Transport for London
Surface Transport

Factsheet

London Road Safety Unit
LAAU topic 2009-2

October 2009

Powered two wheeler user casualties in Greater London

This factsheet looks into the scale and nature of road traffic collisions resulting in injury to powered two wheeler (P2W) users (riders and passengers) in the Greater London area. It gives an overview of such collisions for the period 1986 to 2008 and then looks in detail at the profile of the casualties and factors relating to the collisions that occurred in 2008 (the latest year for which finalised data are available at the time of writing).

It provides background information to support the Government and Mayor for London's targets to reduce road casualties by the year 2010. The target in London for P2W casualties is a 40% reduction in those killed or seriously injured (KSI) by 2010 from a baseline of the average number of casualties for 1994-98.

The data provided are for personal injury road traffic collisions that occurred on the public highway and were reported to the police in accordance with the *STATS 19* national reporting system.

Prior to 1999 *STATS 19* categorised P2W vehicles as mopeds, motor scooters and motor cycles. From January 1999 the P2W categories were changed to mopeds, motor cycles up to and including 125cc and motorcycles over 125cc. A further change took place from January 2005, whereby the P2W categories became motorcycle 50cc and under, motorcycle over 50cc and up to 125cc, motorcycle over 125cc and up to 500cc and motorcycle over 500cc.

Key facts

- 4,111 collisions in Greater London in 2008 resulted in injury to 4,222 P2W users; these represented 18% of all collisions and 15% of all casualties.
- P2W user KSI casualties accounted for 21% of all KSI casualties in 2008.
- In terms of the casualty reduction targets for London, P2W KSI casualties fell by 21% between the 1994-98 average and 2008; all P2W casualties fell by 30%.
- In 2008 90% of P2W casualties were male.
- Just over one third (35%) of P2W user casualties of known age in 2008 were aged between 25 and 34 years.
- P2W casualties averaged 12 a day in Greater London during 2008

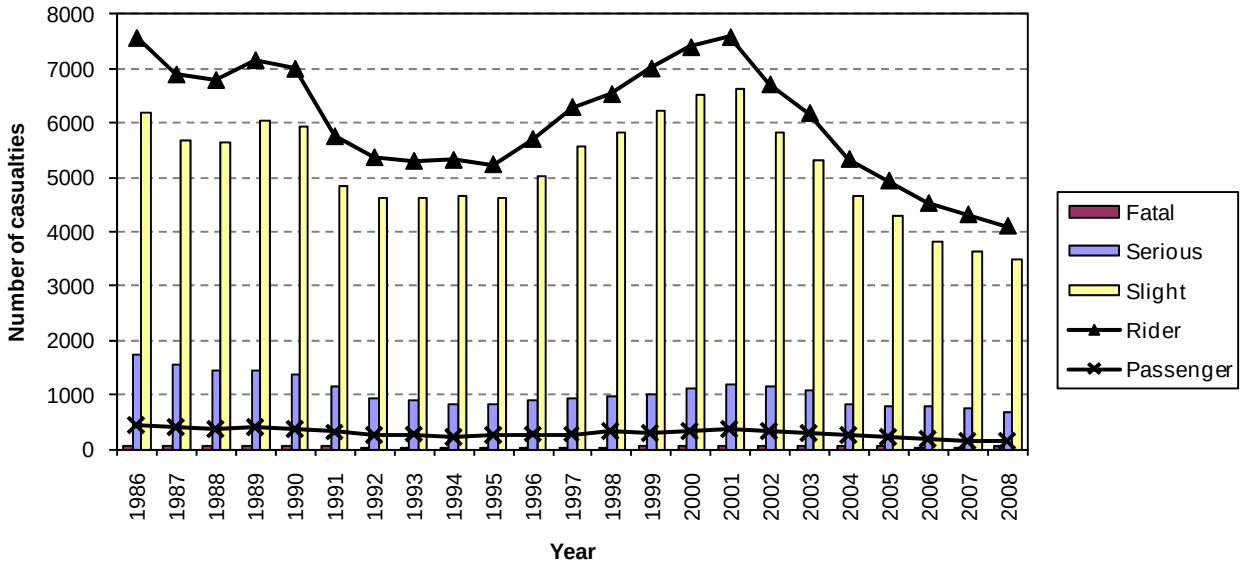
Annual Trends 1986 to 2008

Table 1 and Figure 1 show the number of P2W casualties by year and severity in Greater London from 1986 to 2008.

Table 1: P2W user casualties by year, casualty class and severity in Greater London 1986 to 2008

		Casualty class		Severity of casualty				
Year	P2W collisions	Rider	Passenger	Fatal	Serious	Slight	Total	Severity ratio
1986	7,674	7,564	435	74	1,737	6,188	7,999	23%
1987	6,975	6,888	398	57	1,564	5,665	7,286	22%
1988	6,886	6,785	356	51	1,459	5,631	7,141	21%
1989	7,260	7,153	404	49	1,458	6,050	7,557	20%
1990	7,082	6,992	352	59	1,364	5,921	7,344	19%
1991	5,833	5,745	303	45	1,152	4,851	6,048	20%
1992	5,457	5,357	247	36	936	4,632	5,604	17%
1993	5,381	5,290	265	34	913	4,608	5,555	17%
1994	5,375	5,307	224	40	839	4,652	5,531	16%
1995	5,314	5,226	256	25	824	4,633	5,482	15%
1996	5,786	5,695	264	35	891	5,033	5,959	16%
1997	6,379	6,285	263	32	961	5,555	6,548	15%
1998	6,627	6,525	316	36	981	5,824	6,841	15%
1994 to 1998 average	**5,896.2**	**5,807.6**	**264.6**	**33.6**	**899.2**	**5,139.4**	**6,072.2**	**15%**
1999	7,085	6,999	299	51	1,012	6,235	7,298	15%
2000	7,461	7,392	310	55	1,140	6,507	7,702	16%
2001	7,665	7,577	343	71	1,215	6,634	7,920	16%
2002	6,805	6,705	336	66	1,156	5,819	7,041	17%
2003	6,237	6,176	293	63	1,089	5,317	6,469	18%
2004	5,389	5,325	233	47	848	4,663	5,558	16%
2005	4,978	4,926	216	44	801	4,297	5,142	16%
2006	4,536	4,509	166	43	805	3,827	4,675	18%
2007	4,328	4,299	149	41	778	3,629	4,448	18%
2008	4,111	4,089	133	50	688	3,484	4,222	17%
% change 1986 to 2008	**-46%**	**-46%**	**-69%**	**-32%**	**-60%**	**-44%**	**-47%**	**-**
% change 1994-98 average to 2008	**-30%**	**-30%**	**-50%**	**49%**	**-23%**	**-32%**	**-30%**	**-**
% change 2007 to 2008	**-5%**	**-5%**	**-11%**	**22%**	**-12%**	**-4%**	**-5%**	**-**

Fig. 1: P2W user casualties by year, severity and casualty class in Greater London 1986 to 2008



P2W user casualties showed a downward trend for 10 years from a high of 7,999 in 1986 to a low of 5,482 in 1995. This trend reversed from 1996 when casualty numbers rose year on year to a second high of 7,920 in 2001. Since this time casualty numbers have again been falling steadily to an all time low of 4,222 in 2008. This represents a reduction of 47% from 1986 to 2008.

Fatal and serious injuries fell by 32% and 60% respectively between 1986 and 2008, while slight casualties fell by 44%. Overall, collisions involving injury to P2W users fell by 46% during this period.

Comparing 2008 with the 1994-98 average (the period against which progress towards the current casualty reduction targets are measured); all P2W user casualties fell by 30%, serious injuries by 23% and slight by 32%. P2W fatalities however rose by 49%. P2W KSI casualties fell by 21% overall.

Comparing 2008 with 2007, P2W casualties fell by 5% with serious and slight injuries falling by 12% and 4% respectively. P2W fatalities rose by 22%, from 41 in 2007 to 50 in 2008, while KSIs overall fell by 10%. Year on year fluctuations in fatalities are not uncommon and numbers have varied from a high of 74 in 1986 to a low of 25 in 1995, averaging 48 per year between 1986 and 2008.

The severity ratio (the percentage of fatal and serious injuries to all injuries) reduced quite steadily between 1986 and 1999 from 23% to 15%. It rose again to 18% in 2007 and fell to 17% in 2008.

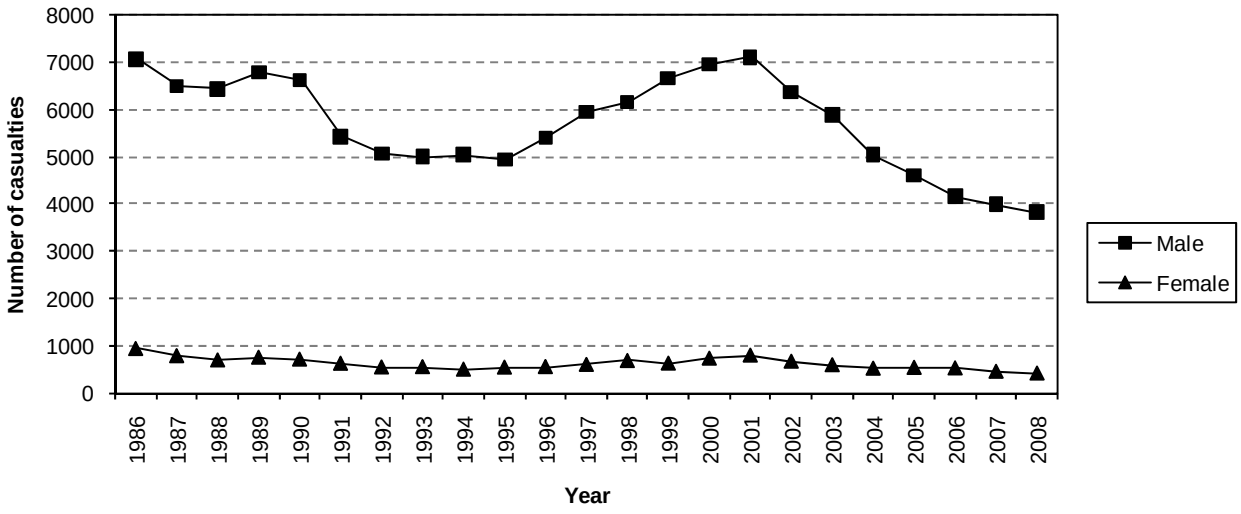
Casualty class

In terms of casualty class, P2W passenger casualties have shown the biggest reduction during this period, decreasing by 69% between 1986 and 2008, while P2W rider casualties fell by 46%. Passenger casualties fell by 50% between the 1994-98 average and 2008, while rider casualties fell by 30%. Comparing 2008 with 2007, passenger casualties fell by 11% and riders by 5%. The proportion of P2W rider to passenger casualties has remained fairly constant throughout this period, averaging 96% riders to 4% passengers.

Casualty gender

Figure 2 shows P2W user casualties by gender in Greater London 1986 to 2008.

Fig. 2: P2W user casualties by gender in Greater London 1986 to 2008



By far the greatest proportion of P2W user casualties were male, with an average of 90% per year over this period. The male/female split has remained fairly constant during this time. The number of P2W casualties of both genders reached a peak in 2001 and have been falling steadily since that time. Male and female P2W user casualties fell by 46% and 56% respectively between 1986 and 2008 and by 31% and 28% respectively between the 1994-98 average and 2008. Males fell by 5% and females by 8% between 2007 and 2008.

On average over the 1986 to 2008 period, 96% of P2W user casualties were riders, of which 92% were male. Of the average of 4% P2W passenger casualties however, 58% were female.

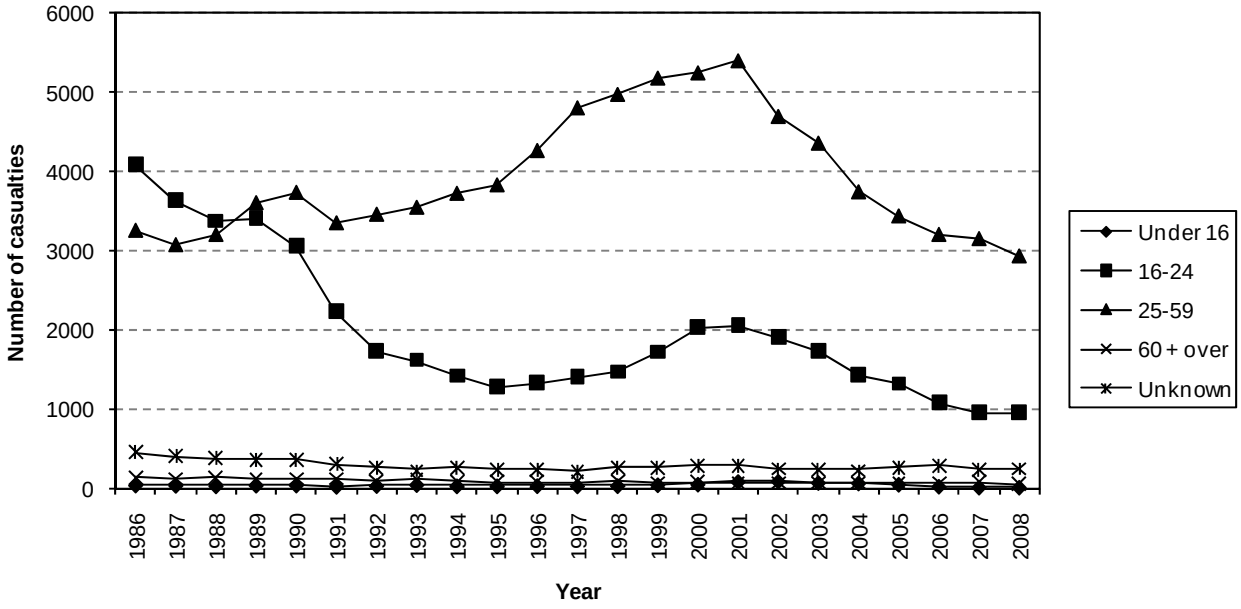
Casualty age

Table 2 and Figure 3 show P2W user casualties by year and age (banded) in Greater London from 1986 to 2008.

Table 2: P2W user casualties by year and age (banded) in Greater London 1986 to 2008

	Casualty age banded						% aged	% aged	% aged	% aged
Year	**Under 16**	**16-24**	**25-59**	**60 + over**	**Unknown**	**Total**	**<16**	**16-24**	**25-59**	**60+**
1986	46	4,092	3,257	141	463	7,999	0.6%	51.2%	40.7%	1.8%
1987	43	3,639	3,075	125	404	7,286	0.6%	49.9%	42.2%	1.7%
1988	37	3,376	3,205	143	380	7,141	0.5%	47.3%	44.9%	2.0%
1989	45	3,410	3,608	121	373	7,557	0.6%	45.1%	47.7%	1.6%
1990	46	3,063	3,738	123	374	7,344	0.6%	41.7%	50.9%	1.7%
1991	31	2,232	3,352	124	309	6,048	0.5%	36.9%	55.4%	2.1%
1992	40	1,729	3,461	98	276	5,604	0.7%	30.9%	61.8%	1.7%
1993	52	1,613	3,549	111	230	5,555	0.9%	29.0%	63.9%	2.0%
1994	37	1,420	3,726	90	258	5,531	0.7%	25.7%	67.4%	1.6%
1995	37	1,279	3,833	84	249	5,482	0.7%	23.3%	69.9%	1.5%
1996	39	1,323	4,269	83	245	5,959	0.7%	22.2%	71.6%	1.4%
1997	36	1,401	4,810	85	216	6,548	0.5%	21.4%	73.5%	1.3%
1998	39	1,470	4,980	94	258	6,841	0.6%	21.5%	72.8%	1.4%
1994 to 1998 average	**37.6**	**1,379**	**4,323.6**	**87.2**	**245.2**	**6,072.2**	**0.6%**	**22.7%**	**71.2%**	**1.4%**
1999	50	1,720	5,187	79	262	7,298	0.7%	23.6%	71.1%	1.1%
2000	57	2,025	5,253	81	286	7,702	0.7%	26.3%	68.2%	1.1%
2001	89	2,055	5,406	74	296	7,920	1.1%	25.9%	68.3%	0.9%
2002	94	1,912	4,700	79	256	7,041	1.3%	27.2%	66.8%	1.1%
2003	77	1,725	4,362	73	232	6,469	1.2%	26.7%	67.4%	1.1%
2004	72	1,431	3,745	79	231	5,558	1.3%	25.7%	67.4%	1.4%
2005	56	1,320	3,439	69	258	5,142	1.1%	25.7%	66.9%	1.3%
2006	32	1,076	3,205	74	288	4,675	0.7%	23.0%	68.6%	1.6%
2007	21	948	3,152	84	243	4,448	0.5%	21.3%	70.9%	1.9%
2008	20	959	2,932	55	256	4,222	0.5%	22.7%	69.4%	1.3%
% change 1986 to 2008	**-57%**	**-77%**	**-10%**	**-61%**	**-45%**	**-47%**	**-**	**-**	**-**	**-**
% change 1994-98 average to 2008	**-47%**	**-30%**	**-32%**	**-37%**	**4%**	**-30%**	**-**	**-**	**-**	**-**
% change 2007 to 2008	**-5%**	**1%**	**-7%**	**-35%**	**5%**	**-5%**	**-**	**-**	**-**	**-**

Fig. 3: P2W user casualties by year and age (banded) in Greater London 1986 to 2008



The majority of P2W casualties fell within the 16-24 and 25-59 year age groups, averaging 31% and 62% respectively. However, there have been quite pronounced changes within these groups throughout this period. In 1986 those aged between 16 and 24 years accounted for 51% of all P2W user casualties compared to 23% in 2008. Casualty numbers in this group fell by 77% in this period and by 30% between the 1994-98 average and 2008. 2008 saw a small rise of 1% (11 casualties) over 2007.

Casualties in the 25-59 years age group made up 41% of all P2W casualties in 1986 compared to 69% in 2008. Casualty numbers in this group decreased by 10% between 1986 and 2008, by 32% between the 1994-98 average and 2008 and by 7% between 2007 and 2008.

On average over this period casualties under the age of 16 years have made up 1% of the P2W casualty total. The number of casualties in this age group has fluctuated a lot, rising to a high of 94 in 2002 and falling to a low of 20 in 2008. The trend has been downward since 2002. P2W casualties under 16 fell by 57% between 1986 and 2008, by 47% between the 1994-98 average and 2008 and by 5% between 2007 and 2008.

P2W casualties aged 60 years and over also made up an average of 1% of the total. Numbers in this age band have generally been falling throughout this period, showing reductions of 61% between 1986 and 2008, 37% between the 1994-98 average and 2008 and 35% between 2007 and 2008.

Type of P2W

Table 3 shows P2W user casualties by type of P2W vehicle ridden in Greater London 1986 to 2008. The *STATS 19* categories have changed twice during this period (see details on page 1), and as a result it is not possible to make meaningful comparisons between the 2008 data and the 1994-98 average or 1986 data.

The most continuous data is for moped casualties, as this category was used until the end of 2004. Numbers have fluctuated quite dramatically throughout this period, falling from 860 in 1986 to just 262 in 1996, and then rising steeply to a peak of 1,215 in 2002 before dropping again to 891 in 2004. While the new category of motorcycle up to and including 50cc is not directly comparable with the former moped category (some motorcycles under 50cc are capable of speeds up to 60-70mph, while mopeds are limited to 31mph), the number of casualties on these smaller engine bikes increased again in 2005 to an all time high of 1,260 but have been falling steadily since then to 494 in 2008.

The reverse has been seen in casualties on bikes over 50cc and up to 125cc, with numbers rising from a low of 1,270 in 2005 to 1,675 in 2008.

Table 3: P2W user casualties by year and type of P2W vehicle in Greater London 1986 to 2008

	Type of powered two wheeler								
Year	Moped	Motor scooter	Motor cycle	M/C =<50cc	M/C =<125cc (>50-125cc)	M/C >125cc	M/C >125-500cc	M/C >500cc	Total P2W
1986	860	219	6,920	-	-	-	-	-	7,999
1987	760	138	6,388	-	-	-	-	-	7,286
1988	591	129	6,421	-	-	-	-	-	7,141
1989	557	122	6,878	-	-	-	-	-	7,557
1990	503	94	6,747	-	-	-	-	-	7,344
1991	456	106	5,486	-	-	-	-	-	6,048
1992	391	65	5,148	-	-	-	-	-	5,604
1993	407	66	5,082	-	-	-	-	-	5,555
1994	302	47	5,182	-	-	-	-	-	5,531
1995	266	47	5,169	-	-	-	-	-	5,482
1996	262	89	5,608	-	-	-	-	-	5,959
1997	336	139	6,073	-	-	-	-	-	6,548
1998	431	222	6,188	-	-	-	-	-	6,841
1994 to 1998 average	**319.4**	**108.8**	**5,644.0**	-	-	-	-	-	**6,072.2**
1999*	867	-	-	-	1,577	4,854	-	-	7,298
2000	684	-	-	-	2,527	4,491	-	-	7,702
2001	1,032	-	-	-	2,547	4,341	-	-	7,920
2002	1,215	-	-	-	2,129	3,697	-	-	7,041
2003	840	-	-	-	2,140	3,489	-	-	6,469
2004	891	-	-	-	1,728	2,939	-	-	5,558
2005*	-	-	-	1,260	1,270	-	1,140	1,472	5,142
2006	-	-	-	873	1,444	-	512	1,846	4,675
2007	-	-	-	558	1,652	-	599	1,639	4,448
2008	-	-	-	494	1,675	-	521	1,532	4,222

*Stats 19 P2W definitions changed from Jan 1999 from Moped, Motor Scooter and Motor Cycle to Moped, M/C =< 125cc and M/C > 125cc, and from Jan 2005 to M/C =<50cc, M/C >50 to 125cc, M/C >125 to 500cc and M/C >500cc

P2W user casualty rates and changes in P2W usage in Greater London

In order to gain a clearer picture of the extent of the P2W collision issues in London, it is important to look at casualty numbers in relation to P2W usage.

Regular surveys of radial traffic movements in London are carried out which give useful indicators of the change in travel over time. These surveys measure 24-hour radial vehicle flows crossing the Greater London boundary and inner and central London cordons.

Fig. 4: Radial 24 hour motorcycle movements in London, both directions combined, 1980-2008

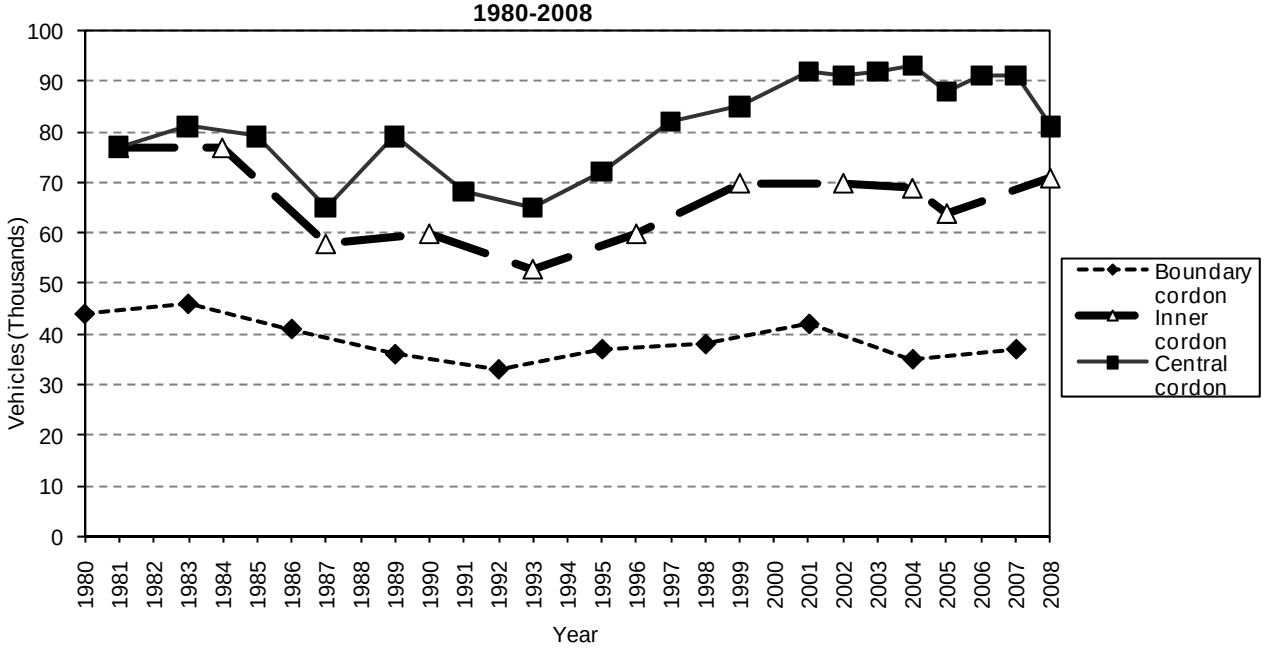


Figure 4 shows the radial cordons, combined direction, 24-hour P2W movements between 1980 and 2008. Flows across the London boundary cordon have reduced by 16% between 1980 and 2007. Within this period P2W movements have fluctuated, rising to a high of 46,000 in 1983 and falling to a low of 33,000 in 1992. Numbers have continued to fluctuate in a similar vein since then, rising to 42,000 in 2001, while the latest recorded number across this cordon was 37,000 in 2007, a rise of 12% from the low in 1992.

A similar pattern is evident in flows across the inner cordon, with numbers peaking at 77,000 in 1981 and 1984, falling to 53,000 in 1993 then rising by 34% to 71,000 in 2008. There was an overall decrease of 8% between 1981 and 2008. In contrast, P2W flows across the central cordon have increased by 5% between 1981 and 2008, with an increase of 25% between the low point in 1993 and 2008.

Figure 5a shows the number of P2Ws licensed in Greater London against P2W user casualties per 1,000 P2W vehicles licensed. This clearly illustrates that, while the number of P2Ws licensed has been increasing steadily since 1995, the casualty rate per 1,000 P2W licensed has been decreasing.

Fig. 5a: P2W user casualties per 1,000 P2W vehicles licensed in Greater London 1986 to 2008

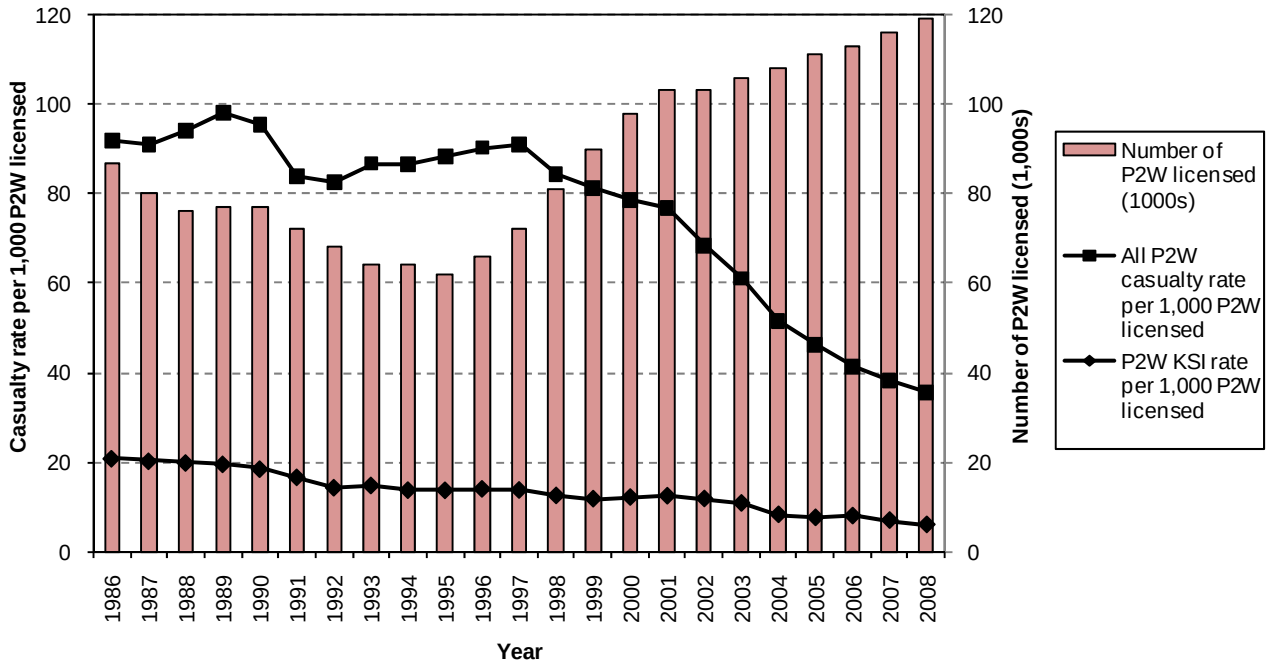
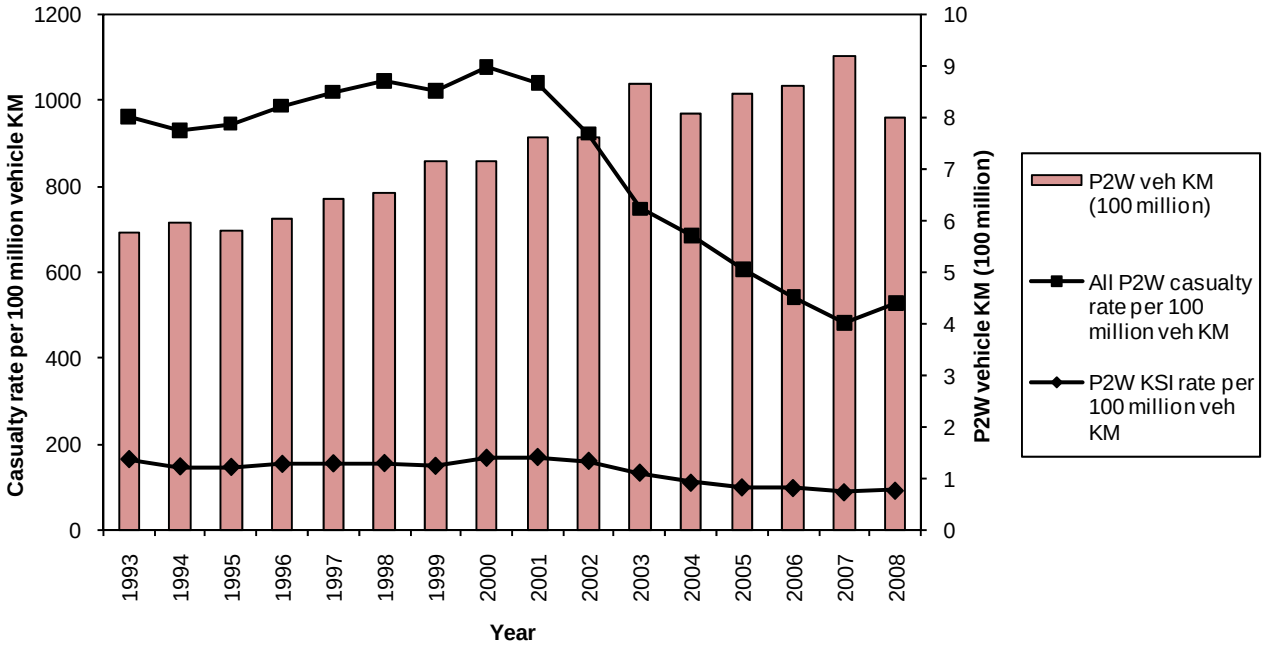


Figure 5b shows P2W vehicle kilometres travelled in Greater London against P2W user casualties per 100 million vehicle kilometres. Again this clearly illustrates the decrease in the P2W casualty rate against the general increase in distance travelled.

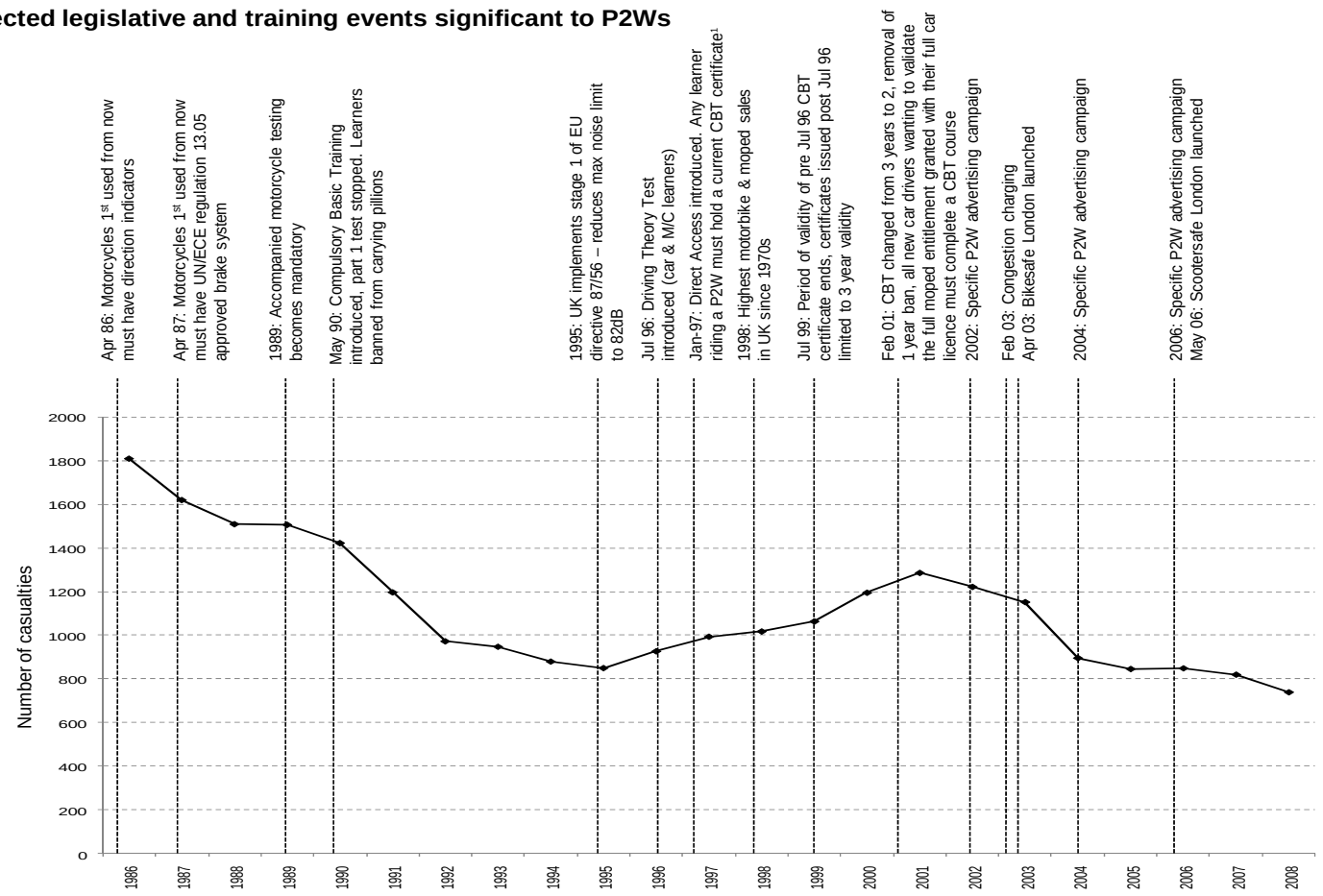
Fig. 5b: P2W user casualty rate per 100 million vehicle kilometres in Greater London 1993 to 2008



Timeline

Figure 6 represents a timeline which sets P2W user KSI casualties against significant changes in legislation and training related to P2Ws.

Fig. 6: P2W KSI casualties 1986 to 2008 overlaid with selected legislative and training events significant to P2Ws



1 Unless they are on the road riding element of an approved CBT course

Sources: Bikesafe London, DfT, DSA, DVLA, Bikermag, BMF, Sportsbike.org, Scottish Executive

Powered two wheeler user casualties in Greater London in 2008

The remainder of this factsheet provides a more detailed analysis of P2W casualties in Greater London in 2008. This is the most recent year for which finalised data are available.

How many?

During 2008 there were 23,116 personal injury road traffic collisions reported to the police in the Greater London area. Of these collisions, 4,111 (18%) involved injury to P2W users (rider or passenger) and resulted in 4,222 P2W user casualties. P2W users represented 15% of the total casualties in Greater London in 2008. In contrast, in Greater Britain as a whole, P2W user casualties accounted for 9% of all casualties in 2008.

Table 4 shows P2W user casualties by gender, casualty class and severity in Greater London in 2008. The majority (83%) of P2W casualties were slightly injured, with 16% suffering serious injury and 1% being killed. In total, P2W user casualties killed or seriously injured accounted for 21% of all road user KSIs in Greater London.

90% of P2W casualties were male, compared to just 10% female. 97% were riders; of these 92% were male and 8% female. Of the 3% P2W passenger casualties, 35% were male and 65% female.

Table 4: P2W user casualties by casualty class, gender, severity & severity ratio in Greater London 2008

		Severity of casualty				
		Fatal	**Serious**	**Slight**	**Total**	**Severity ratio**
Male	Rider	47	622	3,090	3,759	18%
	Passenger	1	8	37	46	20%
	Total	**48**	**630**	**3,127**	**3,805**	**18%**
Female	Rider	2	39	289	330	12%
	Passenger	0	19	68	87	22%
	Total	**2**	**58**	**357**	**417**	**14%**
All	Rider	49	661	3,379	4,089	17%
	Passenger	1	27	105	133	21%
	Total	**50**	**688**	**3,484**	**4,222**	**17%**

Who?

Age and gender

Table 5 and Figure 7 show the number of P2W user casualties by five-year age bands, gender and severity. Table 6 gives a more detailed breakdown of young P2W user casualties aged between 16 and 24 years.

Just under two thirds (63%) of P2W user casualties of known age were between 20 and 39 years old. The highest numbers occurred in the 25-29 and 30-34 year age bands, which together represented over one third (35%) of casualties of known age. Nearly a quarter (24%) of P2W user casualties of known age was aged between 16 and 24 years, highlighting young riders as another area for concern. There were more male casualties than female in all age bands except 5-9 years where one female passenger casualty was recorded.

The highest severity ratios were found in the youngest and oldest age groups. The peak was 67% in the 75-79 year group, with 38% for 65-69 year olds and 10-14 and 70-74 year groups each having a severity ratio of 33%. This is partly due to the very low numbers of casualties in these groups, but highlights the increased vulnerability to serious injury of these age groups.

Table 5: P2W casualties by age-band, gender, severity and severity ratio in Greater London 2008

			Severity of casualty				% of	Severity
Casualty age	**Male**	**Female**	**Fatal**	**Serious**	**Slight**	**Total**	**known age**	**ratio**
0-4	0	0	0	0	0	0	-	-
5-9	0	1	0	0	1	1	0%	0%
10-14	6	3	0	3	6	9	0%	33%
15-19	399	21	3	68	349	420	11%	17%
20-24	487	62	5	88	456	549	14%	17%
25-29	611	110	11	102	608	721	18%	16%
30-34	586	73	7	99	553	659	17%	16%
35-39	507	51	11	88	459	558	14%	18%
40-44	417	44	7	64	390	461	12%	15%
45-49	277	20	5	58	234	297	7%	21%
50-54	142	11	1	29	123	153	4%	20%
55-59	80	3	0	16	67	83	2%	19%
60-64	31	1	0	5	27	32	1%	16%
65-69	13	0	0	5	8	13	0%	38%
70-74	5	1	0	2	4	6	0%	33%
75-79	3	0	0	2	1	3	0%	67%
80-84	1	0	0	0	1	1	0%	0%
85-89	0	0	0	0	0	0	-	-
90-94	0	0	0	0	0	0	-	-
95-99	0	0	0	0	0	0	-	-
Total (age known)	**3,565**	**401**	**50**	**629**	**3,287**	**3,966**	**100%**	**17%**
Total (age unknown)	240	16	0	59	197	256	-	23%
Total	**3,805**	**417**	**50**	**688**	**3,484**	**4,222**	**-**	**17%**

Fig. 7: P2W user casualties by age-band and severity in Greater London 2008

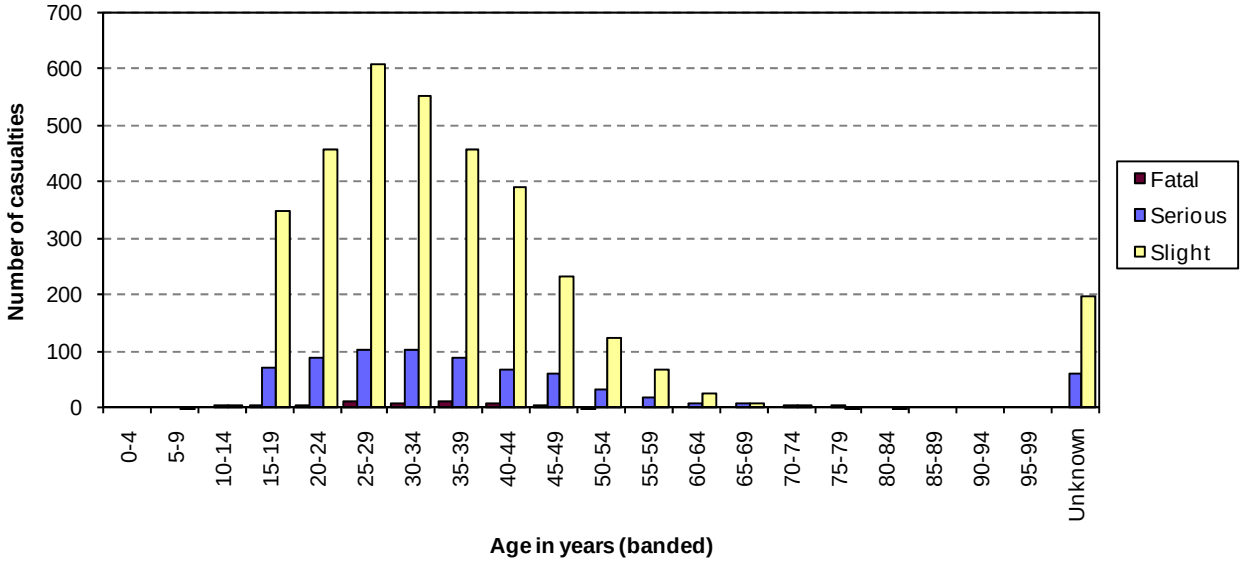


Table 6: Breakdown of P2W user casualties aged between 16 and 24 years of age in Greater London 2008

			Severity of casualty			
Casualty age	**Male**	**Female**	**Fatal**	**Serious**	**Slight**	**Total**
16	88	5	1	14	78	93
17	102	2	1	12	91	104
18-19	201	12	0	38	175	213
20-24	487	62	5	88	456	549
Total aged 16 - 24 years	**878**	**81**	**7**	**152**	**800**	**959**

Where?

Table 7 shows the number of P2W user casualties by borough, severity and percentage change in KSI casualties in 2008 over the 1994-98 average.

Just over half (57%) of all P2W user casualties were injured on roads in inner London, this included 50% of fatalities, 56% of all serious injuries and 57% of all slight injuries, Despite these numbers, the average severity ratio was slightly higher in outer London (18% compared to 17% in inner London).

Regarding progress towards the 2010 casualty reduction targets, KSI casualties in outer London showed the greater reduction between 2008 and the 1994-98 average, falling by 27%, compared with a 15% fall in inner London.

Table 7: P2W user casualties by borough, severity and KSI percentage change in 2008 over 1994-98 average in Greater London

Borough	Fatal	Serious	Slight	Total	Severity ratio	1994-98 KSI average	2008 KSI total	% change 1994-98 average to 2008 KSI
City of London	0	6	65	71	8%	15.2	6	-61%
Westminster	6	55	245	306	20%	64.8	61	-6%
Camden	2	25	157	184	15%	41	27	-34%
Islington	1	16	105	122	14%	31.8	17	-47%
Hackney	2	35	139	176	21%	25	37	48%
Tower Hamlets	1	35	153	189	19%	37.8	36	-5%
Greenwich	2	27	84	113	26%	30	29	-3%
Lewisham	1	30	109	140	22%	30	31	3%
Southwark	3	35	170	208	18%	47.4	38	-20%
Lambeth	2	37	209	248	16%	51.2	39	-24%
Wandsworth	2	25	197	224	12%	53.4	27	-49%
Hammersmith & Fulham	2	28	148	178	17%	26.2	30	15%
Kensington & Chelsea	1	34	217	252	14%	31	35	13%
Total inner London	**25**	**388**	**1,998**	**2,411**	**17%**	**484.8**	**413**	**-15%**
% of Greater London	**50%**	**56%**	**57%**	**57%**	**-**	**-**	**-**	**-**
Waltham Forest	1	10	61	72	15%	19.4	11	-43%
Redbridge	3	13	48	64	25%	14.4	16	11%
Havering	1	11	65	77	16%	19.8	12	-39%
Barking & Dagenham	3	9	45	57	21%	13.2	12	-9%
Newham	0	18	72	90	20%	17.6	18	2%
Bexley	0	14	70	84	17%	17.2	14	-19%
Bromley	0	22	85	107	21%	33.4	22	-34%
Croydon	1	25	129	155	17%	31.2	26	-17%
Sutton	1	20	74	95	22%	16	21	31%
Merton	3	16	82	101	19%	21.2	19	-10%
Kingston	1	14	56	71	21%	22.2	15	-32%
Richmond	0	14	89	103	14%	24.2	14	-42%
Hounslow	1	16	102	119	14%	28	17	-39%
Hillingdon	3	7	57	67	15%	25.4	10	-61%
Ealing	2	23	108	133	19%	32	25	-22%
Brent	0	14	78	92	15%	24.6	14	-43%
Harrow	0	10	38	48	21%	12	10	-17%
Barnet	4	20	90	114	21%	34	24	-29%
Haringey	0	12	82	94	13%	21	12	-43%
Enfield	1	12	55	68	19%	21.2	13	-39%
Total outer London	**25**	**300**	**1,486**	**1,811**	**18%**	**448**	**325**	**-27%**
% of Greater London	**50%**	**44%**	**43%**	**43%**	**-**	**-**	**-**	**-**
Total Greater London	**50**	**688**	**3,484**	**4,222**	**17%**	**932.8**	**738**	**-21%**

Table 8 shows P2W user casualties by borough, casualty class and age group for Greater London in 2008. 57% of all P2W rider casualties and 64% of all P2W passenger casualties were injured in inner London.

With regard to age, 62% of P2W user casualties in the 25-59 years age group were injured in inner London, while the majority of casualties in the under 16, 16-24 and 60 years and over age groups were injured in outer London (60%, 55% and 64% respectively).

Table 8: P2W casualties by borough, casualty class and age group in Greater London 2008

	Casualty class		Casualty age (banded)					
Borough	**P2W Rider**	**Passenger**	**Under 16**	**16-24**	**25-59**	**60 + over**	**Unknown**	**Total**
City of London	68	3	0	11	57	0	3	71
Westminster	295	11	1	39	250	3	13	306
Camden	174	10	0	40	131	0	13	184
Islington	118	4	1	23	78	0	20	122
Hackney	171	5	0	35	134	0	7	176
Tower Hamlets	183	6	1	28	144	4	12	189
Greenwich	110	3	0	30	75	1	7	113
Lewisham	136	4	0	26	107	2	5	140
Southwark	203	5	0	46	147	3	12	208
Lambeth	240	8	3	34	200	3	8	248
Wandsworth	217	7	1	38	174	2	9	224
Hammersmith & Fulham	168	10	0	32	136	0	10	178
Kensington & Chelsea	243	9	1	45	198	2	6	252
Total inner London	**2,326**	**85**	**8**	**427**	**1,831**	**20**	**125**	**2,411**
% of Greater London	**57%**	**64%**	**40%**	**45%**	**62%**	**36%**	**49%**	**57%**
Waltham Forest	69	3	1	22	39	0	10	72
Redbridge	61	3	2	23	36	1	2	64
Havering	76	1	0	30	38	1	8	77
Barking & Dagenham	57	0	0	20	35	0	2	57
Newham	88	2	0	23	60	1	6	90
Bexley	82	2	1	38	39	1	5	84
Bromley	105	2	1	34	65	4	3	107
Croydon	154	1	1	57	88	3	6	155
Sutton	93	2	0	28	56	6	5	95
Merton	100	1	1	24	66	5	5	101
Kingston	68	3	0	25	41	1	4	71
Richmond	99	4	0	22	71	5	5	103
Hounslow	117	2	0	25	86	1	7	119
Hillingdon	65	2	1	22	35	3	6	67
Ealing	129	4	1	35	91	0	6	133
Brent	89	3	1	27	57	1	6	92
Harrow	45	3	1	12	22	1	12	48
Barnet	110	4	0	24	77	0	13	114
Haringey	90	4	0	21	61	1	11	94
Enfield	66	2	1	20	38	0	9	68
Total outer London	**1,763**	**48**	**12**	**532**	**1,101**	**35**	**131**	**1,811**
% Greater London	**43%**	**36%**	**60%**	**55%**	**38%**	**64%**	**51%**	**43%**
Total Greater London	**4,089**	**133**	**20**	**959**	**2,932**	**55**	**256**	**4,222**

Table 9 shows P2W user casualties by highway authority and severity. Just under two thirds (64%) of injuries occurred on borough roads. These accounted for 68% of fatalities, 62% of serious and 64% of slight P2W casualties. 36% of injuries to P2W users occurred on the Transport for London Road Network (TLRN). Those injured on Highways Agency (HA) roads (mainly motorways) displayed the highest severity ratio, 29% compared with 18% on the TLRN and 17% on borough roads, however casualties on HA roads accounted for less than 1% of all P2W user casualties.

Table 9: P2W user casualties by highway authority, severity and severity ratio in Greater London 2008

	Severity of casualty					
	Fatal	**Serious**	**Slight**	**Total**	**% of total**	**Severity ratio**
TLRN	15	255	1,240	1,510	35.8%	18%
Highways Agency Road	1	4	12	17	0.4%	29%
Borough Road	34	429	2,232	2,695	63.8%	17%
Total	**50**	**688**	**3,484**	**4,222**	**100.0%**	**17%**

Table 10 shows P2W user casualties by road class and severity. 70% occurred on 'A' class roads, 20% on 'C' class or unclassified roads, 9% on 'B' class roads and less than 1% on motorways. The vast majority of P2W user casualties (94%) were injured on roads subject to a 30mph speed limit.

Table 10: P2W user casualties by road class, severity and severity ratio in Greater London 2008

	Severity of casualty					
First road class	**Fatal**	**Serious**	**Slight**	**Total**	**% of total**	**Severity ratio**
Motorway	2	3	11	16	0.4%	31%
A	30	481	2,459	2,970	70.3%	17%
B	4	69	316	389	9.2%	19%
C	7	70	323	400	9.5%	19%
Unclassified	7	65	375	447	10.6%	16%
Total	**50**	**688**	**3,484**	**4,222**	**100.0%**	**17%**

Table 11 shows P2W user casualties by junction detail and junction control. 78% were injured at or within 20m of a junction. Of these, 60% occurred at a 'T' or staggered junction, and 20% at a crossroads. Of those injured at a junction, 76% occurred where the junction control was 'Give Way' and 23% were at a junction controlled by automatic traffic signals.

Table 11: P2W user casualties by junction control and junction detail in Greater London 2008

		Junction control				
		Authorised	**Automatic**		**Give Way or**	
Junction detail	**Not applicable**	**Person**	**Traffic Signals**	**Stop Sign**	**Uncontrolled**	**Total**
Roundabout	0	0	30	1	139	170
Mini-Roundabout	0	1	0	0	42	43
T & Staggered Jct	0	4	261	6	1,715	1,986
Slip Road	0	0	6	0	29	35
Crossroads	0	3	401	2	267	673
Multi Junction	0	2	57	0	36	95
Private Drive	0	0	1	0	188	189
Other	0	1	18	1	98	118
Total at junctions	**0**	**11**	**774**	**10**	**2,514**	**3,309**
No junction in 20m	913	0	0	0	0	913
Total	**913**	**11**	**774**	**10**	**2,514**	**4,222**

Road surface/weather

The majority of P2W user casualties were injured on a dry road surface (76%) and in fine weather conditions (82%).

13% of all P2W user casualties and 22% of P2W KSIs were injured in a collision where their vehicle skidded. 20% of those injured on a wet road surface and 36% of those on a surface with snow, frost or ice involved the P2W skidding.

When?

Figures 8, 9 and 10 show the number of P2W user casualties by time of day, day of week and month in Greater London in 2008. They also indicate the proportions occurring in the light or during the hours of darkness.

Time of day

Three quarters (75%) of P2W user casualties were injured between 7am and 7pm. Within this 12 hour period there were two clear peaks, with 22% occurring between 7am and 10am and 25% between 4pm and 7pm. The single highest hour was between 8am and 9am with 10% of casualties. 72% of P2W user casualties were injured during daylight hours.

Day of week

81% of P2W user casualties were injured on a week day, an average of 16% per day, with 11% on a Saturday and 8% on a Sunday. However, the highest proportion of P2W user casualties injured in the dark occurred at the weekend with 35% on Saturdays and 32% on Sundays.

Month of year

The highest number of P2W user casualties (11%) were recorded in October and the lowest number (6%) in January. 31% of casualties were injured in the autumn period (September to November), with 21% in the winter (December to February), 23% in the spring (March to May) and 25% in the summer (June to August).

40% or more of casualties in January, February, November and December occurred in the dark, peaking in December when over half (55%) were injured during the hours of darkness.

Fig. 8: P2W casualties by time and light conditions in Greater London 2008

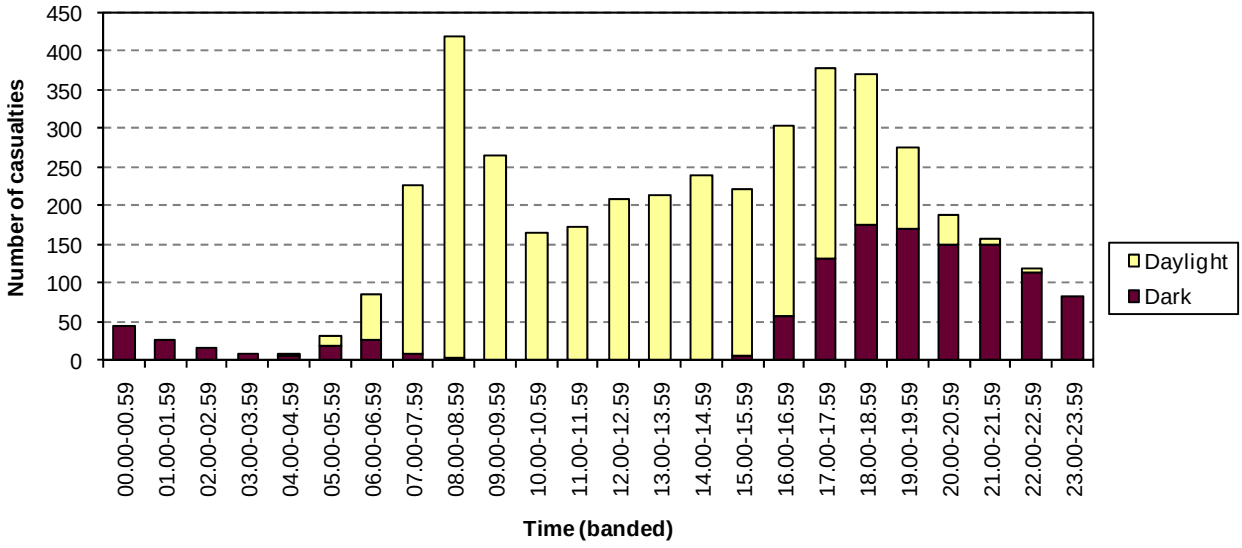


Fig. 9: P2W user casualties by day and light conditions in Greater London 2008

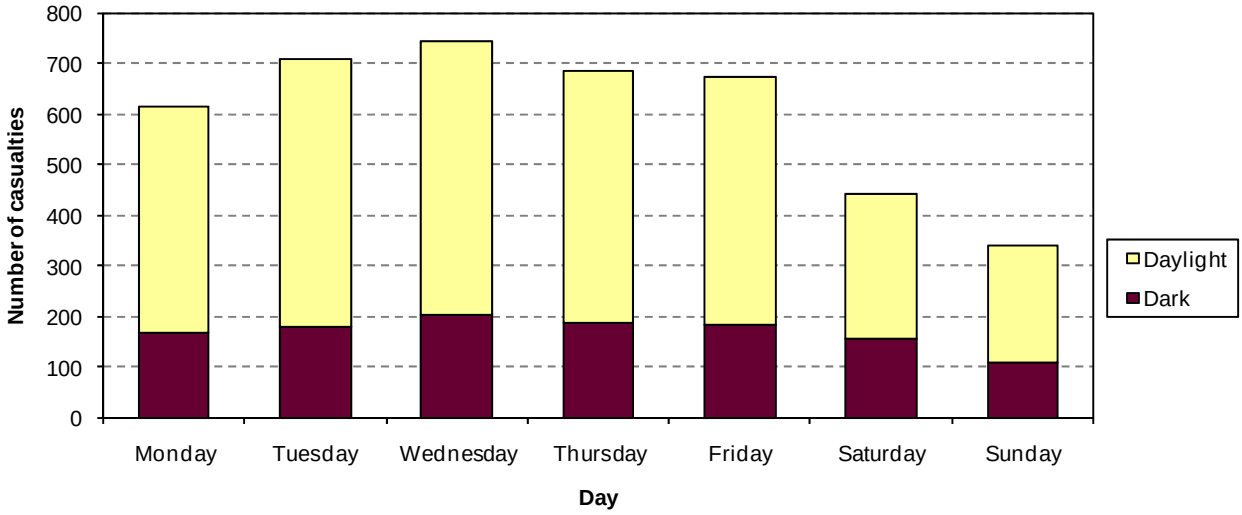
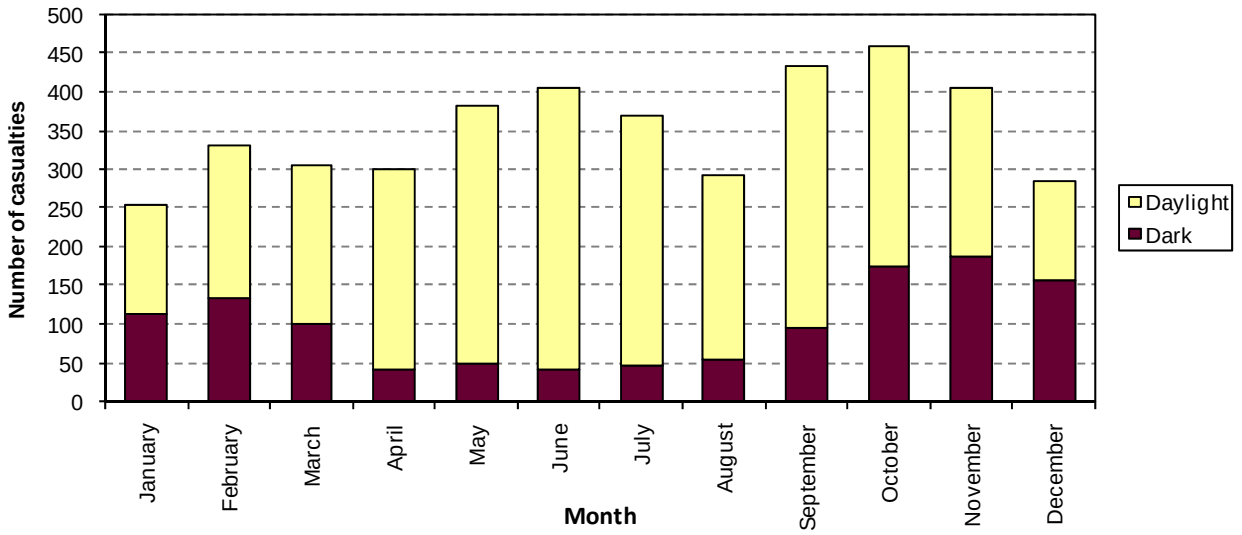


Fig. 10: P2W user casualties by month and light conditions in Greater London 2008



P2W vehicle type

Table 12 shows P2W user casualties by vehicle type, gender and severity in 2008. The categories of bike associated with the greatest number of casualties were those with an engine over 50cc and up to 125cc (40%) and those over 500cc (36%). In terms of KSI casualties, 42% were injured on bikes over 500cc, nearly half (48%) of P2W fatalities were also riding this category of bike.

At least 83% of P2W user casualties in each vehicle category were male and this percentage increased with engine size, rising to 93% for the largest size.

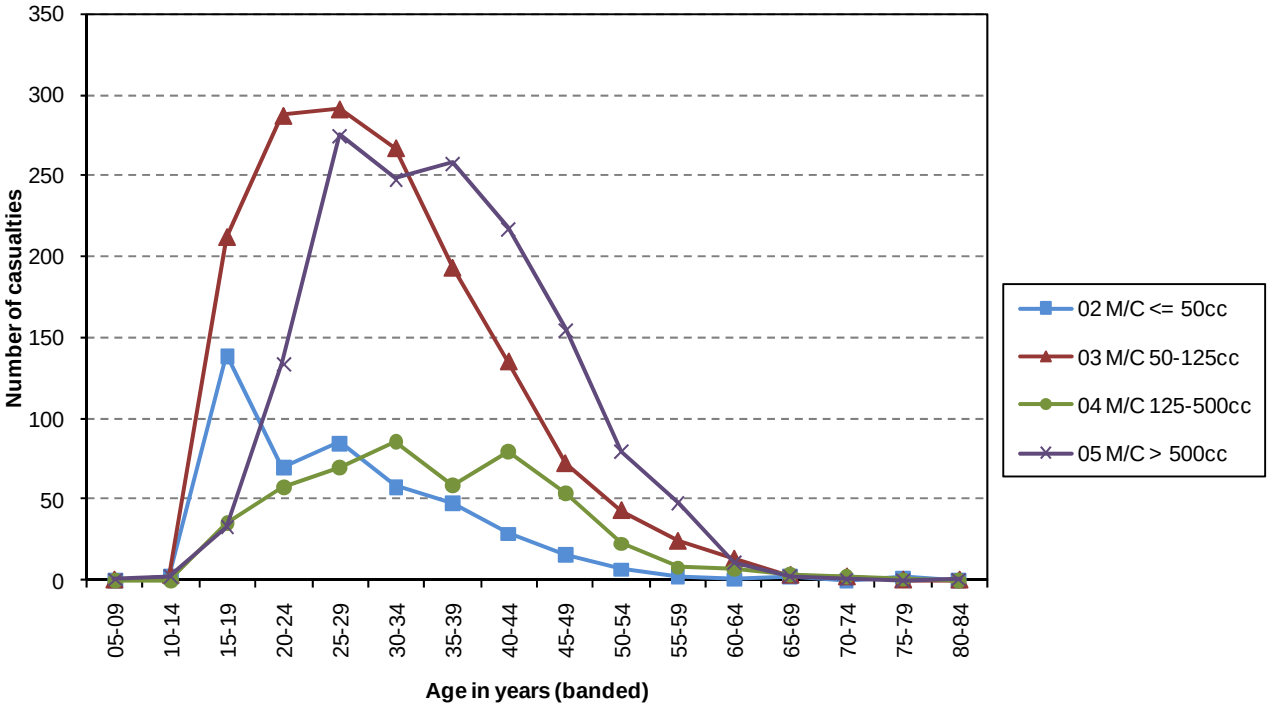
Table 12: P2W user casualties by vehicle type, gender and severity in Greater London 2008

	Casualty gender		Casualty severity					
P2W type	**Male**	**Female**	**Fatal**	**Serious**	**Slight**	**Total**	**% of total**	**Severity ratio**
M/C <=50cc	412	82	3	60	431	494	12%	13%
M/C >50cc up to 125cc	1488	187	11	239	1425	1,675	40%	15%
M/C >125cc up to 500cc	476	45	12	104	405	521	12%	22%
M/C >500cc	1429	103	24	285	1223	1,532	36%	20%
All P2W	**3,805**	**417**	**50**	**688**	**3,484**	**4,222**	**100%**	**17%**

Figure 11 shows P2W user casualties by vehicle type and age in five-year bands. More than a quarter (28%) of casualties on bikes under 50cc was aged 15-19 years. Half (50%) of casualties on bikes between 50 and 125cc were 20-34 years old. Over three quarters of casualties riding bikes between 125 and 500cc were aged 20-49 years and just over half (51% of casualties on bikes over 500cc were aged between 25 and 39 years.

84% of 15-19 year old P2W casualties were injured on bikes up to 125cc while 52% of 50-54 year olds and 58% of 55-59 year olds were injured on bikes over 500cc.

Fig. 11: P2W user casualties by age-band and vehicle type in Greater London 2008



Vehicle manoeuvre

Table 13 shows P2W user casualties by vehicle manoeuvre and severity.

63% of P2W users were injured when the P2W was 'going ahead', i.e. not carrying out any particular manoeuvre, lane change etc. The next most common manoeuvre (18%) involved the P2W performing an 'overtaking manoeuvre'. 6% of P2W users were injured while turning or waiting to turn left or right.

Table 13: P2W user casualties by vehicle manoeuvre, severity and severity ratio in Greater London 2008

	Severity of casualty					
Vehicle manoeuvre	**Fatal**	**Serious**	**Slight**	**Total**	**% of total**	**Severity ratio**
Reversing	0	0	2	2	0%	0%
Parked	0	1	4	5	0%	20%
Going Ahead But Held Up	2	18	166	186	4%	11%
Slowing or Stopping	0	21	137	158	4%	13%
Moving Off	0	12	72	84	2%	14%
U-Turning	0	2	10	12	0%	17%
Turning Left	0	14	73	87	2%	16%
Waiting to Turn Left	0	1	7	8	0%	13%
Turning Right	0	19	132	151	4%	13%
Waiting to Turn Right	0	3	25	28	1%	11%
Changing Lane To Left	0	2	20	22	1%	9%
Changing Lane To Right	0	3	28	31	1%	10%
Overtaking Moving Veh Offside	5	48	303	356	8%	15%
Overtaking Stat Veh Offside	0	36	257	293	7%	12%
Overtaking Nearside	2	20	97	119	3%	18%
Going Ahead Left Bend	3	23	68	94	2%	28%
Going Ahead Right Bend	3	22	72	97	2%	26%
Going Ahead Other	35	443	2,011	2,489	59%	19%
Total	**50**	**688**	**3,484**	**4,222**	**100%**	**17%**

Common conflicts in P2W KSI collisions

Tables 14 and 15 show a listing of the main types of conflicts occurring in collisions resulting in fatal or serious injury to a P2W user. The tables include a simple sketch representation of the conflict between the P2W (shown as a broken line) and the other vehicle(s) involved (shown as a solid line). The information included in the tables was compiled from a manual analysis of the details of each P2W KSI collision.

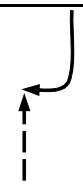
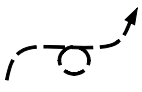
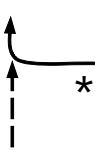
Table 14 – fatal summary

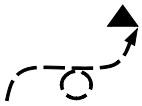
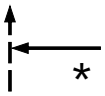
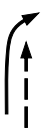
In total just over a third (34%) of P2W fatalities resulted from the P2W losing control. 16% involved the P2W losing control and hitting a kerb or barrier, 10% involved the P2W hitting another vehicle when it lost control, and a further 8% involved the P2W mounting the kerb and hitting a roadside object or item of street furniture having lost control.

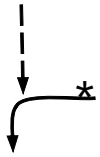
The single most common collision type (10 out of 50, 20%) resulting in fatal injury involved another vehicle turning right across the path of the P2W. In 60% of these collisions the other vehicle was a car. 16% (8 out of 50) of fatal P2W collisions involved another vehicle disobeying the junction control and turning or pulling out into the path of the P2W from a side road (four turned right, three went straight across and one turned left).

In 38% of fatal P2W collisions the P2W was in conflict with a car and in 14% with a goods vehicle over 7.5 tonnes. In just over a quarter (26%) there was no other vehicle involved.

Table 14: Ranked analysis of the most commonly occurring conflicts between vehicles in collisions resulting in a powered two wheeler user being fatally injured in London during 2008

		Conflict between powered two wheeler and:												
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle ****	**Total Collisions**	**%**
	Other vehicle turns right across path of P2W	0	0	6	0	3	0	0	0	1	0	-	**10**	**20.0%**
	P2W loses control and hits kerb, barrier or wall etc.	0	0	0	0	0	0	0	0	0	8	-	**8**	**16.0%**
	P2W loses control (and may hit other vehicle)	0	0	1	1	0	0	0	1	1	1	-	**5**	**10.0%**
	Other vehicle disobeys junction control and turns right into path of P2W	0	0	3	0	1	0	0	0	0	0	*(2)*	**4**	**8.0%**

Conflict between powered two wheeler and:														
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle ****	**Total Collisions**	**%**
	P2W loses control, mounts kerb & hits road side object or street furniture	0	0	0	0	0	0	0	0	0	4	-	**4**	**8.0%**
	Other vehicle fails to give way or disobeys junction control and collides with P2W	0	0	1	0	0	0	1	0	1	0	-	**3**	**6.0%**
	Other vehicle turns left across the path of P2W user	0	0	2	0	0	0	1	0	0	0	*(1)*	**3**	**6.0%**
	Other vehicle u-turns into path of P2W	0	0	1	0	0	0	0	0	1	0	-	**2**	**4.0%**
	Head on collision between P2W and other vehicle	0	0	2	0	0	0	0	0	0	0	-	**2**	**4.0%**
	P2W runs into rear of other vehicle	0	0	0	0	0	0	2	0	0	0	-	**2**	**4.0%**
	P2W collides with other vehicle or loses control while overtaking	0	0	1	0	0	0	0	0	1	0	*(1)*	**2**	**4.0%**
	Other vehicle changes lane (o/s or n/s) across the path of P2W	0	0	1	0	0	0	0	0	0	0	-	**1**	**2.0%**

Conflict between powered two wheeler and:														
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle ****	**Total Collisions**	**%**
	Other vehicle disobeys junction control and turns left into path of P2W	0	0	0	0	0	0	1	0	0	0	-	**1**	**2.0%**
	Other vehicle runs into rear of P2W	0	0	1	0	0	0	0	0	0	0	*(1)*	**1**	**2.0%**
	Other vehicle starts off or pulls out into path of P2W	0	0	0	0	0	0	1	0	0	0	-	**1**	**2.0%**
	P2W and other vehicle travelling too close alongside each other	0	0	0	0	0	0	1	0	0	0	-	**1**	**2.0%**
	Total	**0**	**0**	**19**	**1**	**4**	**0**	**7**	**1**	**5**	**13**	*(5)*	**50**	**100%**

*collisions involving three or more vehicles - the main vehicle in such collisions is recorded in the relevant column

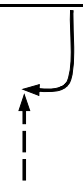
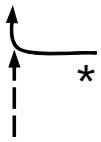
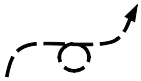
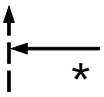
Table 15 – serious summary

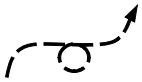
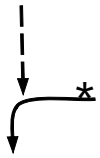
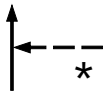
15.1% (102 out of 675) of collisions resulting in serious injury to a P2W user involved another vehicle turning right across the path of a P2W from the opposite direction, and a further 14.5% (98 collisions) involved a vehicle disobeying the junction control and turning right across the path of a P2W from a side road.

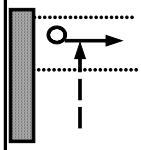
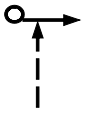
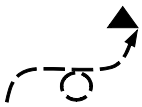
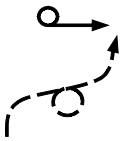
A total of 106 collisions (16%) involved the P2W losing control or braking/swerving to avoid a collision. In many cases the P2W, having lost control, then hit another vehicle, kerb, barrier, wall or item of street furniture.

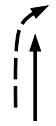
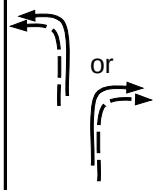
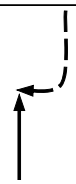
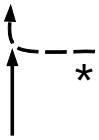
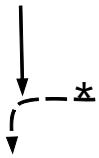
In 69% of serious P2W collisions the P2W was in conflict with a car, while in 13% no other vehicle was involved.

Table 15: Ranked analysis of the most commonly occurring conflicts between vehicles in collisions resulting in a powered two wheeler user being seriously injured in London during 2008

Conflict between powered two wheeler and:														
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle* ***	**Total Collisions**	**%**
	Other vehicle turns right across path of P2W	0	1	82	3	12	1	1	1	1	0	*(1)*	**102**	**15.1%**
	Other vehicle disobeys junction control and turns right into path of P2W	1	0	87	2	5	1	0	1	1	0	*(4)*	**98**	**14.5%**
	P2W loses control (and may hit other vehicle)	0	2	12	0	1	0	0	1	0	26	*(3)*	**42**	**6.2%**
	P2W runs into rear of other vehicle	0	1	32	0	6	0	0	0	0	0	*(4)*	**39**	**5.8%**
	Other vehicle u-turns into path of P2W	0	0	25	4	4	1	2	0	2	0	*(3)*	**38**	**5.6%**
	P2W performs overtaking manoeuvre into path of right turning vehicle	1	0	27	3	3	0	0	0	2	0	*(2)*	**36**	**5.3%**
	Other vehicle changes lane (o/s or n/s) across the path of P2W	1	0	20	1	6	2	0	1	0	0	*(3)*	**31**	**4.6%**
	Other vehicle fails to give way or disobeys junction control and collides with P2W	1	0	20	2	1	0	0	0	3	0	*(2)*	**27**	**4.0%**

Conflict between powered two wheeler and:														
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle ****	**Total Collisions**	**%**
	Head on collision between P2W and other vehicle	0	2	15	1	1	0	0	0	0	0	-	**19**	**2.8%**
	P2W loses control and hits kerb, barrier or wall etc.	0	0	2	0	0	1	0	0	0	14	*(1)*	**17**	**2.5%**
	P2W loses control and may hit other vehicle - road surface condition/spillage/weather	0	0	1	0	0	0	0	0	0	16	-	**17**	**2.5%**
	Other vehicle runs into rear of P2W	0	2	8	1	0	1	1	2	0	0	*(4)*	**15**	**2.2%**
	P2W collides with other vehicle or loses control while overtaking	1	1	11	1	1	0	0	0	0	0	*(2)*	**15**	**2.2%**
	Other vehicle disobeys junction control and turns left into path of P2W	0	0	13	1	0	0	0	0	0	0	*(1)*	**14**	**2.1%**
	P2W and other vehicle travelling too close alongside each other	0	1	11	0	1	0	0	0	0	0	*(2)*	**13**	**1.9%**
	P2W fails to give way or disobeys junction control and collides with other vehicle	0	0	12	0	0	0	0	0	0	0	*(3)*	**12**	**1.8%**

Conflict between powered two wheeler and:														
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle ****	**Total Collisions**	**%**
	P2W strikes pedestrian at or within 50m of a formal pedestrian crossing	0	1	1	0	0	0	0	0	0	10	*(1)*	**12**	**1.8%**
	P2W strikes pedestrian not at or within 50m of a formal pedestrian crossing - crossing road	0	0	2	0	0	0	0	0	0	9	-	**11**	**1.6%**
	P2W loses control, mounts kerb & hits road side object or street furniture	0	0	1	0	1	0	0	0	0	9	-	**11**	**1.6%**
	Other vehicle turns left across the path of P2W user	0	0	9	0	1	0	0	0	1	0	-	**11**	**1.6%**
	P2W loses control and hits parked vehicle	0	1	8	0	0	0	0	0	1	0	*(3)*	**10**	**1.5%**
	P2W hits open door / swerves to avoid open door of other vehicle.	0	0	7	2	1	0	0	0	0	0	*(1)*	**10**	**1.5%**
	P2W brakes and/or swerves to avoid (uninjured) pedestrian	0	0	8	0	1	0	0	0	0	0	-	**9**	**1.3%**
	Other vehicle starts off or pulls out into path of P2W	0	0	6	0	1	0	0	1	0	0	*(1)*	**8**	**1.2%**

		Conflict between powered two wheeler and:												
Conflict	**Description**	**Pedal cycle**	**Powered two wheeler**	**Car**	**Taxi/Private Hire**	**Goods under 3.5t**	**Goods 3.5t to 7.5t**	**Goods over 7.5t**	**Bus or coach**	**Other vehicle**	**No other vehicle**	***Multiple vehicle ****	**Total Collisions**	**%**
	P2W changes lane (o/s or n/s) across path of other vehicle	0	0	5	0	0	0	0	1	0	0	-	**6**	**0.9%**
	Vehicle reverses into powered two wheeler	0	0	4	0	1	0	0	0	0	0	-	**5**	**0.7%**
	P2W and other vehicle collide when both turning left or right	0	0	4	0	0	0	0	0	0	0	-	**4**	**0.6%**
	P2W turns right across path of other vehicle	0	0	2	0	0	0	0	1	0	0	-	**3**	**0.4%**
	P2W disobeys junction control and turns right into path of other vehicle	0	0	1	0	2	0	0	0	0	0	-	**3**	**0.4%**
	P2W disobeys junction control and turns left into path of other vehicle	0	0	1	1	0	0	0	0	0	0	*(1)*	**2**	**0.3%**
Various	other P2W accidents	0	0	7	0	2	0	0	0	1	2	*(2)*	**12**	**1.8%**
	Insufficient details available	0	0	19	0	1	0	1	0	0	2	-	**23**	**3.4%**
	Total	**5**	**12**	**463**	**22**	**52**	**7**	**5**	**9**	**12**	**88**	*(44)*	**675**	**100%**

*collisions involving three or more vehicles - the main vehicle in such collisions is recorded in the relevant column

What is the cost?

Based on the average cost of motorised two-wheeler rider and passenger casualties as published by the Department for Transport in the *Accidents Sub-Objective* (Transport Analysis Guidance Unit 3.4.1), the cost to the community of P2W user casualties in 2008 is estimated at around £430 million at December 2008 prices.

P2W casualties averaged 12 a day in Greater London in 2008, with a subsequent cost to the community of approximately £1.2 million per day.

Background documents

- Transport Statistics Bulletin Road Casualties Great Britain Main Results: 2008 (Department for Transport)
  http://www.dft.gov.uk/adobepdf/162469/221412/221549/227864/479748/rcgbmainresults08.pdf

- Transport Analysis Guidance (TAG) Unit 3.4.1 – The Accidents Sub-Objective (Department for Transport – April 2009)
  http://www.dft.gov.uk/webtag/webdocuments/3_Expert/4_Safety_Objective/pdf/3.4.1.pdf

- Radial Traffic Movements in London 1980 to 2008 (TfL - unpublished)

- Licensed vehicles in Greater London 1981 to 2008 (Department for Transport)

- DfT National Road Traffic Survey data

Copies of reports and research published by LRSU can be found at –
www.tfl.gov.uk/londonroadsafety

Prepared by: Sandra Cowland, London Road Safety Unit

Reviewed by: John Devenport, London Road Safety Unit

Cleared by: Ben Plowden
Director, Integrated Programme Delivery