



City of Ryde

## **Crash Analysis Report**

**Ryde LGA**

**1999-2003**

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**February 2005**

## **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 five main concerns when dealing with road safety. They are speeding, pedestrians, drink driving, occupant restraints, and young drivers. Promoting community-based action underlies these issues at the local level.

### **The Challenge**

The City of Ryde commenced involvement with the NSW Local Government Program in 1999 with the employment of a full-time Road Safety Officer. The challenge is to address the road safety issues within Ryde, 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

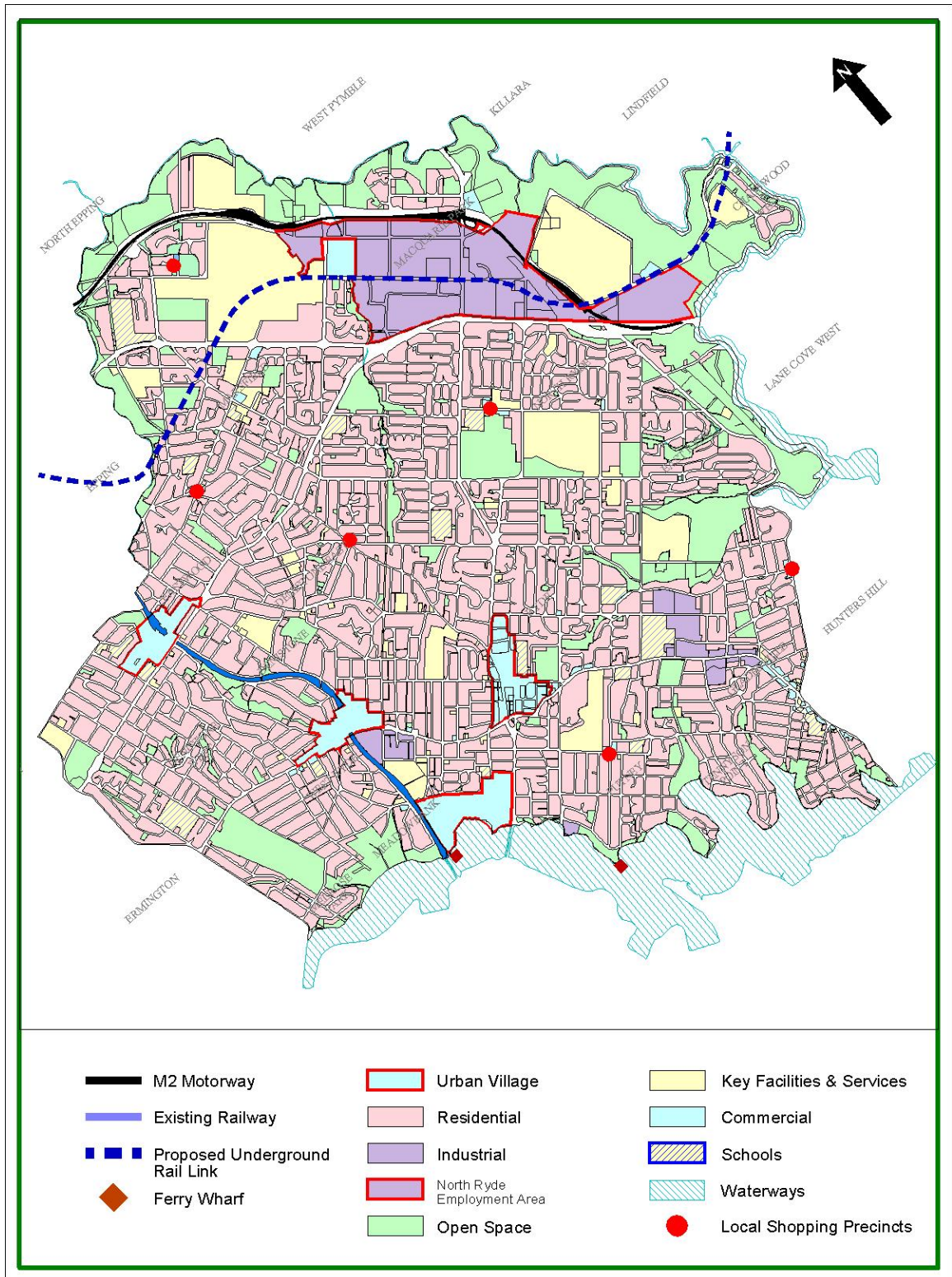
The City of Ryde has an area of 40.651kms<sup>2</sup> and lies in the central northern part of the Sydney Metropolitan area, approximately 12kms from the centre of Sydney.



**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

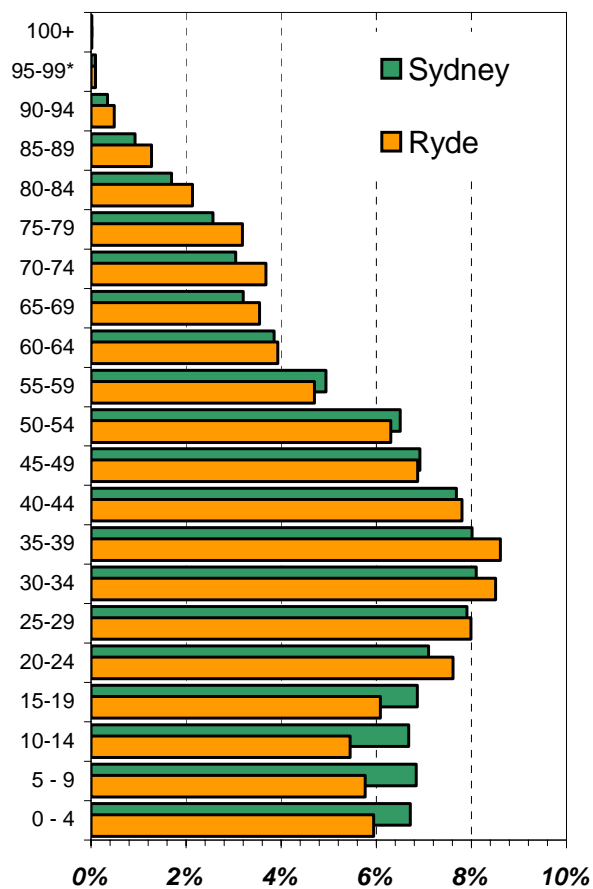
The residential population for the City of Ryde, as at the 2001 Census, was estimated at 95 744. The largest age-group in the community is adults in their prime working age from 25–54 years who make up 46% of the population.

Notable changes from the 1996 Census among age groups are, that the adults age group (25–54) increased by 1 566 and the older persons (75+) age group increased by 902, while the mature adults age group (55–74) and pre-school age group (0–4) decreased.

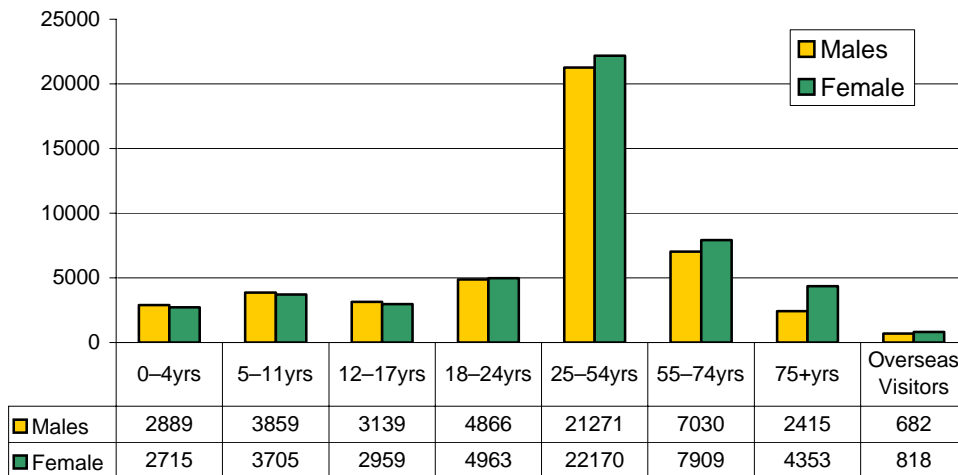
Of the population, 41% are married couples, 17% are dependant children under 15 years and 10% live alone. The City of Ryde has a stable community compared to the rest of Sydney with 56% of residents over the age of five living here prior to 1996.

In the City in 2001, there were 46 152 males and 49 592 females.

The City's Aboriginal and Torres Strait Islander population in 2001 was 227 persons.



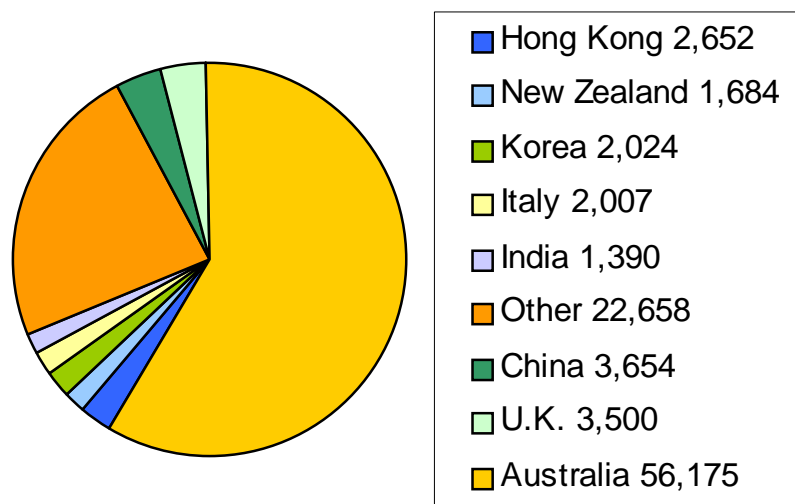
**Graph 1: Relative size of age groups (ABS 2001 Census Population and Housing)**



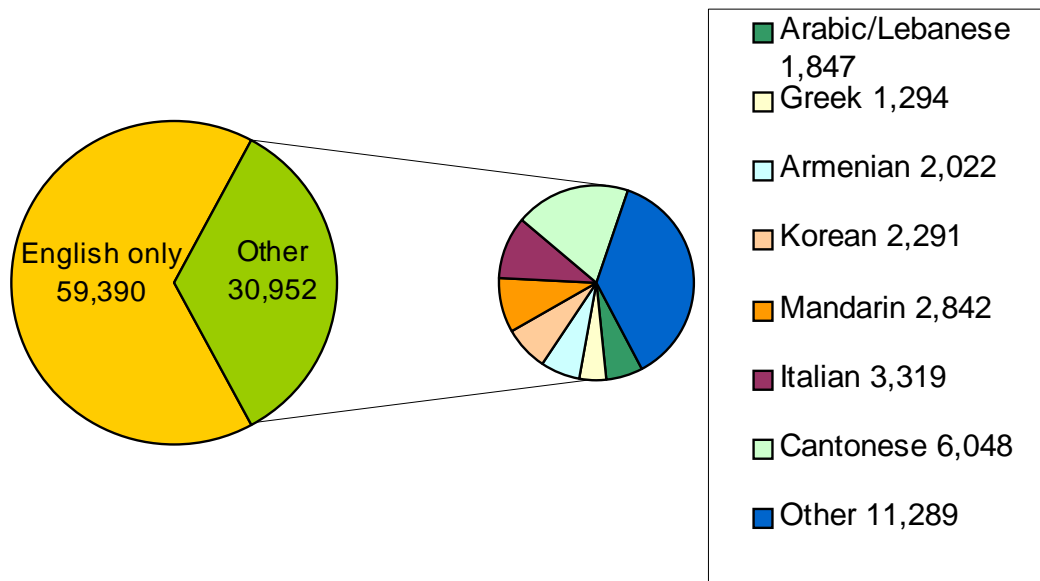
**Graph 2: Relative size of age groups (ABS 2001 Census Population and Housing)**

In 2001, some 63% of the City's people were born in Australia and 37% 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 34% of the population. The most common of these languages were Cantonese, Italian, Mandarin, Korean, Armenian, Arabic/ Lebanese and Greek.



**Graph 3: Country of birth (ABS 2001 Census Population and Housing)**



**Graph 4: Language spoken at home (ABS 2001 Census Population and Housing)**

(City of Ryde – City Vision 2022, Draft)

## PART 3

# Ryde Crash Analysis 1999-2003

The following information provides a statistical overview of the road accident data for Ryde LGA between 1999 and 2003.

### 1. ACCIDENTS

Table 1 identifies the total number of accidents in Ryde LGA by fatal/injury/non-casualty classification between 1999 and 2003. The highest number of fatality accidents occurred in 2003. The number of injury accidents has fluctuated between 1999 and 2003, however has decreased since 2001. Furthermore, non-casualty tow-away accidents for 2003 are below the 5-year average, and have been from 2001. The total number of accidents from 1999 up until 2003 has also decreased.

**Table 1. Ryde LGA number of accidents by fatal/injury/non-casualty classification 1999-2003**

	1999	2000	2001	2002	2003	5 year Av.
<b>Fatal Accidents</b>	4	3	5	5	6	4.6
<b>Injury Accidents</b>	239	298	338	355	298	305.6
<b>Non-casualty Accidents</b>	636	583	536	525	546	565.2
<b>Total Accidents</b>	879	884	879	885	850	875.4

### 2. CASUALTIES

Table 2 shows the total number of casualties in Ryde LGA by killed/injured classification between 1999 and 2003. Again, it is seen that in 2003, the number of people killed (7) is slightly higher than the 5-year average (5) and the number of people injured (373) is lower than the 5-year average (381).

**Table 2. Ryde LGA number of casualties by killed/injured classification 1999-2003**

	1999	2000	2001	2002	2003	5 yr Av.
<b>Killed</b>	4	3	5	6	7	5
<b>Injured</b>	309	374	428	419	373	381
<b>Total</b>	313	377	433	425	380	381



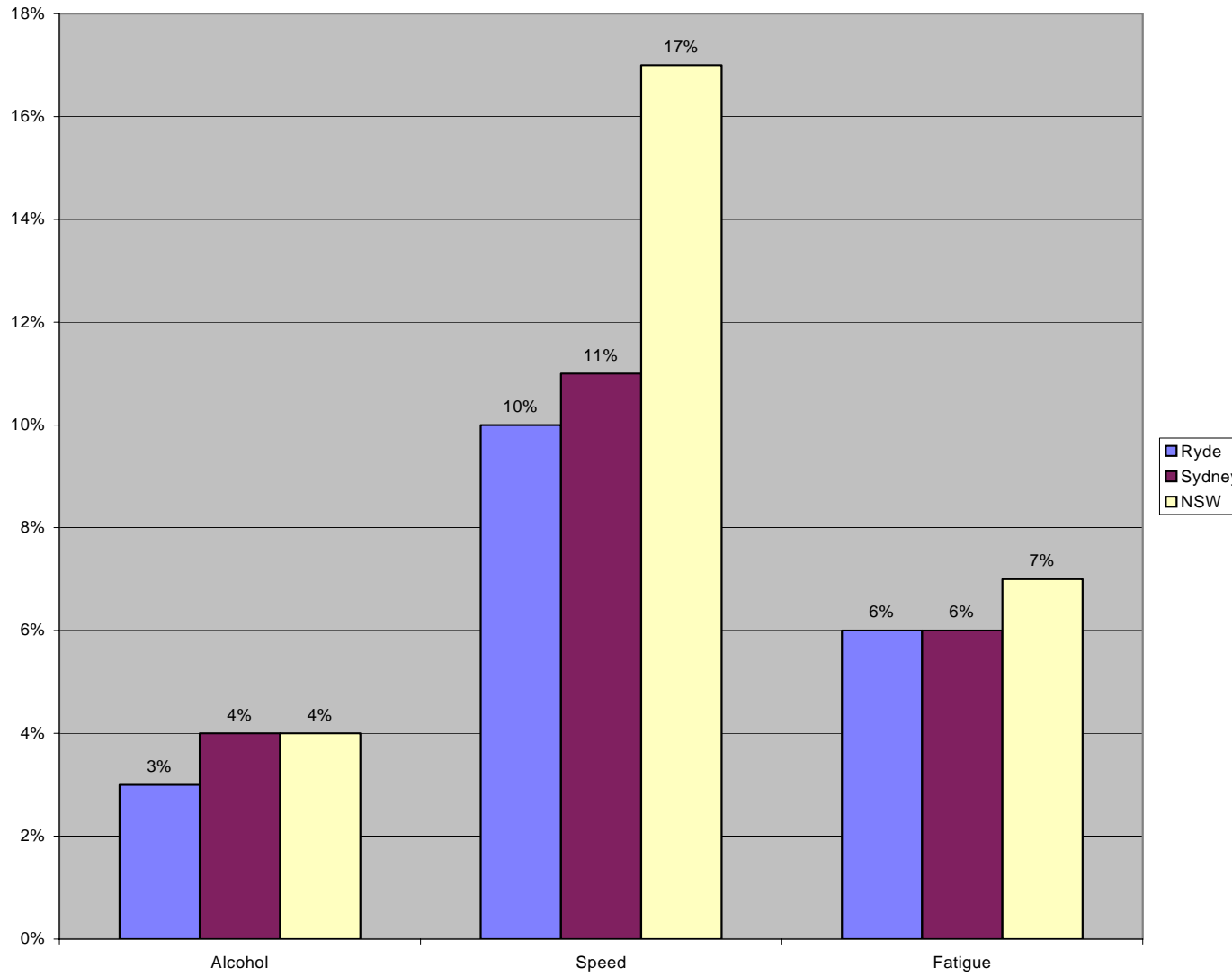
### 3. CONTRIBUTING FACTORS IN RYDE ACCIDENTS

Table 3 and Graph 5 show the percentage of accidents in Ryde, Sydney region and NSW with contributing factors. As can be seen, NSW has the highest percentage of accidents with speed involvement, whereby 17% of all accidents in NSW involved speed. Sydney and NSW has the highest percentage of accidents with alcohol (4%), and NSW has the highest percentage of accidents involving fatigue (7%). Speed is the highest contributing factor for Ryde, with 10% of all accidents involving speed, followed by fatigue (6%) and alcohol (3%). Ryde has the same accident percentage as Sydney for fatigue as contributing factors. While the percentage of accidents with speed and/or alcohol involvement is below Sydney region, residents in Ryde may still speed or drive above the legal BAC limit in other areas.

**Table 3. Percentage of Accidents with Contributing Factors 2003**

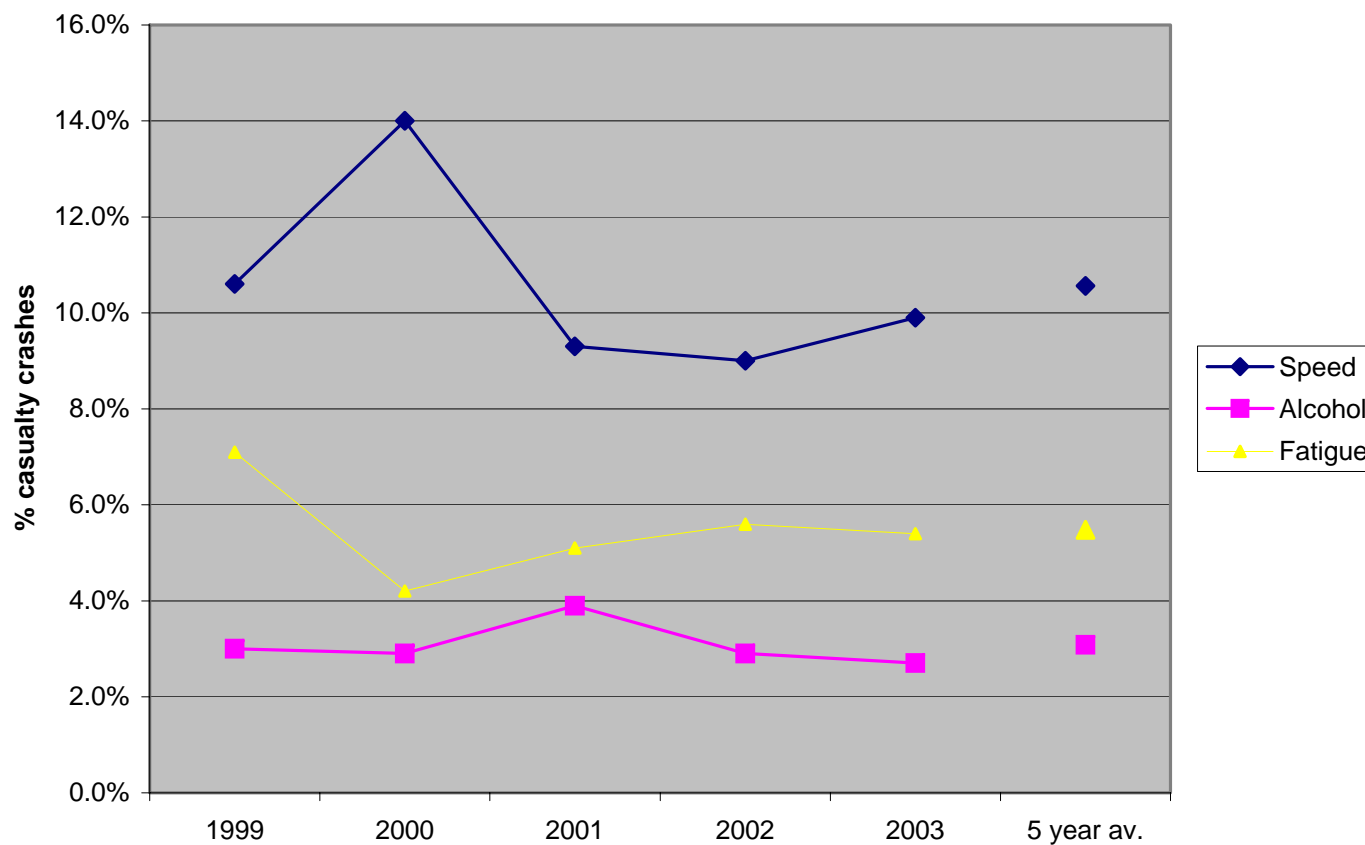
	<b>Speed</b>	<b>Alcohol</b>	<b>Fatigue</b>
<b>NSW</b>	17%	4%	7%
<b>Sydney Region</b>	11%	4%	6%
<b>Ryde LGA</b>	10%	3%	6%

Graph 5: Accidents by contributing Factor Ryde, Sydney and NSW 2003



Graph 6 looks at the percentage of accidents with contributing factors between 1999 and 2003 in Ryde. Speed is the highest contributing factor to accidents in Ryde, followed by fatigue and alcohol. In 2003 all contributing factors were below the 5-year average. Accidents involving speeding, however have increased since 2002, and accidents with alcohol involvement have remained relatively stable over the 5-year period.

**Graph 6. Percentage of Accidents According to Contributing Factors 1999-2003 Ryde LGA**



Graph 7 describes the average number of accidents according to contributing factors in Ryde by time periods, 1999-2003. The time periods are specified in the table below according to McLean Time Periods.

### **3a. Number of Accidents Involving Speed**

In 2003, there were 84 accidents involving speed in Ryde. The vast majority of accidents involving speed between 1999 and 2003 occurred during the week, Monday to Friday between 9am and 3pm. This is followed by Monday to Wednesday between 3pm and 9pm. That is, most speeding accidents occurred during the weekday. Road Safety 2010 has identified enhanced speed education and enforcement as a potential road safety initiative to promote safer people on the roads.

### **3b. Number of Accidents Involving Alcohol**

In 2003, alcohol was a factor in 23 accidents, resulting in 20 casualties in Ryde. In 2003, alcohol contributed to 3% of the total number of accidents in Ryde. The number of casualties has increased by 3.1% since 2002. Between 1999-2003 the most common time of day where the highest casualties were recorded involving alcohol, were from late evening until early morning (from 9pm until 3am), particularly from Thursday to Sunday, with the majority of casualties with alcohol involvement being between 17-25 years and 26-39 years of age. 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. Road Safety 2010 has identified the Government as leading in the development of alternative transport schemes as effective means to reduce drink driving incidence. Furthermore, the licensed premises within Ryde are in favour of participating in alternative transport initiatives to proactively address this issue, and improve driver and pedestrian behaviour in Ryde.

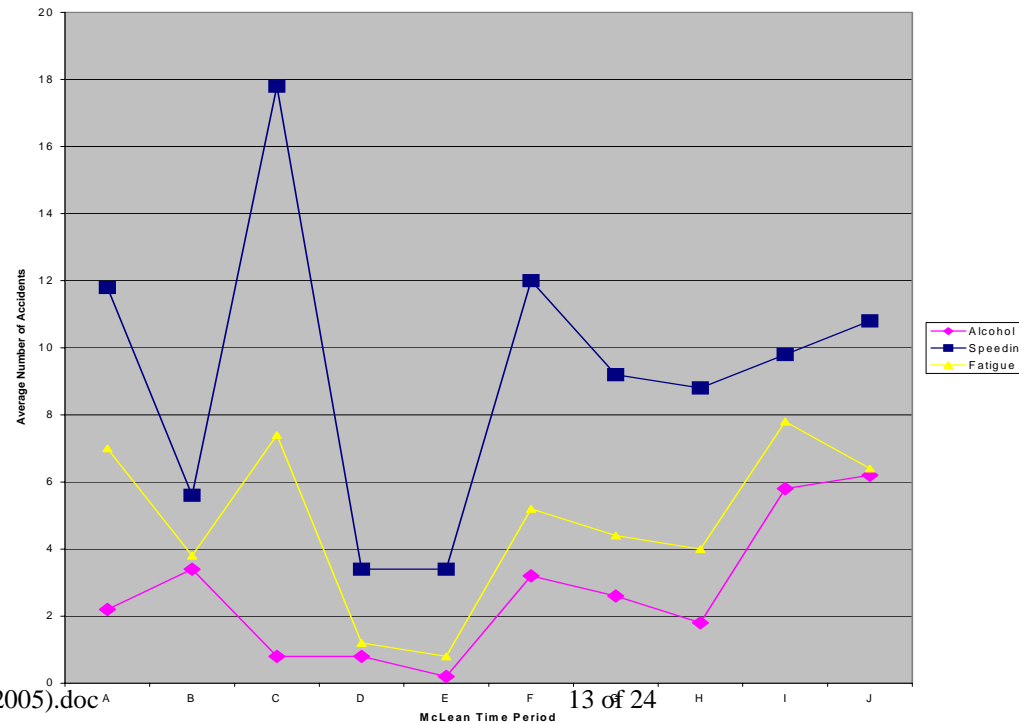
### **3c. Number of Accidents Involving Fatigue**

In 2003, there were 46 accidents involving fatigue in Ryde. The majority of accidents involving fatigue occurred from Sunday to Wednesday between 9pm and 3am the next day. This was followed by Monday to Friday between 9am and 3pm, indicating fatigue related accidents also occurred during the week-day. This may be work-related, as it does not appear to be caused by long distance driving.

### McLean Time Periods

A	Monday – Friday 3am – 9pm
B	Saturday – Sunday 3am – 9pm
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 – Wednesday 9pm – 3am (the next day)
J	Thursday – Saturday 9pm – 3am (the next day)

Graph 7. Average Number of Accidents by Time Period in Ryde and Contributing Factors 1999-2003



#### 4. ROAD USER TYPE

Table 4 summarises the percentage of casualties by road user class between 1999 and 2003 for NSW, Sydney region and Ryde LGA.

- Ryde LGA has a higher percentage of motor vehicle driver casualties (59%) compared to Sydney region (54%) and NSW (53%).
- When looking at motor vehicle passenger casualties, Ryde LGA has a slightly lower percentage (19%) of casualties compared to NSW (25%) and Sydney region (22.9%).
- Ryde's percentage of motorcyclist casualties is similar to NSW and Sydney region over the 5 year period.
- The percentage of pedestrian casualties for Ryde LGA (11%) is lower than Sydney region (13%) but slightly higher than NSW (10%). The reason for this is Ryde LGA has a similar demographic pattern to Sydney, compared to NSW as a whole, with a denser population.

It should be noted that followed by the percentage of motor vehicle driver and motor vehicle passenger casualties (59% and 19% respectively) pedestrians are the third highest casualty group in Ryde LGA, at 11%.

**Table 4. Percentage of casualties by road user class 1999-2003 Average**

	<b>NSW</b>	<b>Sydney Region</b>	<b>Ryde LGA</b>
<b>Motor Vehicle Driver</b>	53.4%	53.7%	59.0%
<b>Motor Vehicle Passenger</b>	25.1%	22.6%	19.0%
<b>Motorcyclist</b>	7.3%	6.7%	7.0%
<b>Pedal Cyclist</b>	4.2%	4.3%	3.5%
<b>Pedestrian</b>	10.0%	12.8%	11.4%

Table 5 shows the percentage of casualties by road user class between 1999 and 2003 in Ryde LGA.

**Table 5. Percentage of Casualties by road user class 1999-2003 Ryde LGA**

	1999	2000	2001	2002	2003
<b>Motor Vehicle Drivers</b>	56.5%	57.3%	61.7%	63.5%	55.8%
<b>Motor Vehicle Passengers</b>	20.4%	20.1%	18.7%	14.8%	21.1%
<b>Motorcyclists</b>	7.7%	5.8%	7.2%	6.6%	7.9%
<b>Pedal Cyclists</b>	2.2%	4.5%	2.5%	5.2%	3.2%
<b>Pedestrians</b>	13.1%	12.2%	9.9%	9.9%	12.1%

#### **4a. Number of Pedestrian Casualties**

The percentage of pedestrian casualties has increased since 2001. In 2003, there were 46 pedestrian casualties. When looking at age of pedestrian casualties and the time in which the accident occurred in 2003 some interesting patterns emerged. The accidents that occurred with older pedestrians aged 60 years and over most commonly happened in the morning during the weekday. One reason for this may be an increased number of older pedestrians over drivers who are more fragile with slower reaction times to dangerous situations. Pedestrian accidents of the younger age group, 17-39 years, occurred mostly on weekends in the late evenings, and early mornings. A possible reason for this may be impairment through alcohol consumption. Furthermore, child pedestrian accidents, 5-16 years of age occurred mostly during weekday mornings and afternoons, probably travelling to and from school. The majority of late night pedestrian accidents occurred on Victoria Road Gladesville and Epping Road Marsfield. These areas are close to licensed premises.

#### **4b. Number of Motorcyclist Casualties**

The percentage of motorcyclist casualties is at its highest in 2003 at 7.9% of all casualties There were 30 Motorcyclist casualties in 2003. Epping Road Marsfield and Victoria Rd Ryde and West Ryde, and Church St Ryde stand out as more frequent motor cycle accident locations. The times that these accidents occur seem to be in the mornings between 8am and 9am and afternoons between 5pm and 6pm on weekdays. This is clearly during peak hour times possibly from travelling to and from work.

#### **4c. Number of Pedal Cyclist Casualties**

There were 12 pedal cyclist casualties in 2003. This was the lowest number of casualties according to road user type.

#### 4d. Motor Vehicle Passenger Casualties

Motor vehicle passenger casualties has also increased since 1999, with the highest percentage of passenger casualties in 2003 (21.1%). There were 80 passenger casualties in Ryde in 2003.

Pedestrians, motorcyclists and motor vehicle passengers seem to be the road users whose numbers have increased in the last year compared with other road users.

#### 4e. Occupant Restraints

Table 6 shows the percentage of restraints fitted but not worn in accidents in NSW, Sydney region and Ryde area. While Ryde's percentage is lower than NSW and Sydney region there is still a need to address this, as seatbelts save lives and Road Safety 2010 has identified restraints as an important safety issue.

**Table 6. Use of Restraints: 1999-2003 Average**

	<b>NSW</b>	<b>Sydney Region</b>	<b>Ryde</b>
<b>All Motor Vehicle Driver Casualties</b>			
Restraint fitted but not worn	<b>2.5%</b>	<b>2.0%</b>	<b>1.4%</b>
<b>All Motor Vehicle Passenger Casualties</b>			
Restraint fitted but not worn	<b>3.3%</b>	<b>2.5%</b>	<b>1.6%</b>



## 5. AGE GROUPS AND GENDER FOR ALL ACCIDENTS

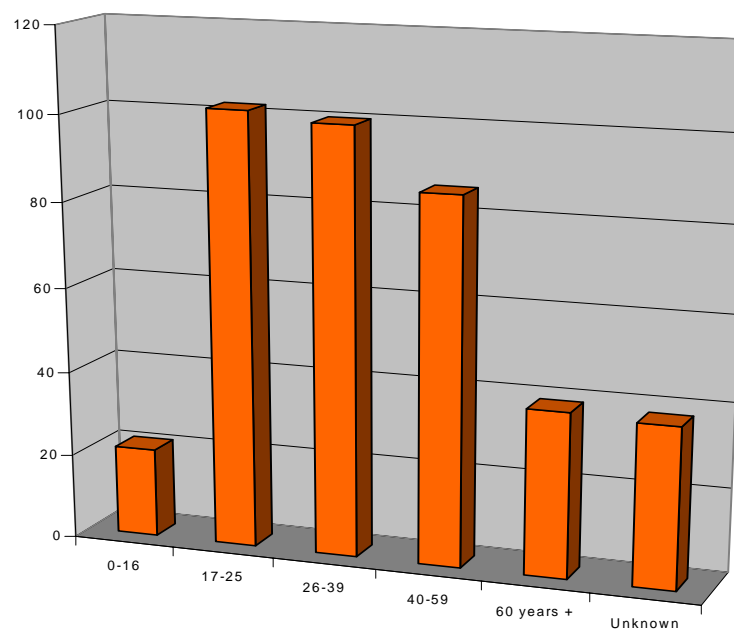
### 5a. Accidents by Age Group

Table 7 shows the percentage of all accidents by age group of motor vehicle controller for NSW, Sydney region and Ryde LGA. The statistics for each age group across NSW, Sydney region and Ryde remain relatively similar. The majority of motor vehicle controller accidents occur in the 17-25 year age group and 26-39 year age group.

**Table 7. Percentage of all Accidents by Age Group of Controller 1999-2003 Average**

	0-16	17-25	26-39	40-59	60+	Unknown
<b>NSW</b>	9%	26%	26%	21%	10%	8%
<b>Sydney Region</b>	8%	26%	27%	21%	9%	9%
<b>Ryde LGA</b>	5%	27%	26%	22%	10%	10%

**Graph 8. Number of casualties by age 1999-2003 Ryde**



Graph 8 displays the average number of casualties in Ryde by age between 1999-2003. The majority of accidents in Ryde over the 5-year period occurred in the 17-25 year age group.

#### **5b. Age Group, Gender and Road User Type**

This section addresses casualties in Ryde LGA according to age and road user class. Table 8 and Graph 9 shows the number of casualties by age group and road user class in Ryde 2003. The following has been identified from the data.

##### **5bi. Motor Vehicle Driver Casualties**

The highest number of motor vehicle driver casualties was in the 26-39 year age group with 68 casualties (32% of all motor vehicle driver casualties). 40-59 years (58), and 17-25 years (55) followed this age group. Most of these casualties were male.

##### **5bii. Motor Vehicle Passenger Casualties**

The highest number of motor vehicle passenger casualties was found in the 17-25 year age group (19 casualties, 24% of all motor vehicle passenger casualties). From 0-25 years of age both genders appear similarly, however, from ages 26 and up, the majority of casualties in this class are female. One reason for the high number of passenger casualties in this age group may be attributed to young drivers having other young passengers/peers in the vehicle and therefore a higher level of peer influence, towards speeding.

##### **5biii. Motorcyclist Casualties**

The highest number of motorcyclist casualties was aged between 17-25 and 26-39 years, each with 10 casualties. The majority of these casualties were male.

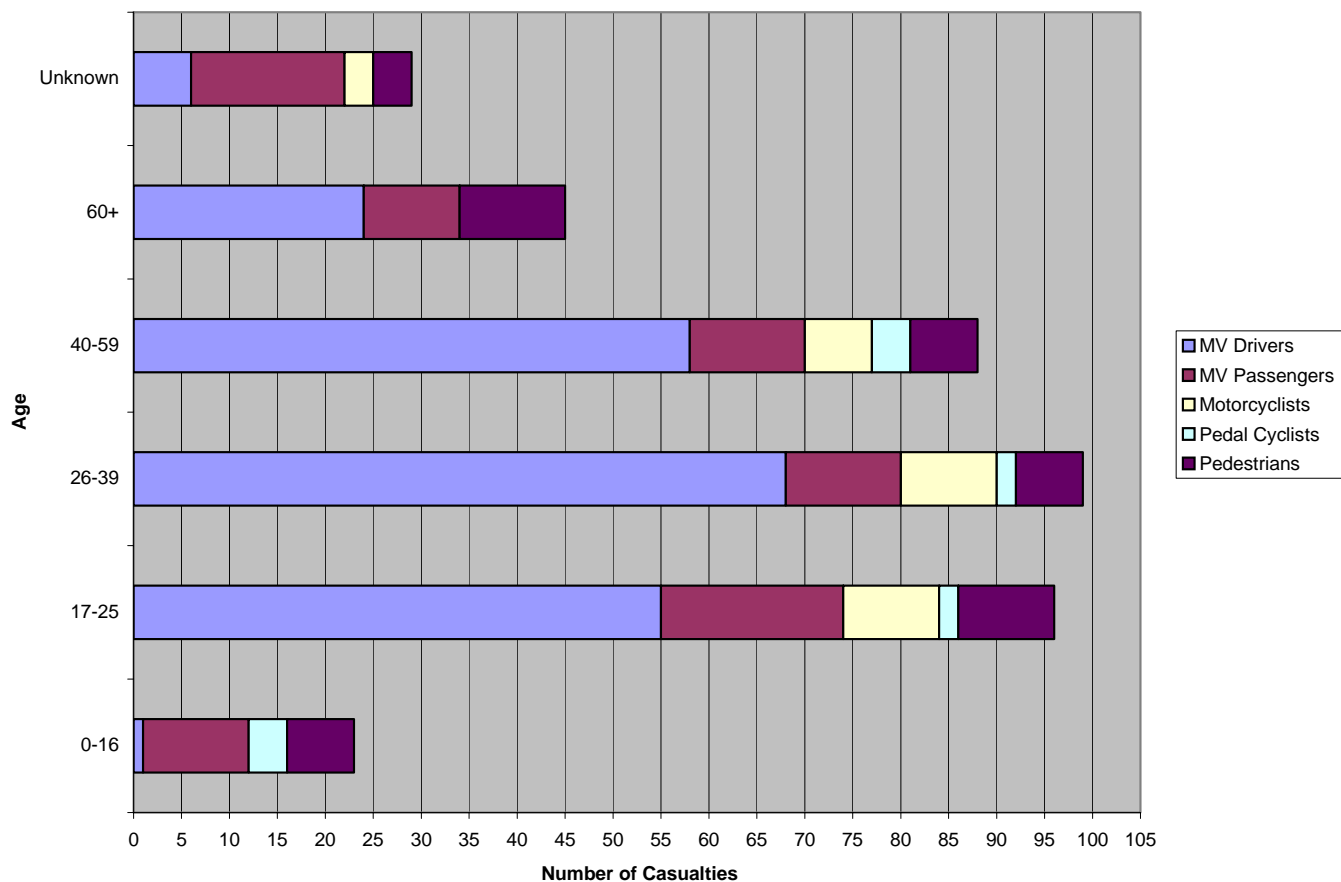
##### **5biv. Pedal Cyclist Casualties**

The highest number of pedal cyclist casualties occurred in the 0-16 year age group and 40-59 year age group, each with 4 casualties. All pedal cyclist casualties were male.

##### **5bv. Pedestrian Casualties**

The highest number of pedestrian casualties occurred in the 60+ age group (11) followed by the 17-25 year age group (10). Graph 10 shows that the majority of pedestrian casualties occurred in the 60+ age group (24%) and 17-25 year age group (22%) in Ryde, 2003. The majority of these casualties in each age group were female.

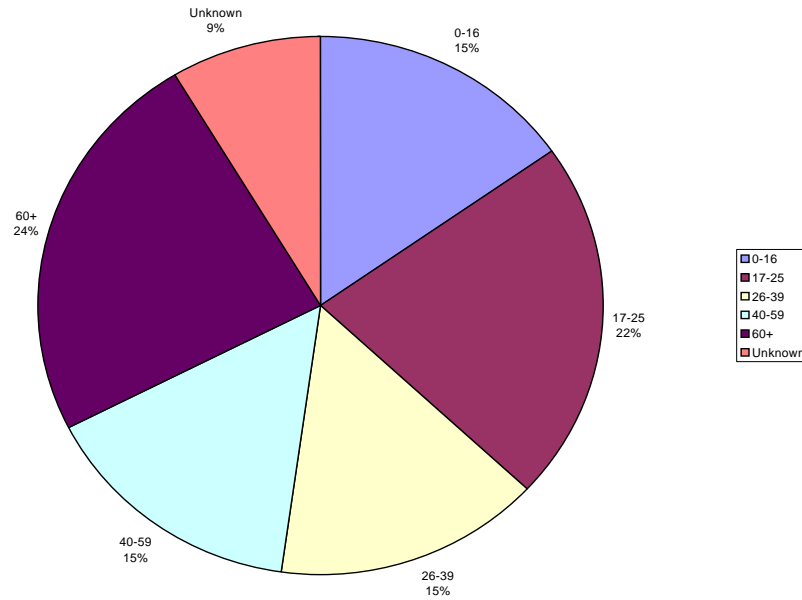
**Graph 9. Ryde - Casualties by Age Group and Road User Type 2003**



**Table 8. 2003 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		
<b>Motor Vehicle Drivers</b>	1	-	34	21	34	34	30	28	12	12	6	212
<b>Motor Vehicle Passengers</b>	6	5	10	9	3	9	2	10	3	7	16	80
<b>Motorcyclists</b>	-	-	9	1	10	-	7	-	-	-	3	30
<b>Pedal Cyclists</b>	4	-	2	-	2	-	4	-	-	-	0	12
<b>Pedestrians</b>	2	5	4	6	5	2	5	2	4	7	4	46

**Graph 10. Percentage of Pedestrian Casualties by Age Group in Ryde 2003**

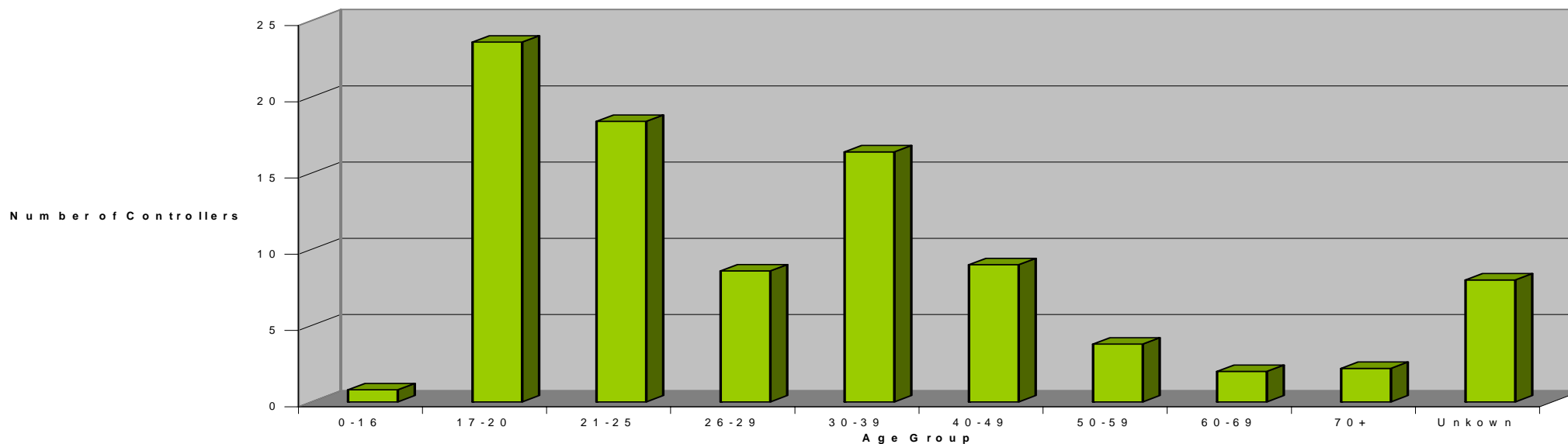


### 5c. Age Group and Contributing Factors

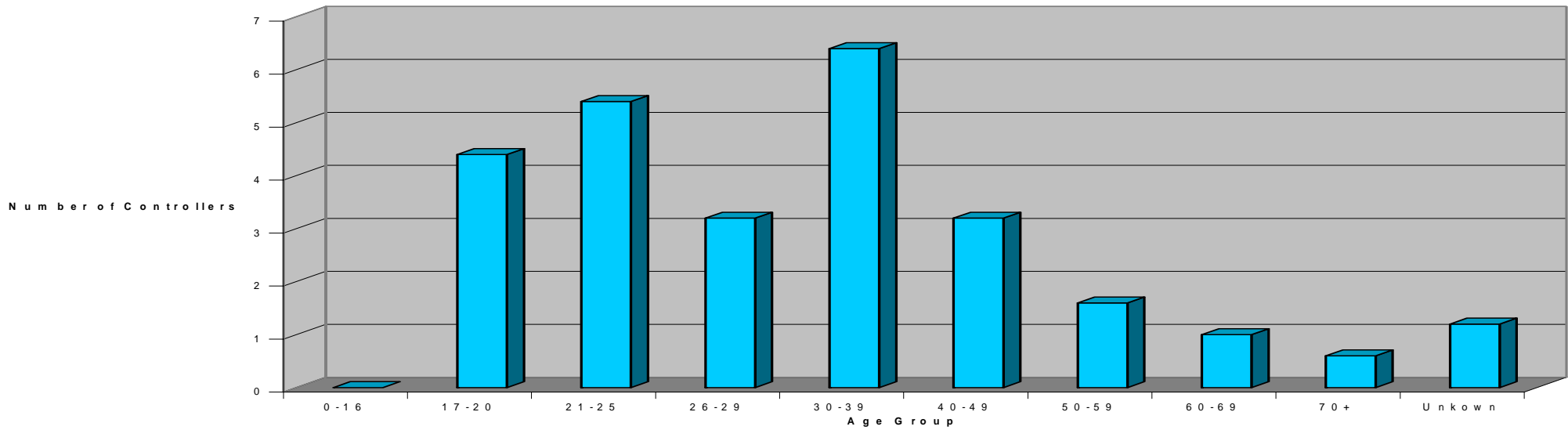
The following graphs show the average number of accidents by age and contributing factor in Ryde between 1999-2003.

- Graph 11 indicates that the highest number of speeding related accidents occurred in the 17-20 and 21-25 year age groups.
- Graph 12 shows the highest number of accidents involving alcohol occurred in the 30-39 year age group followed by 21-25 year age group.
- Graph 13 shows the highest number of accidents involving fatigue also occurred in the 30-39 year age group followed by the 21-25 year age group.

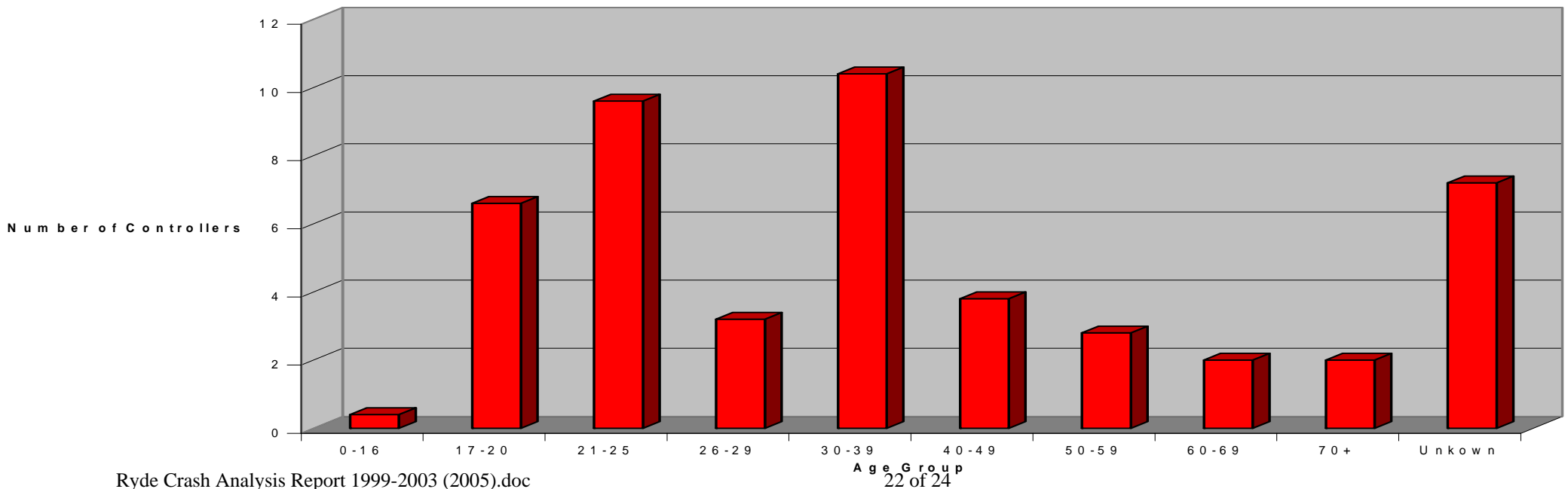
Graph 11. Number of Accidents, Age of Motor Vehicle Controller and Speeding Involvement 1999 - 2003



Graph 12. Number of Accidents, Age of Motor Vehicle Controller and Alcohol Involvement 1999-2003



Graph 13. Number of Accidents, Age of Motor Vehicle Controller and Fatigue Involvement 1999-2003



## 6. SUMMARY

In summary, the following issues have been identified for Ryde LGA, and therefore need to be addressed when developing road safety initiatives for 2005.

- The trend shows the total number of accidents and casualties in Ryde between 1999 and 2003 is decreasing.
- Most motor vehicle controller accidents occurred in the 17-25 year age group followed by the 26-39 year age group. The former may be put down to inexperience and over confidence.
- Pedestrians are the third highest casualty group in Ryde LGA after motor vehicle driver casualties and motor vehicle passenger casualties. The percentage of pedestrian casualties has increased since 2001. The majority of pedestrian casualties were in the 60+ year age group followed by the 17-25 year age group, followed by school aged children.
- Motorcyclist casualties was at its highest in 2003. The majority of motorcyclist casualties were males aged between 17-39 years of age.
- Motor vehicle passenger casualties were also at its highest percentage in 2003, since 1999. The majority of motor vehicle passenger casualties were aged between 17-25 years.
- Pedestrians, motorcyclists and motor vehicle passengers seem to be the road users whose numbers have increased in the last year compared with other road users.
- The greatest contributing factor to accidents in Ryde LGA was speeding. The number of accidents involving speeding has increased since 2002. The majority of speeding accidents occurred during week days, Monday to Friday between 9am and 3pm. The majority of speeding accidents occurred in the 17-25 year age group, followed by the 30-39 year age group.
- Fatigue was the second greatest contributing factor to accidents in Ryde LGA. The majority of accidents involving fatigue occurred from Sunday to Wednesday between 9pm and 3am the next day followed by week days Monday to Friday between 9am and 3pm. The age group where the most accidents involving fatigue occurred was the 30-39 year age group and 21-25 year age group.
- Accidents involving alcohol occurred mostly between Thursday and Saturday evenings from 9pm until 3am the next day. This was followed by Sunday to Wednesday between 9pm and 3am the next day. The majority of alcohol related accidents occurred in the 30-39 year age group and 17-25 year age group.

### **What needs to be addressed in 2005 road safety initiatives?**

- Speeding, 17-25 year old male motor vehicle drivers. Ie, young driver campaigns.
- Drink Driving, particularly late evenings on weekends and the beginning of the week, targeted at the 30-39 year age group and 17-25 year age group, including alternative transport scheme.
- Pedestrian safety for older people during the day and younger people, 17-39 years of age, on weekends at night (drink walking). Particularly women.
- Continued school based pedestrian safety campaigns targeting 40km/h zones and illegal parking.
- Motor Vehicle passengers in the 17-25 year age group (may also be addressed with speeding). Particularly women.
- Male motorcyclists aged between 17-39 years.

### **7. SOURCES**

- Sydney Profile
- RTA Crash Data
- Road Safety 2010