City of Ryde

Crash Analysis Report

Ryde LGA

2003-2007

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February 2009

PART 1

Introduction

The City of Ryde is committed to making its roads a safe environment to be. Better understanding of road safety issues and solutions is important in achieving our goal.

In the City of Ryde there are a number of concerns when dealing with road safety. Promoting community-based action underlies the issues that will emerge from this crash analysis report, at the local level.

The Challenge

The City of Ryde commenced involvement with the NSW Local Government Road Safety Program in 1999 with the employment of a full-time Road Safety Officer. Since 2004, the Road Safety Officer position has moved from Engineering to Community Services and the position has been renamed to Road and Community Safety. The challenge is to address the road safety issues within Ryde, in conjunction with community safety issues, by raising community awareness through enforcement, education and engineering efforts to make the roads a safer place to be.

Objectives of Action Plan

Road safety is an issue for all members of the Ryde community. The City of Ryde is committed to road safety and the Road Safety Action Plan will help to ensure our objectives are met. These objectives are stated in each road safety project initiative outlined in the Action Plan. They have been decided, based on the crash data evaluation of the City of Ryde. The activities of the Road Safety Action Plan aim to reduce the casualties on Ryde roads by educating the community and thereby changing driver and pedestrian behaviour.

The actions outlined in the Plan reflect both the commitment of the State Government and that of the City of Ryde.

PART 2 Ryde Demographic Data

The City of Ryde has an area of 40.651kms^2 and lies in the central northern part of the Sydney Metropolitan area, approximately 12kms from the centre of Sydney.

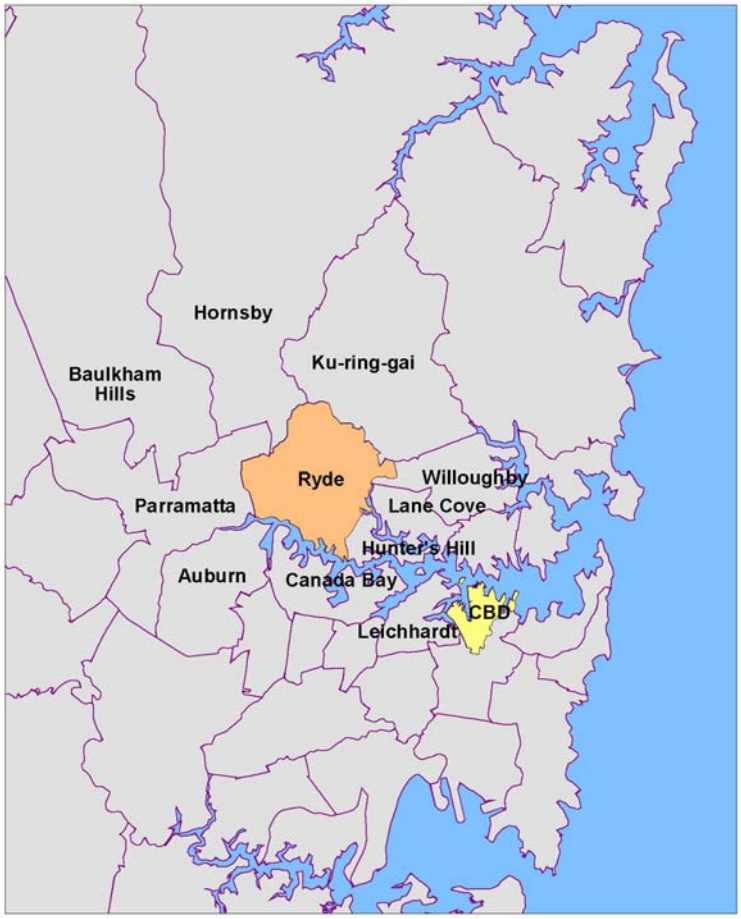


Figure 1: The location of the City of Ryde

The City occupies most of the divide between the Parramatta and Lane Cove rivers, and has 16 suburbs within its boundaries. The suburbs that make up the City of Ryde include Chatswood West, Denistone, Denistone East, Denistone West, East Ryde, Eastwood, Gladesville, Macquarie Park, Marsfield, Meadowbank, Melrose Park, North Ryde, Putney, Ryde, Tennyson Point, and West Ryde.

The traditional Aboriginal owners of the land are the Wallumedegal clan of the Dharug tribe. Aboriginal sites in the City are predominantly located around the foreshores of the Parramatta River and Lane Cove River.

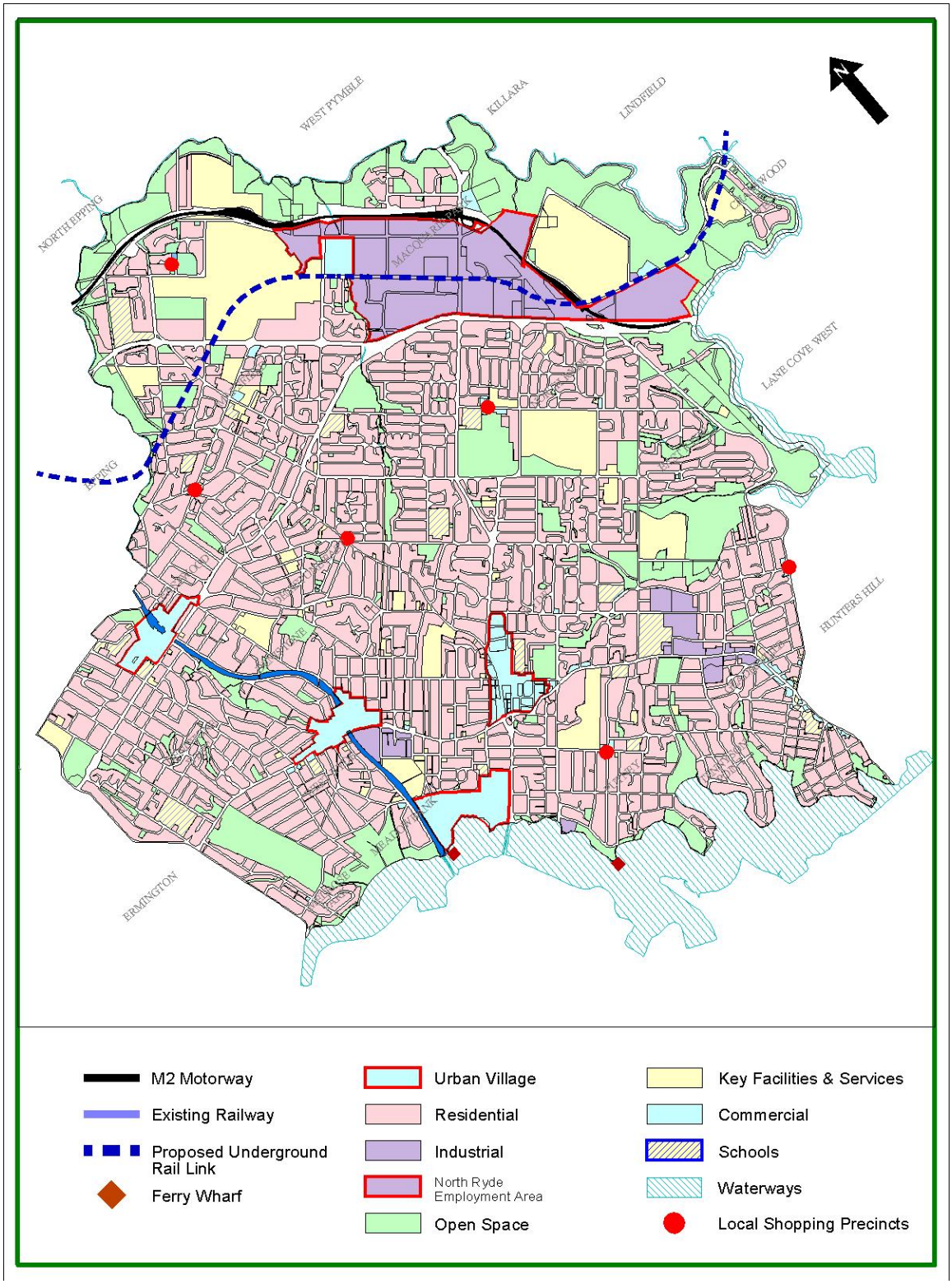


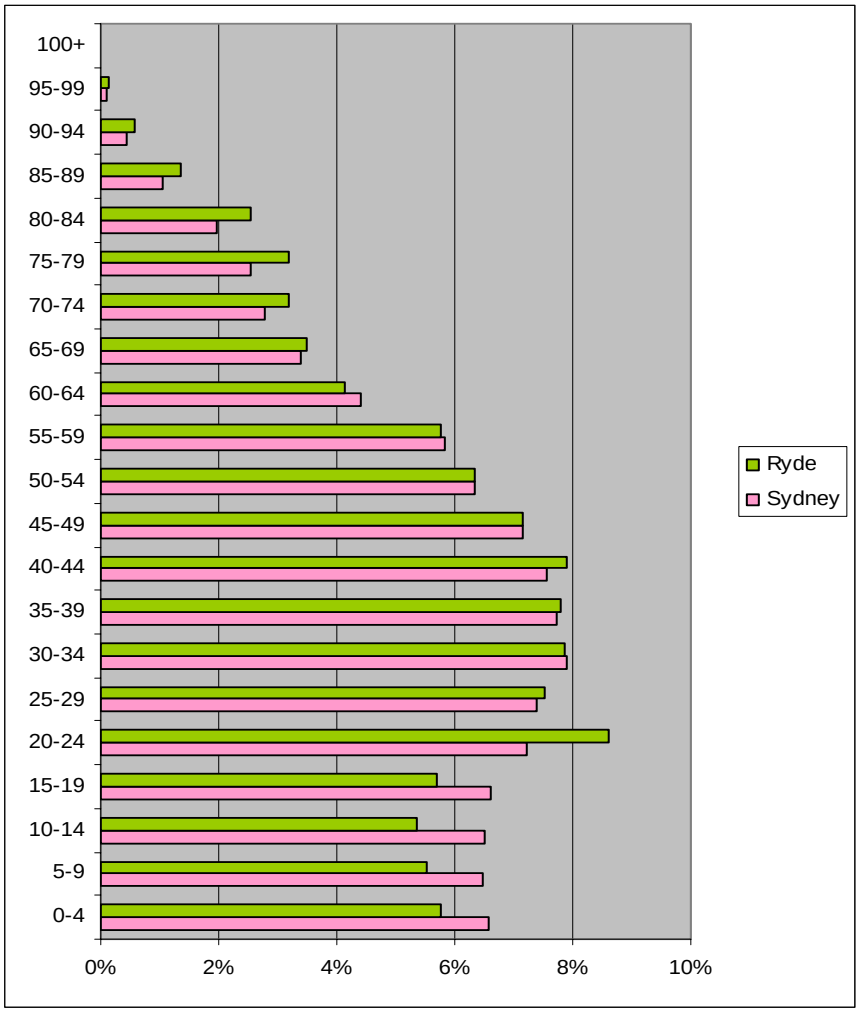
Figure 2: Structure Plan of the City of Ryde

The People

The residential population for the City of Ryde, as at the 2006 Census, was estimated at 96 948 The largest age group in the community is adults in their prime working age from 25–54 years who make up 45% of the population.

In the City in 2006, there were 46 778 males and 50 170 females.

The City's Aboriginal and Torres Strait Islander population in 2006 was 267 persons.

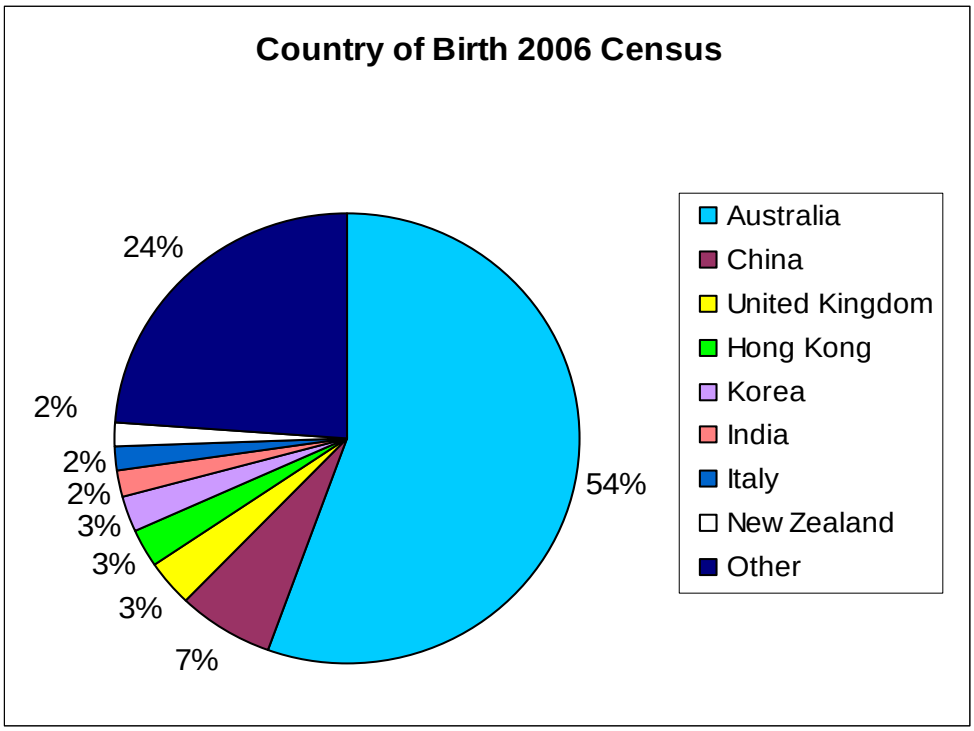


Graph 1: Relative size of age groups (ABS 2006 Census Population and Housing)

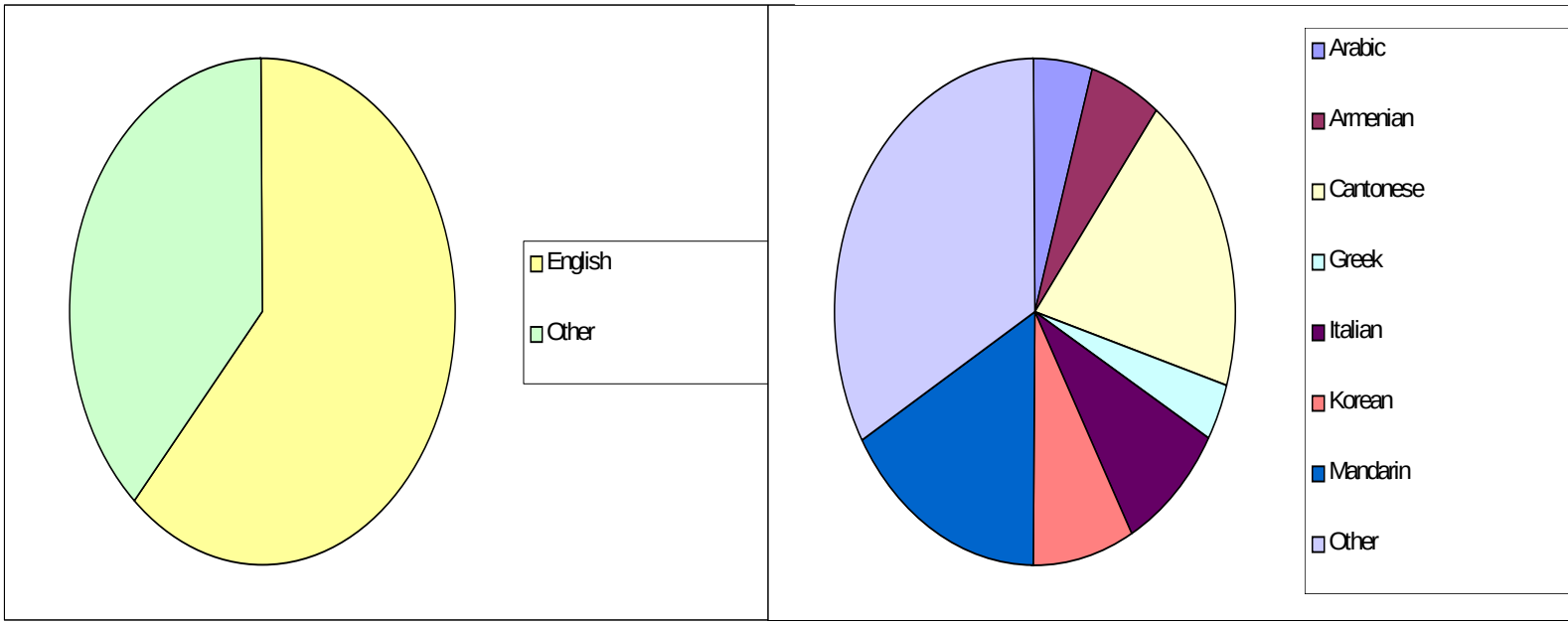
In 2006, some 62% of the City's people were born in Australia and 38% born overseas. The most common overseas birthplaces were China, U.K., Hong Kong and Korea.

People who spoke a language other than English at home made up 36% of the population. The most common of these languages were Cantonese, Mandarin, Italian, , Korean & Armenian.

Graph 2: Country of birth (ABS 2001 Census Population and Housing)



Graph 3: Language spoken at home (ABS 2001 Census Population and Housing)



(City of Ryde – City Vision 2022, Draft)

The Cars

Table A, identifies the number of Vehicles registered in Ryde LGA. The majority of the vehicles which are registered in Ryde LGA are passenger vehicles (73%) followed by light trucks (10%). There has been an increase in light trucks since 2006, whilst there has been a large decrease from 2006 to 2007 in the off-road passenger vehicles.

Table A: Number of vehicles registered in Ryde LGA as at 30 June 2006 and 2007

Passenger Vehicles	Off-road Passenger Vehicles	Small Buses	Buses	Mobile Homes	Motor-cycles	Light Trucks	Heavy Trucks	Prime Movers	Light Plant	Heavy Plant	Small Trailers	Trailers	Other Vehicles	Size of Vehicle Fleet
51568	8640	344	1366	42	1176	5863	371	18	73	25	3299	1034	5	73824
54674	6139	348	419	37	1301	6728	358	15	60	28	3259	1123	5	74494

Table B: Licence holders in Ryde by licence type as at 30 June 2006 and 2007

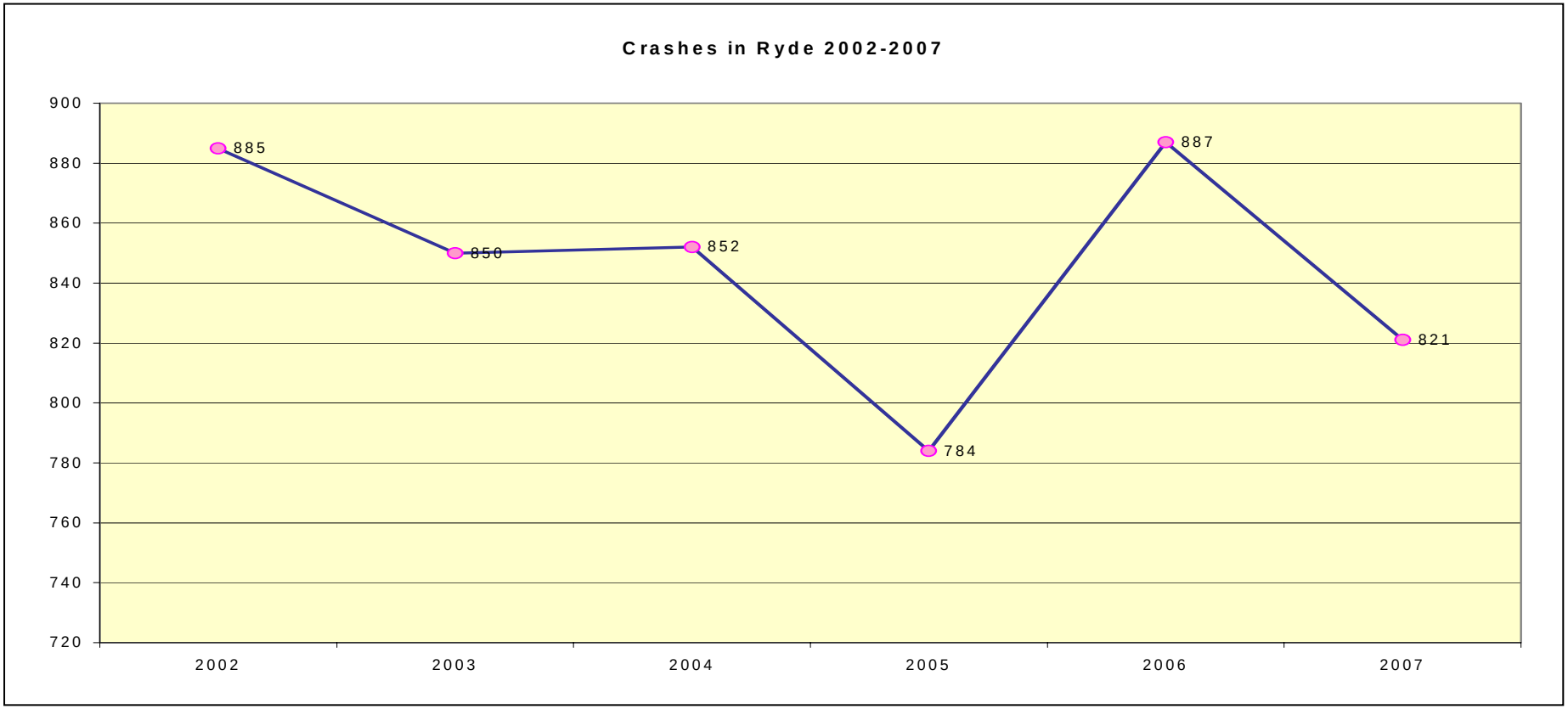
Learner	P1	P2	Unrestricted	Total
5874	2712	4050	76675	89311
4907	2343	3479	59769	70498

Table B shows the number of licence holders in Ryde by licence. There has been a large decrease in the number of licence holders.

PART 3

Ryde Crash Analysis 2000- 2006

The following information provides a statistical overview of the road crash data for Ryde LGA between 2000 and 2007. For definitions and explanatory notes please see Appendix 1.



Graph 4: Total Number of Crashes in Ryde 2002-2007

1. CRASHES

Table 1 and the graph 4 above identifies the total number of crashes in Ryde LGA by fatal/injury/non-casualty classification between 2003 and 2007. After a drastic increase in the number of total crashes from 2005 to 2006 (increase of 103 crashes), the 2007 number has not continued to follow this trend and has in fact significantly decreased in the total number of crashes, as seen in the graph above. Although the number of fatal and injury crashes has not changed significantly from 2006, the number of non-casualty crashes can be sited as the reason behind the large decrease in the number of total crashes for 2007.

Table 1. Ryde LGA number of crashes by fatal/injury/non-casualty classification 2003-2007

	2003	2004	2005	2006	2007	5 year Av.
Fatal Crashes	6	4	7	2	2	4.2
Injury Crashes	298	309	268	312	313	300
Non-casualty Crashes	546	539	509	573	506	534.6
Total Crashes	850	852	784	887	821	838.8

2. CASUALTIES

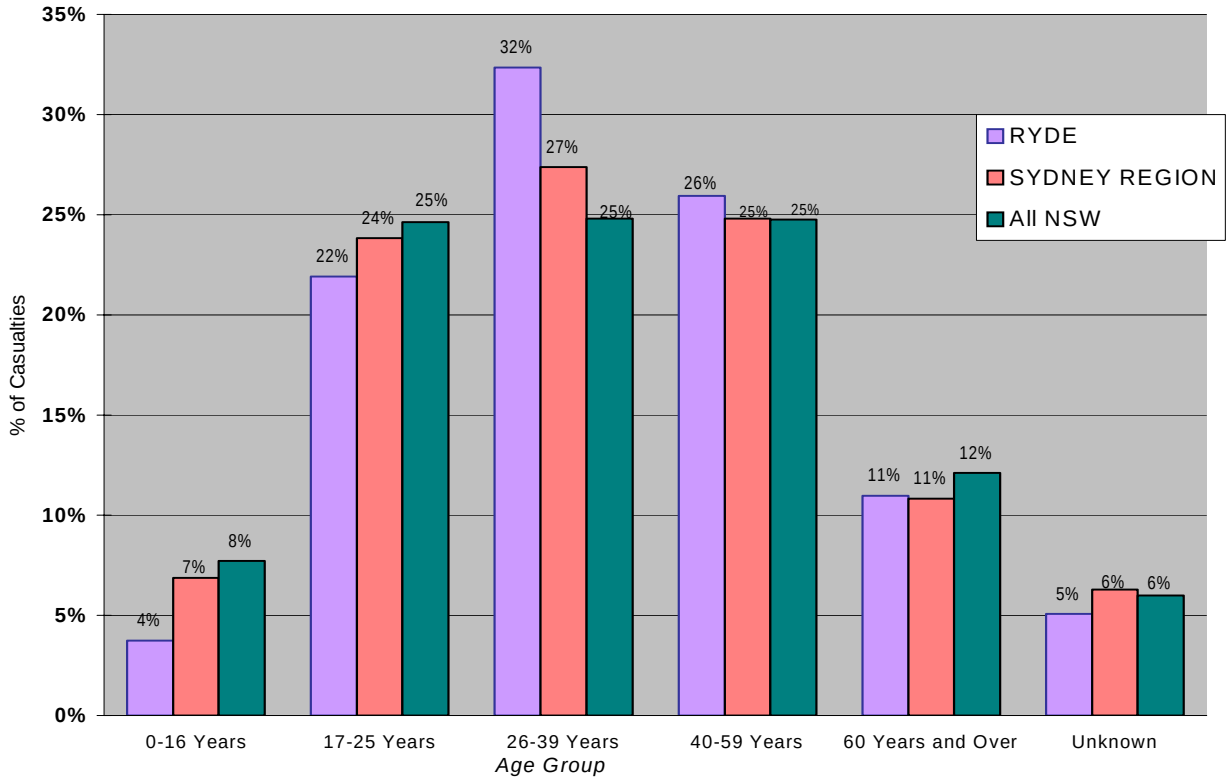
Table 2 shows the total number of casualties in Ryde LGA by killed/injured classification between 2003 and 2007. The total number of casualties killed for 2007 has not changed since 2006 and is still at its lowest since before 2002, where only 2 casualties were killed. The number of injured casualties has decreased from 380 in 2006 to 372 in 2007 (-8), although not a large decrease it has affected the 5 year average. The 5 year average for 2006 (2002-2006) was 372.2 and the current 5 year average (2003-2007) now stands at 362.8 (9.4), this is an important average when looking at the 2005 statistics where the 5 year average for injured casualties stood at 381.8 (+19). The 5 year averages for number of casualties injured is showing that there is a decreasing trend taking place.

Table 2. Ryde LGA number of casualties by killed/injured classification 2003-2007

	2003	2004	2005	2006	2007	5 yr Av.
Killed	7	4	7	2	2	4.4
Injured	373	355	334	380	372	362.8
Total	380	359	341	382	374	367.2

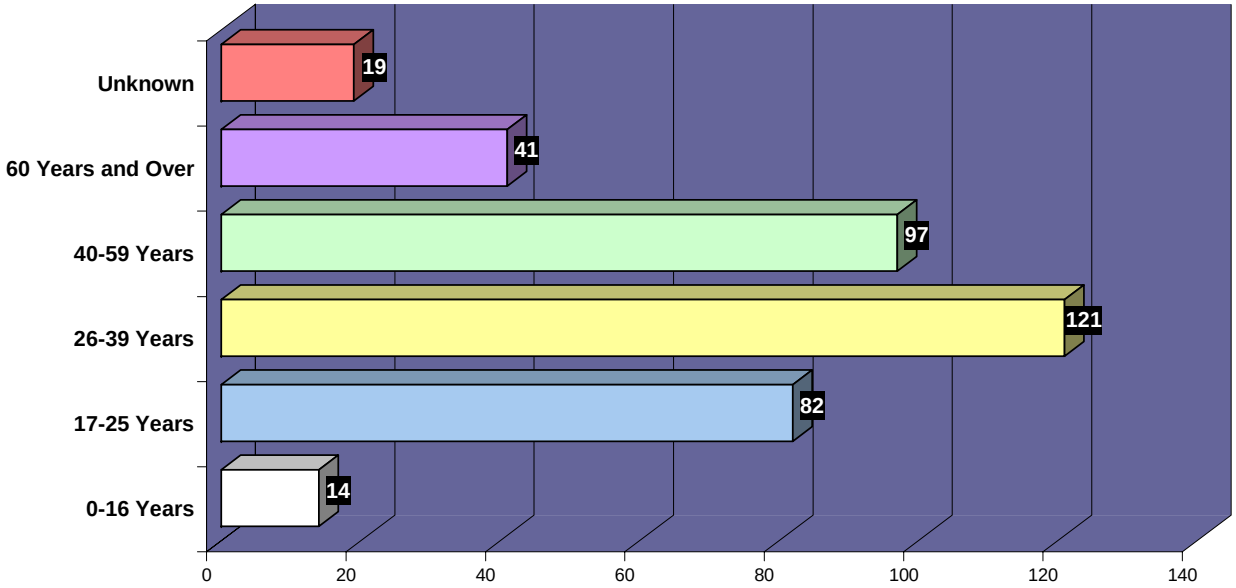
2a. Casualties by age group

Graph 5 shows the distribution of casualties by age group across Ryde LGA, Sydney and NSW for 2007. Ryde has a higher percentage of casualties in both the 26-39 and 40-59 year age group than NSW and Sydney, both age groups have increased from 2006 but the 26-39 age group has a notably larger percentage than both Sydney and NSW. The 0-16 year age group has dropped by 4% from 2006 (8%) to 4% in 2007, and is 3% lower than the Sydney percentage and 4% lower than the NSW percentage.



Graph 5: Distribution of casualties by age group and region 2007

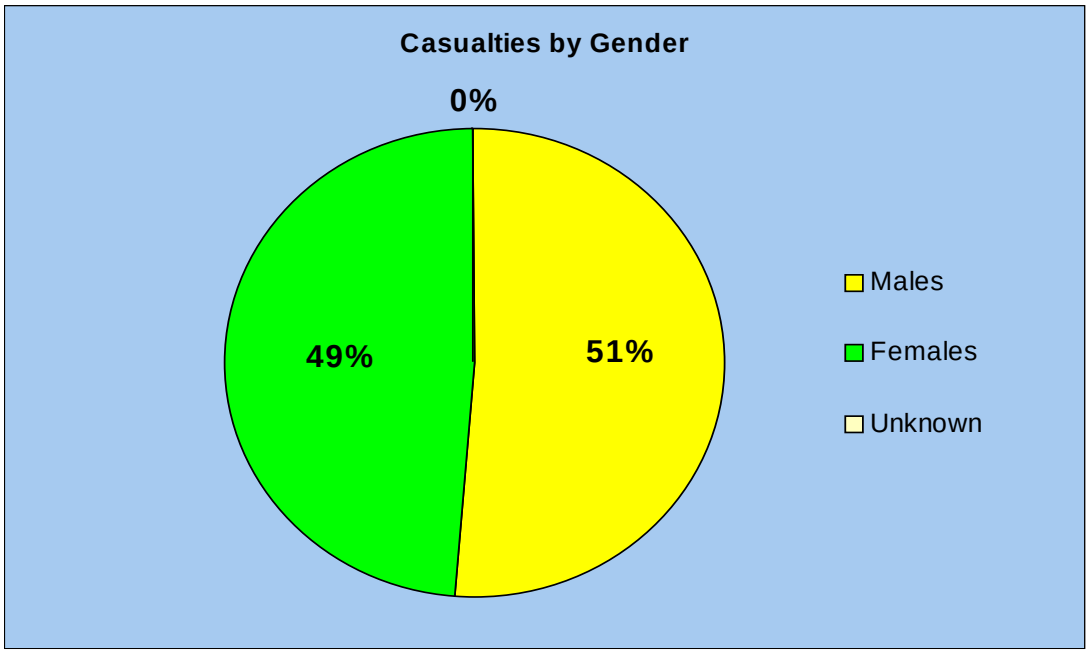
Graph 6 displays the number of casualties in Ryde by age group in 2007. As in 2006, the majority of casualties in Ryde in 2007 for motor vehicle controllers involved in all crashes occurred in the 26-39 year age group followed by the 40-59 year age group. It is important to note however that there is a smaller age gap in the 17-25 year group and this statistic remains relatively high.



Graph 6: Casualties in Ryde LGA by age group 2007

2b. Casualties by gender

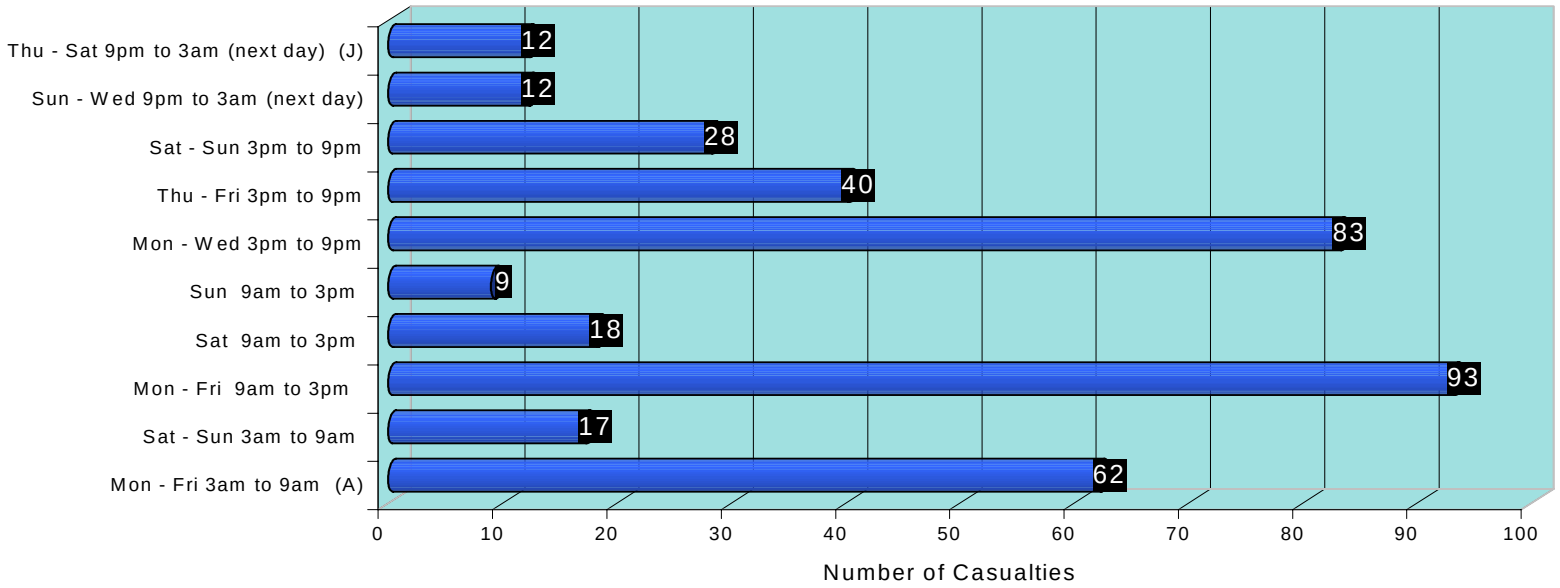
Table 2 showed that there were 374 casualties in the Ryde LGA, of the 374 casualties, 51% were males and 49% were females. This is interesting because in 2006, 49% of casualties were males and 50% were females, therefore the male casualties' percentage has increased and the female casualties have decreased. The percentages for Ryde are comparable with NSW and Sydney.



Graph 7 in Ryde LGA by gender 2007

2c. Casualties by time period

Graph 8 describes the number of casualties in Ryde by time periods, 2007.The greatest number of casualties occurred from Monday to Friday between 9am and 3pm. Also important to note is Monday to Wednesday between 3pm and 9pm, since 2005 this time period has doubled in casualties, whilst the Monday to Friday time period from 9am-3pm has stayed relatively constant.



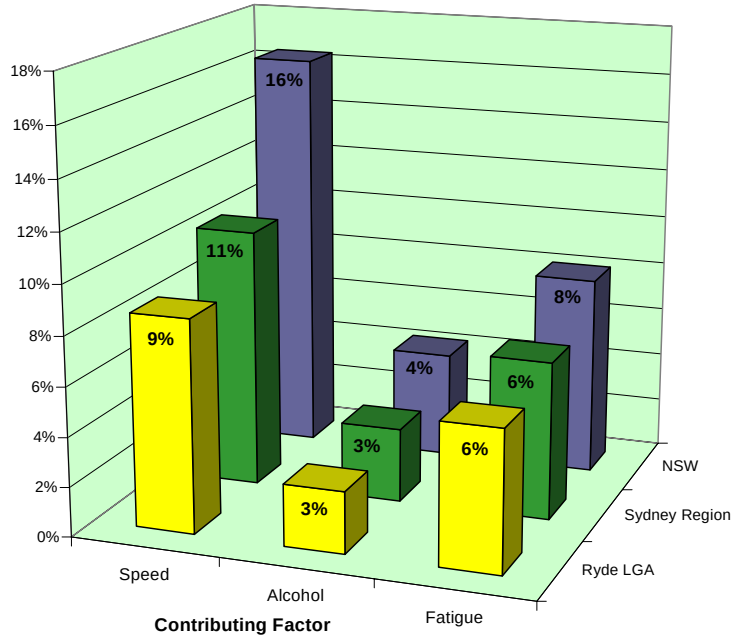
Graph 8: Number of casualties by time period in Ryde 2007

3. CONTRIBUTING FACTORS

This section discusses crash statistics in relation to contributing factors, notably speed, alcohol and fatigue.

3a. Comparisons by region

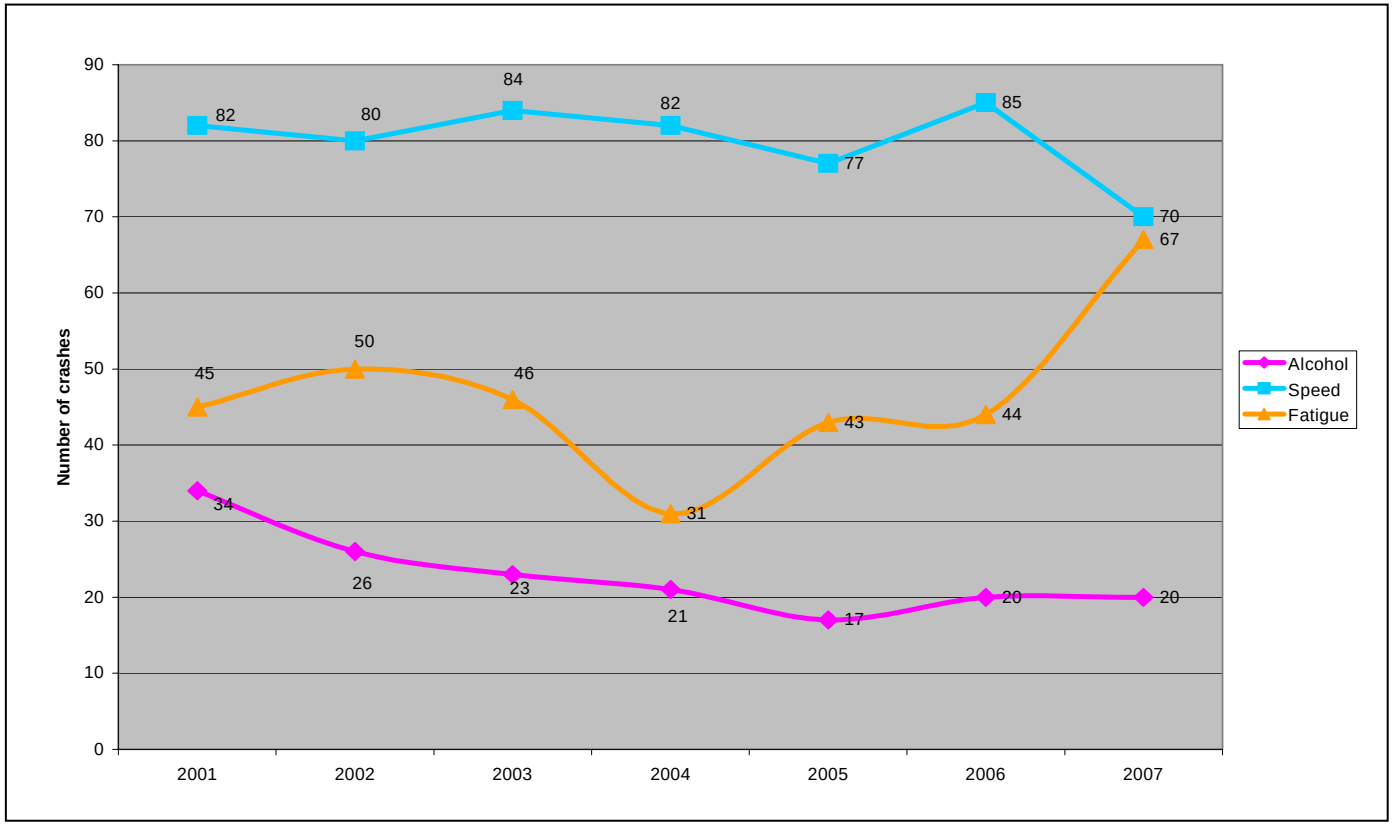
Graph 9 shows the percentage of all crashes in Ryde, Sydney region and NSW according to contributing factors in 2007. As can be seen, NSW has the highest percentage of crashes with speed involvement, 16% of all crashes in NSW involved speed. Speed is also the highest contributing factor for both Sydney with 11% and slightly less in Ryde with 9% of all crashes involving speed. In 2007 fatigue related crashes has only slightly increased from 5% in 2006 to 6% in 2007, however this fatigue related crashes is now on the same percentage as Sydney. Alcohol related crashes are also on the same percentage as Sydney but it is only very low at 3%.



Graph 9: Crash percentage and contributing factors between Ryde, Sydney region and NSW 2007

3b. Comparisons within Ryde 2001-2007

Graph 10 looks at the percentage of crashes with contributing factors between 2001 and 2007 in Ryde and shows the large difference between the number of Speed, Fatigue and Alcohol crashes. As mentioned speed is the highest contributing factor to crashes in Ryde, followed by fatigue and alcohol, there is no pattern existing between the three contributing factors though. Speed related crashes have actually dropped by 15 crashes, the lowest it has been, whilst fatigue related crashes has substantially increased by 23, the largest number in the 7 years shown. Alcohol was on the decrease until 2006, but a positive sign is that alcohol related crashes have not increased, only stayed the same.

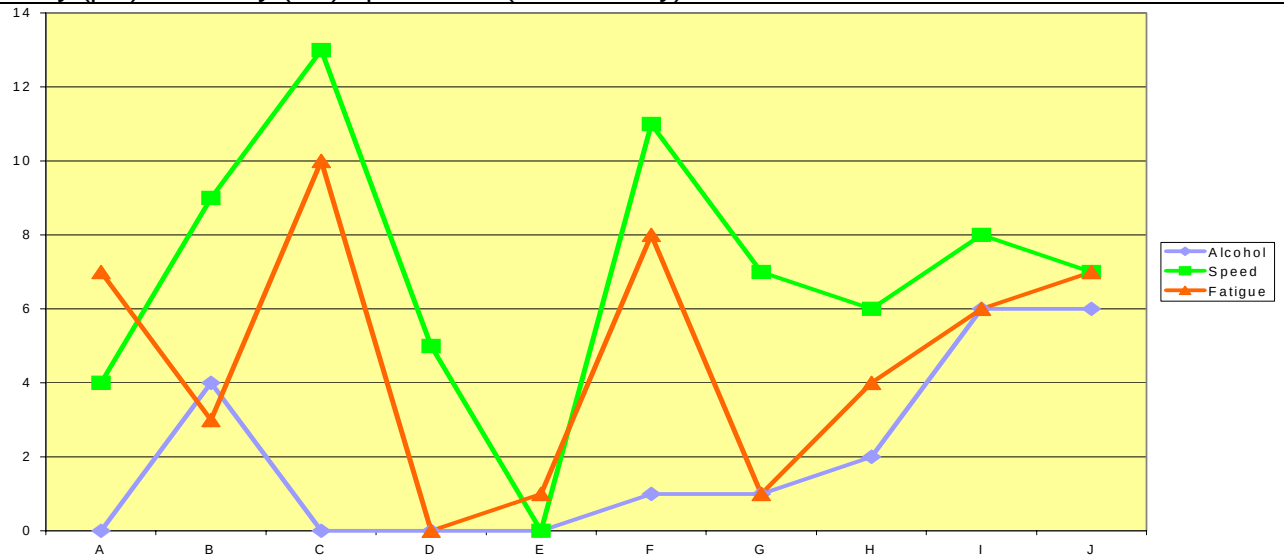


Graph 10: Number of all crashes according to contributing factors 2001-2007 Ryde

3c. Comparisons in Ryde by time period and contributing factor

McLean Time Periods

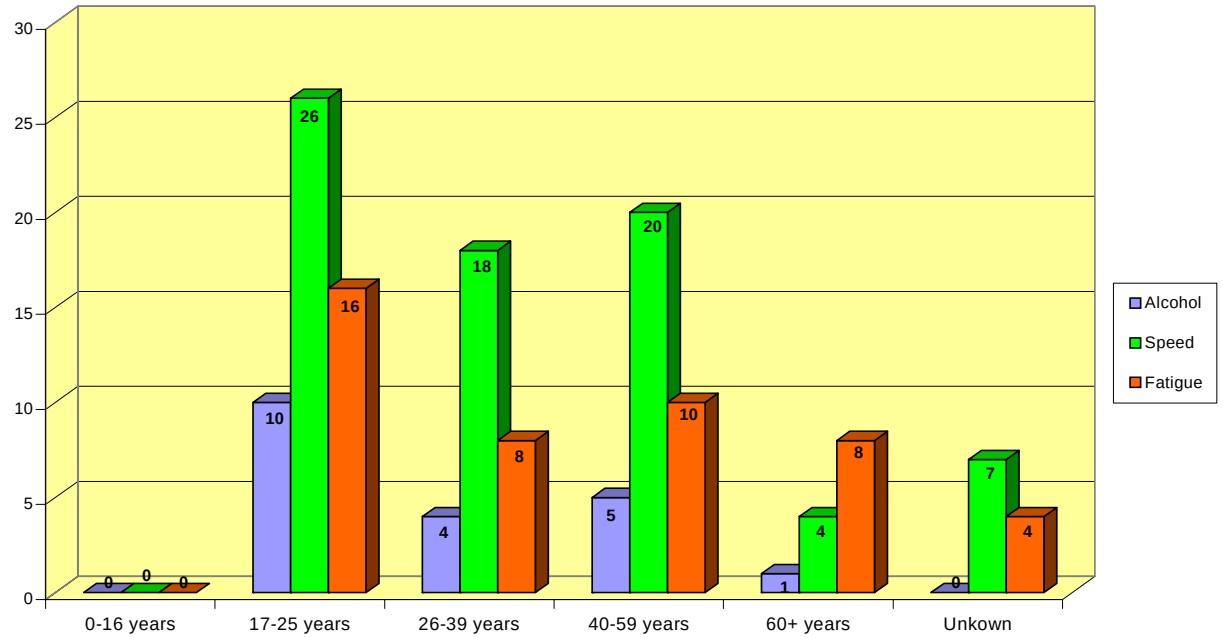
A	Monday – Friday 3am – 9am
B	Saturday – Sunday 3am – 9am
C	Monday – Friday 9am – 3pm
D	Saturday 9am – 3pm
E	Sunday 9am – 3pm
F	Monday – Wednesday 3pm – 9pm
G	Thursday – Friday 3pm – 9pm
H	Saturday – Sunday 3pm – 9pm
I	Sunday (pm) – Thursday (am) 9pm – 3am (the next day)
J	Thursday (pm) – Sunday (am) 9pm – 3am (the next day)



Graph 11: Fatal or injury crashes by contributing factor and time period Ryde 2007

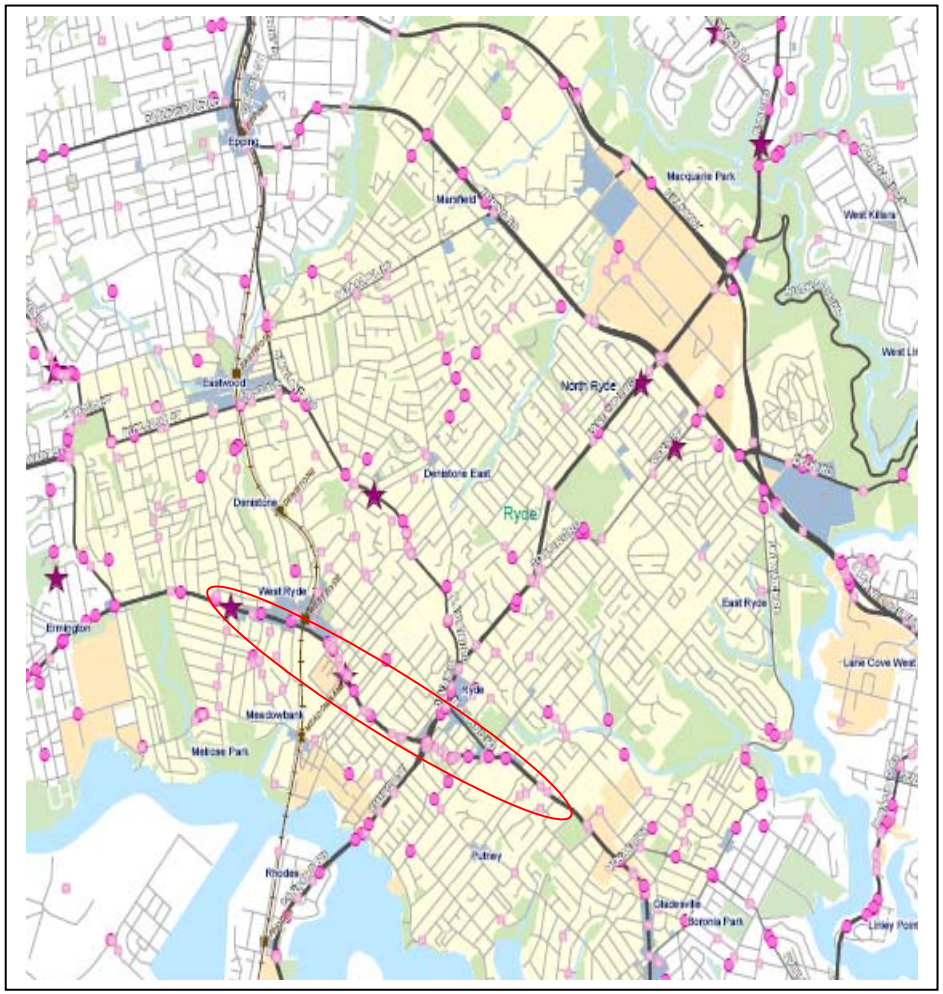
Graph 11 shows the fatal or injury crashes by contributing factor and time period in Ryde 2007. The time periods are specified in the table above according to McLean Time Periods.

Graph 12 shows the number of motor vehicle controllers involved in crashes in Ryde according to contributing factors and age group for 2007. The number of speed related crashes for the 17-25 year age group has decreased significantly in 2007 by 16 crashes, however both alcohol and fatigue related crashes for this age group have increased (5 and 6 crashes respectively)- this age group has the greatest number of alcohol, speed, and fatigue related crashes out of any age group. There have been other increases in other age group's, the most noteable would be the increase in fatigue related crashes for the 60+ year group (6 crash increase).



Graph 12: Number of motor vehicle controllers involved in crashes by contributing factor and age group Ryde 2007

3ci. Crashes involving speed



In 2007, there were 70 crashes involving speed in Ryde, 21 of which were injury crashes, this is a large decrease from 2006 where there were 85 crashes involving speed 37 of which were both fatal and injury crashes. This number is lower than the 2005 figure as well, where there were 77 crashes, 22 of which were injury or fatal crashes.

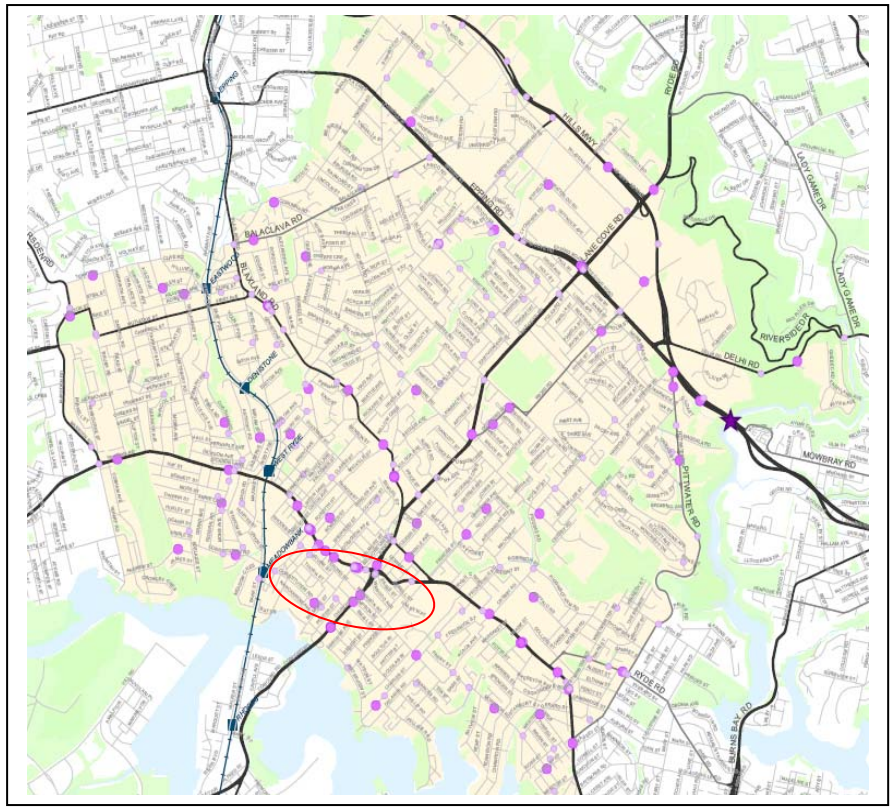
There were 37 speeding related casualties in Ryde in 2006, this number decreased by 12 to 25 in 2007. The majority of casualty crashes involving speed in 2006 occurred during the week, Monday to Friday between 9am and 3pm (see Graph 12). The 17-25 year age group had the highest number of speeding crashes by motor vehicle controller (26), 40-59 year age group were the second highest on 20, followed by 26-39 year age group on 18. Unlike previous years there is not as big of a gap between the 17-25 year age group and other age groups. For all age groups, except for the 60 + age group, speeding has the highest number for motor vehicle controllers in crashes by contributing factors. Speeding related crashes were decreasing until 2006, when there was a sharp increase, but in 2007 they have taken a dramatic fall to 70.

The map to the left identifies all the speeding related crash sites in Ryde between 2002 and 2006. There were a large number of speeding related crashes that occurred on Victoria Road, Gladesville to West Ryde, as outlined by the clusters of bright pink dots and the red circles around them. The stars show the number of fatal crashes involving speed. Over the 2003-2007 period, there has only been 1 fatality on the crash cluster spot indicated to the left.

3cii. Crashes involving alcohol

The number for alcohol related crashes have not changed from 2006, alcohol was a factor in 20 crashes, however there were more casualties than in 2006 (8), in 2007 there were 10 casualties. Alcohol contributed to approximately 3% of the total number of fatal or injury crashes in Ryde, and the time period for when most of the casualty crashes took place, between the hours of 9pm and 3am from Thursday to Sunday (see graph 11). There may be more drink driving incidences in the late evenings on weekends because of licensed premises being opened until late and an increased number of patrons at these premises. Like speed and fatigue the 17-25 year age group were the biggest offenders for alcohol related crashes (10) an increase of 5 from 2006, the 40-59 year age group were the next closest at 5, which is half the number of the 17-25 year age group.

3ciii. Crashes involving fatigue



In 2006 there were only 44 crashes involving fatigue in Ryde, resulting in 11 casualties, none of which were fatalities, however in 2007 there has been a large increase in the number of crashes involving fatigue, 67 with 22 casualties. This a 23 crash increase with a further 12 casualties. The majority of fatigue-related injury crashes in 2007 occurred from the beginning of the week to mid week, Monday to Friday between 9am and 3pm (see Graph 11). Unlike other years the 17-25 year age group had the highest number of motor vehicle controllers involved in fatigue-related crashes, at 16 crashes, followed by the 40-59 year age group (see Graph 12).

The map to the left identifies the driver fatigue related crashes in Ryde between 2003 and 2007. Fatigue related crash locations in Ryde and are mainly shown in the south of the LGA, around West Ryde, Ryde, Putney and Gladesville. However these are fairly evenly spread within these areas, showing no particular pattern. There does seem to be a large amount of crashes involving fatigue around the intersection of Victoria Road and Devlin Street, as indicated by the red circle. It must be noted that there may be discrepancies in police recordings of what constitutes a fatigue-related crash and therefore figures may not be a true and accurate recording of this factor.

4. ROAD USER TYPE

This section will now examine crash statistics and road user type.

Table 3 summarises the percentage of casualties by road user class, as a total of all casualties, between 2003 – 2007, for NSW, Sydney region and Ryde LGA. The following is representative of the 5 year average and 2007 data (5 year average data is shown).

- Ryde LGA still has a higher percentage of motor vehicle driver casualties (58.3%) compared to Sydney region (55.9%) and NSW (55.6%) for the 5 year average and in 2007. Although the Ryde LGA 5 year average has decreased, the 2007 total has actually increased to 59% in 2007 (+2%), and it is still higher than both the Sydney region and NSW (both 56%).
- There has been a 4% decrease in the percentage of motor vehicle passenger casualties for 2007 (16%) in Ryde. Both the 2007 percentage and the 5 year average for Ryde LGA, (16% and 17.4% respectively) are still well below the 2007 percentages and 5 year averages for the Sydney regions (20% and 20.6% respectively) and NSW (22% and 22.8% respectively). This decrease could help to account for the increase in motor vehicle driver casualties.
- Motorcyclist casualties have increased to 10% in 2007 and they are now above both the Sydney region (8%) and NSW (9%).
- Pedestrian casualties for Ryde LGA 5 year average (11.4%) is still on a par with the Sydney region (11.3%). This is higher than NSW (8.8%). One reason for this may be that Ryde LGA has a similar demographic pattern to Sydney, compared to NSW as a whole, with a denser population.
- Followed by the percentage of motor vehicle driver and motor vehicle passenger casualties (58.3% and 17.4%) pedestrians are the third highest casualty group in the Ryde LGA, at 11.4%.

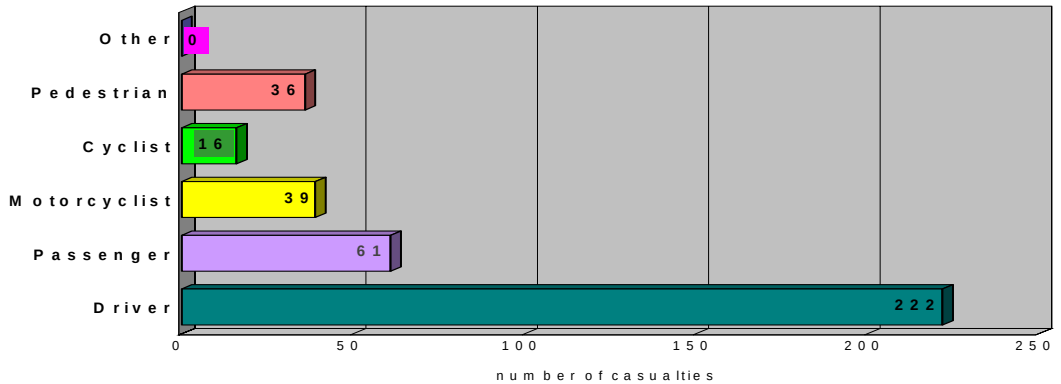
Table 3. Percentage of casualties by road user class 2003-2007 average, and 2007

	NSW		Sydney Region		Ryde LGA	
	5 yr avg	2007	5 yr avg	2007	5 yr avge	2007
Motor Vehicle Driver	55.7%	55.8%	55.9%	55.9%	58.3%	59%
Motor Vehicle Passenger	22.1%	20.6%	20.3%	18.6%	17.4%	16%
Motorcyclist	8.9%	10.2%	8.3%	9.7%	9%	10%
Pedal Cyclist	4.9%	4.5%	4.6%	4.8%	3.9%	4%
Pedestrian	8.6%	8.7%	10.8%	10.9%	11.4%	10%

Table 4 examines the total number of casualties by road user class from 2003 to 2007. 2006 saw an increase in the total number of motor vehicle drivers and motorcyclist's casualties for (219 and 31), this trend has continued into 2007 for both groups (222 and 39) however neither increase has been too significant. Although both groups have increased, motorcyclist casualties are still not above the 5 year average (33), unlike motor vehicle drivers (214). After an increase in motor vehicle passenger casualties in 2006 (77), the 2007 figure has decreased back to the 2005 figure of 61 casualties, which has also taken the 2007 figure below the 5 year average (64). Pedestrian casualties are now at their lowest they have been over the 5 year period, since its high in 2004 (48) the number has continued to follow the trend and decline, hopefully this will continue in the future.

Table 4. Number of casualties by road user class 2003-2007 Ryde LGA

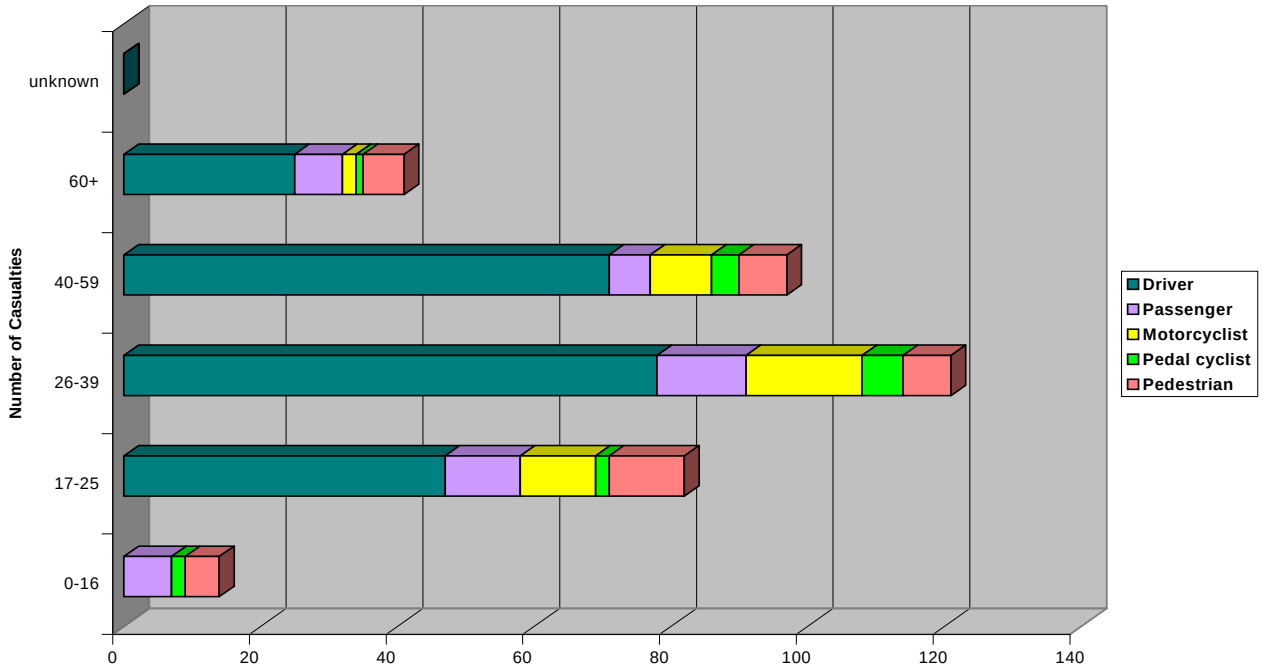
	2003	2004	2005	2006	2007	5 Yr. Average
Motor Vehicle Drivers	212	219	198	219	222	214
Motor Vehicle Passengers	80	40	61	77	61	64
Motorcyclists	30	38	28	31	39	33
Pedal Cyclists	12	14	13	17	16	14
Pedestrians	46	48	41	38	36	42



Graph 13: Casualties in Ryde LGA by road user group 2007

Table 5. 2007 Ryde casualties by age, gender and road user class

	0-16		17-25		26-39		40-59		60+		Unknown	Total
	M	F	M	F	M	F	M	F	M	F		
Motor Vehicle Drivers	-	-	25	22	36	42	36	35	7	18	1	222
Motor Vehicle Passengers	5	2	2	9	4	9	1	5	1	6	17	61
Motorcyclists	-	-	11	-	15	2	8	1	2	-	-	39
Pedal Cyclists	2	-	1	1	6	-	4	-	1	-	1	16
Pedestrians	1	4	6	5	3	4	2	5	2	4	-	36



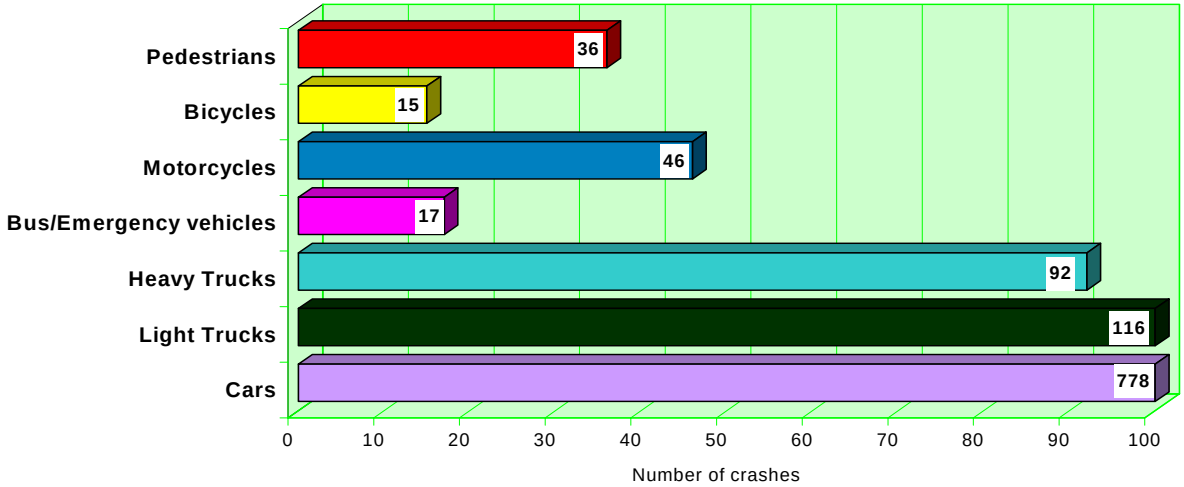
Graph 14: Casualties by road user class and age Ryde 2007

The following section addresses casualties and crashes in Ryde LGA according to age and road user class. The following has been identified from the RTA data, and graphs and tables above.

4ai. Motor Vehicle Drivers

Graph 13 shows the total number of casualties for each road user type in Ryde, 2007. Motor vehicle driver casualties' account for 59% (222 from 374) of all casualties in Ryde for 2007, this is a minuscule increase from 2006 (57%). Graph 14 shows the Ryde casualties by age and road user class whilst Table 5 breaks this down further to include gender (note- the shaded sections of the table highlights the gender discrepancies within each road user class). The largest discrepancy for motor vehicle driver casualties, where females account for more than double the male casualties is in the 60+ year (F-18, M- 7) age group. However according to Table 5 and Graph 14, the majority of motor vehicle driver casualties were aged between 26 and 39 years of age

Graph 15 displays the total number of crashes in Ryde by crash type for 2006. It should be noted that the displayed accident types are not mutually exclusive and therefore should not be added together. For example an accident involving a car and a motorcycle would be included in the "car" and "motorcycle" crash type categories. From a total of 821 crashes, 778 crashes involved cars, with almost 94% of all crashes involving at least one car. This is followed by light trucks (116) and heavy trucks (92). Motorcycle crashes has increased and pedestrian crashes have decreased. No fatalities were recorded in cars, trucks, bus/emergency, motorcyclist or bicycles, fatalities were only recoded in pedestrian crashes which resulted in pedestrian fatalities.



Graph 15: Crash types in Ryde 2007

4aii. Motor Vehicle Passengers

Following 2004 which had a 5 year low of 40 motor vehicle passenger casualties, 2005 and 2006 both significantly increased in the number of casualties (61 and 77), however a positive sign that the number of motor vehicle passenger casualties could lower back to 40 is that in 2007 this number has now decreased back down to 61, a decrease of 16 (table 4). Aside from the unknown age group who had 17 motor vehicle passenger casualties, like the motor vehicle driver casualties, the 26-39 year age group have the highest number of the known age groups (13), followed closely by the 17-25 age group with 11 casualties. In each age group from the 17-25-60+ age groups, female motor vehicle passengers have more casualties than male motor vehicle passengers (table 5).

4aiii. Occupant Restraints

It is important to now examine occupant restraints as it relates to motor vehicle drivers and passengers. Table 6 shows the percentage of casualties who had restraints fitted in the vehicle but did not wear them in NSW, Sydney region and Ryde area in 2007. There were no casualties who had restraints fitted in the vehicle and did not wear them.

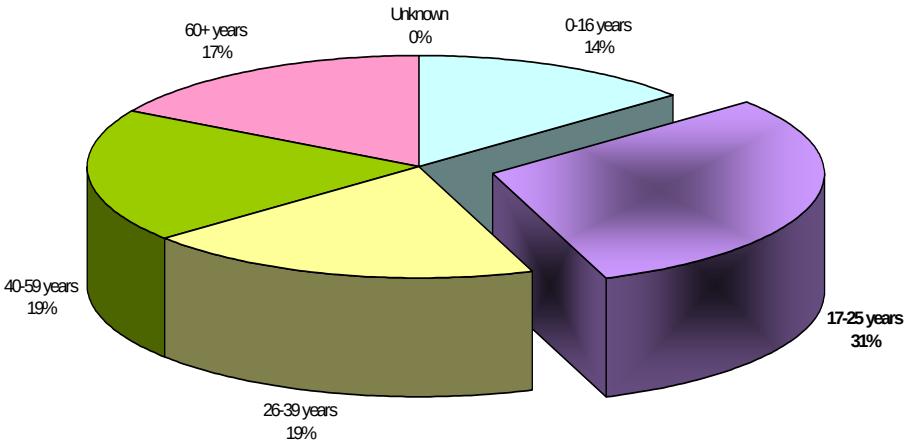
Table 6. Use of Restraints: 2007

	NSW		Sydney Region		Ryde	
All Motor Vehicle Driver Casualties						
Restraint fitted but not worn (as a % of the total number of driver casualties)	259	**1.7%**	44	**1.3%**	0	**-**
	NSW		**Sydney Region**		**Ryde**	
All Motor Vehicle Passenger Casualties						
Restraint fitted but not worn (as a % of the total number of passenger casualties)	120	**2.0%**	60	**2.9%**	0	**-**

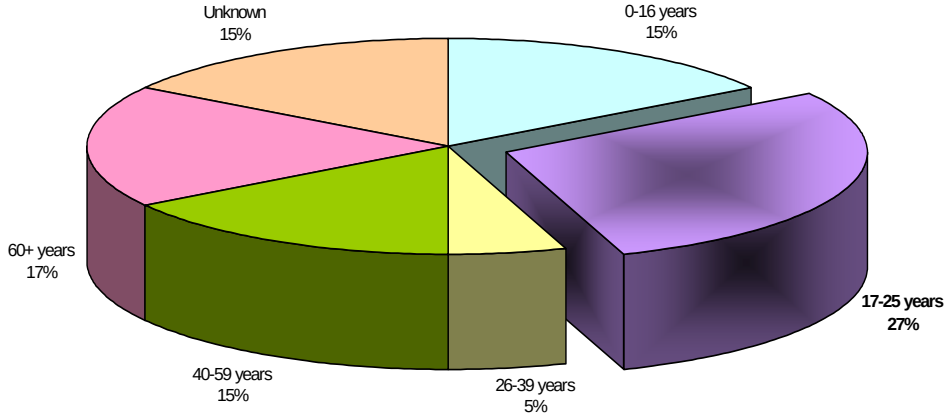
4c. Pedestrians

In 2005 the pedestrian casualties' number decreased substantially from 48 in 2004 to 41, this trend of pedestrian casualties decreasing has continued into 2006 (38) and has further continued into 2007. Pedestrian casualties have decrease since 2004, they are now at a 5 year low of 36 in 2007, which is well below the 5 year average of 42 (see table 4).

Graph 16 shows the percentage of pedestrian casualties in Ryde in 2007 and 2006 by age group, there have been both large and minor changes from 2006 to 2007. One minor change is in the 17-25 year old, where there has been an increase from 27% in 2006 to 31% in 2007. However for both years this age group still have the highest percentage of all pedestrian casualties. As can be seen there is large increase in percentage of 26-39 year old pedestrian causalities and the large decrease in the percentage of pedestrian casualties whose age is not known (15% in 2006 to 0% in 2007). In 2006 26-39 year old pedestrian casualties were at a low of 5%, that number has increased by 14% to 19% of all Pedestrian casualties are in this age range now. The 0-16 and the 60+ age group have barely changed if at all.



2007

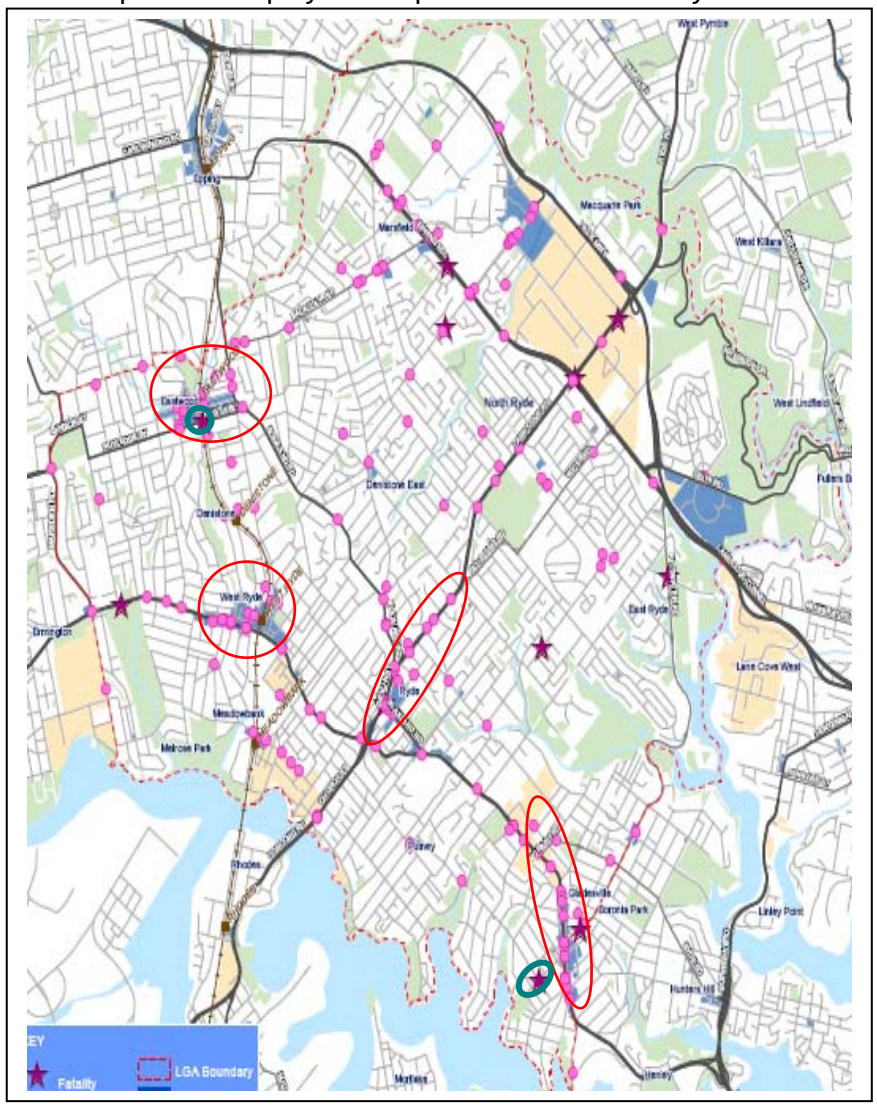


2006

Graph 16: Pedestrian casualties by age group Ryde 2007 and 2006

The number of pedestrian casualties for females and males respectively was 22 and 14. However when delving into the figures, there was a higher number of female pedestrian casualties in the 0-16, 26-39,40-59 and 60+ year age groups, and the 17-25 age group had a higher number of male pedestrian casualties. The highest number of pedestrian casualties for females was in both the 17-25 and 40-59 year age group (5), whilst for males, the highest number of pedestrian casualties was also in the 17-25 year age group (6). These figures show in the City of Ryde greater focus needs to be placed on the younger pedestrian population.
The biggest difference between the sexes was in the 0-16 and 40-59 year age group, respectively 1 and 4, and 2 and 5, which meant females had 3 more pedestrian casualties than males in these groups.

The map below displays each pedestrian crash in Ryde between 2003 and 2007, and pedestrian crash clusters.



When looking at the map over the 5-year period there is a cluster of pedestrian crashes in Ryde, at Lane Cove Road, particularly both of the intersections of Blaxland Road. It is also important to note the large clusters of pedestrian crashes which have occurred at two of the railway stations in Ryde LGA, around West Ryde, and Eastwood (which recorded one fatality) station. Another hot spot for pedestrian crashes is along Victoria Rd at Gladesville; this area has several schools and a strip of shops, which are used by pedestrians regularly. Another fatality was recorded in Gladesville.

In 2007 there was a total of 36 pedestrian crashes, 34 of which were injury crashes and 2 were a fatal crash. The pedestrian fatalities both involved older pedestrians in the 70+ age group; over the 2006 and 2007 total fatalities recorded, older pedestrians (70+) have made up 3 out of those 4 fatalities, a worrying statistic. The green circles show the pedestrian fatalities for 2007, the first was on 1st Avenue in Eastwood, near the train station. The second was on Morrison Road which is one street south and runs parallel with Victoria Road, Gladesville, the fatality did not take place in a pedestrian crash cluster spot, but just one street south of Victoria Road (a crush cluster spot). Unlike the other pedestrian fatality, this crash took place on a Pedestrian crossing as the car came over the crest of the hill at 6:50pm in winter, meaning that visibility most likely could have been a factor.

Both drivers were also above the age of 60 which could also be reason for an increase in older pedestrian fatalities and casualties. Older drivers and pedestrian's have slower reaction time when faced with dangerous situations. Whether it as the driver or as a pedestrian this slow reaction time, combined with an older person fragile frame, will hinder one's ability to escape danger quickly (avoiding a car driving towards you or avoiding hitting a pedestrian who walks out in front of your car).

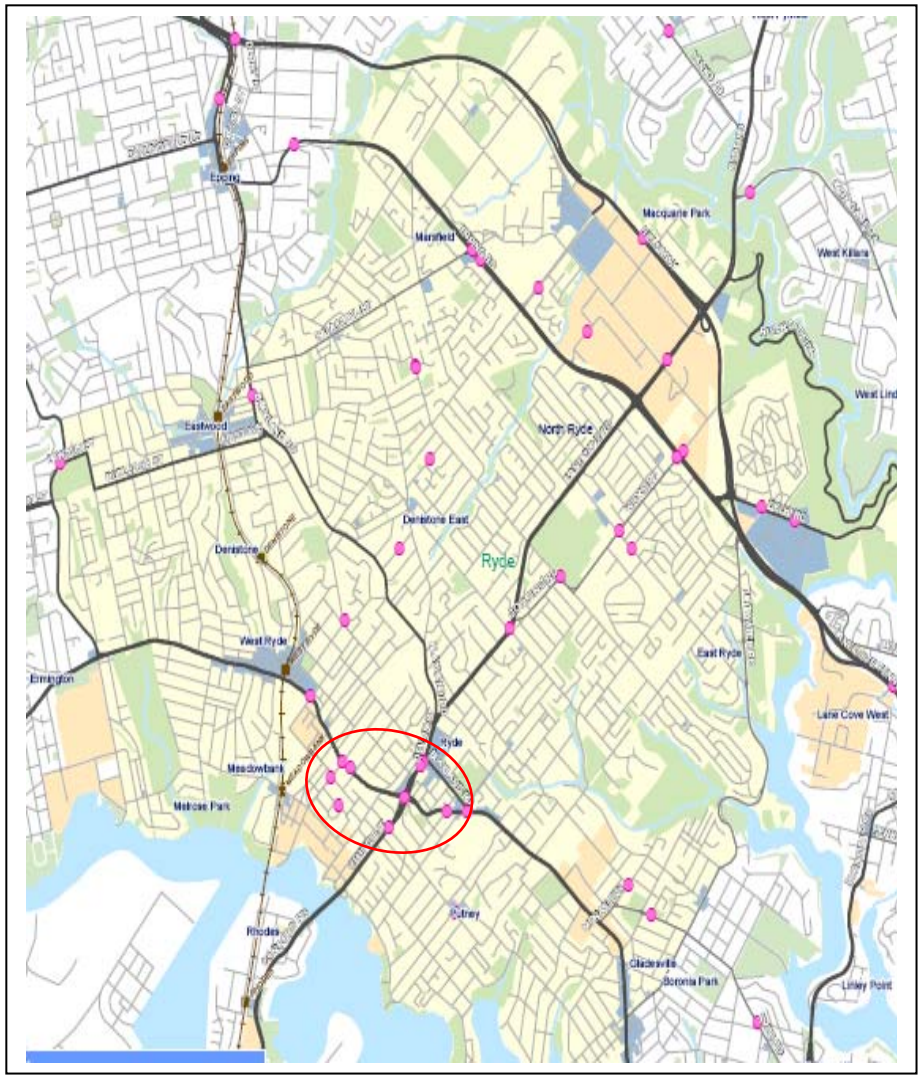
4b. Motorcyclists

Motorcyclists accounted for 10% of all casualties in 2006, this is a 2% increase on the 2006 figure, this means that the total number of motorcycle casualties is 39 (31 in 2006). The number of motorcycle crashes also increased from 39 in 2006 to 46 in 2007 resulting in 39 casualties. 39 casualties is the highest number of motorcyclists casualties in the 5 year period from 2003-2005 and it is also 6 above the 5 year average of 33 casualties.

As in 2006, the 26-39 year age group still dominates in the highest number of motorcyclists casualties, with 17 (16 males, 1 female) casualties being recorded, 2007 has followed the 2006 trend of the 17-25 year age group following in second place for motorcyclist casualties with 11 (all of which were male). Males make up the majority of motorcyclist casualties in 2007, 3 out of the 39 motorcyclist casualties were females, all aged between 26 and 59.

The map to the right is the motorcycle crashes for 2007, the reason for this map to be displayed and not the 2003-2007 motorcycle casualties map, is because of the large increase in motorcyclist crashes and casualties. The red circle on the map shows that the motorcycle crash cluster is in the Ryde/West Ryde, focusing on Victoria Road. The Macquarie Business Park area also recorded an increased amount of motorcycle crashes.

Of the 39 motorcycle casualties in Ryde there were no known motorcyclists who were not wearing a helmet.



4c. Pedal Cyclists

Pedal cyclist casualties have decreased from 17 in 2006 to 16 in 2007 in Ryde, with no pedal cycle fatalities, they make up 4% of the total percentage of casualties by road user class. From the 16 casualties only 1 was a female, a large decrease from the 2006 data where all but 1 age group had female pedal cyclist casualties totaling 5 female pedal cyclist casualties. Male pedal cyclists made up 93% of the total number of pedal cyclist casualties, 15 out of the 16 casualties were male. The 26-39 year age group had the most pedal cyclist casualties at 6, followed by the 40-59 year age group on 4. Ryde pedal cyclist casualties are lower in the total percentage of casualties than the Sydney region, but equal in total percentage of casualties in NSW. In all three regions Pedal cyclist record the lowest number of casualties by road user class.

5. SUMMARY

In summary, there are still some issues which need to be identified and addressed in the Ryde LGA for 2007. The issues identified will in turn aid in developing road safety initiatives for the Ryde LGA over the 2008-2009 period.

- Large decrease in the total number of crashes since 2006. The trend was initially showing a decline but then increased in 2006, 2007 is following the previous trend of a decline.
- The total number of crashes (821) is back below the 5-year average (838.8). Although fatal crashes stayed the same from 2006 to 2007, injury crashes increased but only by 1 crash, however non casualty crashes decreased substantially from 573 in 2006 to 506 in 2007 (the lowest over the five year period. This could be an indication of cars becoming safer instead of driver becoming more aware and safe on the road environment.
- Most motor vehicle controller crashes and casualties occurred in the 26-39 year age group.
- 17-25 year age group had the highest number of any age group for motor vehicle controllers involved in speed, alcohol and fatigue related crashes.
- 2007 has followed the trend of increasing number of motor vehicle driver casualties (222), and is now 8 above the 5 year average (214). Motor vehicle driver casualties accounted for 58.3% of all casualties; this is higher than both the Sydney region (55.9%) and NSW (55.6%).
- Both fatal crashes in the Ryde LGA involved pedestrians being struck by cars. Pedestrian fatalities are an issue that needs to be addressed, particularly older pedestrians. Over 2006 and 2007 3 out of the 4 fatalities in the Ryde LGA were older pedestrians being struck by cars. Young pedestrians are also an increasing worry with an increase to 31% of pedestrian casualties being in the 17-25 year age group. Programs to inform older pedestrian is advised, and projects creating awareness of distraction, such as ipod's for younger pedestrians need to be enforced.
- Fatigue related crashes continue to increase from 44 crashes in 2006 to 67 in 2007resulting in an increase to 22 in fatigue related casualties (however, there may be a number of discrepancies regarding reporting of these crashes). Speeding related crashes have dramatically decreased to 70 crashes, an encouraging sign for Ryde LGA. Whilst alcohol related crashes have made no substantial change.
- The majority of fatal or injury crashes occurred from Monday to Friday 9am to 3pm.
- The Intersection of Devlin Street and Victoria Road, Ryde appears to be a"hot spot" for crashes. Over the 2003-2007 periods there were crash clusters for speed, fatigue, pedestrians and motorcyclists.
- Road Safety in Ryde needs to mainly focus on pedestrian safety for both older and younger people. Although different projects would benefit both groups differently.

7. SOURCES

- Sydney Profile
- RTA Crash Data
- Road Safety 2010
- Maps provided by the RTA

Appendix 1

DEFINITIONS AND EXPLANATORY NOTES

Animal rider: A person sitting on/riding a horse or other animal.

Articulated truck: Comprised of articulated tanker, semi-trailer, low loader, road train and B-double.

Bicycle rider: See *Pedal cycle rider.*

Bus: Includes 'State Transit Authority' bus and long distance/tourist coach.

Car: Includes sedan, station wagon, utility (based on car design), panel van (based on car design), coupe, hatchback, fastback, sports car, taxi-cab, passenger van and four wheel drive vehicle.

Carriageway: That part of the road improved or designed and/or ordinarily used for vehicular movement. When a road has two or more of these portions, divided by a median strip or other physical separation, each of these is a separate carriageway.

Casualty: Any person killed or injured as a result of a crash.

Controller: A person occupying the controlling position of a road vehicle.

Crash: Any apparently unpremeditated event reported to the police and resulting in death, injury or property damage attributable to the movement of a road vehicle on a road.

Driver: A controller of a motor vehicle other than a motorcycle.

Emergency vehicle: Includes ambulance, fire brigade vehicle, police patrol car (or van) and tow truck.

Fatal crash: A crash for which there is at least one fatality.

Fatality: A person who dies within 30 days of a crash as a result of injuries received in that crash.

Footpath: That part of the road which is ordinarily reserved for pedestrian movement as a matter of right or custom.

Heavy truck: Comprised of heavy rigid truck and articulated truck.

Heavy rigid truck: Comprised of rigid lorry and rigid tanker with a tare weight in excess of 4.5 tonnes.

Injured: A person who is injured as a result of a crash, and who does not die as a result of those injuries within 30 days of the crash.

Injury crash: A non-fatal crash for which at least one person is injured.

Intersection crash: A crash for which the first impact occurs at or within 10 metres of an intersection.

Killed: See Fatality.

Light truck: Includes panel van (not based on car design), utility (not based on car design) and mobile vending vehicle.

Motor vehicle: Any road vehicle which is mechanically or electrically powered but not operated on rails.

Motorcycle: Any mechanically or electrically propelled two or three-wheeled machine with or without side-car. Includes solo motorcycle, motorcycle with sidecar, motor scooter, mini-bike, three-wheeled special mobility vehicle and moped (motorized 'pedal cycle').

Motorcycle passenger: A person on but not controlling a motorcycle.

Motorcycle rider: A person occupying the controlling position of a motorcycle.

Newcastle Metropolitan Area: Comprised of the following local government areas: Newcastle and Lake Macquarie cities.

Non-casualty crash: A crash for which at least one vehicle is towed away but there is no fatality or person injured.

Passenger: Any person, other than the controller, who is in, on, boarding, entering, alighting or falling from a road vehicle at the time of the crash, provided a portion of the person is in/on the road vehicle.

Pedal cycle: Any two or three-wheeled device operated solely by pedals and propelled by human power except toy vehicles or other pedestrian conveyances. Includes bicycles with side-car, trailer or training wheels attached.

Pedal cycle passenger: A person on but not controlling a pedal cycle.

Pedal cycle rider: A person occupying the controlling position of a pedal cycle.

Pedestrian: Any person who is not in, on, boarding, entering, alighting or falling from a road vehicle at the time of the crash.

Pedestrian conveyance: Any device, ordinarily operated on the footpath, by which a pedestrian may move, or by which a pedestrian may move another pedestrian or goods. Includes non-motorized scooter, pedal car, skateboard, roller skates, in-line skates, toy tricycle, unicycle, push cart, sled, trolley, non-motorized go-cart, billycart, pram, wheelbarrow, handbarrow, non-motorized wheelchair or any other toy device used as a means of mobility.

Road: The area devoted to public travel within a surveyed road reserve. Includes a footpath and cycle path inside the road reserve and a median strip or traffic island.

Road vehicle: Any device (except pedestrian conveyance) upon which or by which any person or property may be transported or drawn on a road.

Sydney Metropolitan Area: Comprised of the following local government areas: City of Sydney, Bankstown, Blacktown, Botany Bay, Campbelltown, Canada Bay, Canterbury, Fairfield, Holroyd, Hurstville, Liverpool, Parramatta, Penrith, Randwick, Rockdale, Ryde, South Sydney and Willoughby cities, Ashfield, Auburn, Baulkham Hills, Burwood, Camden, Hornsby, Hunters Hill, Kogarah, Ku-ring-gai, Lane Cove, Leichhardt, Manly, Marrickville, Mosman, North Sydney, Pittwater, Strathfield, Sutherland, Warringah, Waverley and Woollahra.

Wollongong Metropolitan Area: Comprised of the following local government areas: Wollongong and Shellharbour cities.

CRITERIA FOR DETERMINING SPEEDING AND FATIGUE INVOLVEMENT

Speeding

The identification of speeding (excessive speed for the prevailing conditions) as a contributing factor in road crashes cannot always be determined directly from police reports of those crashes. Certain circumstances, however, suggest the involvement of speeding. The Roads and Traffic Authority has therefore drawn up criteria for determining whether or not a crash is to be considered as having involved speeding as a contributing factor.

Speeding is considered to have been a contributing factor to a road crash if that crash involved at least one *speeding* motor vehicle.

A motor vehicle is assessed as having been *speeding* if it satisfies the conditions described below under (a) or (b) or both.

(a) The vehicle's controller (driver or rider) was charged with a speeding offence; or

the vehicle was described by police as travelling at excessive speed; or

the stated speed of the vehicle was in excess of the speed limit.

(b) The vehicle was performing a manoeuvre characteristic of excessive speed, that is:

while on a curve the vehicle jack-knifed, skidded, slid or the controller lost control; or

the vehicle ran off the road while negotiating a bend or turning a corner and the controller was not distracted by something or disadvantaged by drowsiness or sudden illness and was not swerving to avoid another vehicle, animal or object and the vehicle did not suffer equipment failure.

Fatigue

The identification of fatigue as a contributing factor in road crashes similarly cannot always be determined directly from police reports of those crashes and the following criteria are used to assess its involvement. Fatigue is considered to have been involved as a contributing factor to a road crash if that crash involved at least one *fatigued* motor vehicle controller.

A motor vehicle controller is assessed as having been *fatigued* if the conditions described under (c) or (d) are satisfied together or separately.

(c) The vehicle's controller was described by police as being asleep, drowsy or fatigued.

(d) The vehicle performed a manoeuvre which suggested loss of concentration of the controller due to fatigue, that is

the vehicle travelled onto the incorrect side of a straight road and was involved in a head-on collision (and was not overtaking another vehicle and no other relevant factor was identified); or

the vehicle ran off a straight road or off the road to the outside of a curve and the vehicle was not directly identified as travelling at excessive speed and there was no other relevant factor identified for the manoeuvre.

Roads and Traffic Authority (2004) Road Traffic Crashes in NSW – 2003 Statistical Statement