ROAD SAFETY STRATEGY

THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

CONTENTS

1. INTRODUCTION

WHY WE NEED THIS STRATEGY

1.1 Put simply, with 60 people killed on roads in the Royal Borough in the past ten years, and over 1,200 seriously injured, we need to reduce road casualties. However, it is becoming harder to do this using conventional methods.

1.2 We have made considerable improvements in reducing collisions on roads in the borough over this period, and we now have the best record in the country for child casualties.

1.3 The previous Mayor of London set London boroughs a target to reduce all deaths and serious injuries by 50 per cent by the end of 2010 (compared with the average figure for the late 1990s). We expect that we will have come very close to achieving this, when we see the final casualty statistics from Transport for London (TfL) later in 2011.

1.4 In our draft Local Implementation Plan for 2011-14, we set ourselves a target to reduce deaths and serious injuries on our roads by 33 per cent (in line with the previous Government's draft national targets). However, we face three major challenges as we attempt to reduce casualties even further in the years ahead:

a. The increasing numbers of motorcyclists and cyclists means that, for these two modes of travel, the casualty statistics are not following the general downward trend of casualties to other road users. In fact, although the vast majority of collisions involve a motor vehicle, 70 per cent of the casualties resulting from these collisions are neither the drivers of, nor the passengers in, the vehicles.

b. Over the past few years we have found it increasingly difficult to find patterns in collisions that can be addressed through engineering measures, so we need to place more emphasis on educating road users to change risky behaviours. We now attribute most collisions to human error. Aggression and a lack of empathy towards other road users are characteristic of the way too many people travel, and these are the behaviours we will target.

c. Finally, as with all areas of local government activity, we face extreme pressures on our budgets, making it all the more crucial that we devote our resources to where they will have the greatest impact – this might mean working differently, and it will certainly mean that we must be proactive in addressing known problems, rather than reacting to perceptions of road danger.

1.5 The key to responding to all three of these challenges is having good information about road casualties in the borough – not just where collisions are taking place, but how, and looking at the details of those who are being injured and those who are driving the 'other vehicle'.

1.6 We have produced an evidence-based strategy that seeks to deliver a coherent approach to reducing road collisions, and a focus on achieving real progress.

2. PROGRESS AGAINST THE PREVIOUS TARGETS

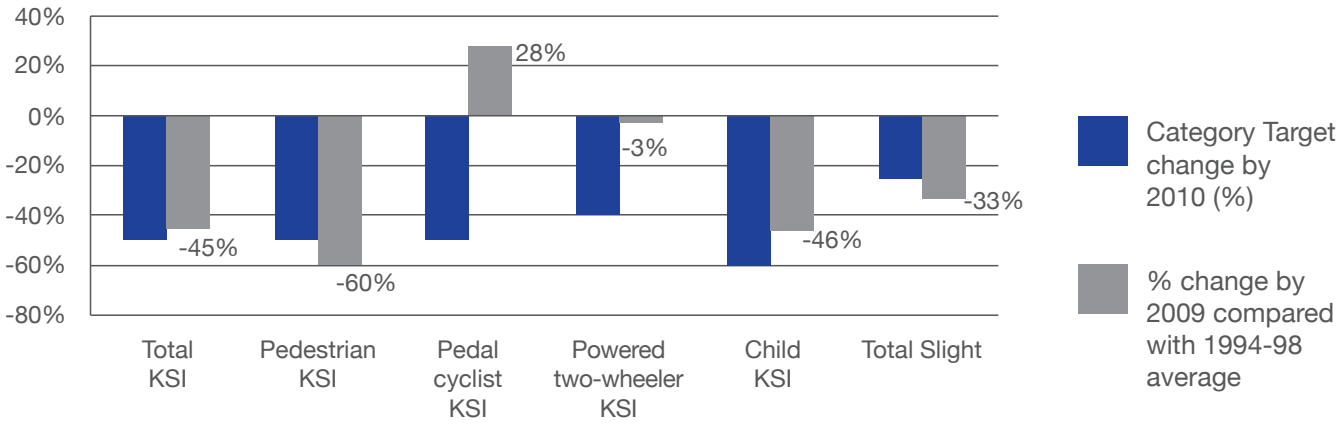
2.1 In March 2000 the Department for Transport (DfT) announced new targets for road casualty reduction by 2010 in Tomorrow's Roads: safer for everyone. The targets were set from a baseline of the average of 1994-98 casualties. By 2004, many of these targets had been met and the Mayor of London announced new, more challenging, targets in 2006.

2.2 The targets are based on data from Stats 19 forms, which are completed by the police officer attending the scene of a collision. This data is checked by Transport for London (TfL) and the boroughs before being officially published – a process which currently takes about six months. While the data recorded is reliant on the notes of the attending police officer, and is therefore susceptible to human error, the Stats 19 forms are the best source of data available to us at present.

2.3 The Royal Borough has made good progress against a number of the 2010 targets since the 1994-98 baseline, as illustrated in the table on page 5. Since the baseline, slight casualties have fallen by 33 per cent and pedestrians killed or seriously injured (KSI) have reduced by 60 per cent. We have almost met our child casualty target, as well as our total KSI target. As powered two-wheeler (P2W) KSIs have reduced by just three per cent, we will not meet our 50 per cent reduction target – nor will we for cyclist casualties, which have increased by 28 per cent since the baseline.

2.4 TABLE 1

Summary of percentage change in casualties in Kensington and Chelsea for target groups between 1994-98 average and 2009

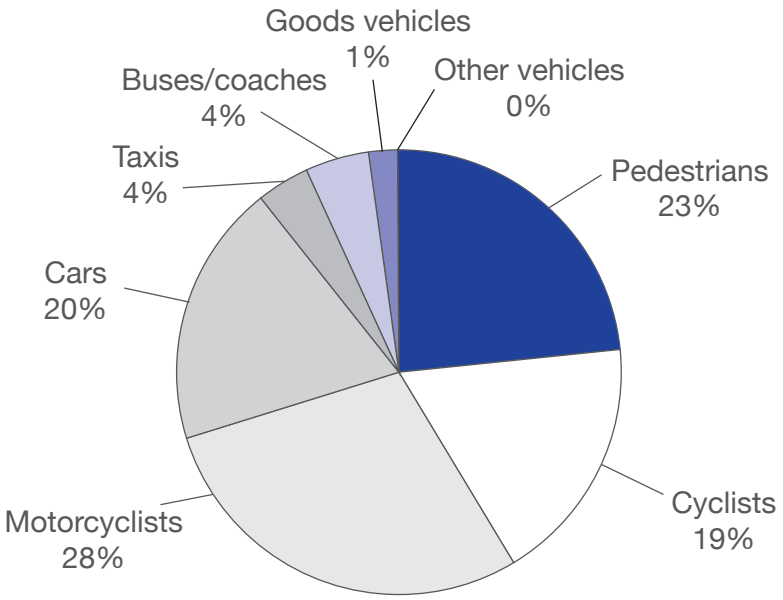


2.5 The Royal Borough was on track to meet all targets until 2004, when there was an increase in cyclist and motorcyclist KSIs. We believe this increase was associated with increased cycling and motorcycling following the introduction of the congestion charge and a warmer than average summer in 2003. The long-term trend suggests that we will not meet the 2010 target of a 50 per cent reduction for cyclist and motorcyclist KSIs.

2.6 Motorcyclists, car occupants and pedestrians make up the majority of casualties from collisions in the borough; however, the fastest growing casualty group is cyclists. Cyclist, pedestrian and P2W casualty groups are termed 'vulnerable road users' and account for 85 per cent of the borough's KSI casualties.

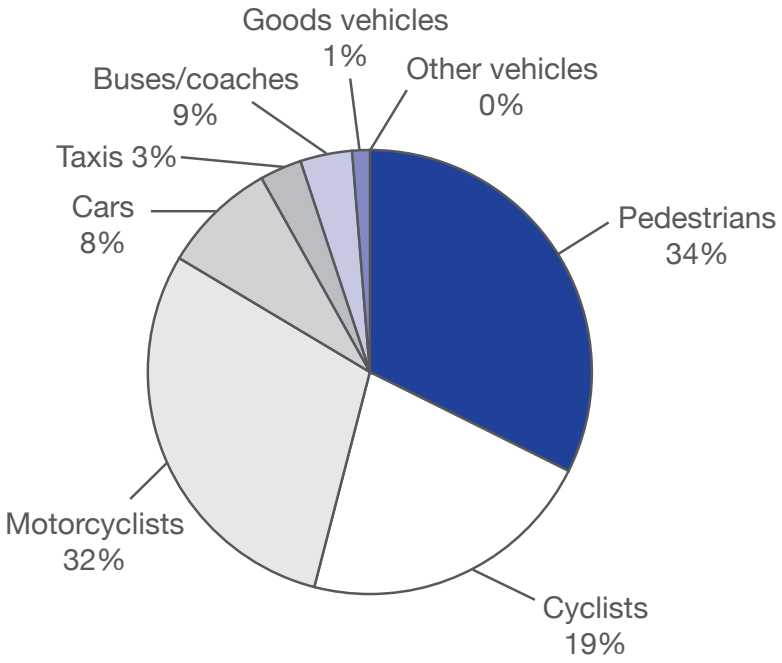
2.7 TABLE 2

All casualties in the Royal Borough of Kensington and Chelsea by user group 2005-09



2.8 TABLE 3

KSI casualties in the Royal Borough of Kensington and Chelsea by user group 2005/09



2.9 Although vulnerable road users are strongly represented in all collision severities, including 68 per cent of the borough's slight casualties, they are more likely to be involved in collisions resulting in severe injuries and represent 93 per cent of the borough's fatalities.

2.10 The number of cyclists in central London has increased dramatically in the past ten years. TfL estimates there was a 197 per cent increase in cycling across central London between 1998 and 2008. Cycle casualty rates have fluctuated over the last two decades, but the general trend has been downward. The substantial increase in the number of cycle trips has been accompanied by a comparatively small increase in cycling casualties. As such, the relative risk of cycling per trip is actually falling and cycling is becoming safer.

2.11 Despite the general increase in cycling and motorcycling, these vulnerable road users account for a disproportionate level of the borough's casualties. Cycling accounts for just four per cent of travel in the Royal Borough, yet cyclists make up 19 per cent of the boroughs KSI casualties. Cyclists and motorcyclists will therefore be a key focus of this strategy.

3. HOW DOES THIS COMPARE TO THE REST OF LONDON?

3.1 Across Greater London, KSIs have reduced by 47 per cent compared to the baseline average. In comparison, KSIs have reduced by 45 per cent in the Royal Borough, which gives the borough the sixth lowest KSI reduction in London.

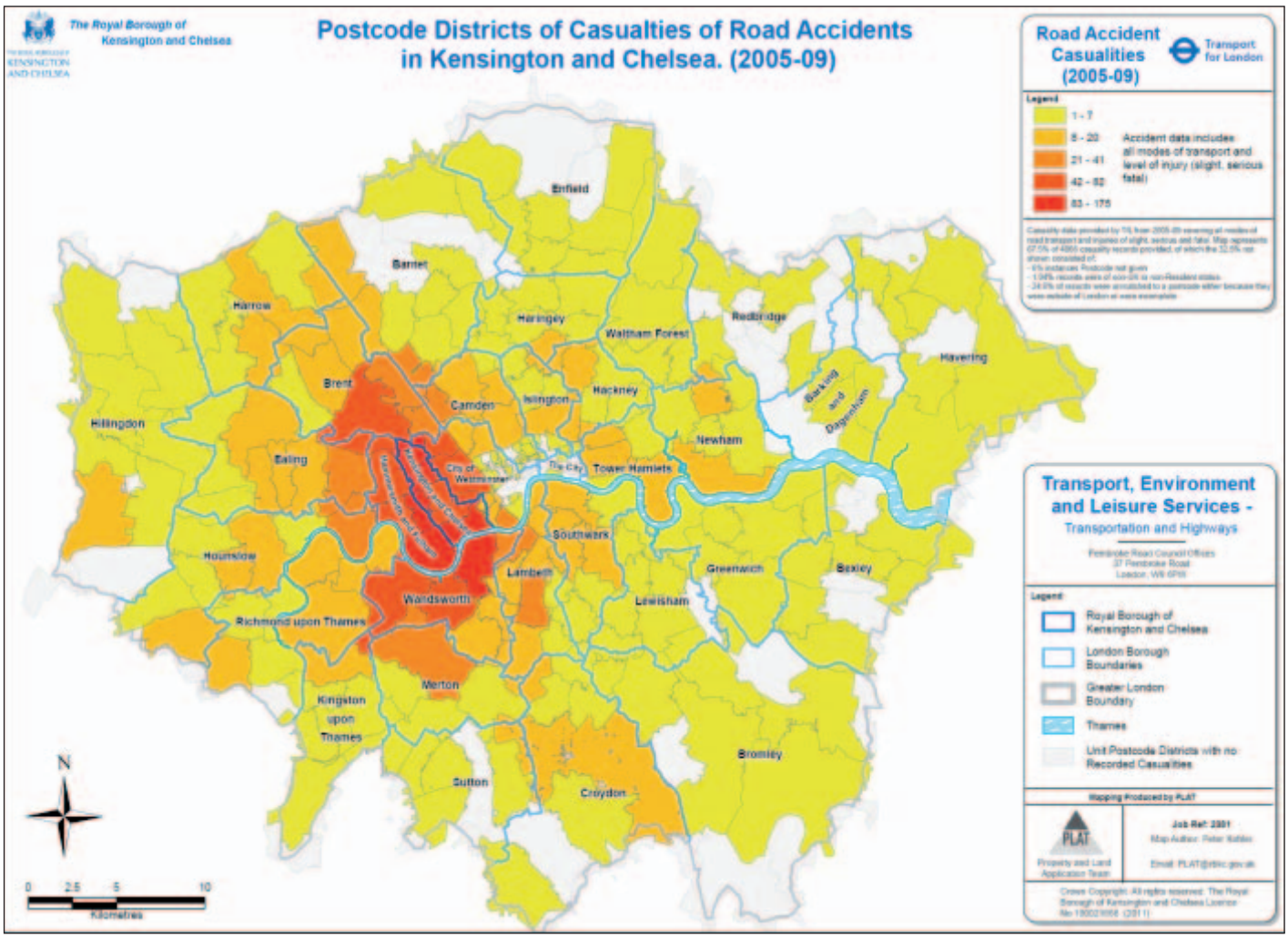
3.2 We are performing above average for child and pedestrian casualty reduction and have the second lowest number of child casualties in London, behind the City of London. When population is taken into account, the Royal Borough has the lowest rate of child casualties in the UK.

3.3 While the increases we have experienced in cyclist and P2W KSIs compares to a 21 per cent decrease in KSIs for both user groups across Greater London, a number of central London boroughs have experienced similar increases in casualties amongst these vulnerable groups. Following the introduction of the Congestion Charge Zone in central London, both cyclist and P2W numbers increased significantly, and the higher casualty levels in central London boroughs reflect this.

4. WHO IS BEING INJURED?

4.1 According to research by TfL and the DfT, training and education can help make road users more aware of potential threats to their safety. Our analysis identifies that the majority of people injured on the borough's roads live within the borough or come from neighbouring boroughs, as illustrated by the diagram on page 8. We are therefore able to target educational programmes to borough residents and work with neighbouring boroughs to ensure that our programmes reach the correct target audience.

4.2 FIGURE 1



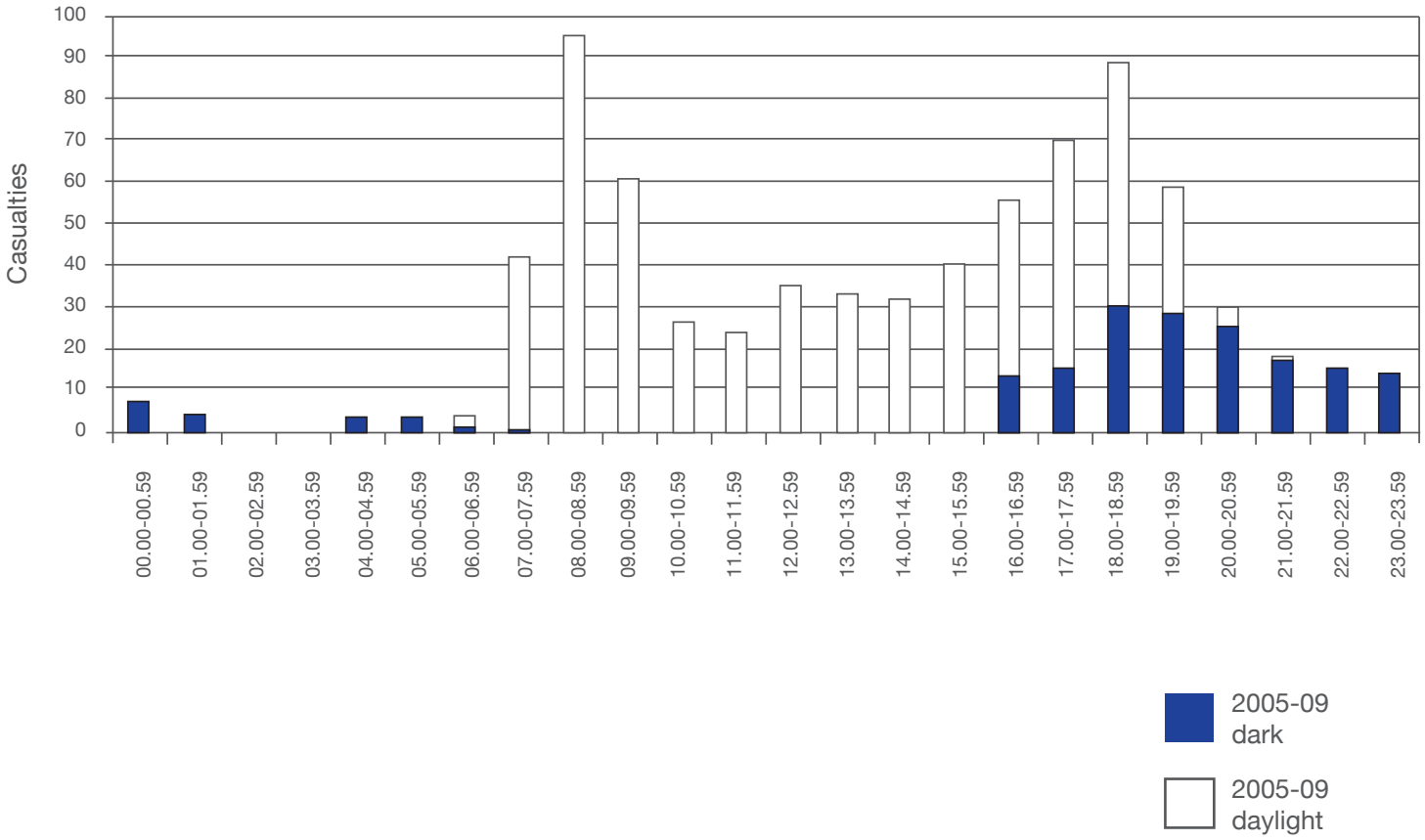
5. CYCLISTS

5.1 Cycle casualty data closely matches what we know about cycle flow in the Royal Borough. Casualties involving cyclists are highest during peak commuting hours and cyclists are likely to be young men.

5.2 Collisions involving cyclists are more likely to occur in the morning or afternoon peak, on a weekday and on key east-to-west routes through the borough. The bulk of these collisions take place during the day, in light and dry weather conditions. This data, as illustrated by the table on page 9, suggests that the majority of cycle casualties are commuters.

5.3 TABLE 4

Cyclist casualties by hour of the day and light conditions in the Royal Borough of Kensington and Chelsea 2005-09



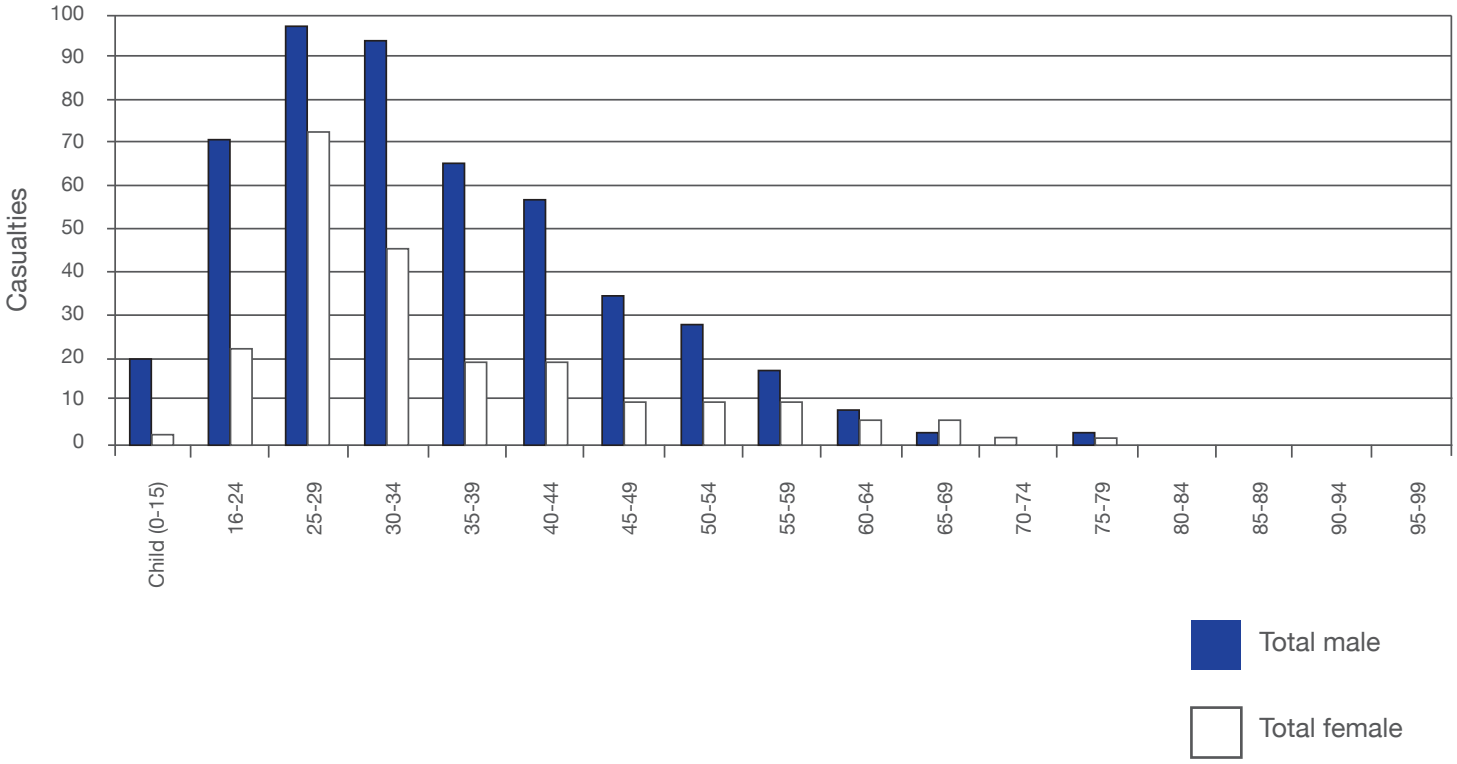
5.4 We expect that this profile could change depending on the success of the London Cycle Hire Scheme, as many of the bicycles will be used for short, non-work related journeys through the day.

5.5 Collisions involving cyclists are most likely to occur between May and October, which corresponds to the months with the highest cycle flows in the borough. The lower casualty numbers over winter could possibly be attributed to the higher proportion of more experienced cyclists cycling at that time and the fact there are fewer cyclists on the roads.

5.6 The borough's cyclist casualties are younger than the London average, with 25 to 29 being the most common age (as illustrated in the Table, on the next page), compared to the London average, in which cyclists aged 30 to 34 are most commonly involved in collisions.

5.7 TABLE 5

Cycle casualties by age in the Royal Borough of Kensington and Chelsea 2005-09



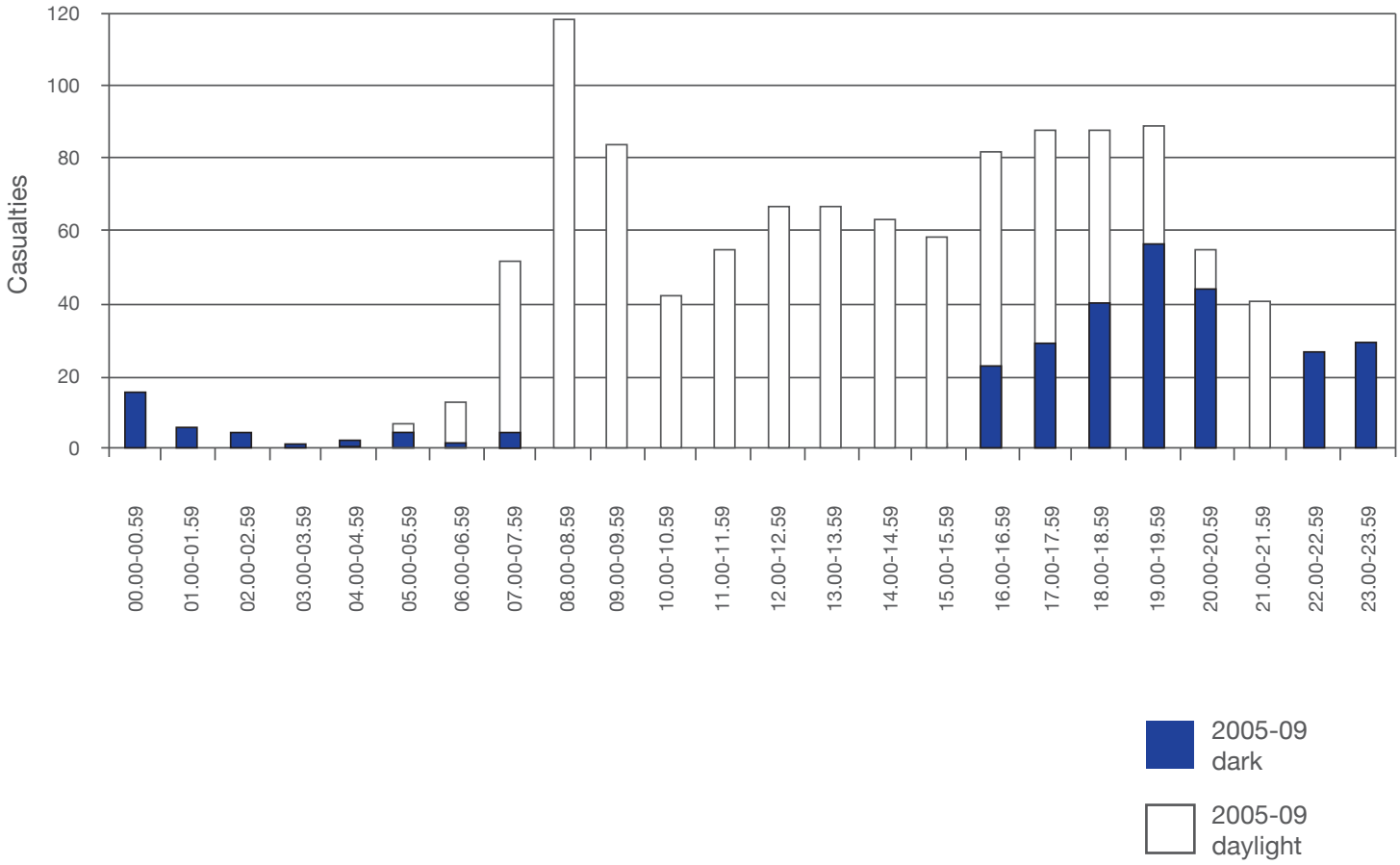
5.8 This data gives us a clearer picture of who is being injured on our roads. Combined with the borough's MOSAIC (geo-demographic) data, the data puts us in a position to develop targeted safety campaigns.

6. POWERED TWO WHEELERS (P2W)

6.1 Data for P2W casualties in the borough reflects the London-wide trends. Men feature prominently in P2W collisions; in fact, in the past five years 84 per cent of P2W casualties on the borough's roads were men, the majority of whom were aged between 20 and 45. Although P2W collisions are not as concentrated in the peak periods as the borough's cyclist collisions, as Table 6 (page 11) suggests, a high proportion of the P2W casualties could be commuters given the times of day the collisions are taking place.

6.2 TABLE 6

Motorcyclist casualties by time of day and light conditions in the Royal Borough of Kensington and Chelsea 2005-09

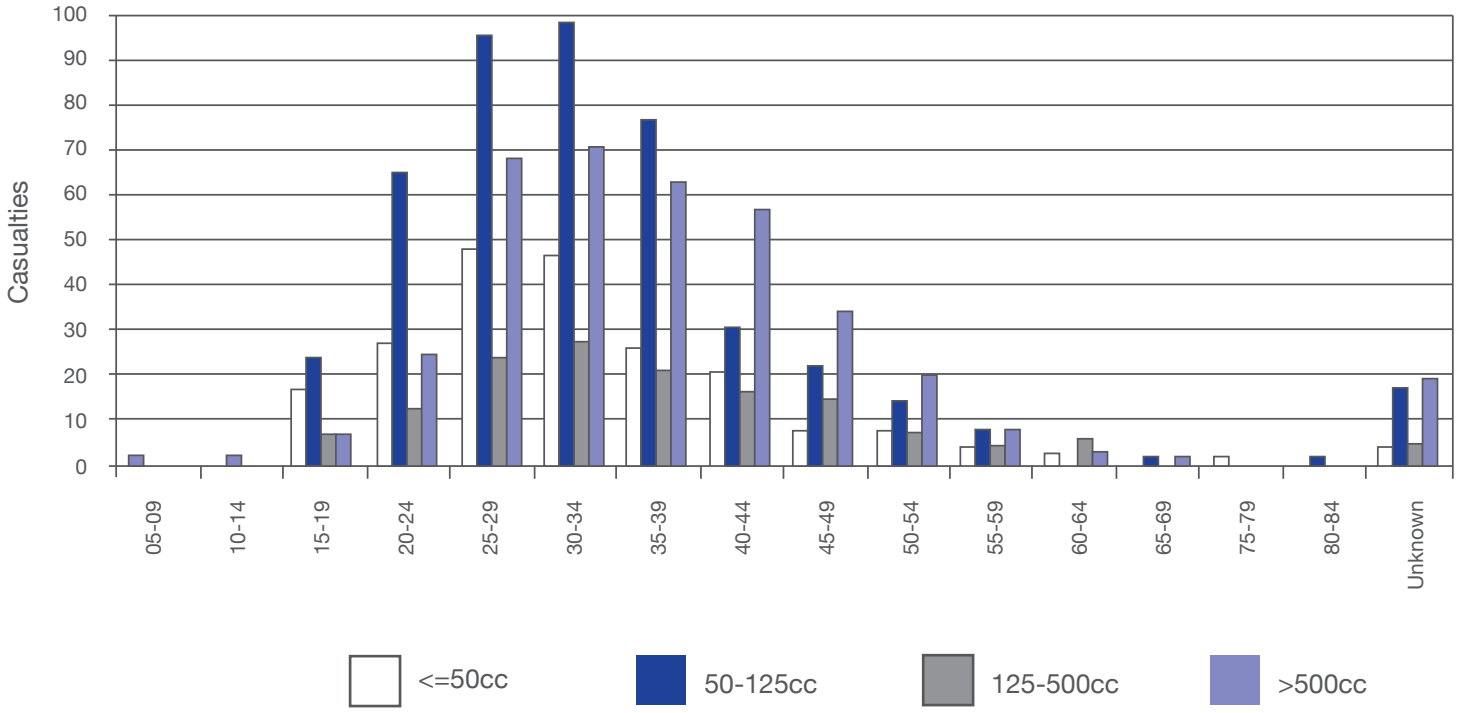


6.3 Collisions involving P2W riders do not vary greatly over the course of year.

6.4 The borough collision data illustrated in Table 7 suggests that younger people riding smaller vehicles are involved in more collisions than those aged over 40.

6.5 TABLE 7

Motorcyclist casualties by age and M/C engine size in the Royal Borough of Kensington and Chelsea 2005-09



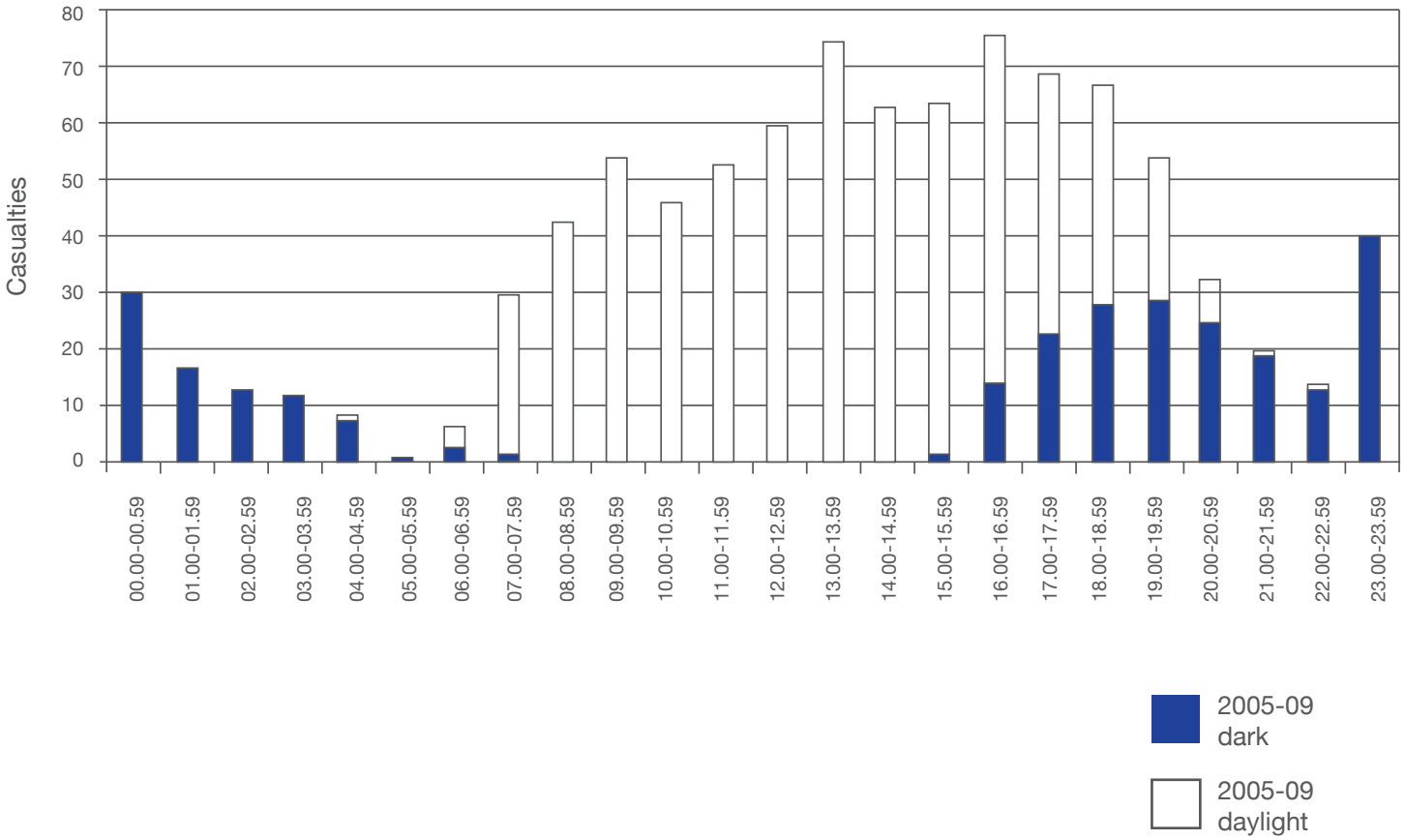
7. PEDESTRIANS

7.1 Across Greater London, as in Kensington and Chelsea, 34 per cent of KSIs are pedestrians. Unlike P2W and cyclist casualties, there is no clear pattern for pedestrian casualties in terms of time of day or day of week, although there are far fewer casualties on Sundays.

7.2 There does not appear to be a seasonal variation in collisions involving pedestrians; on average, February and July were the months with fewest pedestrian casualties in the past five years, with the highest number recorded in November.

7.3 TABLE 8

Pedestrian casualties by time of day and light condition in the Royal Borough of Kensington and Chelsea 2005-09

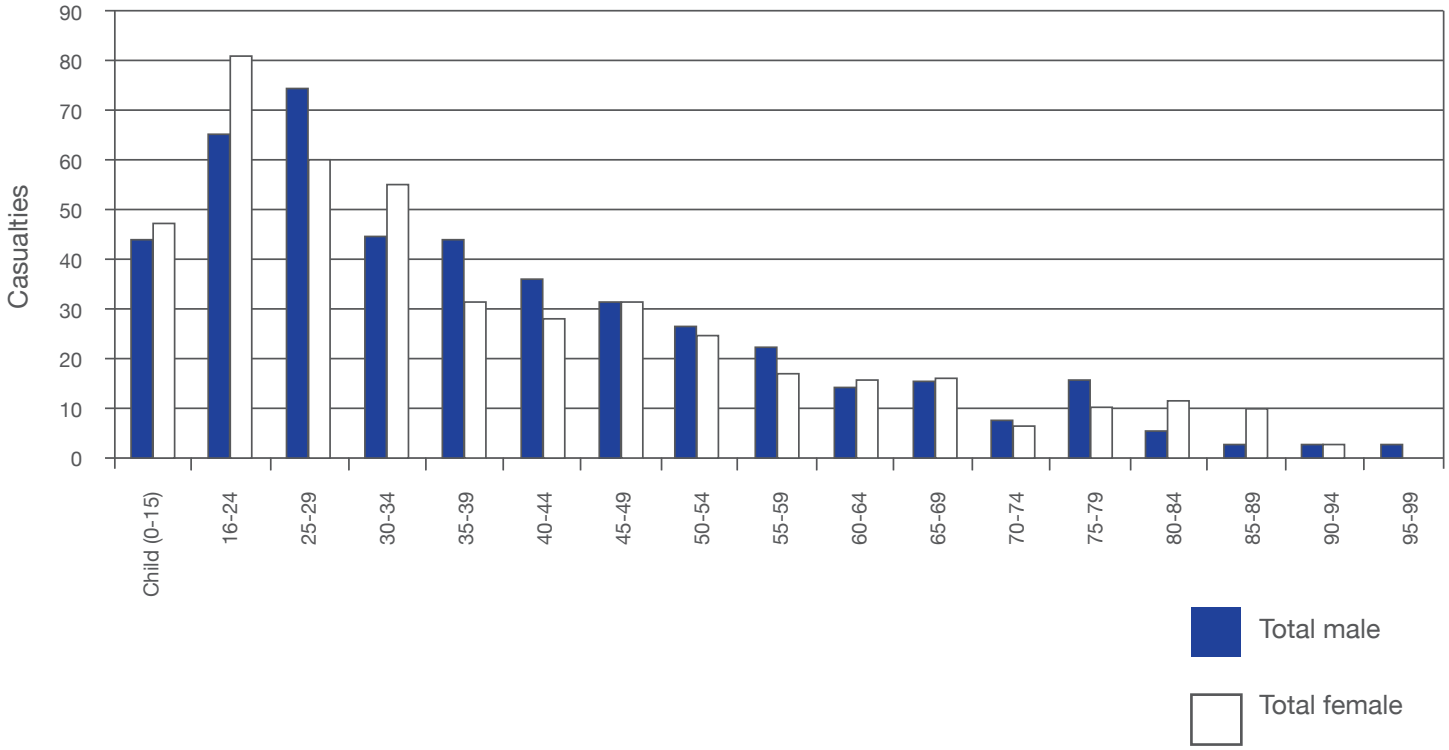


7.4 Men and women are represented equally among pedestrian casualties.

7.5 Pedestrian casualties in the Royal Borough are more likely to be young; in fact, 45 per cent are under the age of 30. Across Greater London, over half of pedestrian casualties were aged 60 or over, whilst in the Royal Borough 85 per cent were under the age of 60.

7.6 TABLE 9

Pedestrian casualties by age in the Royal Borough of Kensington and Chelsea 2005-09



8. CHILD COLLISIONS

8.1 The Royal Borough has the second lowest level of child casualties behind the City of London and the lowest rate (of casualties for the borough population) of child casualties in the UK. In the past three years there were 86 casualties aged 16 or under, of which the majority were slight casualties. This represents 3.5 per cent of all casualties and two per cent of KSIs casualties in the Royal Borough.

8.2 Twenty-two per cent of child casualties were reported to be travelling to or from school. This may not be a true reflection of the situation, as 'travel to school' is not a compulsory field in the Stats 19 forms. More children were involved in a road collision between 3pm and 5pm than any other two hour period, suggesting a link to school travel.

8.3 The majority of child casualties in the Royal Borough are aged between 12 and 15 years. After these year groups, the fourth largest casualty group is children aged four years old.

8.4 Of the child casualties in the Royal Borough, 44 per cent are classified 'White European', compared to the borough's

child population of which 67 per cent is categorised as white. Afro- Caribbean comprises a further 23 per cent of child casualties, but just 11 per cent of the child population. In terms of road casualties, children of Arab descent are the largest of the minority groups.

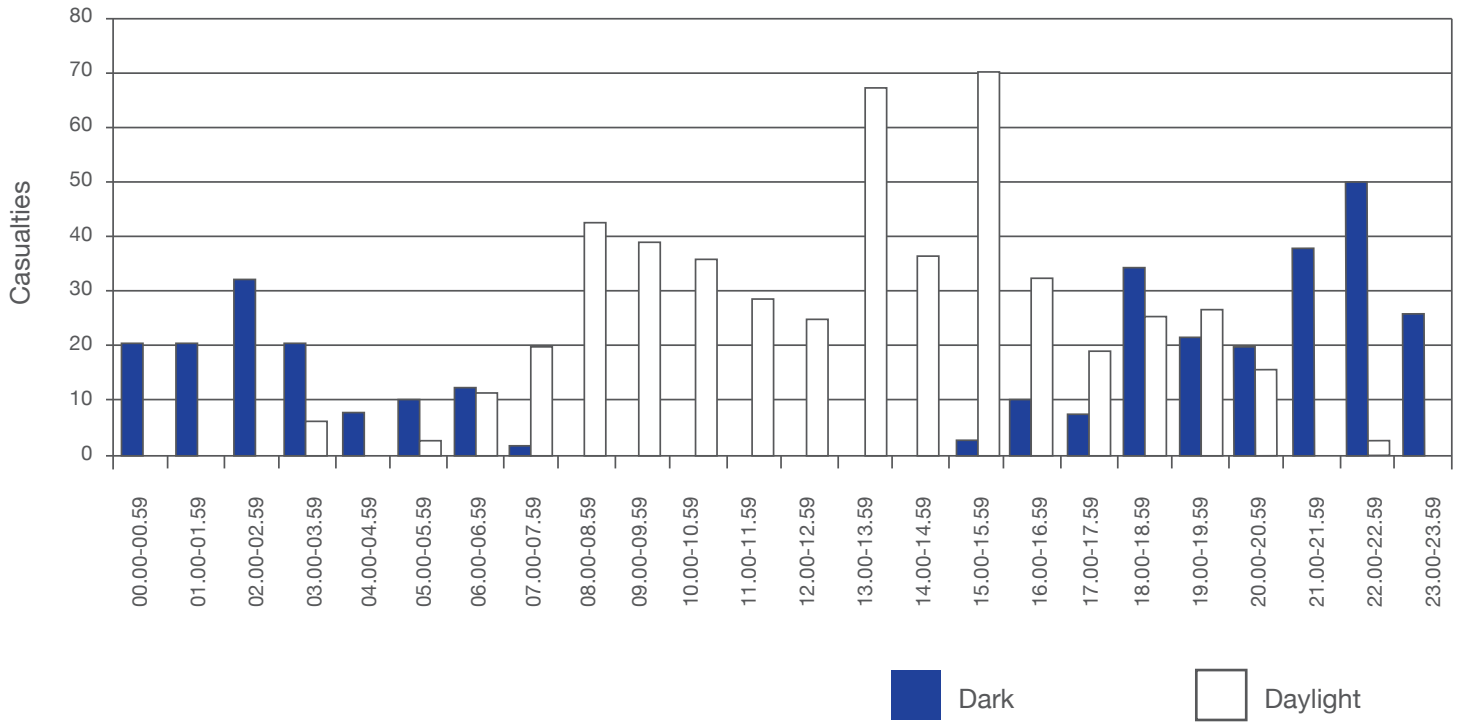
9. CAR OCCUPANT COLLISIONS

9.1 Car occupants form the largest casualty group across London, but the third largest casualty group in the Royal Borough. As 25 per cent of residents travel by car for their main journey, which is the second most common travel mode for main journeys behind walking, car occupant casualties in the Royal Borough are low in the borough casualty statistics.

9.2 Collisions that result in injury to car occupants follow a different pattern to the vulnerable road user groups. As illustrated by the table below, there are two pronounced peaks during the day: between 1pm and 2pm, and between 3pm and 4pm. There is no obvious reason for these peaks in collisions, but the latter peak could be related to the additional congestion caused by school travel.

9.3 TABLE 10

Car occupant casualties in the Royal Borough of Kensington and Chelsea by time and light conditions 2005-09

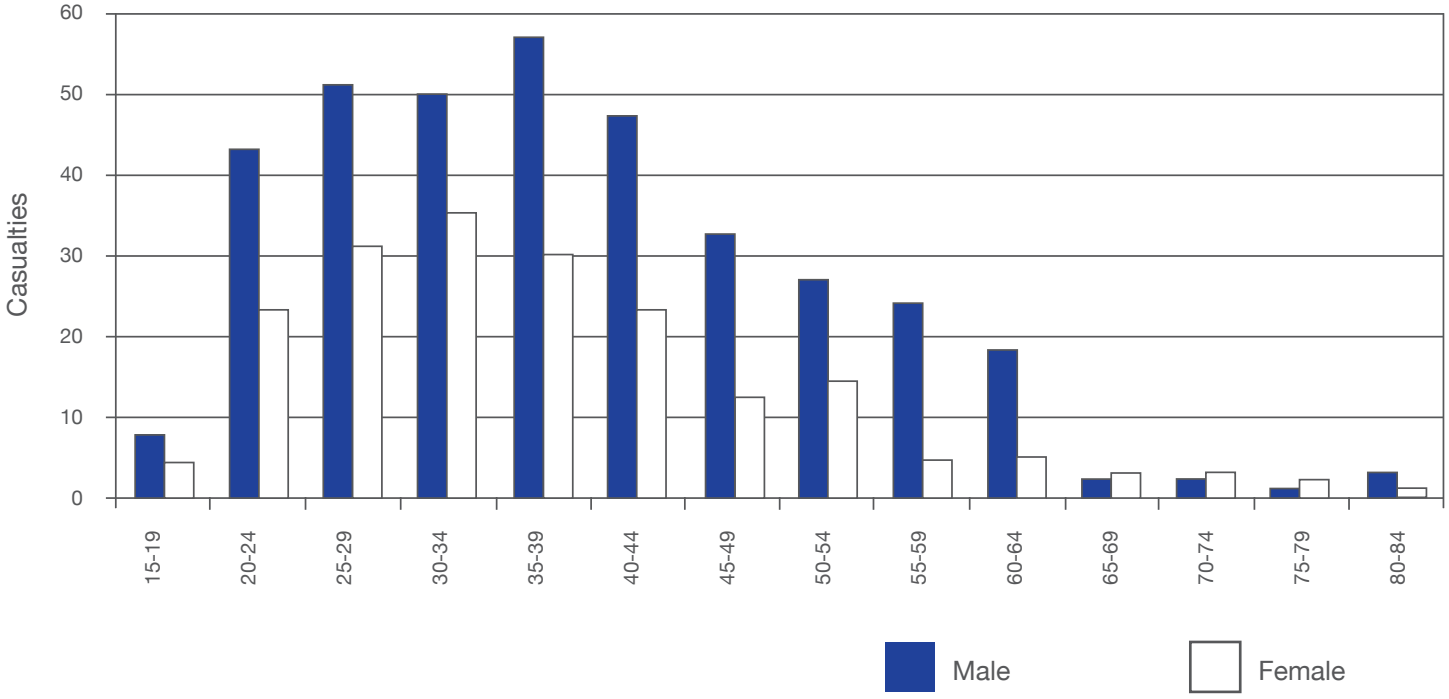


9.4 Child casualties make up four per cent of all car occupant casualties across Greater London, but ten per cent in the Royal Borough.

9.5 Car driver casualties are more likely to be men. Amongst car occupant casualties, there is much less difference by gender, as illustrated by Tables 11 and 12 below.

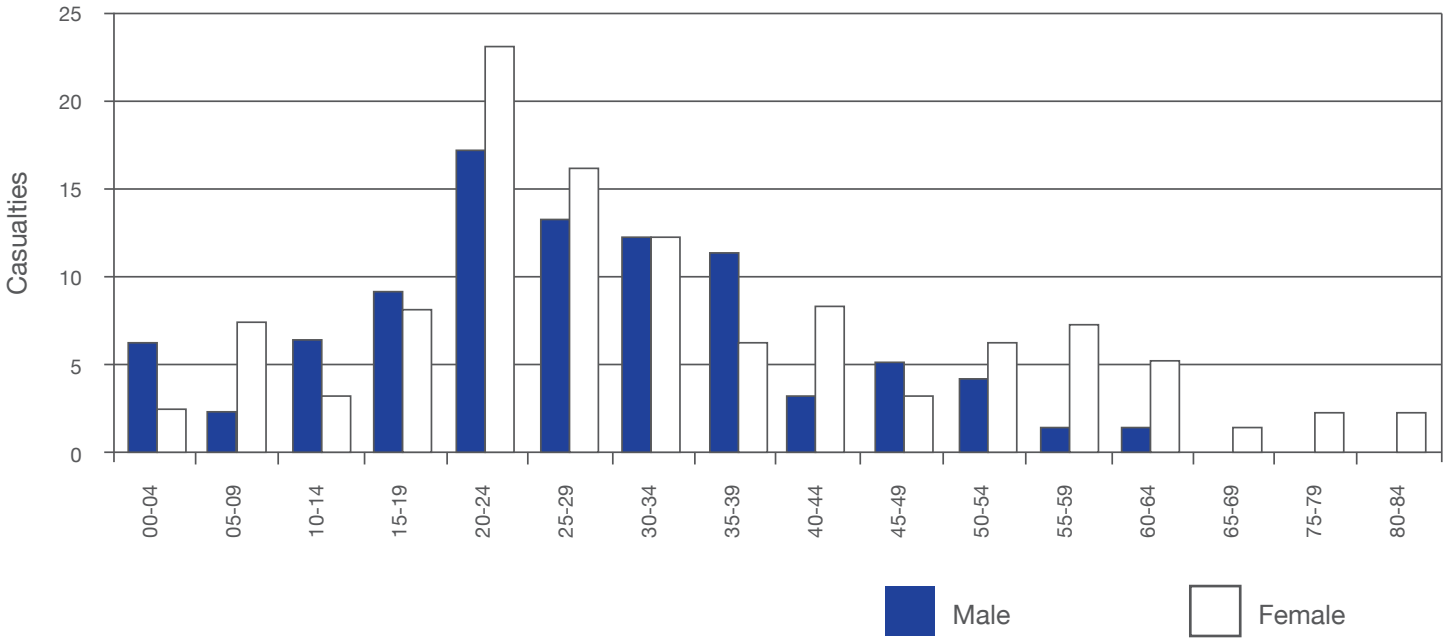
9.6 TABLE 11

Car driver casualties in the Royal Borough of Kensington and Chelsea by age and gender 2005-09



9.7 TABLE 12

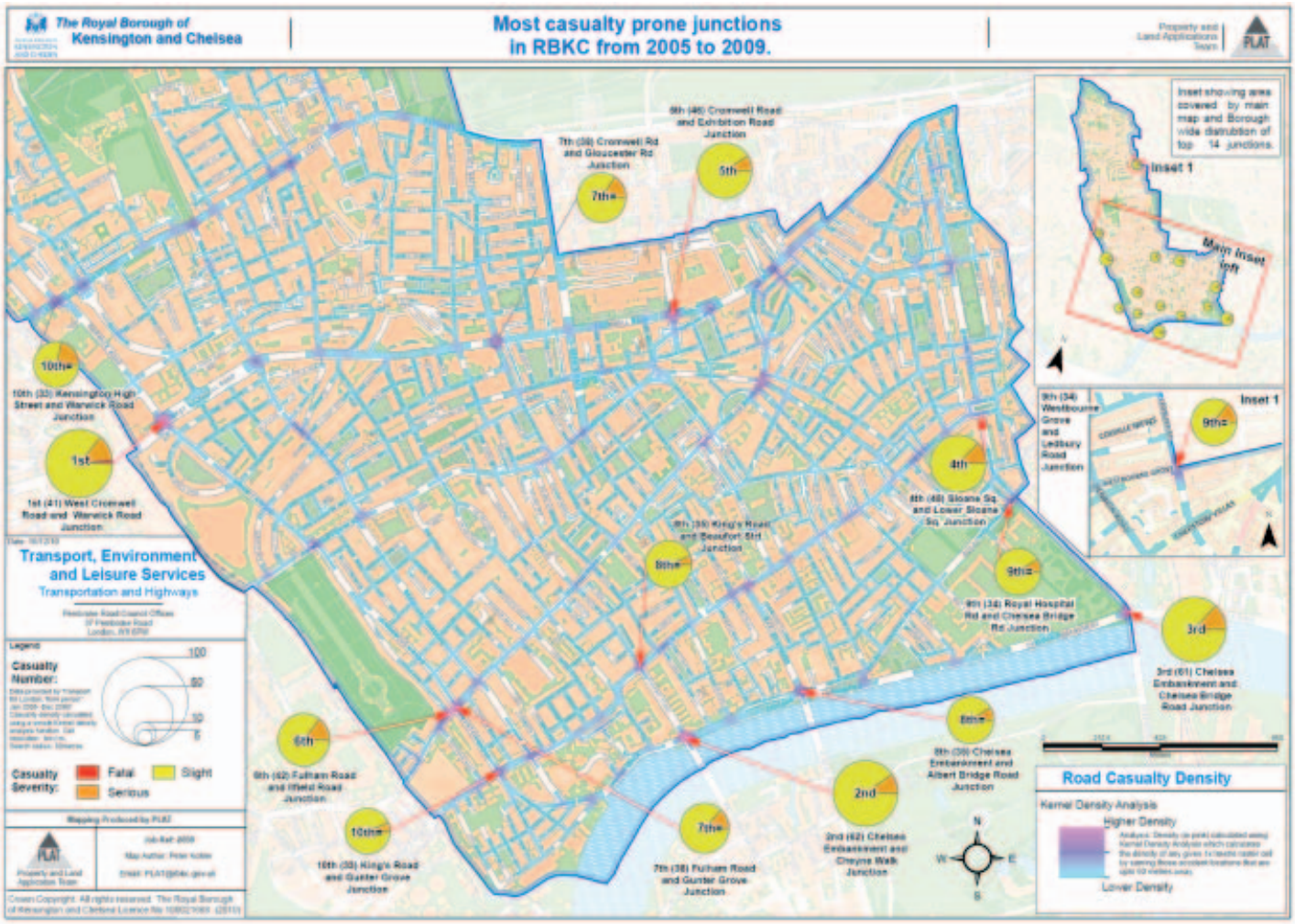
Car passenger casualties in the Royal Borough of Kensington and Chelsea by age and gender 2005-09



10. WHERE ARE COLLISIONS TAKING PLACE?

10.1 Over 50 per cent of collisions take place on the borough's major roads, which account for less than a fifth of all roads in the borough. Figure 2 (below) highlights the areas with the highest casualty levels in the past five years. All of the top 14 sites were in the south of the borough, except for Westbourne Grove junction with Ledbury Road, and focused on the Transport for London Road Network (TLRN) and other A roads. The pie charts refer to the casualty severity of collisions at each site.

10.2 FIGURE 2



10.3 Thirty-five per cent of the borough's collisions occur on the TLRN, which makes up just seven per cent of the borough's roads.

10.4 In the past ten years, casualties on the borough's roads have reduced faster than those on the TLRN. The number of KSIs has decreased by 37 per cent on the borough's roads, compared to 22 per cent on the TLRN.

10.5 Forty-four per cent of P2W KSIs took place on the TLRN.

10.6 We will continue to work with TfL to identify treatable patterns of collisions on the TLRN within Kensington and Chelsea. We will request that TfL prioritise those sites with a treatable pattern of collisions that are high on the priority list for London.

10.7 In terms of the borough's roads, 66 per cent of collisions took place on A roads and roughly ten per cent of collisions occurred on each of the B, C and un-classified road categories. This data indicates that collisions are more likely to occur on the heavily trafficked roads.

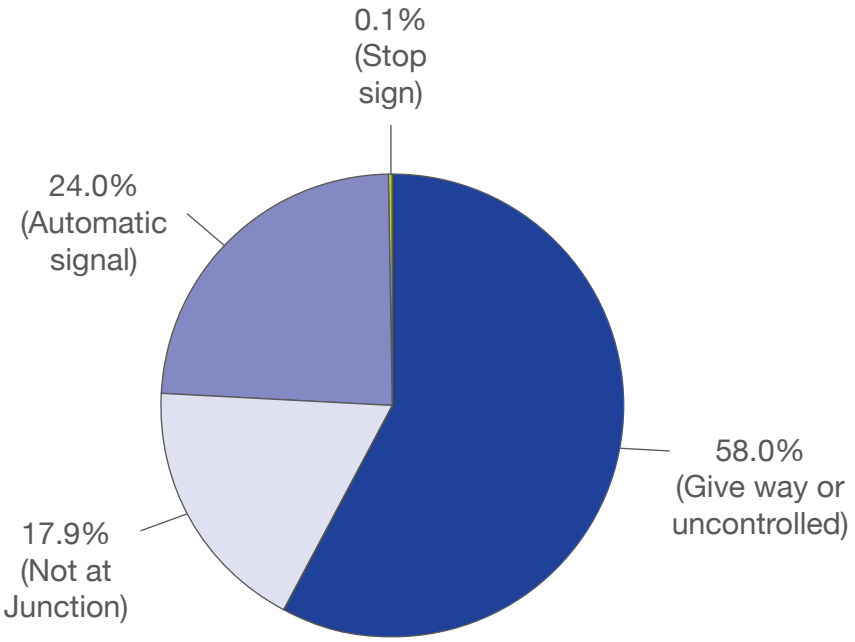
10.8 Of the vulnerable groups, the trend shows that there are a higher number of P2W collisions on the busier roads, followed by cyclists and then pedestrians.

11. WHERE IN THE ROAD ARE THE COLLISIONS TAKING PLACE?

11.1 Cyclist and P2W collisions in the Royal Borough occur in a very similar pattern in terms of their location in the carriageway. As Table 13 (page 19) illustrates, over half occur at a give way or uncontrolled junction. Of these collisions, for both P2W riders and cyclists, 48 per cent of collisions take place at T-junctions and a further 26 per cent at crossroads.

11.2 TABLE 13

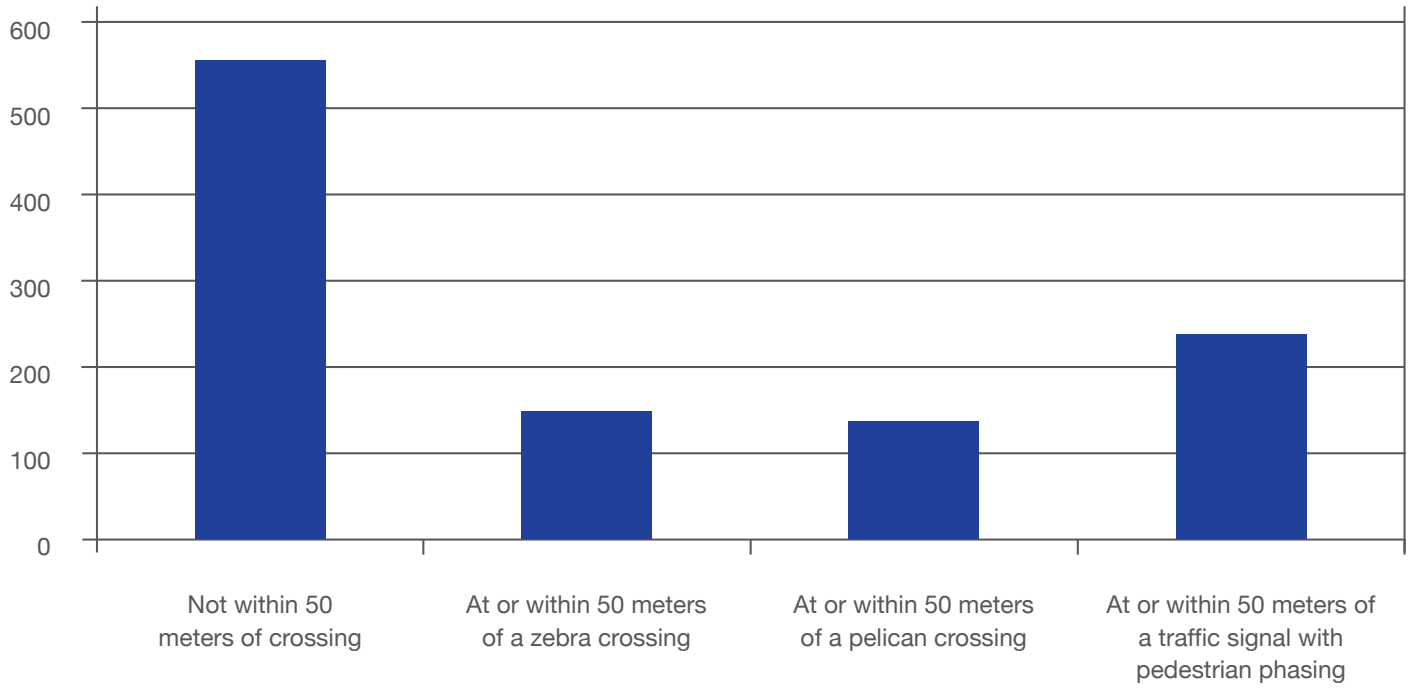
Cyclist and P2W collision by junction control 2005-09



11.3 Just over half of pedestrian collisions occur away from a formal crossing point. As Table 14 (below) illustrates, of the formal crossing points there is a higher likelihood of a collision at a traffic signal with pedestrian phasing. We attribute this to the fact that signalised crossings are generally located on our busier roads and therefore attract a higher level of risk. The borough figures closely match trends for Greater London.

11.4 TABLE 14

Pedestrian casualties 2005-09



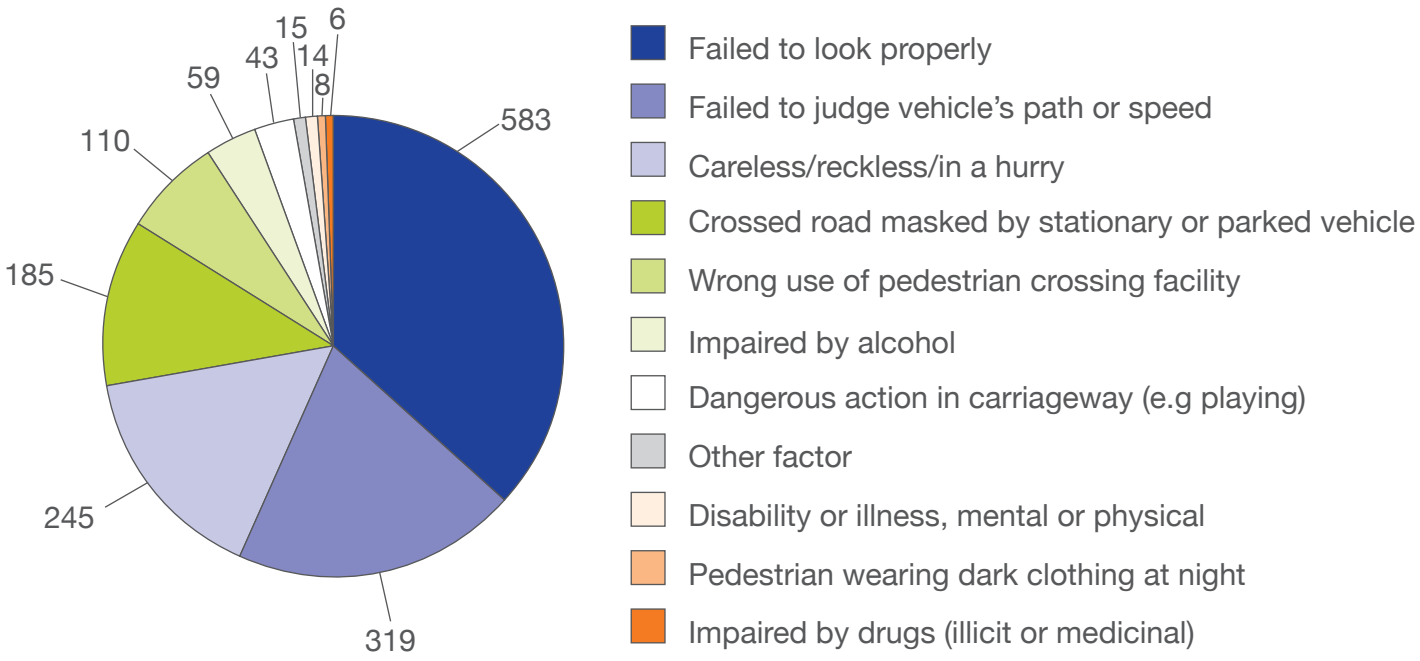
12. WHY ARE THEY BEING INJURED?

12.1 Although attending police officers assign up to seven contributory factors to any one collision, with no one factor given greater emphasis than the others, we are able to gain some understanding as to why collisions are taking place. 'Failure to look properly' is the most commonly recorded contributory factor, recorded in 27 per cent of collisions. We are not able to determine whether people are not looking at all, or whether they are looking but not seeing the other road user; nor do we know who is failing to look – the casualty or the driver of the other vehicle. For pedestrians this contributory factor is particularly prominent, as illustrated by Table 15 (below) which shows the number of contributory factors recorded against pedestrian casualty collisions.

12.2 Failure to judge speed is the second most common factor, acknowledged in 15 per cent of collisions. The two main contributory factors recorded in the Royal Borough are major areas of concern, as they indicate lack of understanding between road users. We plan to target these particular behaviours through education campaigns.

12.3 TABLE 15

Pedestrian contributory factors in pedestrian collisions 2005-09

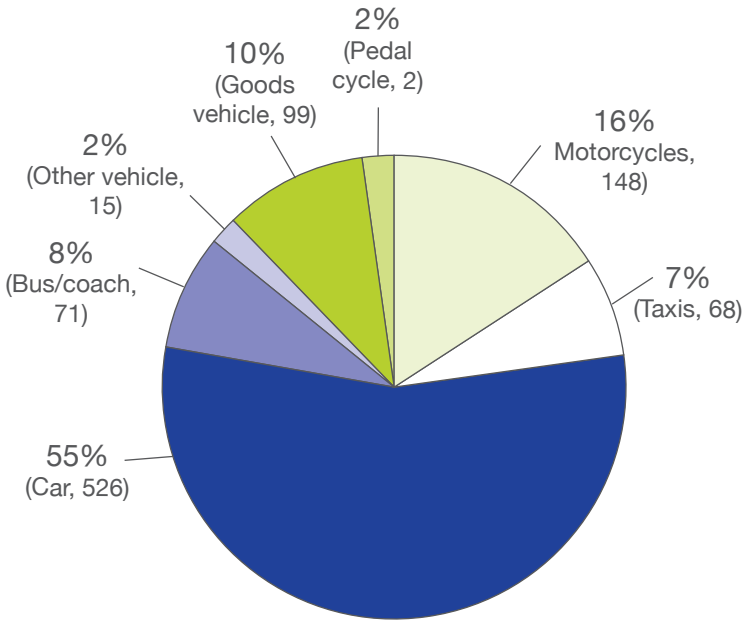


12.4 Table 15 includes contributory factors in pedestrian collisions. The table comprises 950 collisions, with an average of 1.7 contributory factors per collision.

12.5 Cars or taxis are involved in 62 per cent of collisions with pedestrians.

12.6 TABLE 16

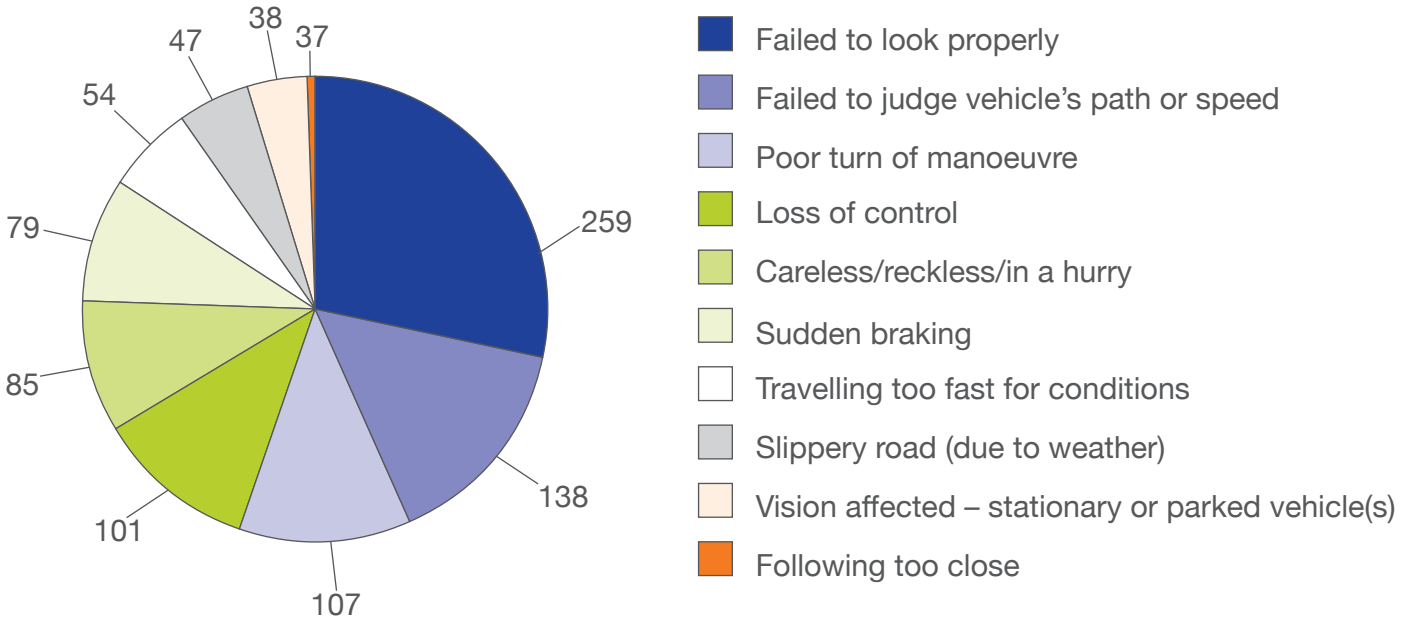
Pedestrian casualties in the Royal Borough of Kensington and Chelsea by vehicle they were in conflict with 2005-09



12.7 A third of P2W collisions also involved a car; however, 52 per cent of collisions involved another motorcycle. Again, failure to look properly features as the most common contributory factor, but speed and lack of experience are key areas of concern.

12.8 TABLE 17

Most common contributory factors in motorcycle collisions 2005-09



12.9 Cars are more prevalent in collisions with cyclists, where they are involved in 64 per cent of collisions.

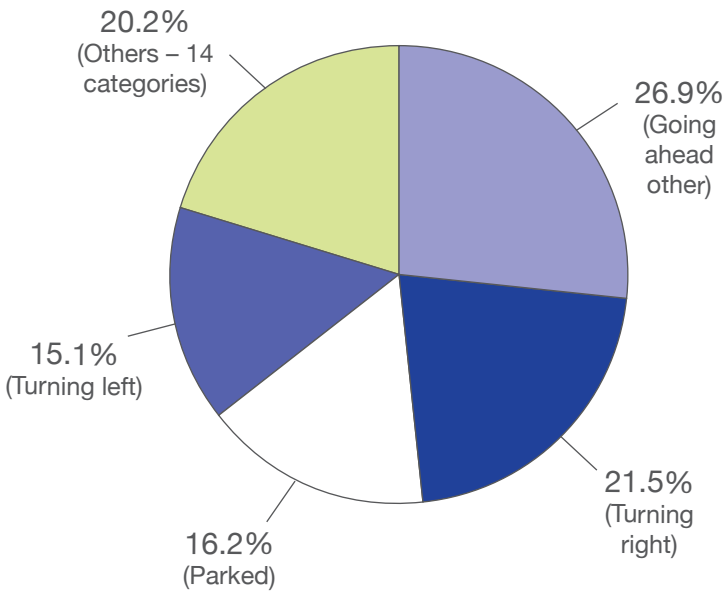
12.10 In the past five years, heavy goods vehicles (HGVs) have been involved in 53 collisions resulting in 59 casualties in the borough; of these, four were fatalities and ten resulted in serious casualties. That is 15 per cent of all fatalities, although HGVs represent just 0.02 per cent of the borough's traffic flow.

13. WHAT WERE THE VEHICLES DOING?

13.1 Nearly three quarters of cyclists and two thirds of P2W riders were travelling ahead at the point of collision.

13.2 TABLE 18

Other vehicle manoeuvre in collisions with cyclists 2005-09

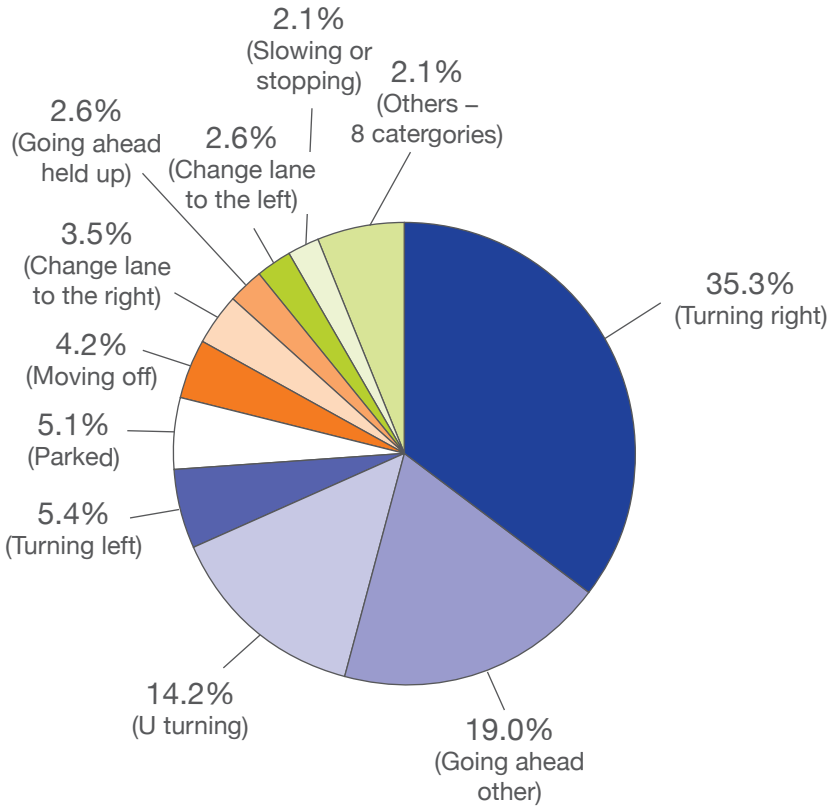


13.3 Table 18 (page 22) indicates the five most common manoeuvres performed by the other vehicle involved in all collisions involving cyclists. While 37 per cent of the other vehicles were turning, the most common manoeuvre was travelling ahead. This indicates that the cyclist and other vehicle were not giving each other enough room on the carriageway. Parked vehicles also feature prominently, indicating that cyclists could be riding too close to parked vehicles and that the vehicle occupant did not look before opening their door. We will use our data to help target campaigns about these specific actions.

13.4 Table 19 (below) shows that in collisions where the P2W rider was the casualty, the 'other vehicles' were most commonly turning right. As with cyclist collisions, 'going ahead other' is a common manoeuvre listed for the other vehicle. U-turning vehicles are the third most common manoeuvre.

13.5 TABLE 19

Other vehicle manoeuvre in collision with P2W 2005-09



13.6 Analysis of this data will feed in to our road safety messages to drivers in the borough. The data demonstrates that many collisions occur because the drivers did not see vulnerable road users and did not give them enough space on the road. These will be key themes in our road safety campaign messages.

13.7 We need to address collisions that are due to vehicles travelling too close to other road users. Sharing the road and giving all road users enough space to travel can reduce the incidence of these collisions. This is particularly relevant for collisions between cyclists and goods vehicles.

14. WHAT DO WE HOPE TO ACHIEVE IN THE NEXT TEN YEARS?

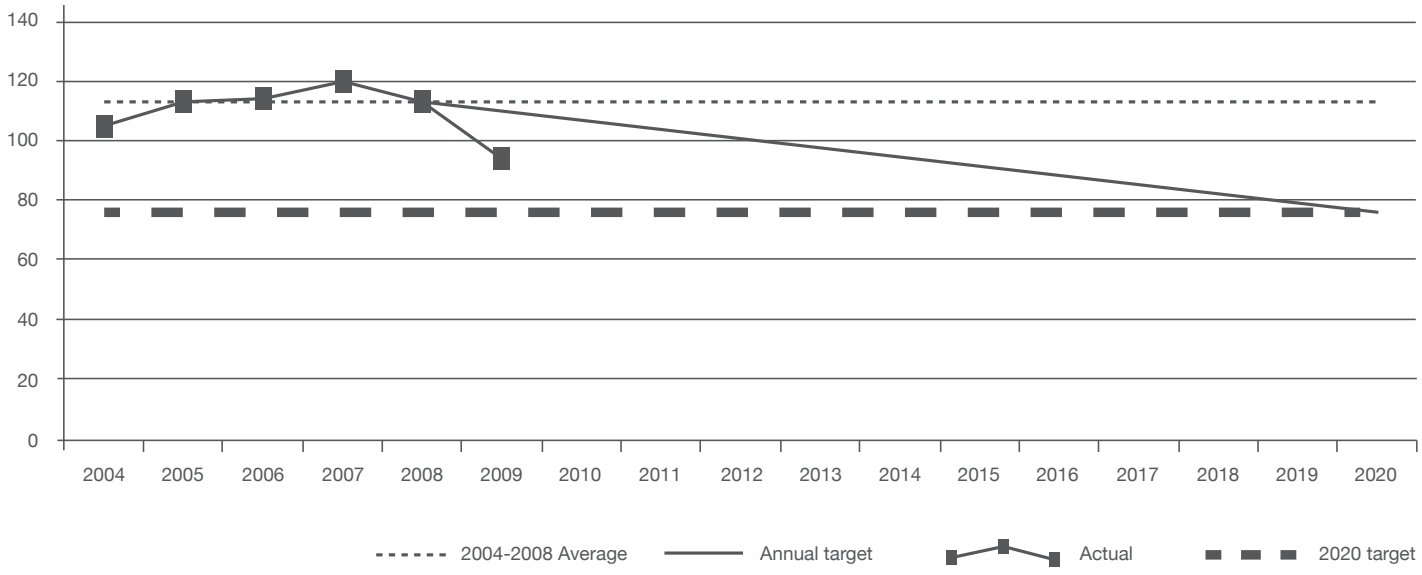
14.1 The goal of this strategy is to prevent road deaths and reduce the chance of injuries. We propose to do this by making the physical environment safer, particularly by improving the behaviour of people travelling on our roads.

14.2 New targets for reducing the number of people killed or seriously injured beyond 2010 will be set in the context of the revised Mayor's Transport Strategy and emerging national Government targets on road safety.

14.3 As part of our requirement from TfL to complete a Local Implementation Plan, we have set our own target of a 33 per cent reduction for all KSIs by 2020, compared with the average of 2005-09, as set out in the Table 20 (below).

14.4 TABLE 20

Proposed 33 per cent target reduction by 2020 for KSI casualties in Kensington and Chelsea



14.5 In order to achieve this target, there are eight different areas for action that this strategy will focus on:

- Design
- Speed Reduction
- Encouragement
- Education
- Enforcement.

14.6 The aim is to take a proactive approach from highway design to traffic behaviour. The responsibility for road safety lies not only with those who design and manage the road network, but also the individual users of the network.

14.7 We will investigate opportunities to deliver the actions set out in this strategy through joint services and funding bids with the London Borough of Hammersmith and Fulham.

15. DESIGN

15.1 We are committed to encouraging road user autonomy and responsibility by removing barriers and restrictions in the allocation of road space; we have achieved this without compromising road safety. Our design principles, set out in the Council's Streetscape Strategy, include improving the environmental quality and accessibility of the public realm; increasing permeability and legibility; and creating 'liveable' and 'sociable' urban environments with a sense of place, civic pride and community. Much of this work involves the omission or removal of unnecessary and aggressive features such as guard railings and 'sheep pens', which are very often unnecessary.

15.2 We take a holistic approach to traffic schemes in which we consider the needs of all road users equally.

15.3 We believe that vulnerable road users in particular should have equitable access to streets, making their travel safe, convenient and pleasant. We aim to improve permeability for pedestrians and cyclists by enabling use of side streets and less busy streets. We have trialled two-way cycling on five one-way streets in the borough and, following approval from the DfT, will be expanding the scheme to other one-way streets. Greater use of these side streets offers vulnerable road users an alternative to the heavily trafficked

routes where there is a higher likelihood of collision and which for vulnerable road users are often less pleasant to use.

ACTION: INVESTIGATE EXTENSION OF TWO-WAY CYCLING TO SUITABLE ONE-WAY STREETS.

15.4 The Dutch Road Safety Institute (SWOL) claim one of the key reasons for their success in reducing vulnerable road user casualties is the designation of different roads for different purposes. They decided that rules for speed and restriction of traffic movements should be appropriate to the road environment and credible to road users. Quiet residential streets were designed for low speeds and smaller vehicles; large vehicles and motorised vehicles travelling at speed were catered for on ring routes and key distributor roads. We will progress with schemes to increase permeability to side streets in order to improve access routes for cyclists and pedestrians.

15.5 We understand that off-road facilities can help to encourage new cyclists and those less confident of cycling in traffic. Therefore, we have improved the paths for cyclists and pedestrians along the Grand Union Canal, Thames Path, Holland Park, Kensington Gardens and Brompton Cemetery in the past two years. We will continue to improve off-road routes in the borough, through our parks and along our waterways in particular.

15.6 Obstructions in the carriageway, such as potholes and uneven manhole covers and road works, can cause collisions. These obstructions can be hazardous for people on bicycles or motorcycles; one of our aims is to treat these issues as quickly as possible. We have a maintenance programme for the public carriageway and prioritise roads by the condition of the surfacing, and our principal road network is the best maintained in London. We work with the Mayor of London's Streetworks Permit Programme and coordinate works to limit the disruption to road users.

15.7 We carry out in depth analysis of collisions to identify treatable patterns and consider whether specific sites would benefit from changes to the road layout. Finding collision sites to treat which will result in high returns in collision reduction is proving difficult. In the past year we have completed one road safety scheme: on Westbourne Grove at the junction with Ledbury Road. We will continue to monitor collisions and try to identify treatable patterns, but our focus has shifted to treatments of larger areas within the borough to improve conditions for all road users. To this end we have completed a comprehensive review of the King's Road and have made improvements to junctions and reductions of street clutter. We have made progress with ward by ward streetscape reviews which aim to reduce unnecessary street clutter.

ACTION: MONITOR COLLISIONS AND INVESTIGATE SITES FOR SAFETY SCHEMES.

16. SPEED REDUCTION

16.1 The most commonly coded contributory factors for vehicles involved in collisions are related to speeding. This does not necessarily mean that the vehicle was exceeding the speed limit at the time of the collision; rather that the police deemed that the vehicle was driving at excessive speed for the road conditions at that time. 'Driving too fast for conditions' was most commonly recorded against P2Ws, cars and goods vehicles. We aim to address the issue of speeding through the utilisation of new technologies, design and behaviour campaigns.

NEW TECHNOLOGIES

16.2 TfL has completed a map of speed limits throughout London and this has enabled us to pilot Intelligent Speed Adaptation (ISA) in our fleet. This technology can help advise drivers of the speed limit and can help to prevent them from exceeding the speed limit. The vehicle's speed is displayed on the dashboard and a driver can then choose to have the vehicle speed limited to the legal speed limit. This technology is now available from TfL's website for all drivers that have a TomTom navigation device.

16.3 TfL is currently trialling average speed cameras in the London boroughs of Newham and Barking and Dagenham. Average speed cameras received approval in 2009 and work by taking the average speed of a vehicle travelling through a number of fixed points. These have the additional benefit of smoothing traffic flow. We will await the results of this trial and consider the value and feasibility of average speed cameras in the Royal Borough.

16.4 TfL introduced new traffic light timings on Camden High Street to enforce the 20mph speed limit. Three traffic lights are phased so that vehicles travelling at the speed limit should pass through all of the lights on green. Those travelling over the speed limit will be caught in a red light phase. This technology also aids in smoothing traffic flow and could be useful on roads with higher collision rates such as the Chelsea Embankment and Cromwell Road on the TLRN and Kensington High Street.

16.5 In 2009 we purchased three sets of speed-activated signs to trial their effect in reducing speeds. We selected three residential roads following requests from residents for traffic calming measures. Our trials showed the signs had a short-term effect on speeds. The signs flash 'SLOW DOWN' to any vehicle travelling over 30 mph.

16.6 Transport Research Laboratory (TRL) recommend that they should be used on roads that have at least one collision in which exceeding the speed limit was listed as a contributory factor; where there is a minimum of 100 metres unrestricted view on the approach to the sign; and where the 85th percentile speed exceeds the speed limit.

16.7 We will identify a number of sites that meet the DfT guidelines for use of speed-activated signs as set out in 16.2.5 (above) and rotate between them on a monthly basis.

ACTION: IDENTIFY ROADS WHERE SPEED-ACTIVATED SIGNS MIGHT REDUCE COLLISIONS.

DESIGN

16.8 Creating uncertainty for road users can also reduce speeds. According to SWOL, the removal of signs and road markings has led to an improvement of casualty figures in parts of Holland, Denmark and Sweden. This is a key philosophy behind the use of shared space schemes as a means of improving the public realm and lowering traffic speeds. When lanes and junctions are not marked out, drivers tend to their lower speeds and drive more cautiously. Exhibition Road will be the Council's flagship shared space project when it launches in 2012.

16.9 The DfT suggests that high friction surfaces at junctions could reduce collisions. The introduction of high-friction surfaces would enable a road user to avoid an emerging vehicle in their path, leading in turn to a reduction in road casualties. The findings of the 'On the Spot' report by the DfT suggest that for the sample of two-wheeler accidents investigated, 12 to 24 per cent could have been prevented through this measure. Our goal is that all junctions, and approaches to formal crossing points, will have high friction surfacing by including the feature in our highway maintenance programme.

ACTION: ENSURE ALL FORMAL CROSSING POINTS HAVE THE RECOMMENDED LEVEL OF ANTI-SKID SURFACING.

17. ENCOURAGEMENT

17.1 Our evidence review drew attention to a serious problem of collisions between vehicles and vulnerable road users in what are termed ‘close proximity’ collisions. This means that a large number of collisions with vulnerable road users are caused by users not allowing adequate room for each other. Research by TRL supports this assertion and shows that a high proportion of collisions can be attributed to failures to share the road. They have set out the key reasons for these failures to share the road:

- Acts of aggression
- Failure of attitude
- Failure of competence
- Failure of expectation
- Pressure from other road users.

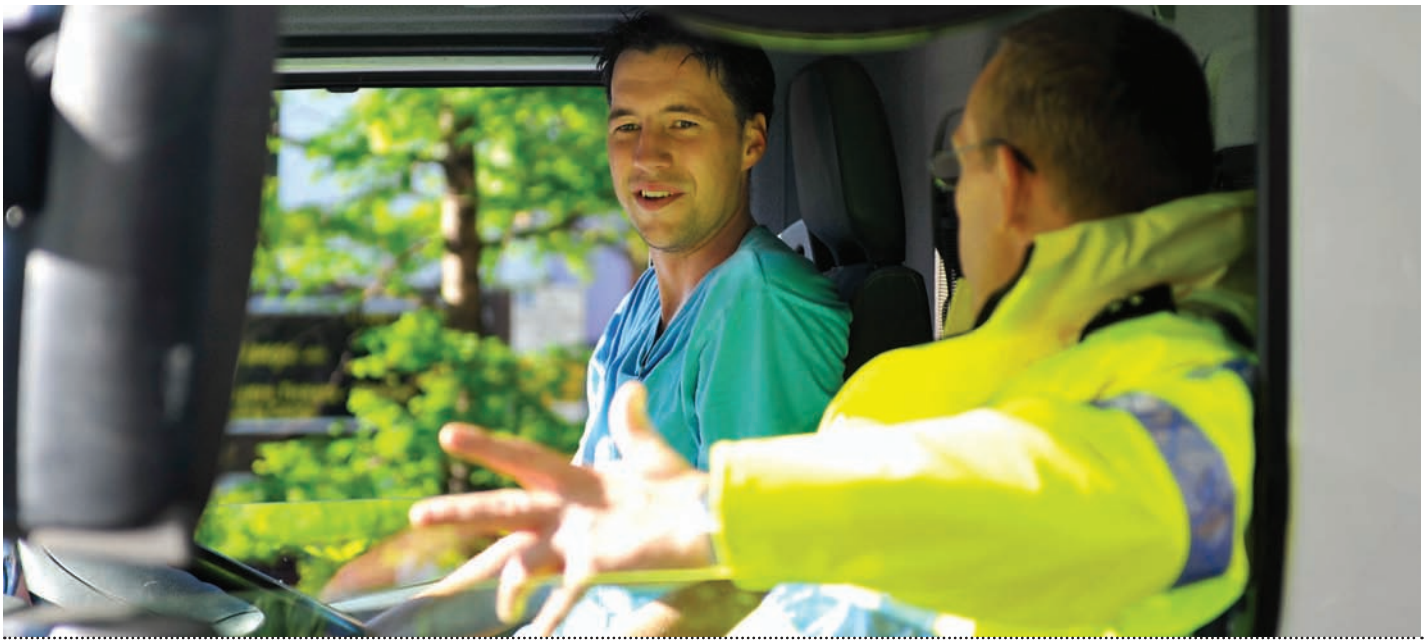
17.2 Social marketing techniques can improve behaviour amongst all road users. Through our work in education and encouragement, we will be promoting respect between road users and specifically appealing to vehicle drivers to look out for those less capable or more vulnerable. Vulnerable road users are the largest casualty group in the Royal Borough and they are most commonly hit by cars. In the past our focus has been on educating the vulnerable road users; henceforth, encouraging drivers of motorised vehicles to share the road and to travel with consideration for those more vulnerable will be a more important part of our work in the future.

17.3 Our investigations have highlighted casualty home postcodes, as well as the home postcode of the other driver or rider involved in the collision and we therefore have a good understanding of where we need to target our campaigns. We also have comprehensive demographic and lifestyle data for these areas. We will use this to ensure we are targeting the correct people by the most effective methods, and with messages to which they are most likely to respond.

ACTION: DEVELOP MARKETING CAMPAIGNS TO HELP REDUCE COLLISIONS INVOLVING VULNERABLE ROAD USERS IN THE ROYAL BOROUGH.

17.4 One of the best ways to make cycling safer may be to encourage more cycling. Although we don't know conclusively that more cycling necessarily means safer cycling, we know that the collision rate for cyclists in the UK is almost eight times higher than Germany and almost 30 times higher than Denmark and the Netherlands. In these three countries cycling rates have increased dramatically in the past 30 years, but cycle fatalities have declined by over 70 per cent. By encouraging more cycling and ensuring these cyclists are well trained and that other road users are more aware of cyclists, we aim to reduce our cyclist casualty rate. We will therefore continue to develop our cycle training programme in schools and aim to increase uptake of our free adult cycle training.

ACTION: ENCOURAGE SAFE CYCLING IN THE ROYAL BOROUGH THROUGH OUR CHILD AND ADULT CYCLE TRAINING PROGRAMME.



18. EDUCATION

18.1 Road collisions are generally the result of mistakes made by road users rather than faults in the highway design; in fact, research shows that 93 per cent of collisions can be attributed to human error (TRL, 2001). Our work must therefore aim at reducing the incidences of the behaviours that lead to collisions.

18.2 Much of the work undertaken by the Council in the past ten years has focused on school children. We run a vast range of educational programmes in school and this focus has reaped dividends for the borough: we now have the lowest rate of child casualties in the UK.

18.3 We have worked with schools to prepare travel plans and identify their road safety concerns. We offer schools pedestrian, scooter and cycle training, as well as theatre, targeted lessons and free resources. Some schools have also recruited pupils to run education campaigns and the Junior Road Safety Officers (JRSO) have been successful in running parental and pupil behavioural programmes.

18.4 At schools in Golborne ward, at Oxford Gardens Primary School and at St. Cuthberts with St. Mathias Primary School, the JRSO have managed their own parking campaigns with our support and that of the police. The pupils have designed leaflets which they have handed out to any parent parking illegally. These campaigns have dramatically reduced incidences of double parking, or parking on school keep clear markings outside these schools.

ACTION: CONTINUE TO ENCOURAGE AND ENFORCE LEGITIMATE PARKING OUTSIDE SCHOOLS.

18.5 We propose to continue some of our work with schools, but refocus efforts towards education of those most likely to be involved in a collision: adult motorcyclists, cyclists, and pedestrians as well as the drivers of the other vehicles that are most likely to be involved in these collisions.

18.6 We currently offer free cycle training and free motorcycle training sessions to anyone working, living or studying in the borough. We have benefited from the TfL 'Catch up with the Bicycle' campaign and marketing for the Cycle Hire scheme. These campaigns, along with our own localised promotions of our free cycle training, have more than doubled our take-up of adult cycle training in the past three years.

18.7 Through our cycle training programme we are able to convey important safety messages, such as cycling centrally in the carriageway to avoid the 17 per cent of collisions that have been attributed to car doors opening into the path of the cyclist. We will target workplaces in the borough as well as cyclists along key commuting routes, as our data shows that the majority of cycle casualties are likely to be commuters.

18.8 Our free motorcycle and scooter training sessions are run by the Metropolitan Police. The take-up of these programmes has been slow and we therefore propose to increase marketing of the sessions and ensure that we target promotions to the groups most likely to benefit from them. These advanced riding skills lessons aim to improve defensive riding skills. We will promote these to residents and workplaces in the borough.

ACTION: PROMOTE FREE MOTORCYCLE TRAINING TO RESIDENTS AND EMPLOYEES IN THE BOROUGH.

18.9 For the past year we have been running targeted motorcycle training sessions with young people in partnership with Connexions and various youth clubs in the borough. The project, Transit, has been very successful with high levels of attendees passing and gaining their Compulsory Basic Training (CBT). For attendees, a CBT can help with future employment opportunities, therefore resulting in both social and safety benefits.

18.10 Research in Northern Europe has identified that a key advance in Denmark and the Netherlands is the extensive training of motorists to be aware of vulnerable road users on the carriageway and to avoid endangering them. Our evidence review highlighted the need to tackle collisions involving HGV's and vulnerable road users. The Royal Borough will work with driving schools and companies in the borough that run fleets to educate their drivers. We

have piloted a training project with our waste contractor, SITA, in which waste lorry drivers were given cycle training.

ACTION: WORK WITH DELIVERY COMPANIES AND ORGANISATIONS WITH LARGE FLEETS TO TRAIN DRIVERS IN CYCLE SAFETY.

18.11 To raise awareness of the potential danger HGVs pose to cyclists, we are running education programmes on key commuting routes through the borough. We enlist a SITA lorry and, along with the Metropolitan Police, stop cyclists and ask them to sit in the lorry to see the limited view lorry drivers have. By understanding the movements lorry drivers are likely to make and the position they will take in the carriageway, we aim to increase cyclists' understanding of how best to avoid the risk of a collision with an HGV.

19. ENFORCEMENT

19.1 In the Royal Borough the Metropolitan Police are responsible for the detection and prosecution of offences committed by moving vehicles. Research by TRL shows that driver or rider error is a major factor in collisions. Data from collisions in the Royal Borough shows high levels of drivers and riders failing to look properly and failures in behaviour such as speeding, aggressive driving and poor manoeuvres. We will therefore work closely with the police to identify locations with a pattern of collisions related to road user behaviour. In the past year we have focused on taxi drivers on the Earl's Court Road; P2W riders and HGVs on Chelsea Embankment; and cyclists on Kensington High Street. We have carried out some work enforcing Advanced Stop Lines and have supported pupils in carrying out campaigns outside schools.

19.2 Inconsiderate parking presents hazards to other road users and we are working to reduce it. Parking enforcement is the Council's responsibility and we use our collision data to identify areas for enforcement.

19.3 We have trialled parking enforcement campaigns outside schools to reduce the level of congestion and have reviewed stopping, and loading restrictions along Notting Hill Gate to simplify enforcement of the restrictions during peak commuting hours.

19.4 Loading and deliveries can have a major impact on congestion and on the safety of vulnerable road users. For those reasons, many Danish transport authorities banned deliveries to their key city centres during the working day. We will work with businesses to discourage deliveries during peak commuter hours. TfL recommends working with businesses on key commuting routes to complete servicing delivery plans. These recommend places for vehicles to load and unload, as well as suggested times to make deliveries.

19.5 Where pavement space allows, it is also possible to inset loading bays so that vehicles do not present an obstacle in the carriageway. These have been installed in Tooley Street in Southwark, and Marylebone High Street in Westminster. Although pavement space is at a premium in most parts of the borough, we will consider opportunities to trial similar bays.

19.6 We have signed up to TfL's Freight Operators Recognition Scheme (FORS) and recommend that our contractors do the same. The scheme recognises positive steps organisations are taking to improve the safety of their vehicles and their drivers, as well as activities to reduce the environmental impact of their operations.

20. CONCLUSION

20.1 Improving road safety is one of the Royal Borough's highest transport priorities. This Road Safety Strategy has presented the proposals that will help to improve road safety and reduce road traffic collisions and casualties in the borough over the next ten years. The plan contains a range of approaches from engineering improvements, to education and training. We will report progress towards implementation of the measures outlined in this plan and any modifications to the plan itself annually.

21. LIST OF KEY ACTIONS

Action	Description	Timeframe
All collisions		
Action 1	**Monitoring –** We will monitor collision data, look for patterns and investigate potential sites for safety schemes.	Ongoing
Action 2	**Marketing campaigns –** We will use data about borough residents, as well as collision data, to develop targeted marketing campaigns for drivers and vulnerable road users. These will focus on encouraging all road users to treat each other with respect and courtesy.	One campaign per year
Action 3	**Partnership –** We will work with neighbouring boroughs to ensure campaigns target those residents in other boroughs that regularly travel through in Kensington and Chelsea.	2012
Collisions involving cyclists		
Action 4	**Cycle training –** We will encourage safe cycling through our adult and child training programmes.	Ongoing
Action 5	**Fleet drivers –** We will work with delivery companies and organisations with fleets to train their drivers in cycle safety.	Ongoing
Action 6	**Cycling in one-way streets –** We will help cyclists to find routes on quiet roads by allowing them to ride in both directions in appropriate one-way streets.	2011

Collisions involving motorcyclists		
Action 7	**Motorcycle training –** We will promote free motorcycle training to residents and employees.	Ongoing
Speed-related collisions		
Action 8	**Speed-activated signs –** We will identify roads where speed-activated signs might reduce collisions.	Ongoing
Action 9	**Anti-skid surfacing –** We will ensure that all approaches to formal crossing points have recommended level of anti-skid surfacing	2011
Child collisions		
Action 10	**Parking outside schools –** We will encourage and enforce legal and safe parking outside schools.	Ongoing