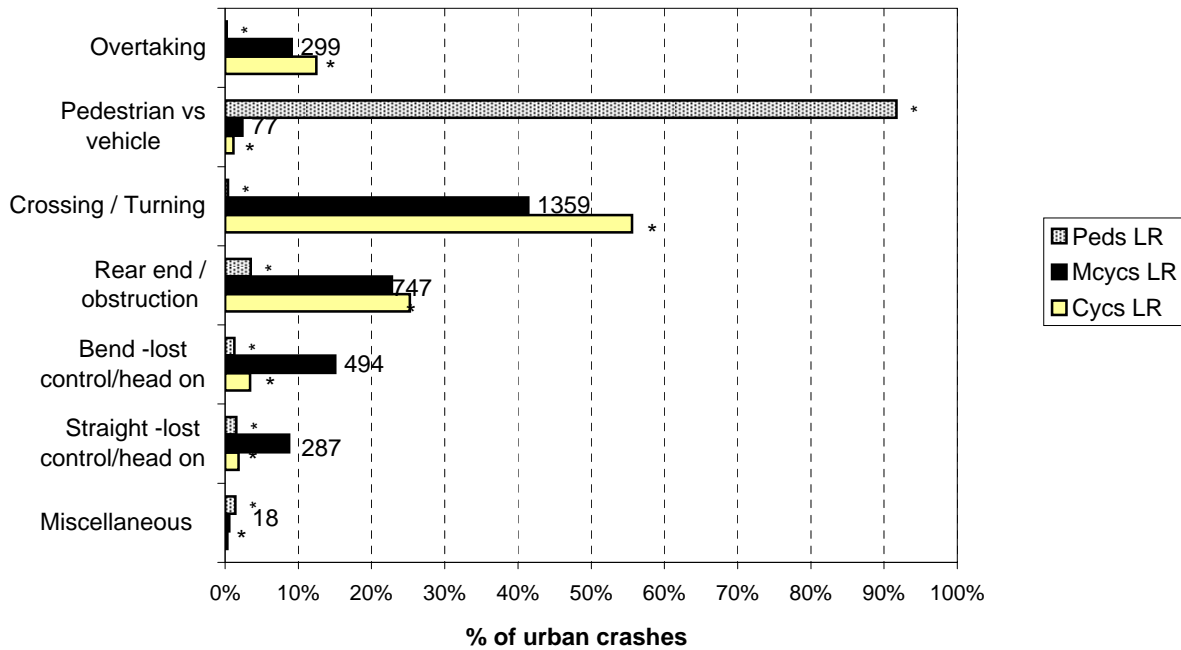


**Figure 8.6 Number of casualties**  
VRUs - Motorcyclists - rural council roads

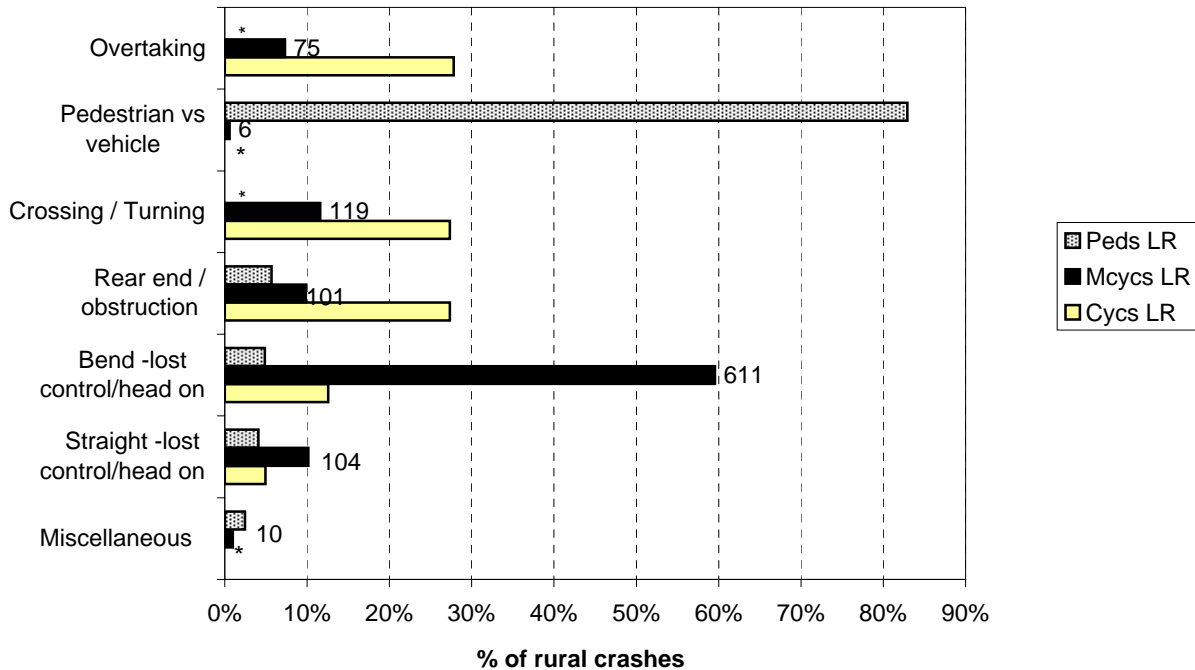




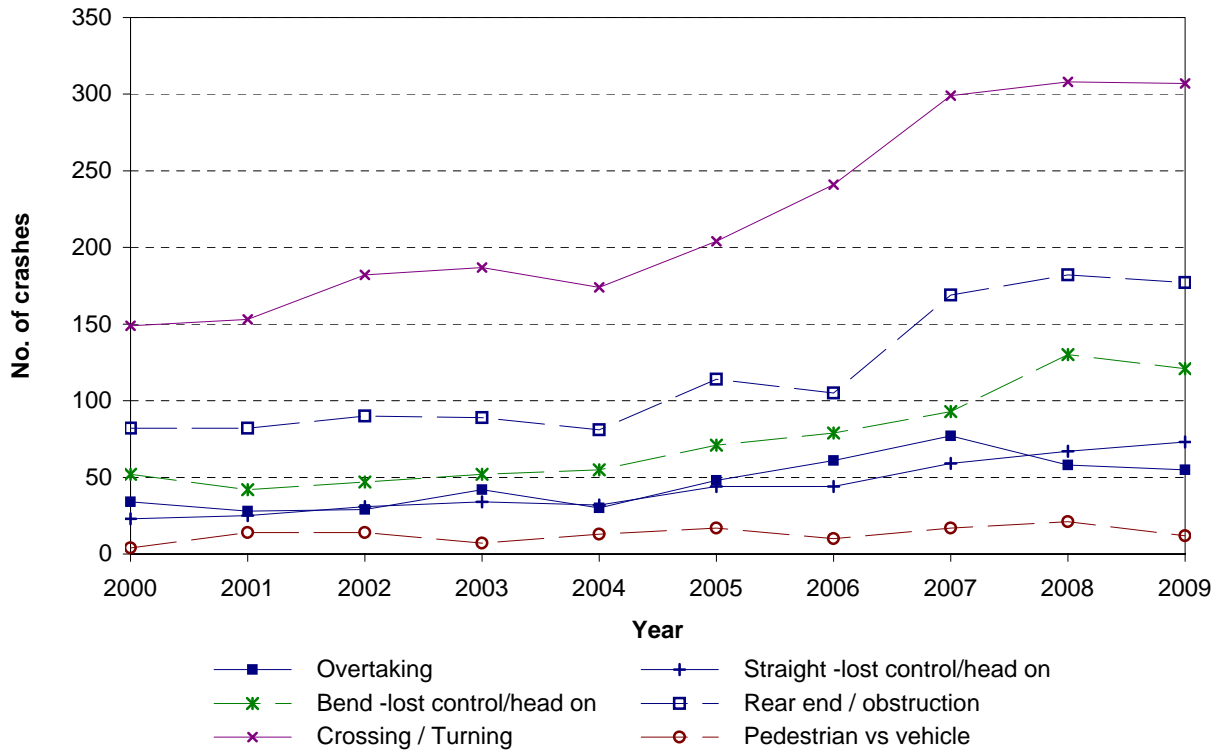
**Figure 8.7 Crash movement type - urban  
VRUs - Motorcyclists council roads (2005-2009)**



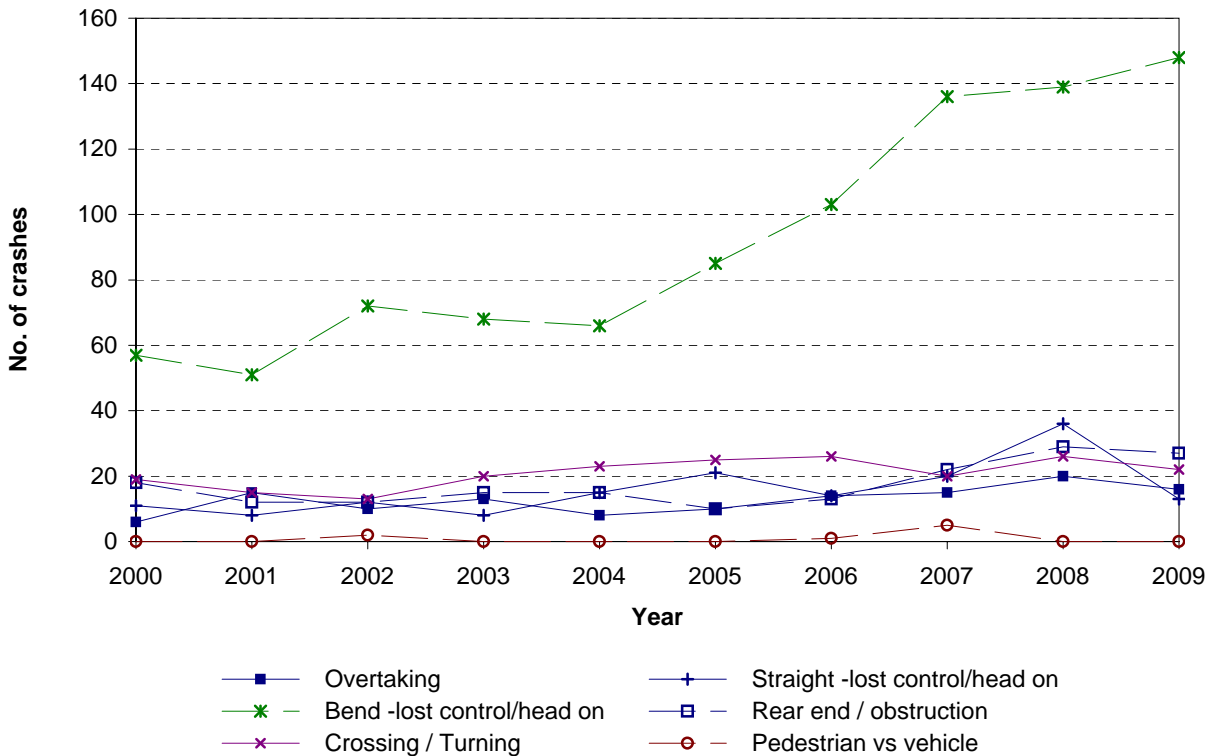
**Figure 8.8 Crash movement type - rural  
VRUs - Motorcyclists council roads (2005-2009)**



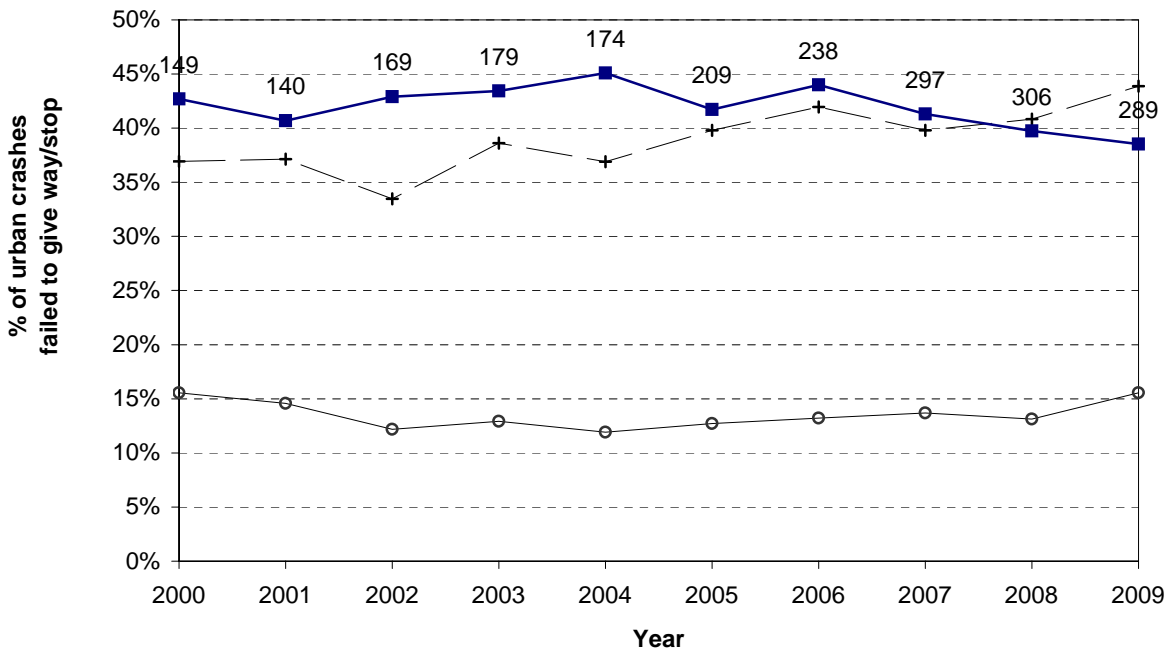
**Figure 8.9 Crash movement type - Trends  
VRUs - Motorcyclists - urban council roads**



**Figure 8.10 Crash movement type - Trends  
VRUs - Motorcyclists - rural council roads**



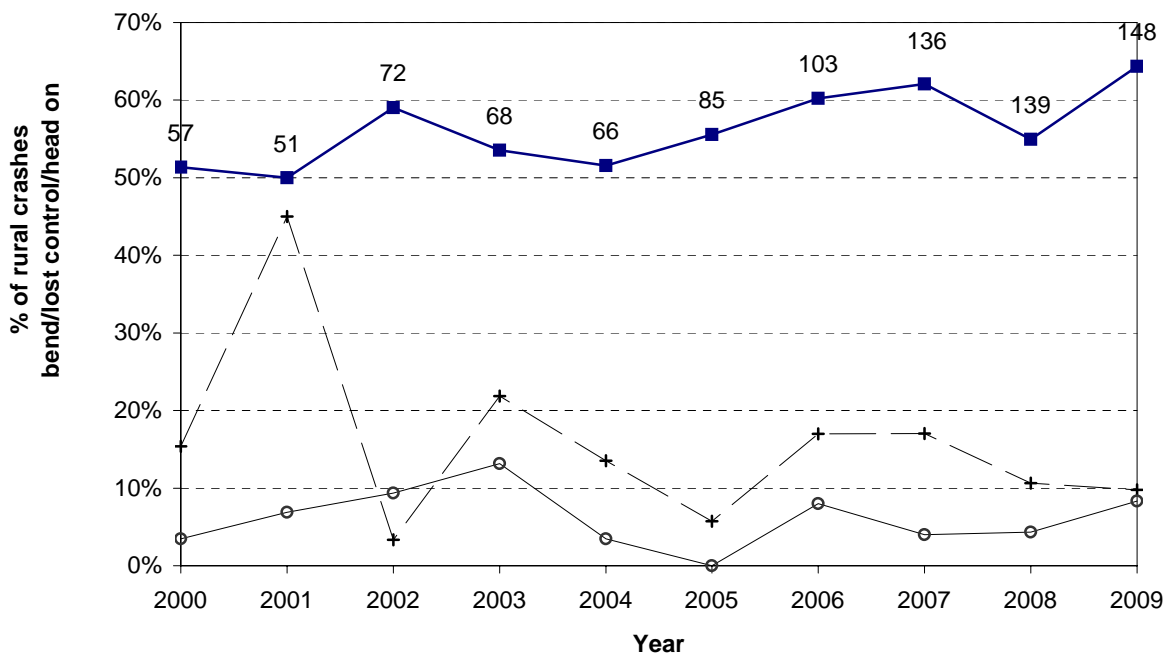
**Figure 8.11 Failed to give way/stop  
VRUs - Motorcyclists - urban council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Cycles LR —■— Mcycs LR —○— Peds LR

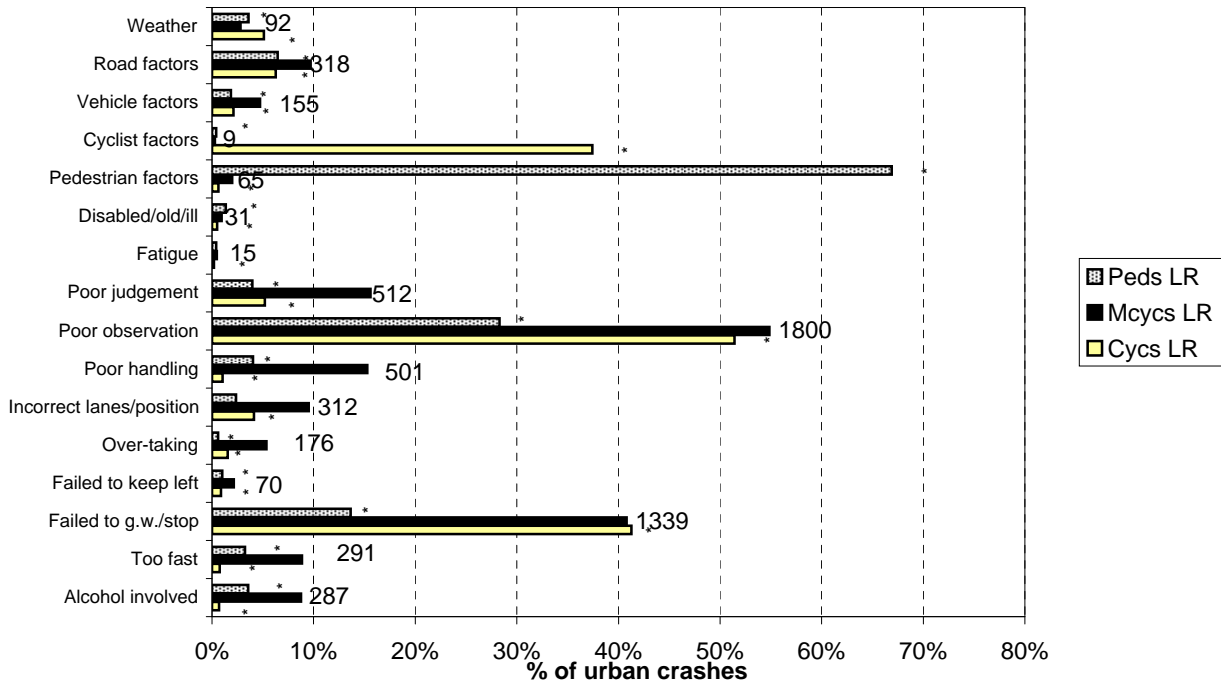
**Figure 8.12 Bend - lost control / head - on  
VRUs - Motorcyclists - rural council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

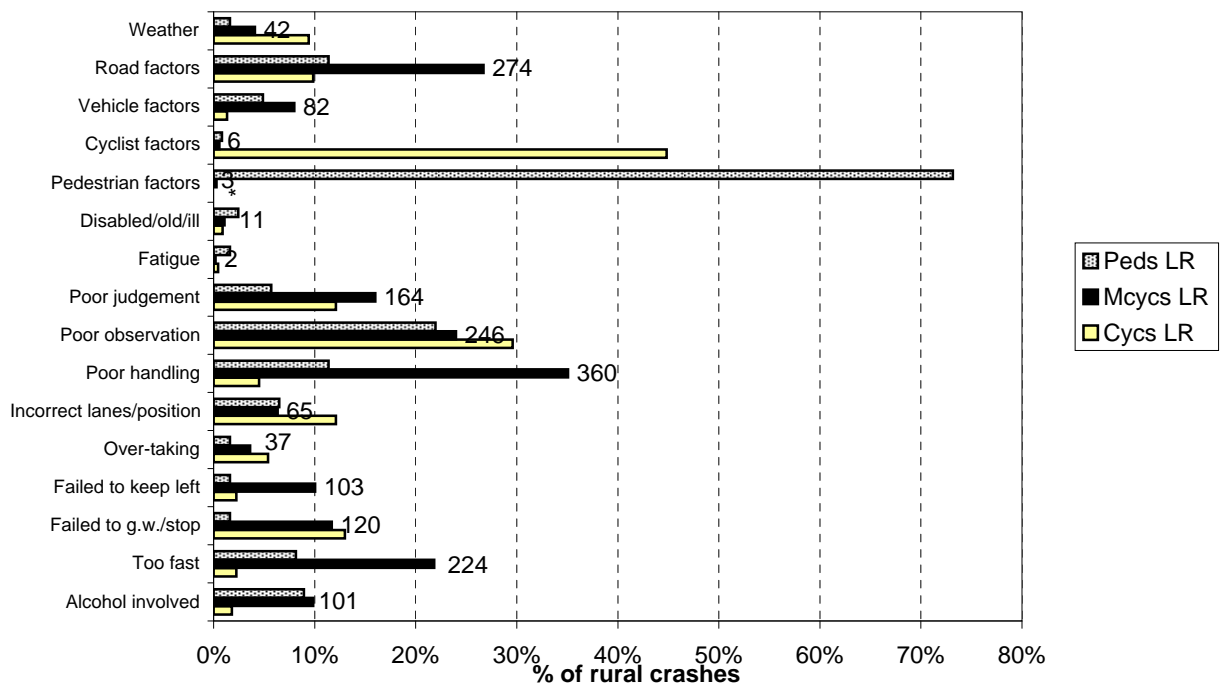
—+— Cycles LR —■— Mcycs LR —○— Peds LR

**Figure 8.13 Contributing factors - urban  
VRUs - Motorcyclists council roads (2005-2009)**



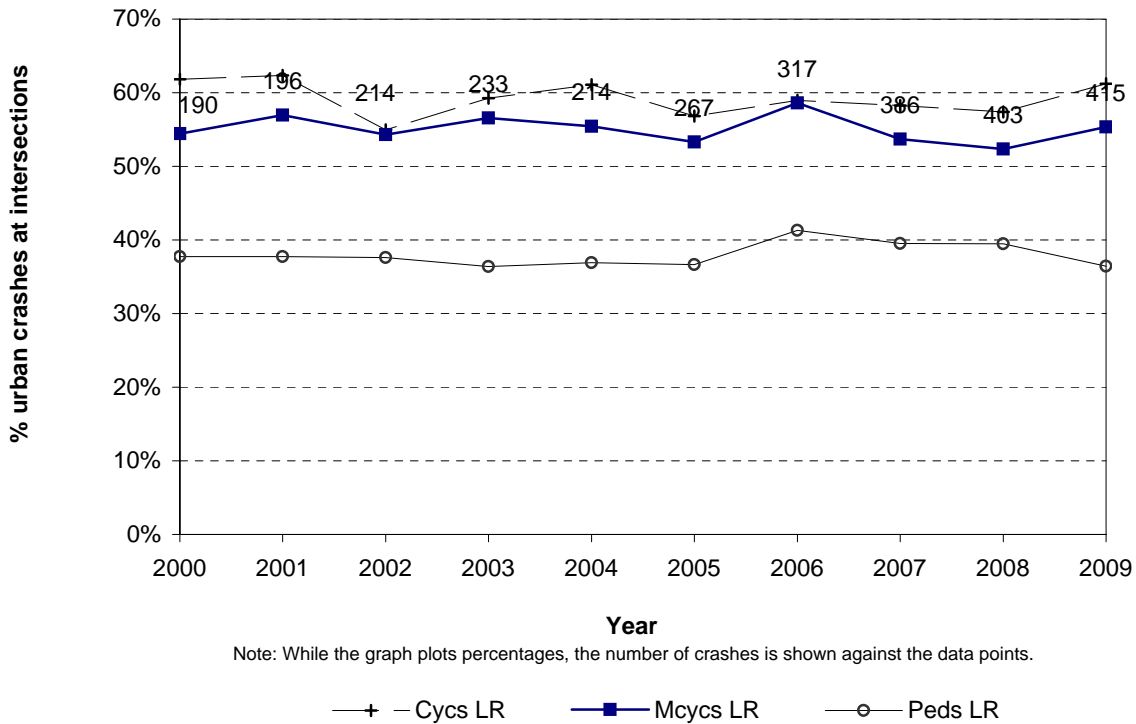
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.14 Contributing factors - rural  
VRUs - Motorcyclists council roads (2005-2009)**

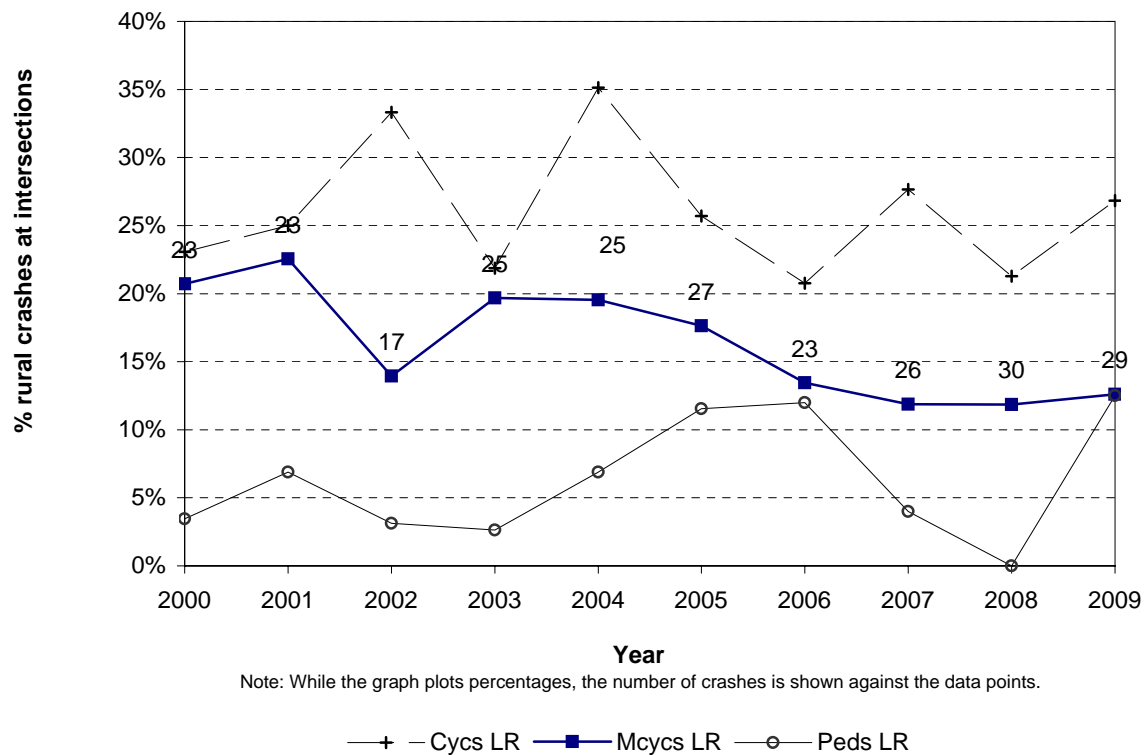


Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

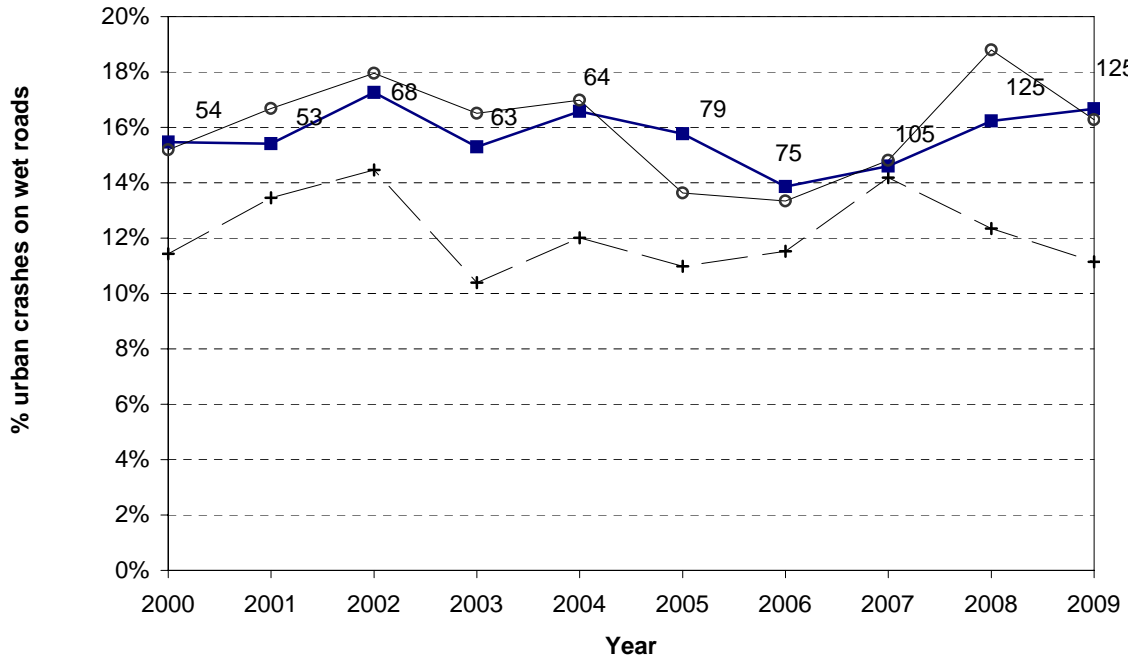
**Figure 8.15 Intersection crashes  
VRUs - Motorcyclists - urban council roads**



**Figure 8.16 Intersection crashes  
VRUs - Motorcyclists - rural council roads**



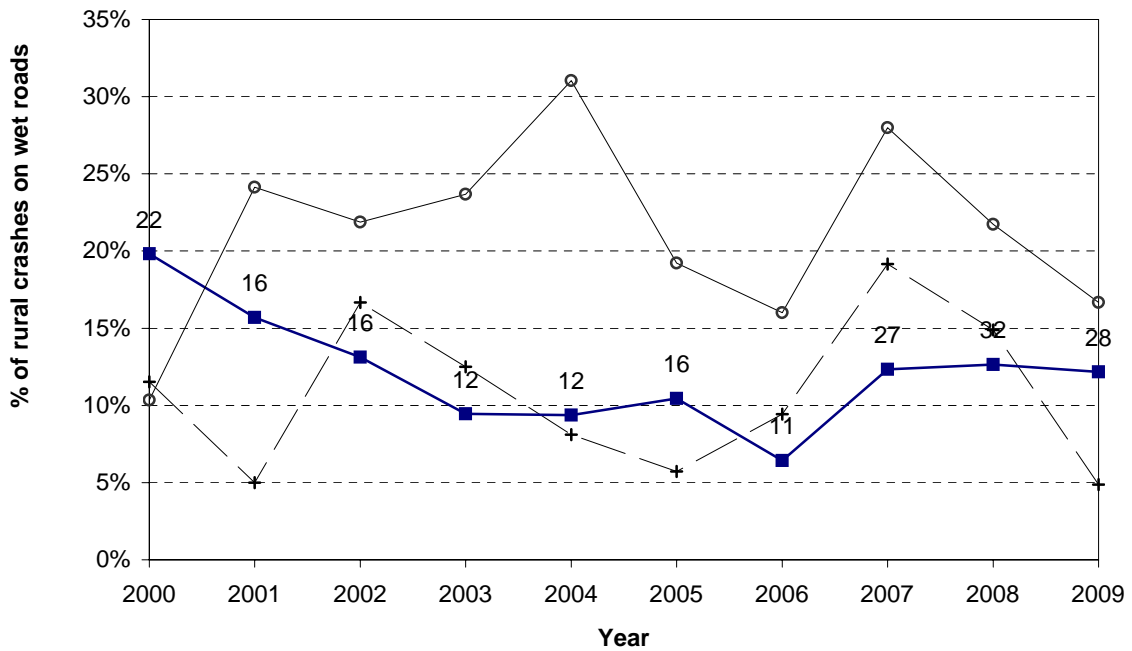
**Figure 8.17 Wet road crashes**  
**VRUs - Motorcyclists - urban council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Cycs LR —■— Mcycls LR —○— Peds LR

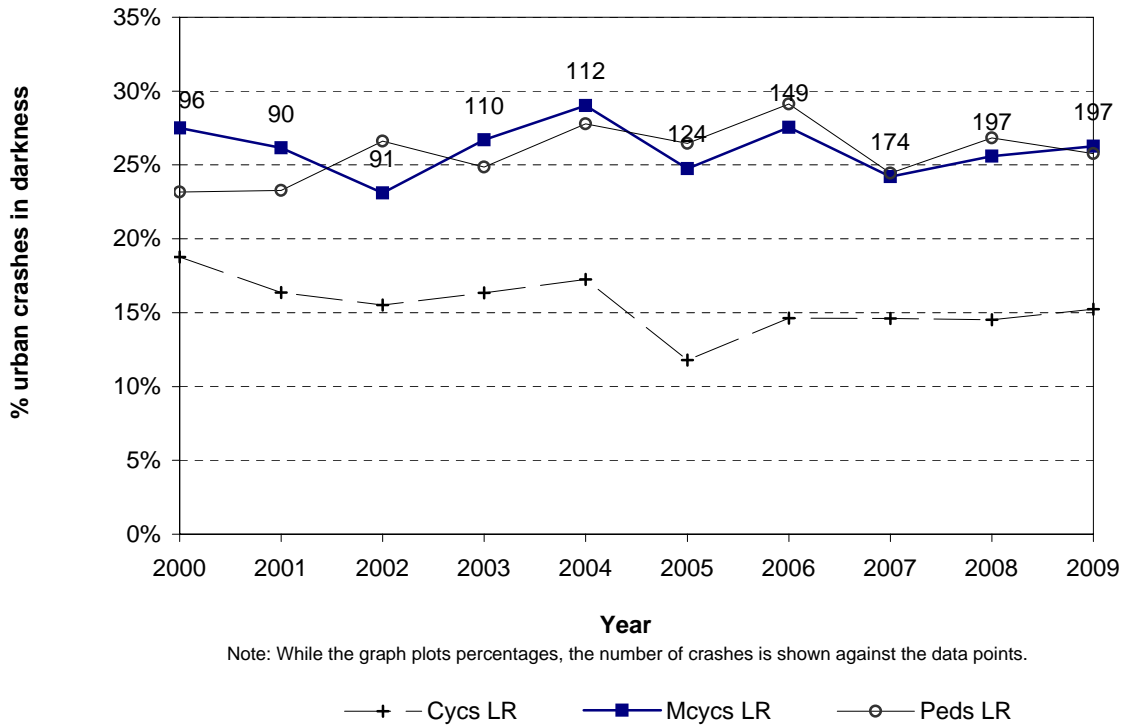
**Figure 8.18 Wet road crashes**  
**VRUs - Motorcyclists - rural council roads**



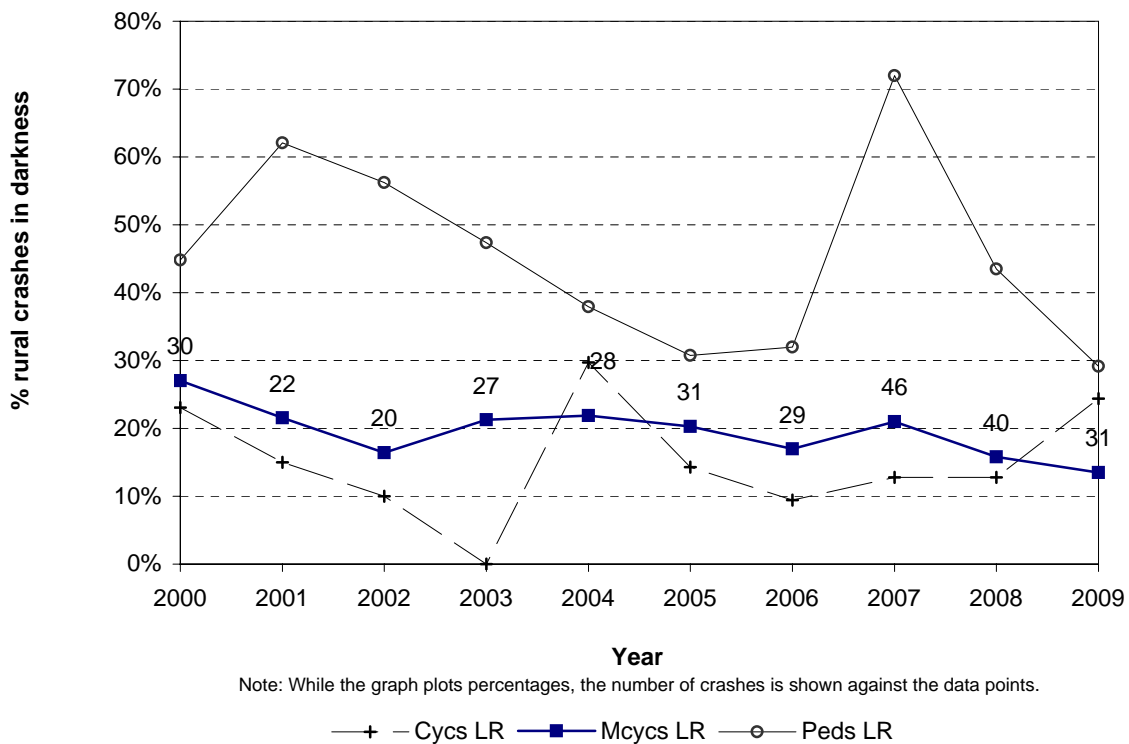
Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— Cycs LR —■— Mcycls LR —○— Peds LR

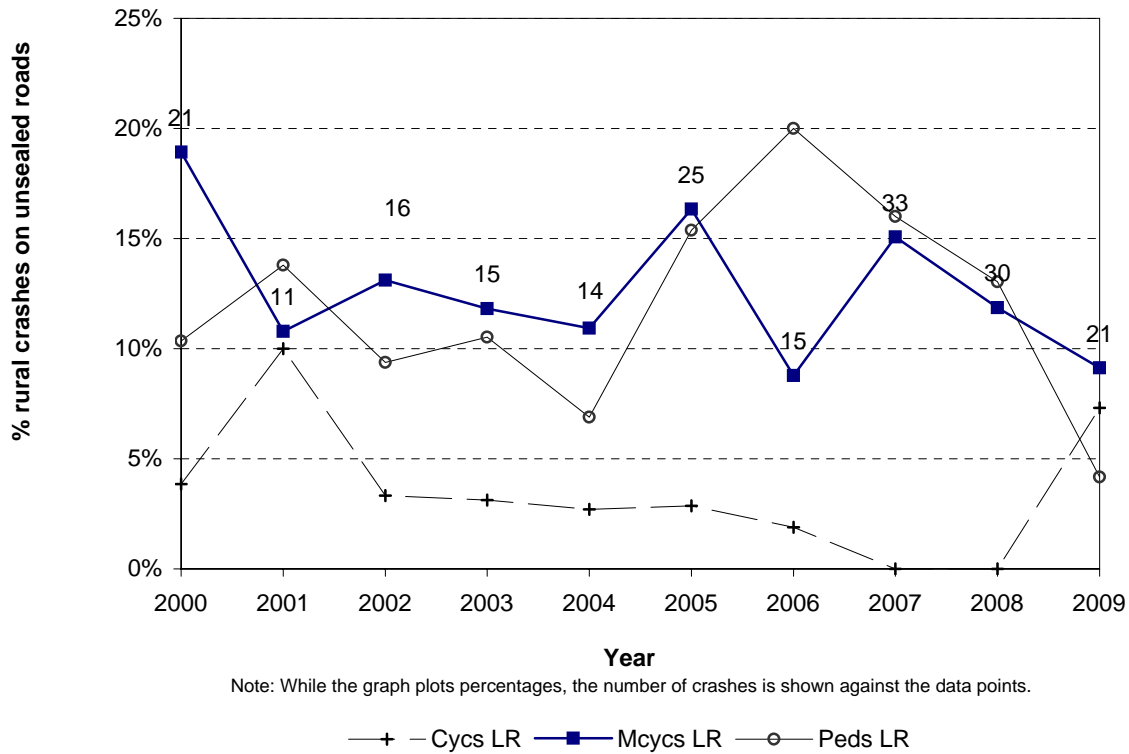
**Figure 8.19 Crashes in darkness  
VRUs - Motorcyclists - urban council roads**



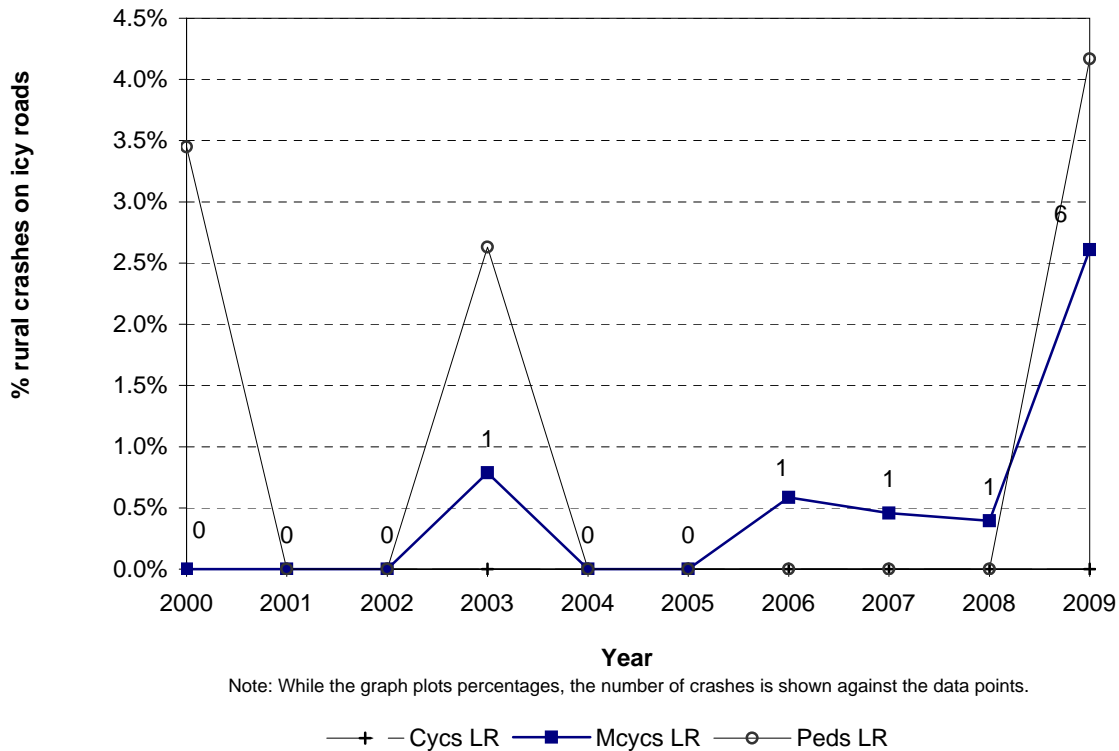
**Figure 8.20 Crashes in darkness  
VRUs - Motorcyclists - rural council roads**



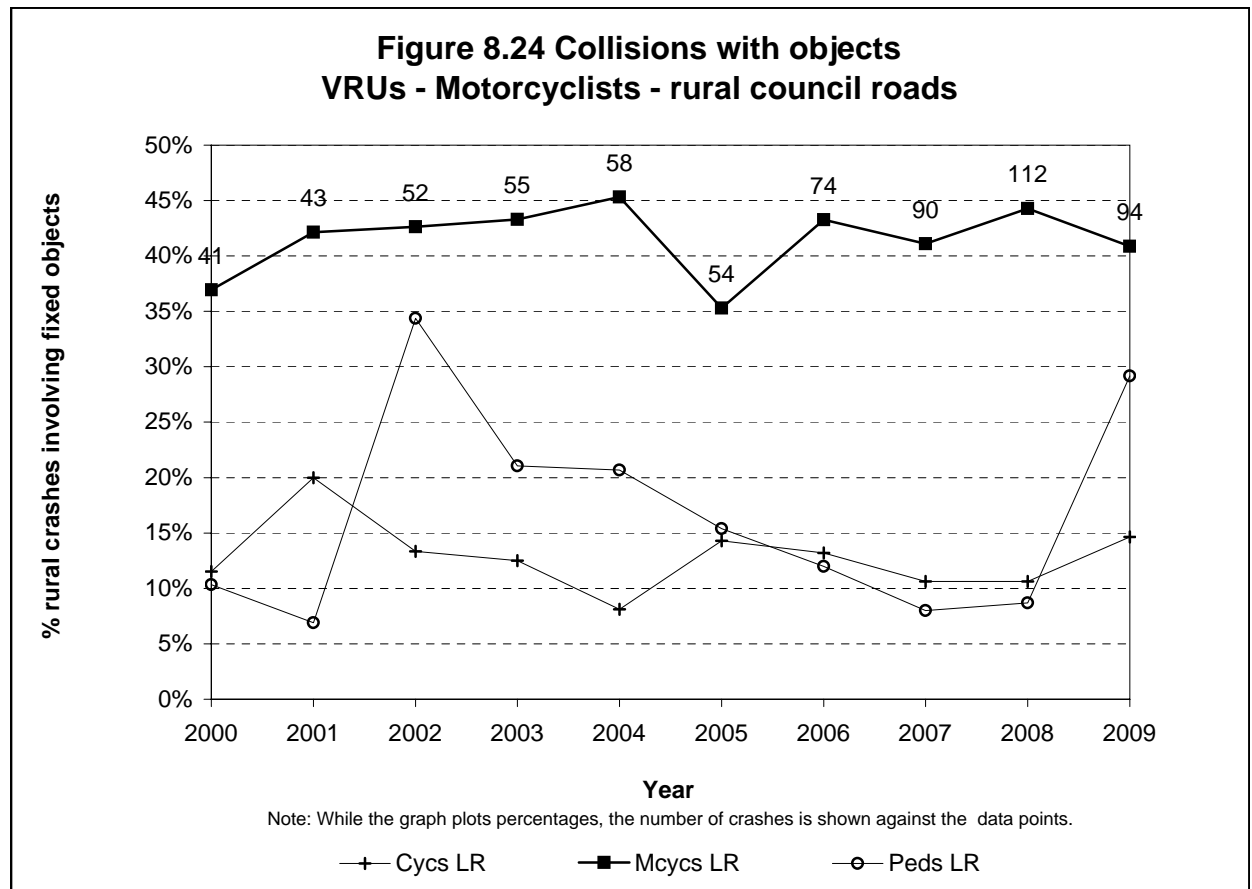
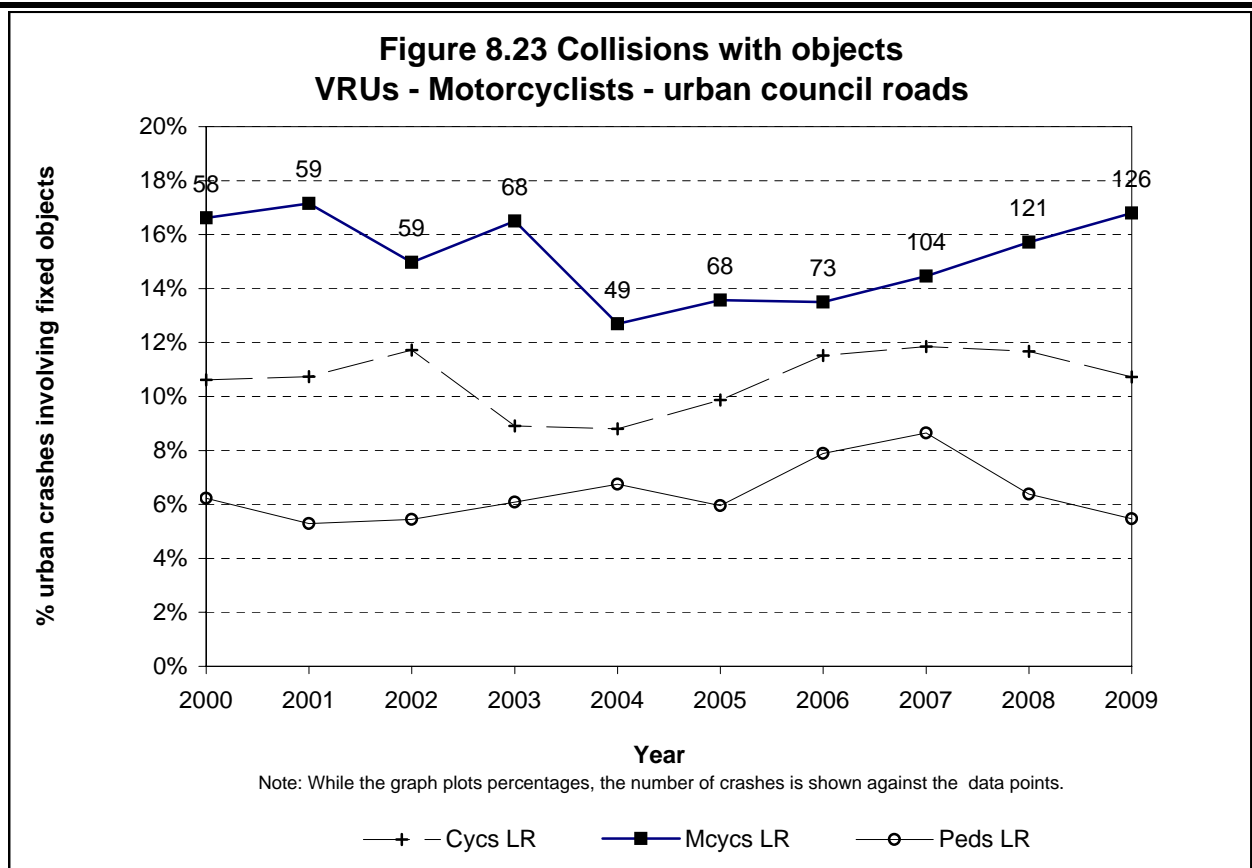
**Figure 8.21 Crashes on unsealed roads  
VRUs - Motorcyclists - rural council roads**



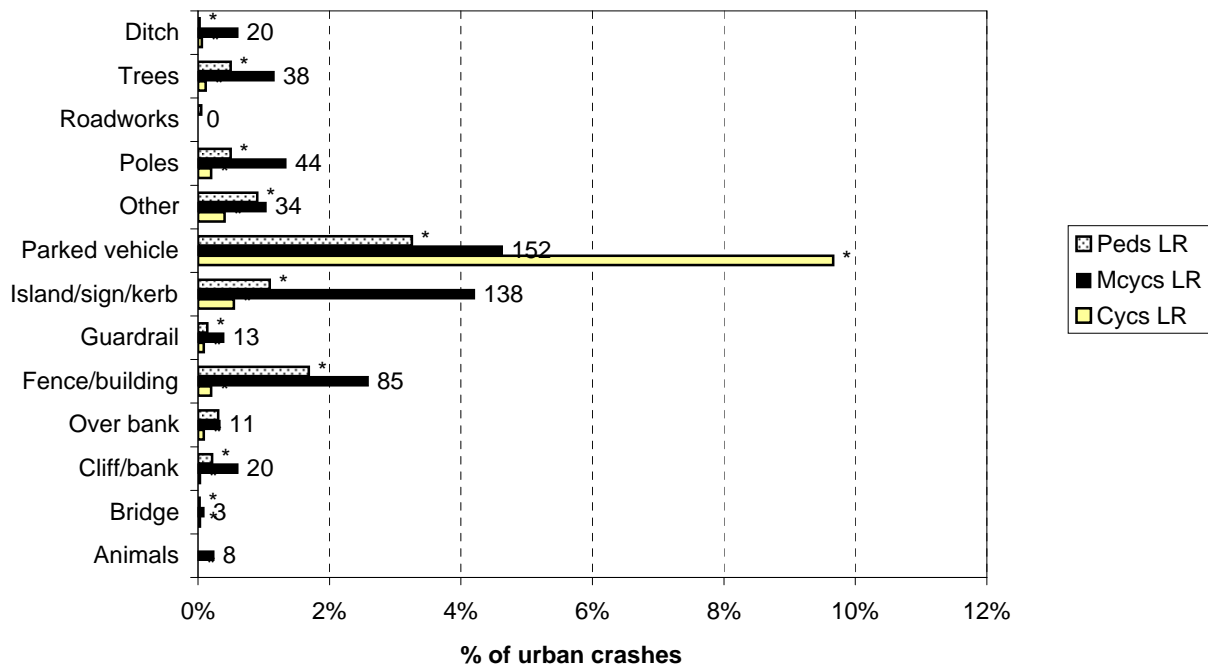
**Figure 8.22 Icy road crashes  
VRUs - Motorcyclists - rural council roads**





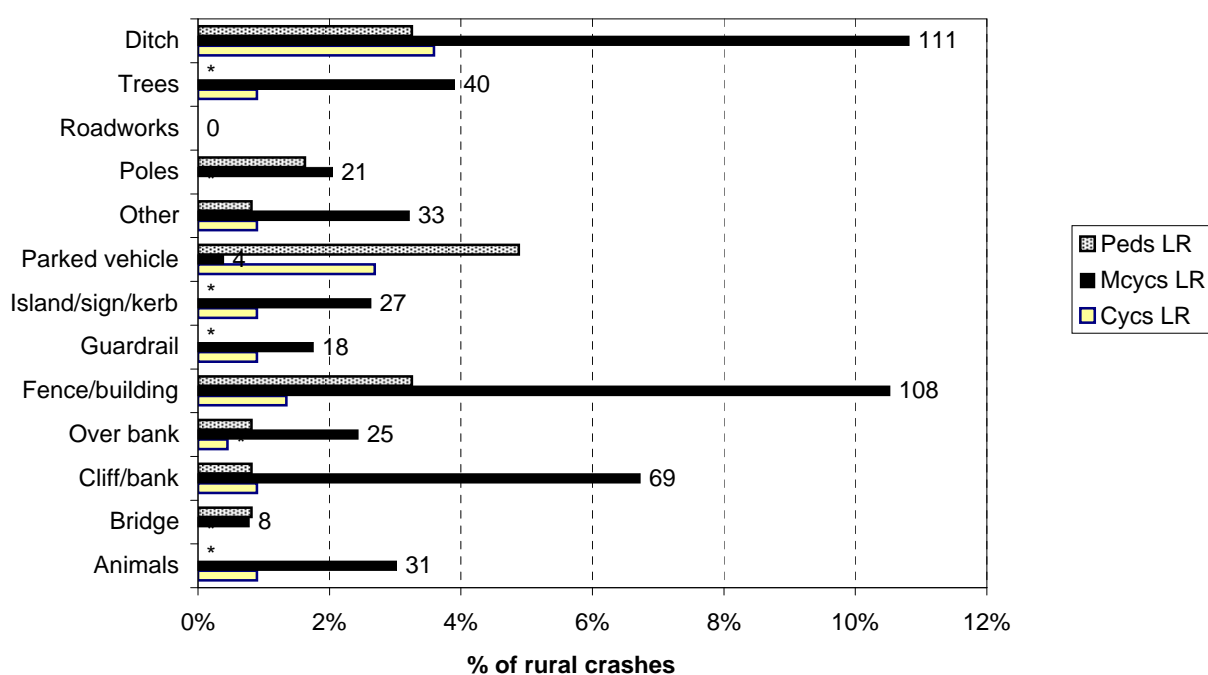


**Figure 8.25 Objects struck - urban  
VRUs - Motorcyclists council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.26 Objects struck - rural  
VRUs - Motorcyclists council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



# *Crash Location Statistics*



**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Westland District	SH 6/ARAHURA RIV BR	10	8	1
Auckland City	SH 1N/1 LINK 16	12	8	2
Auckland City	SH 1N/FANSHAWE OFF SBD	9	7	1
North Shore City	SH 1N/TRISTRAM OBR	11	7	3
Auckland City	DOMINION ROAD/BURNLEY TERRACE	8	6	2
Auckland City	DOMINION ROAD/PAICE AVENUE	6	6	1
Upper Hutt City	SH 2/MARCHANT ROAD	8	6	3
North Shore City	SH 1N/NORTHCOTE OBR	8	6	4
Wellington City	SH 1N/CENTENNIAL SBD	8	6	1
Upper Hutt City	SH 2/RIMUTAKA SUMMIT	5	5	1
Rodney District	MANGAWHAI ROAD/CARTER ROAD	6	5	0
Auckland City	SH 1N/PENROSE INT	5	4	1
Whangarei District	SH 1N/WAIPU GORGE ROAD	4	4	0
Hamilton City	SH3 ON RAMP/BADER ST	5	4	1
Wellington City	GHUZZEE ST/VICTORIA ST	4	4	0
New Plymouth District	TUKAPA ST/DAVID ST	4	4	0
Christchurch City	SH 74 ANZAC/WAINONI ROAD	4	4	1
North Shore City	SH 1N/ONEWA OBR	6	4	1
Auckland City	GREAT NORTH ROAD/BULLOCK TRACK	5	4	0
North Shore City	SH 1N/NORTHCOTE ON SBD	8	4	1
Masterton District	CHURCH ST/DIXON ST	4	4	1
South Wairarapa District	SH 2/TWIN BR	4	4	1
Wanganui District	DUBLIN ST/SOMME PARADE	4	4	0
Auckland City	OWENS ROAD/GILLIES AVENUE	5	4	1
Auckland City	SH 1N/KHYBER PASS OFF NBD	9	4	2
Hamilton City	SH 1N/HUNGERFORD CRESCENT	5	4	1
Auckland City	SH 1N/CURRAN ON NBD	8	4	3
Auckland City	SH 1N/GREENLANE OFF NBD	4	4	1
Matamata-Piako District	OLD TE AROHA ROAD/BARTON ROAD	4	4	2

**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Tasman District	OXFORD ST/WENSLEY ROAD	4	4	2
Wellington City	CABLE ST/CHAFFERS ST	4	4	1
Auckland City	SH 1N/MARKET OBR	7	4	4
North Shore City	WAIRAU ROAD/VIEW ROAD E	3	3	0
Waitakere City	TRIANGLE ROAD/LINCOLN ROAD	3	3	0
Manukau City	PAKURANGA ROAD/TI RAKAU DRIVE	3	3	0
Auckland City	WELLESLEY ST WEST/NELSON ST	3	3	0
Auckland City	SH 1N/CURRAN ON NBD	4	3	2
Auckland City	NEWTON ROAD/SYMONDS ST	8	3	2
Tauranga City	DEVONPORT ROAD/SIXTEENTH AVENUE	3	3	1
Auckland City	WYNDHAM ST/ALBERT ST	4	3	1
Hamilton City	KILLARNEY ROAD/QUEENS AVENUE	3	3	0
Wanganui District	SPRINGVALE ROAD/PARSONS ST	3	3	2
Wellington City	ADELAIDE ROAD/JOHN ST	5	3	2
Wellington City	WHITMORE ST/FEATHERSTON ST	3	3	0
Manawatu District	SH 3/KAIRANGA BUNNYTHORPE ROAD	3	3	0
Manawatu District	SH 54/WAUGHS ROAD	3	3	0
Wellington City	SH 1N/JOHNSONVILLE ON SBD	3	3	0
Christchurch City	FITZGERALD AVENUE/CASHEL ST	3	3	0
Dunedin City	PORTOBELLO ROAD/SHORE ST	3	3	0
Christchurch City	ENSORS ROAD/FERRY ROAD	3	3	0
Christchurch City	MANCHESTER ST/BEDFORD ROW	4	3	1
Waitakere City	SWANSON ROAD/DON BUCK ROAD	5	3	0
Hutt City	SH 2/TIROHANGA ROAD	7	3	1
Western Bay Of Plenty District	SH 2/COLLINS LANE	3	3	1
Auckland City	NEW NORTH ROAD/ALBERTON AVENUE	3	3	2
Hamilton City	SH 3/SAXBYS ROAD	5	3	1
North Shore City	ONEWA ROAD/SYLVAN AVENUE	4	3	1
Auckland City	SH 16/PATI KI ON WBD	5	3	0

**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

Local Authority	Location	Total Crashes 2005-2009	Injury Crashes 2005-2009	Total Crashes in 2009
Hamilton City	SH 1N/CHURCH ROAD	4	3	0
Manukau City	SH 20/MANUKAU OFF SBD	3	3	0
Palmerston North City	COLLEGE ST/COOK ST	3	3	0
Wellington City	THORNDON QUAY/MOORE ST	4	3	0
Wellington City	SH 1N/SOUTH PORTAL	3	3	0
Christchurch City	SAWYERS ARMS ROAD/GARDINERS ROAD	4	3	0
Christchurch City	AVONSIDE DRIVE/LINWOOD AVENUE	3	3	1
Tauranga City	MAUNGANUI ROAD/SALISBURY AVENUE	3	3	0
Rodney District	OLD NORTH ROAD/WAIKOUKOU VALLEY	3	3	2
Auckland City	QUAY ST/THE STRAND	4	3	1
Hamilton City	ANGLESEA ST/LONDON ST	3	3	0
Whangarei District	SH 14/WEST END AVENUE	3	3	1
Rodney District	OLD NORTH ROAD/PINETONE ROAD	3	3	0
Rotorua District	OTUROA ROAD/SH 5	3	3	0
Hamilton City	HEAPHY TERRACE/FAIRFIELD ROAD	4	3	1
Waitakere City	SH 16/ROYAL OBR	3	3	1
Waitakere City	SWANSON ROAD/LARNOCH ROAD	3	3	0
Waitakere City	SH 16/LINCOLN OBR	3	3	0
South Wairarapa District	SH 2/RIMUTAKA SUM	3	3	0
New Plymouth District	SH 3/MANGATI ROAD	3	3	0
Hastings District	EAST ROAD/CLIFTON ROAD	3	3	2
Wellington City	GHUZNEE ST/WILLIS ST	5	3	2
Napier City	SH 2/SH 50	5	3	1
Buller District	KARAMEA HIGHWAY/GLASSEYE CRK BR	3	3	1
Christchurch City	SH 75/PUAHA ROAD	3	3	0
Christchurch City	MARSHLAND ROAD/LOWER STYX ROAD	4	3	1
Dunedin City	OCTAGON/STUART ST	3	3	0
Christchurch City	RICCARTON AVENUE/DEANS AVENUE	3	3	1
Thames-Coromandel District	SH 25/PUMPKIN HILL ROAD	3	3	0



**Table 9.1 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**

<b>Local Authority</b>	<b>Location</b>	<b>Total Crashes 2005-2009</b>	<b>Injury Crashes 2005-2009</b>	<b>Total Crashes in 2009</b>
Hamilton City	TE RAPA ROAD/THE BASE PARADE	4	3	2
North Shore City	SUNSET ROAD/RAMP ROAD	3	3	1
Auckland City	GILLIES AVENUE/SH 1N	3	3	1
Rodney District	SH 16/KAHIKATEA FLAT ROAD	3	3	2
Manukau City	NORTH ROAD/TWILIGHT ROAD	3	3	0
Upper Hutt City	SH 2/MARCHANT ROAD	3	3	0
Palmerston North City	VOGEL ST/HAYDON ST	3	3	2
South Wairarapa District	SH 2/RIMUTAKA SUMMIT	3	3	1
Christchurch City	CASHEL ST/OLLIVIERS ROAD	3	3	0
Dunedin City	JETTY ST/SH 1S	4	3	1
Christchurch City	SH 73A/EPSOM ROAD	3	3	1
Christchurch City	LINWOOD AVENUE/SH 74	3	3	2
Invercargill City	ELLES ROAD/TWEED ST	3	3	0

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Auckland City	SH 1N	109
Wellington City	SH 1N	67
Auckland City	DOMINION ROAD	56
North Shore City	SH 1N	49
Auckland City	GREAT NORTH ROAD	46
Thames-Coromandel District	SH 25	42
Upper Hutt City	SH 2	42
Rodney District	SH 16	39
Auckland City	SH 16	37
Hutt City	SH 2	35
Tauranga City	CAMERON ROAD	32
Tauranga City	SH 29	31
Hamilton City	SH 1N	31
Westland District	SH 6	31
Auckland City	GREAT SOUTH ROAD	30
New Plymouth District	SH 3	29
Tasman District	SH 60	29
Rodney District	SH 1N	28
Auckland City	NEW NORTH ROAD	27
Western Bay Of Plenty District	SH 2	27
Dunedin City	SH 1S	27
Tauranga City	SH 2	25
Marlborough District	SH 1S	25
Christchurch City	SH 75	24
New Plymouth District	SH 45	24
Whangarei District	SH 1N	23
Nelson City	SH 6	23
Wellington City	ADELAIDE ROAD	23
Kapiti Coast District	SH 1N	22

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Waitaki District	SH 1S	22
Auckland City	REMUERA ROAD	21
Christchurch City	MANCHESTER ST	21
Taupo District	SH 1N	20
Waitakere City	GREAT NORTH ROAD	19
Manukau City	PAKURANGA ROAD	19
Auckland City	MOUNT EDEN ROAD	19
Hastings District	SH 2	19
Far North District	SH 1N	18
Rodney District	SH 17	18
Auckland City	TAMAKI DRIVE	18
Auckland City	NEWTON ROAD	18
Horowhenua District	SH 1N	18
Masterton District	SH 2	18
Hurunui District	SH 1S	18
Timaru District	SH 1S	18
Waitakere City	SWANSON ROAD	18
Far North District	SH 10	17
Auckland City	MANUKAU ROAD	17
Waikato District	SH 1N	17
Christchurch City	MARSHLAND ROAD	17
North Shore City	ONEWA ROAD	17
North Shore City	LAKE ROAD	17
South Wairarapa District	SH 2	17
Waitakere City	TE ATATU ROAD	16
Waitakere City	SH 16	16
Rodney District	WHANGAPARAOA ROAD	16
Manawatu District	SH 54	16
Christchurch City	DYERS PASS ROAD	16

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

<b>Local Authority &amp; Road</b>		<b>Route Total</b>
Rodney District	OLD NORTH ROAD	16
Auckland City	SANDRINGHAM ROAD	16
Auckland City	SYMONDS ST	15
Hamilton City	TE RAPA ROAD	15
South Waikato District	SH 1N	15
Hauraki District	SH 2	15
Taranua District	SH 2	15
Gisborne District	SH 35	15
Wanganui District	SH 3	15
Marlborough District	SH 6	15
Christchurch City	RICCARTON ROAD	15
Tasman District	SH 6	14
Kaikoura District	SH 1S	14
South Taranaki District	SH 3	14
Hurunui District	SH 7	14
Christchurch City	MOORHOUSE AVENUE	14
Manukau City	GREAT SOUTH ROAD	14
Wellington City	RIDDIFORD ST	14
Napier City	SH 2	14
Waitakere City	PORTAGE ROAD	13
Porirua City	PAEKAKARIKI HILL ROAD	13
Grey District	SH 6	13
Christchurch City	FERRY ROAD	13
Auckland City	MOUNT ALBERT ROAD	13
Hamilton City	VICTORIA ST	13
Christchurch City	LINCOLN ROAD	13
Hastings District	MIDDLE ROAD	13
Christchurch City	SH 74	13
North Shore City	WAIRAU ROAD	12

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Auckland City	HILLSBOROUGH ROAD	12
Waitomo District	SH 3	12
Hamilton City	SH 3	12
Manukau City	TI RAKAU DRIVE	12
Hauraki District	SH 25	12
Wairoa District	SH 2	12
Kaipara District	SH 12	12
Queenstown-Lakes District	SH 6	12
Manukau City	SH 1N	12
Auckland City	PONSONBY ROAD	11
Tauranga City	DEVONPORT ROAD	11
Wellington City	GHUZNEE ST	11
New Plymouth District	TUKAPA ST	11
Kapiti Coast District	KAPITI ROAD	11
Wanganui District	DUBLIN ST	11
Clutha District	SH 1S	11
Invercargill City	SH 1S	11
Christchurch City	COLOMBO ST	11
Palmerston North City	SH 3	11
Wellington City	HUTT ROAD	11
Rotorua District	SH 5	11
Porirua City	SH 58	11
Palmerston North City	RUAHINE ST	11
Waitakere City	SCENIC DRIVE	10
Otorohanga District	SH 31	10
Papakura District	GREAT SOUTH ROAD	10
North Shore City	SH 17	10
Thames-Coromandel District	SH 25A	10
Tauranga City	MAUNGANUI ROAD	10

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

<b>Local Authority &amp; Road</b>	<b>Route Total</b>
Ruapehu District SH 4	10
Gisborne District GLADSTONE ROAD	10
Horowhenua District SH 57	10
New Plymouth District SH 44	10
Porirua City SH 1N	10
Masterton District CHURCH ST	10
Christchurch City NEW BRIGHTON ROAD	10
Invercargill City SH 6	10
Christchurch City PAGES ROAD	10
Auckland City VICTORIA ST WEST	10
North Shore City ESMONDE ROAD	10
Taupo District SH 5	10
Rotorua District SH 30	10
Auckland City PRINCES ST	10
Auckland City GILLIES AVENUE	10
Tauranga City SH 2A	10
Hutt City HIGH ST	10
Christchurch City SH 1S	10
Whangarei District SH 14	9
Waipa District SH 1N	9
Manukau City SH 20	9
Rodney District COATESVILLE-RIVERHEAD HIG	9
Hastings District SH 50	9
Upper Hutt City FERGUSSON DRIVE	9
Christchurch City GREERS ROAD	9
Dunedin City PORTOBELLO ROAD	9
Western Bay Of Plenty District SH 29	9
Wellington City THE TERRACE	9
Buller District SH 6	9

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

<b>Local Authority &amp; Road</b>		<b>Route Total</b>
Hastings District	SH 5	9
Christchurch City	SH 73	9
Selwyn District	SH 73	9
Auckland City	BLOCKHOUSE BAY ROAD	9
Christchurch City	GLOUCESTER ST	9
Matamata-Piako District	SH 29	8
Matamata-Piako District	SH 26	8
Opotiki District	SH 2	8
Matamata-Piako District	OLD TE AROHA ROAD	8
Auckland City	KARANGAHAPE ROAD	8
Manukau City	EAST TAMAKI ROAD	8
North Shore City	FORREST HILL ROAD	8
Far North District	SH 12	8
Hamilton City	PEACHGROVE ROAD	8
Rangitikei District	SH 1N	8
New Plymouth District	MANGOREI ROAD	8
Hastings District	KARAMU ROAD NORTH	8
Napier City	KENNEDY ROAD	8
Dunedin City	SH 87	8
Dunedin City	SH 88	8
Christchurch City	SH 73A	8
Auckland City	ROSEBANK ROAD	8
Hutt City	EASTERN HUTT ROAD	8
Wanganui District	SH 4	8
Papakura District	SH 1N	8
Hamilton City	TE AROHA ST	8
Auckland City	PARNELL ROAD	8
Hutt City	THE ESPLANADE	8
Christchurch City	PAPANUI ROAD	8

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Auckland City	QUAY ST	8
Rodney District	MANGAWHAI ROAD	8
Napier City	GLOUCESTER ST	8
Carterton District	SH 2	8
Wellington City	EVANS BAY PARADE	8
North Shore City	CONSTELLATION DRIVE	8
North Shore City	MOKOIA ROAD	7
Hamilton City	SH 23	7
Manukau City	WEYMOUTH ROAD	7
Waitakere City	TITIRANGI ROAD	7
North Shore City	GLENFIELD ROAD	7
Hamilton City	WAIRERE DRIVE	7
North Shore City	EAST COAST ROAD	7
Waikato District	SH 23	7
Auckland City	BEACH ROAD	7
Auckland City	KHYBER PASS ROAD	7
South Wairarapa District	SH 53	7
Palmerston North City	TREMAINE AVENUE	7
Napier City	SH 50	7
Palmerston North City	FERGUSON ST	7
Hastings District	HERETAUNGA ST WEST	7
Marlborough District	SH 63	7
Wellington City	TARANAKI ST	7
Palmerston North City	CHURCH ST	7
Central Otago District	SH 8	7
Dunedin City	KING EDWARD ST	7
Christchurch City	BARBADOES ST	7
Dunedin City	PRINCES ST	7
Christchurch City	MAIN NORTH ROAD	7



**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

<b>Local Authority &amp; Road</b>	<b>Route Total</b>
Westland District SH 73	7
Christchurch City SH 73 BROUGHAM	7
Christchurch City BARRINGTON ST	7
Christchurch City BLENHEIM ROAD	7
Southland District SH 6	7
Christchurch City LINWOOD AVENUE	7
Hutt City HUTT ROAD	7
Christchurch City WAIRAKEI ROAD	7
Manukau City BOTANY ROAD	7
Franklin District HIGHWAY 22	7
Waitakere City SH 18	7
Manukau City MASSEY ROAD	7
Wellington City THORNDON QUAY	7
Nelson City VANGUARD ST	7
Christchurch City HILLS ROAD	7
Dunedin City SOUTH ROAD	7
Waimakariri District SH 1S	7
Hamilton City HEAPHY TERRACE	7
Buller District SH 67	7
Auckland City PITT ST	7
Gisborne District SH 2	7
Wellington City SH 2	7
Christchurch City WAINONI ROAD	7
Waitakere City HENDERSON VALLEY ROAD	7
North Shore City BEACH ROAD	6
Auckland City WAKEFIELD ST	6
Auckland City MAYORAL DRIVE	6
Auckland City QUEEN ST	6
Auckland City WELLESLEY ST WEST	6

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Tauranga City	PAPAMOA BEACH ROAD	6
Auckland City	BALMORAL ROAD	6
Auckland City	COLLEGE HILL	6
Auckland City	CAMPBELL ROAD	6
Hamilton City	SH3 ON RAMP	6
South Taranaki District	SH 45	6
Stratford District	SH 43	6
Palmerston North City	SH 57	6
Hutt City	MAIN ROAD	6
Christchurch City	AVONSIDE DRIVE	6
Christchurch City	FITZGERALD AVENUE	6
Southland District	SH 94	6
Christchurch City	NORTHCOTE ROAD	6
Christchurch City	ENSORS ROAD	6
Christchurch City	BURWOOD ROAD	6
Tauranga City	WAIHI ROAD	6
Western Bay Of Plenty District	SH 36	6
Wellington City	COURTENAY PLACE	6
Palmerston North City	FEATHERSTON ST	6
Rodney District	WEST COAST ROAD	6
Rotorua District	SH 36	6
Whangarei District	MAUNU ROAD	6
Auckland City	BROADWAY	6
Waikato District	SH 2	6
Otorohanga District	SH 3	6
Nelson City	MAIN ROAD STOKE	6
Hastings District	OMAHU ROAD	6
Hastings District	SH 50A	6
Southland District	SH 99	6

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

<b>Local Authority &amp; Road</b>	<b>Route Total</b>
Christchurch City      HEREFORD ST	6
Invercargill City      ELLES ROAD	6
Christchurch City      CASHEL ST	6
Hamilton City      ANGLESEA ST	6
North Shore City      TARGET ROAD	6
North Shore City      OTEHA VALLEY ROAD	6
Hamilton City      GREY ST	6
Wellington City      SH 1N VIVIAN	6
Palmerston North City      BOTANICAL ROAD	6
Christchurch City      TUAM ST	6
Christchurch City      STANMORE ROAD	6
Dunedin City      MORAY PLACE	6
Christchurch City      RICCARTON AVENUE	6
Auckland City      LOWER DOMAIN DRIVE	6
Hutt City      WAINUIOMATA HILL ROAD	6
Porirua City      GRAYS ROAD	6
Wellington City      ORIENTAL PARADE	6
Hamilton City      BRIDGE ST	6
Rodney District      PEAK ROAD	5
Waitakere City      TRIANGLE ROAD	5
Franklin District      GLENBROOK ROAD	5
Matamata-Piako District      SH 24	5
Auckland City      ST JOHNS ROAD	5
Waitakere City      LINCOLN ROAD	5
Auckland City      GREENLANE INT	5
Auckland City      GRAFTON ROAD	5
Opotiki District      SH 35	5
Far North District      SH 11	5
Auckland City      OCEAN VIEW ROAD	5

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

Local Authority & Road		Route Total
Auckland City	HOPETOUN ST	5
Taupo District	SH 32	5
Hamilton City	KILLARNEY ROAD	5
North Shore City	RANGATIRA ROAD	5
Hamilton City	RIVER ROAD	5
Franklin District	AWHITU ROAD	5
Hastings District	TE AUTE ROAD	5
Napier City	WESTMINSTER AVENUE	5
Nelson City	NAYLAND ROAD	5
Palmerston North City	COLLEGE ST	5
Hastings District	NAPIER ROAD	5
Wellington City	ARO ST	5
Wellington City	NEWLANDS ROAD	5
Wellington City	UPLAND ROAD	5
Hutt City	COAST ROAD	5
Stratford District	SH 3	5
Manawatu District	SH 3	5
Dunedin City	ALBANY ST	5
Dunedin City	NORTH ROAD	5
Christchurch City	SH 74 ANZAC	5
Christchurch City	HAREWOOD ROAD	5
Rotorua District	FENTON ST	5
Waitakere City	DON BUCK ROAD	5
Wellington City	MIRAMAR AVENUE	5
Napier City	CARLYLE ST	5
Masterton District	QUEEN ST	5
Auckland City	RICHARDSON ROAD	5
Taupo District	SH 41	5
Waikato District	OHAUTIRA ROAD	5

**Table 9.2 Roads with Aggregated Number of Crashes  
(Injury and Non-Injury Crashes). Roads with 5 or more crashes**

Note: No account has been taken of the length of the named road.

<b>Local Authority &amp; Road</b>	<b>Route Total</b>
North Shore City            SUNSET ROAD	5
Taupo District            WAIPAPA ROAD	5
Tauranga City            FRASER ST	5
Franklin District        SH 1N	5
Auckland City            RICHMOND ROAD	5
Waitakere City            WEST COAST ROAD	5
Franklin District        WAIUKU ROAD	5
Wellington City            BROADWAY	5
Palmerston North City    MAIN ST	5
Wellington City            WILLIS ST	5
Tasman District            MOTUEKA VALLEY HIGHWAY	5
Christchurch City        SAWYERS ARMS ROAD	5
Dunedin City            BRIGHTON ROAD	5
Christchurch City        CLYDE ROAD	5
Invercargill City        TWEED ST	5
Ashburton District        SH 1S	5
Christchurch City        MACES ROAD	5
Christchurch City        GASSON ST	5
Timaru District        SH 79	5
Auckland City            OWENS ROAD	5
Wanganui District        GLASGOW ST	5
Palmerston North City    VICTORIA AVENUE	5
Christchurch City        LYTTELTON ST	5
Matamata-Piako District    SH 27	5
Waikato District        HIGHWAY 22	5
Rodney District        Z BCH MURIWAI	5
Manukau City            PAKURANGA HIGHWAY	5
Manukau City            MAHIA ROAD	5
Hamilton City            AVALON DRIVE	5

# appendix

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- Groupings of crash types
- Grouping of contributing factors
- General factor list
- General movement types


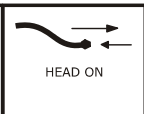


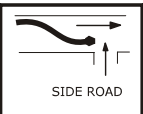


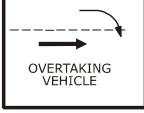
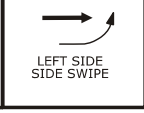







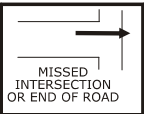
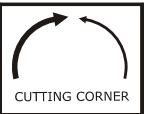
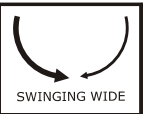
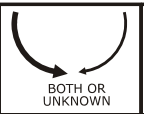
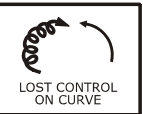





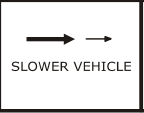

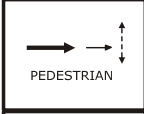
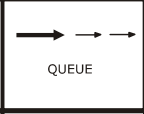
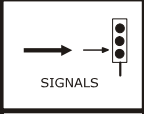
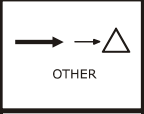

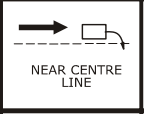

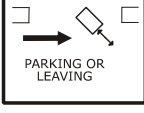
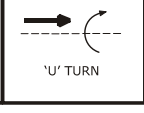
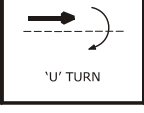

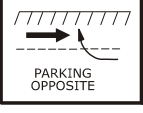


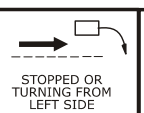
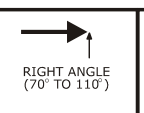
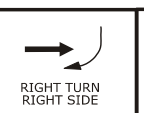
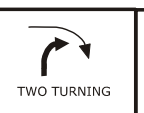
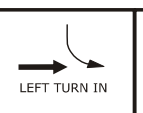
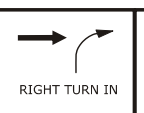
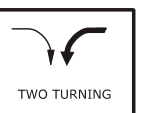

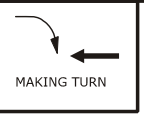
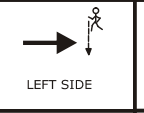
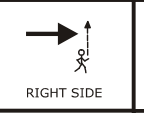
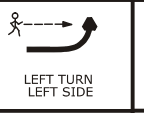
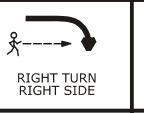




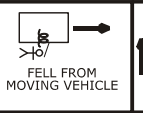
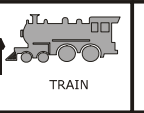
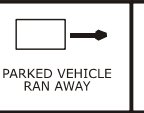
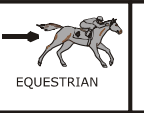
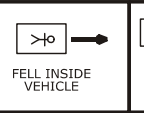
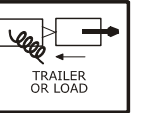


## Explanatory notes for the appendix

1. Each traffic crash report has a diagram and a description of what happened. These are used to classify the movements the vehicles were making when they crashed eg 'collided with parked vehicle', or 'lost control while overtaking'. In this report, crash types are grouped into seven categories. The following page shows the types of crashes which are included in each group.
2. Traffic crash reports also include information on why the crash occurred, or on factors contributing to the crash. In this report the hundreds of contributing factor codes used by New Zealand Transport Agency have been condensed into 16 groups for practical reasons. Lists of the factor groups used in this report, and of all the contributing factors used by New Zealand Transport Agency, are shown on the following pages.
3. Note that in the year 2000 there were some minor changes to the contributing factor groups. The most significant change was that 'inattention' was grouped with 'inadequate check' to form 'poor observation'. This allowed a more accurate assessment of 'fatigue' as a contributing factor, as it now has its own grouping.
4. The factor group 'poor handling' includes factor codes that were only introduced in 1998. This could explain why there may have been a sudden change at this time.
5. The coding of the factors contributing to a crash is subjective. Therefore analysis using contributing factor groups needs to be interpreted with caution. Also, to effectively target safety or enforcement campaigns more analysis of the specific contributing factors involved may be needed.
6. It should be noted that a traffic crash generally has more than one contributing factor. Therefore, adding the number of crashes on graphs showing the number of crashes with a given factor or factor group will be greater than the total number of crashes in the city or district.



# Groupings of crash types

Overtaking	AA	AB	AC	AD	AE	AF	AG						
	 PULLING OUT OR CHANGING LANE TO RIGHT	 HEAD ON	 CUTTING IN OR CHANGING LANE TO LEFT	 LOST CONTROL (OVERTAKING VEHICLE)	 SIDE ROAD	 LOST CONTROL (OVERTAKEN VEHICLE)	 WEAVING IN HEAVY TRAFFIC						
Straight - Lost control / Head on	GE	GB	BA	CA	CB	CC	BE						
	 OVERTAKING VEHICLE	 LEFT SIDE SIDE SWIPE	 ON STRAIGHT	 OUT OF CONTROL ON ROADWAY	 OFF ROADWAY TO LEFT	 OFF ROADWAY TO RIGHT	 LOST CONTROL ON STRAIGHT						
Bend - Lost control / Head on	DA	DB	DC	BB	BC	BD	BF						
	 LOST CONTROL TURNING RIGHT	 LOST CONTROL TURNING LEFT	 MISSED INTERSECTION OR END OF ROAD	 CUTTING CORNER	 SWINGING WIDE	 BOTH OR UNKNOWN	 LOST CONTROL ON CURVE						
Rear end / Obstruction	EA	EB	EC	ED	EE	FA	FB						
	 PARKED VEHICLE	 ACCIDENT OR BROKEN DOWN	 NON VEHICULAR OBSTRUCTIONS (INCLUDING ANIMALS)	 WORKMANS VEHICLE	 OPENING DOOR	 SLOWER VEHICLE	 CROSS TRAFFIC						
Crossing / Turning	FC	FD	FE	FF	GA	GD	GF						
	 PEDESTRIAN	 QUEUE	 SIGNALS	 OTHER	 REAR OF LEFT TURNING VEHICLE	 NEAR CENTRE LINE	 TWO TURNING						
Pedestrian vs Vehicle	MA	MB	MC	MD	ME	MF	MG						
	 PARKING OR LEAVING	 'U' TURN	 'U' TURN	 DRIVEWAY MANOEUVRE	 PARKING OPPOSITE	 ENTERING OR LEAVING	 REVERSING ALONG ROAD						
Miscellaneous	GC	HA	JA	JC	KA	KB	KC						
	 STOPPED OR TURNING FROM LEFT SIDE	 RIGHT ANGLE (70° TO 110°)	 RIGHT TURN RIGHT SIDE	 TWO TURNING	 LEFT TURN IN	 RIGHT TURN IN	 TWO TURNING						
Miscellaneous	LA	LB	NA	NB	NC	ND	NE	NF	NG				
	 STOPPED WAITING TO TURN	 MAKING TURN	 LEFT SIDE	 RIGHT SIDE	 LEFT TURN LEFT SIDE	 RIGHT TURN RIGHT SIDE	 LEFT TURN RIGHT SIDE	 RIGHT TURN LEFT SIDE	 MANOEUVRING VEHICLE				
Miscellaneous	PA	PB	PC	PD	PE	PF	QA	QB	QC	QD	QE	QF	QG
	 FELL WHILE BOARDING OR ALIGHTING	 FELL FROM MOVING VEHICLE	 TRAIN	 PARKED VEHICLE RAN AWAY	 EQUESTRIAN	 FELL INSIDE VEHICLE	 TRAILER OR LOAD						

## Groupings of contributing factors

Factor group	Factor codes included
<b>Alcohol involved</b>	100 – 101 103 – 109
<b>Too fast</b>	110 – 119 430 – 432
<b>Failed to give way or stop</b>	300 – 314 320 – 328
<b>Failed to keep left</b>	120 – 128 205
<b>Overtaking</b>	150 – 161
<b>Incorrect lanes or position</b>	129 170 – 183 200 – 204 206 – 209 440 – 448
<b>Poor handling</b>	130 – 134 137 – 149 420 – 429
<b>Poor observation</b>	330 – 360 370 – 379
<b>Poor judgement</b>	380 – 387 400 – 407
<b>Fatigue</b>	410 – 415
<b>Disabled, old age or illness</b>	500 – 507
<b>Pedestrian factors</b>	700 – 731
<b>Cyclist factors</b>	Any factor coded against a cyclist
<b>Vehicle factors</b>	136, 600 – 699
<b>Road factors</b>	135, 800 – 899
<b>Weather</b>	900 – 909

Note:

The following factor codes are not included as they do not fit adequately into any of the above groupings: 102, 106, 190–198, 433, 434, 510–534 and 910–999.

# VEHICLE MOVEMENT CODING SHEET

For use with crash data from CAS (Version 2.8 May 2010)

	TYPE	A	B	C	D	E	F	G	O
A	OVERTAKING AND LANE CHANGE	PULLING OUT OR CHANGING LANE TO RIGHT	HEAD ON	CUTTING IN OR CHANGING LANE TO LEFT	LOST CONTROL (OVERTAKING VEHICLE)	SIDE ROAD	LOST CONTROL (OVERTAKEN VEHICLE)	WEAVING IN HEAVY TRAFFIC	OTHER
B	HEAD ON	ON STRAIGHT	CUTTING CORNER	SWINGING WIDE	BOTH OR UNKNOWN	LOST CONTROL ON STRAIGHT	LOST CONTROL ON CURVE		OTHER
C	LOST CONTROL OR OFF ROAD (STRAIGHT ROADS)	OUT OF CONTROL ON ROADWAY	OFF ROADWAY TO LEFT	OFF ROADWAY TO RIGHT					OTHER
D	CORNERING	LOST CONTROL TURNING RIGHT	LOST CONTROL TURNING LEFT	MISSED INTERSECTION OR END OF ROAD					OTHER
E	COLLISION WITH OBSTRUCTION	PARKED VEHICLE	CRASH OR BROKEN DOWN	NON VEHICULAR OBSTRUCTIONS (INCLUDING ANIMALS)	WORKMANS VEHICLE	OPENING DOOR			OTHER
F	REAR END	SLOWER VEHICLE	CROSS TRAFFIC	PEDESTRIAN	QUEUE	SIGNALS T	OTHER		OTHER
G	TURNING VERSUS SAME DIRECTION	REAR OF LEFT TURNING VEHICLE	LEFT TURN SIDE SIDE SWIPE	STOPPED OR TURNING FROM LEFT SIDE	NEAR CENTRE LINE	OVERTAKING VEHICLE	TWO TURNING		OTHER
H	CROSSING (NO TURNS)	RIGHT ANGLE (70° TO 110°)							OTHER
J	CROSSING (VEHICLE TURNING)	RIGHT TURN RIGHT SIDE	OPPOSING RIGHT TURNS	TWO TURNING					OTHER
K	MERGING	LEFT TURN IN	RIGHT TURN IN	TWO TURNING					OTHER
L	RIGHT TURN AGAINST	STOPPED WAITING TO TURN	MAKING TURN						OTHER
M	MANOEUVRING	PARKING OR LEAVING	"U" TURN	"U" TURN	DRIVEWAY MANOEUVRE	ENTERING OR LEAVING FROM OPPOSITE SIDE	ENTERING OR LEAVING FROM SAME SIDE	REVERSING ALONG ROAD	OTHER
N	PEDESTRIANS CROSSING ROAD	LEFT SIDE	RIGHT SIDE	LEFT TURN LEFT SIDE	RIGHT TURN RIGHT SIDE	LEFT TURN RIGHT SIDE	RIGHT TURN LEFT SIDE	MANOEUVRING VEHICLE	OTHER
P	PEDESTRIANS OTHER	WALKING WITH TRAFFIC	WALKING FACING TRAFFIC	WALKING ON FOOTPATH	CHILD PLAYING (INCLUDING TRICYCLE)	ATTENDING TO VEHICLE	ENTERING OR LEAVING VEHICLE		OTHER
Q	MISCELLANEOUS	FELL WHILE BOARDING OR ALIGHTING	FELL FROM MOVING VEHICLE	TRAIN	PARKED VEHICLE RAN AWAY	EQUESTRIAN	FELL INSIDE VEHICLE	TRAILER OR LOAD	OTHER

\* = Movement applies for left and right hand bends, curves or turns

## FACTORS PROBABLY CONTRIBUTING TO CRASHES (Version 1.8- 2 November 2009)

### DRIVER CONTROL

#### 100 Alcohol or drugs

- 101 Alcohol suspected
- 102 Alcohol test below limit
- 103 Alcohol test above limit or test refused
- 104 Alcohol test result unknown
- 105 Intoxicated non-driver (pedestrian / cyclist / passenger)
- 106 (MOT only) dead driver not suspect, tested neg
- 107
- 108 Drugs suspected
- 109 Drugs proven

#### 110 Too fast for conditions

- 111 Cornering
- 112 On straight
- 113 To give way at intersection
- 114 Approaching railway crossing
- 115 When passing stationary school bus
- 116 At temporary speed limit
- 117 At crash or emergency

#### 120 Failed to keep left

- 121 Swung wide on bend
- 122 Swung wide at intersection
- 123 Cutting corner on bend
- 124 Cutting corner at intersection
- 125 On straight section
- 126 Vehicle crossed raised median
- 127 Driving or riding abreast (cyclists more than 2 abreast)
- 128 Wandering or wobbling
- 129 Too far left / right

#### 130 Lost control

- 131 When turning
- 132 Under heavy braking
- 133 Under heavy acceleration
- 134 While returning to seal from unsealed shoulder
- 135 Due to road conditions (requires road series code)
- 136 Due to vehicle fault (requires vehicle series code)
- 137 Avoiding another vehicle, pedestrian, party or obstacle on roadway
- 138 On unsealed road
- 139 End of seal

#### 140 Failed to signal in time

- 141 When moving to left, pulling over to left
- 142 When turning left
- 143 When pulling out or moving to the right
- 144 When turning right
- 145 Incorrect Signal

#### 150 Overtaking

- 151 Overtaking line of traffic or queue
- 152 Deliberately in the face of oncoming traffic
- 153 Failed to notice oncoming traffic
- 154 Misjudged speed or distance of oncoming traffic
- 155 At no passing line
- 156 With insufficient visibility
- 157 At an intersection without due care
- 158 On left without due care
- 159 Cut in after overtaking
- 160 Vehicle signalling right turn
- 161 Without care at a pedestrian crossing

#### 170 Wrong lane or turned from wrong position

- 171 Turned right from incorrect lane
- 172 Turned left from incorrect lane
- 173 Travelled straight ahead from turning lane or flush median
- 174 Turned right from left side of road
- 175 Turned left from near centre line
- 176 Turned into incorrect lane
- 177 Weaving or cut in on multi-lane roads
- 178 Moved left to avoid slow vehicle
- 179 Long vehicle tracked outside lane

#### 180 In line of traffic

- 181 Following too closely
- 182 Travelling unreasonably slowly
- 183 Motorist crowded cyclist
- 184 Incorrect merging /diverging manoeuvre

#### 190 Sudden action

- 191 Braked
- 192 Turned left
- 193 Turned right
- 194 Swerved to avoid pedestrian
- 195 Swerved to avoid animal
- 196 Swerved to avoid crash or broken down vehicle
- 197 Swerved to avoid vehicle
- 198 Swerved to avoid object or for unknown reason
- 199 Avoiding approaching emergency vehicle

#### 200 Forbidden movements

- 201 Wrong way in one way street, motorway or roundabout
- 202 When turning or U turning contrary to a sign
- 203 Contrary to "in" or "out" only driveway sign
- 204 Driving or riding on footpath
- 205 On incorrect side of island or median
- 206 Contrary to "no entry" sign
- 207 In Car Park
- 208 Motor vehicle in cycle lane
- 209 Bus / Transit lane
- 210 Cyclist riding on ped-xing / ped signals

### VEHICLE CONFLICTS

#### 300 Failed to give way

- 301 At Stop sign
- 302 At Give Way sign
- 303 When turning to non-turning traffic
- 304 When deemed turning by markings, not geometry
- 305 When turning left, to opposing right turning traffic
- 306 To pedestrian on a crossing
- 307 When turning at signals to pedestrians
- 308 When entering roadway from driveway
- 309 To traffic approaching or crossing from the right
- 310 Failed to give way at one lane bridge / road
- 311 Failed to give way to pedestrian on footpath or verge
- 312 Entering roadway not from driveway or intersection
- 313 To emergency vehicle
- 314 Driver waved through

#### 320 Did not stop

- 321 At stop sign
- 322 At steady red light
- 323 At steady red arrow
- 324 At steady amber light
- 325 At steady amber arrow
- 326 At flashing red lights (Rail Xing, Fire Stn etc)
- 327 For police or flag-person
- 328 For school patrol / kea crossing

#### 330 Inattentive: failed to notice

- 331 Vehicle slowing, stopping or stationary in front
- 332 Bend in road
- 333 Indication of vehicle in front
- 334 Traffic lights
- 335 Intersection or its Stop / Give Way control
- 336 Other regulatory sign / markings
- 337 Warning sign
- 338 Direction, information signs / markings
- 339 Road-works signs
- 340 Lane use arrows / markings?
- 341 Obstructions on Roadway

#### 350 Attention diverted by:

- 351 Passengers
- 352 Scenery or persons outside vehicle
- 353 Other traffic
- 354 Animal or insect in vehicle
- 355 Trying to find intersection, house number, destination
- 356 Advertising or signs
- 357 Emotionally upset /road rage
- 358 Cigarette, radio, heater, AC, glove box, obj under drivers feet/pedals etc
- 359 Cell phone
- 360
- 361 Navigation device
- 362 CB radio/ non cell comms device
- 363 Driver dazzled

#### 370 Did not see or look for another party until too late

- 371 Behind when reversing / manoeuvring
- 372 Behind when changing lanes position or direction (includes U-turns)
- 373 Behind when pulling out from parked position
- 374 Behind when opening door or leaving vehicle
- 375 When required to give way to traffic from another direction
- 376 When required to give way to pedestrians.
- 377 When visibility obstructed by other vehicles
- 378 When visibility limited by roadside features
- 379 When first in queue on receiving green light

#### 380 Misjudged speed, distance, size or position of:

- 381 Other vehicle coming from behind or alongside
- 382 Other vehicle coming from another direction with right of way
- 383 Pedestrian movement or intention
- 384 Towed vehicle, or while towing a vehicle
- 385 Size or position of fixed object or obstacle
- 386 Of own vehicle
- 387 Misjudged intentions of another party

### GENERAL DRIVER

#### 400 Inexperience

- 401 In driving in fast, complex or heavy traffic
- 402 New driver showed inexperience
- 403 Driving unfamiliar vehicle
- 404 Overseas / migrant driver fails to adjust to NZ road rules and road conditions
- 405 Driver under instruction
- 406 At towing trailer / other vehicle
- 407 Driver over-reacted
- 408 Unsupervised cyclist

#### 410 Fatigue (drowsy, tired, fell asleep)

- 411 Long trip
- 412 Lack of sleep
- 413 Exhaust fumes
- 414 Worked long hours before driving
- 415 Exceeded driving hours

#### 420 Incorrect use of vehicle controls

- 421 Started in gear
- 422 Stalled engine
- 423 Wrong pedal
- 424 Footrest, stand
- 425 Ignition turned off (steering locked)
- 426 Lights not switched on
- 427 Foot slipped or caught under pedal
- 428 Parking brake not fully applied
- 429 Trailer coupling or safety chain not secured

#### 430 Showing off

- 431 Racing
- 432 Playing chicken
- 433 Wheel spins / wheelies / doughnuts / drifting
- 434 Intimidating driving

#### 440 Parked or stopped

- 441 Inadequately lit at night: (not lit by street lights or park lights off)
- 442 At point of limited visibility
- 443 Not as close as practicable to side of road
- 444 On incorrect side of road
- 445 Double parked
- 446 In 'No Stopping' area
- 447 Not clear of rail crossing
- 448 In cycle or Transit lane

### GENERAL PERSON

#### 500 Illness and disability

- 501 Illness with no warning e.g. heart attack, unexpected epilepsy)
- 502 Physically disabled
- 503 Defective vision
- 504 Medical illness (not sudden) flu, diabetes
- 505 Mental illness (depression, psychosis)
- 506 Suicidal (but not successful)
- 507 Impaired ability due to old age

#### 510 Intentional or criminal

- 511 Deliberate homicide (only if succeeded)
- 512 Intentional collision
- 513 Committed suicide (only if succeeded)
- 514 Evading enforcement
- 515 Object deliberately thrown at or dropped on vehicle / shot at
- 516 Object thrown from vehicle
- 517 Stolen vehicle

#### 520 Driver or passenger, boarding, leaving , in vehicle

- 521 Boarding moving vehicle
- 522 Intentionally leaving moving vehicle
- 523 Riding in insecure position
- 524 Interfered with driver
- 525 Opened door inadvertently
- 526 Overloaded vehicle (with passengers)
- 527 Child playing in parked vehicle

#### 530 Miscellaneous person

- 531 Casualty drowned
- 532 Casualty thrown from vehicle
- 533 Equestrian not keeping to verge
- 534 Cyclist or M/cyclist wearing dark clothing

## VEHICLES

### **600 Lights and reflectors at fault or dirty**

- 601 Dazzling headlights
- 602 Headlights inadequate or no headlights
- 603 Headlights failed suddenly
- 604 Brake-lights or indicators faulty or not fitted
- 605 Tail-lights inadequate or no tail-lights
- 606 Reflectors inadequate or no reflectors
- 607 Lights or reflectors obscured

### **610 Brakes**

- 611 Parking brake failed
- 612 Parking brake defective
- 613 Service brake failed
- 614 Service brake defective
- 615 Jack-knifed

### **620 Steering**

- 621 Defective
- 622 Failed suddenly

### **630 Tyres**

- 631 Puncture or blow-out
- 632 Worn tread on tyre
- 633 Incorrect tyre type
- 634 Mixed treads / space savers

### **640 Windscreen or mirror**

- 641 Shattered windscreen
- 642 Windscreen or rear window dirty
- 643 Rear vision mirror not adjusted correctly
- 644 No rear vision mirror
- 645 Windscreen or rear window misted/frosted
- 646 Inadequate or no sun-visors
- 647 Inadequate or no windscreen wipers
- 648 Cycle / Motorcycle visor, glasses, goggles or screen

### **650 Mechanical**

- 651 Engine failure
- 652 Transmission failure (including chains and gears)
- 653 Accelerator or throttle jammed

### **660 Body or chassis**

- 661 Body, chassis or frame (cycle, m/c) failure
- 662 Suspension failure
- 663 Failure of door catch or door not shut
- 664 Inadequate mudguards
- 665 Inadequate tow coupling
- 666 Inadequate or no safety chain
- 667 Bonnet catch failed
- 668 Wheel off
- 669 Broken axle
- 670 Inconspicuous colour
- 671 Blind spot
- 672 Seat belt / restraint failed
- 673 Air-bag failed to inflate (fully)

### **680 Load**

- 681 Load interferes with driver
- 682 Not well secured or load moved
- 683 Over-hanging
- 684 Load obscured vision
- 685 Excess dimensions not adequately indicated
- 686 Over dimension vehicle or load
- 687 Load too heavy
- 688 Towed vehicle or trailer too heavy or incompatible

### **690 Miscellaneous vehicle**

- 691 Emergency Vehicle attending emergency
- 692 Vehicle caught fire
- 693 Being towed
- 694 Air-bag contributed to crash or injury
- 695 Seatbelt / restraint absent or unusable
- 696 Dangerous goods

## PEDESTRIANS

### **700 Walking along road**

- 701 Not keeping to footpath
- 702 Not keeping to side of road
- 703 Not facing oncoming traffic
- 704 Not on outside of blind curve
- 705 Wheeled ped inconsiderate or dangerous on footpath

### **710 Crossing road**

- 711 Walking heedless of traffic
- 712 Stepping out from behind vehicles
- 713 Running heedless of traffic
- 714 Failed to use pedestrian crossing when one within 20 metres
- 715 Waiting on roadway for moving traffic
- 716 Confused by traffic or stepped back
- 717 Suddenly stepped onto pedestrian crossing
- 718 Not complying with traffic signals or school patrols
- 719 Misjudged speed and / or distance of vehicle

### **720 Miscellaneous**

- 721 Pushing, working on or unloading vehicle
- 722 Playing on road or unnecessarily on road
- 723 Working on road
- 724 Wearing dark clothing
- 725 Vision obscured by umbrella or clothing
- 726 Child escaped from supervision
- 727 Unsupervised child
- 728 Sitting / lying on road
- 729 Pedestrian to /from school bus
- 730 Pedestrian behind reversing / manoeuvring vehicle
- 731 Overseas pedestrian
- 732 Pedestrian attention diverted eg cigarette, cell phone, music player

## ROAD

### **800 Slippery**

- 801 Rain
- 802 Frost or ice
- 803 Snow or hail
- 804 Loose material on seal
- 805 Mud
- 806 Oil / Diesel / Fuel
- 807 Painted markings
- 808 Recently graded
- 809 Surface bleeding / defective

### **810 Surface**

- 811 Potholed
- 812 Uneven
- 813 Deep loose metal
- 814 High crown
- 815 Curve not well banked
- 816 Edge badly defined or gave way
- 817 Under construction or maintenance
- 818 Unusually narrow
- 819 Broken glass

### **820 Obstructed**

- 821 Fallen tree or branch
- 822 Slip or subsidence
- 823 Flood waters, large puddles, ford
- 824 Road works not adequately lighted
- 825 Road works not adequately signposted
- 826 Roadside object fell on vehicle
- 827 Object flicked up by vehicle

### **830 Visibility limited**

- 831 Curve
- 832 Crest
- 833 Building
- 834 Trees
- 835 Hedge or fence
- 836 Scrub or long grass
- 837 Bank
- 838 Temporary obstruction, dust or smoke
- 839 Parked vehicle

### **840 Signs and signals**

- 841 Damaged, removed or malfunction
- 842 Badly located
- 843 Ineffective or inadequate
- 844 Necessary
- 845 Signals turned off

### **850 Markings**

- 851 Faded
- 852 Difficult to see under weather conditions
- 853 Markings necessary
- 854 Not visible due to geometry or vehicles
- 855 Old markings not adequately removed

### **860 Street lighting**

- 861 Failed
- 862 Inadequate
- 863 Glare on wet road
- 864 Pedestrian crossing not adequately lighted

### **870 Raised islands and roundabouts**

- 871 Traffic island(s) difficult to see
- 872 Traffic island(s) ineffective, badly located or designed
- 873 Cyclist squeeze point

## MISCELLANEOUS

### **900 Weather**

- 901 Heavy rain
- 902 Dazzling sun
- 903 Strong wind
- 904 Fog or mist
- 905 Snow, sleet or hail

### **910 Animals**

- 911 Household pet rushed out or playing
- 912 Farm animal straying
- 913 Farm animal attended, but inadequate warning or unexpected
- 914 Farm animal attended, but out of control
- 915 Wild animal

### **920 Entering or leaving land use**

- 921 Roadside stall
- 922 Service station
- 923 Specialised liquor outlet
- 924 Take away foods
- 925 Shopping complex
- 926 Car parking building / area
- 927 Other commercial
- 928 Industrial site
- 929 Private house / farm
- 930 Other non-commercial
- 931 Mobile shop or vendor

### **999 Unknown**