

ASSOCIATION OF GREATER MANCHESTER AUTHORITIES

GREATER MANCHESTER TRANSPORTATION UNIT

Transport Statistics Rochdale 2008

GMTU Report 1481 November 2009

SUMMARY

This report complements GMTU Reports 1476, 'Transport Statistics Greater Manchester 2008' and 1517, 'Road Casualty Statistics Greater Manchester 2008'. It focuses on the statistics for Rochdale and compares them to those for Greater Manchester where appropriate.

It includes:

- lists and diagrams of traffic flows on major road links
- summaries of traffic profiles at automatic traffic counter sites
- diagrams showing road accident locations by type of accident

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The Greater Manchester Transportation Unit provides a strategic and local transportation service to and on behalf of the ten district councils of Greater Manchester. The unit is funded by the ten districts and attached to Manchester City Council as lead authority.

BOLTON, BURY, MANCHESTER, OLDHAM, ROCHDALE, SALFORD, STOCKPORT, TAMESIDE, TRAFFORD, WIGAN

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1. INTRODUCTION AND SUMMARY

- 1.1 This report has been written to complement GMTU Reports 1476, 'Transport Statistics Greater Manchester 2008' and 1517, 'Road Casualty Statistics Greater Manchester 2008'. Whereas those reports present statistics for Greater Manchester, this report focuses on Rochdale and compares it to Greater Manchester where appropriate.
- 1.2 The key points from this report are summarised below.

Key Facts

- Rochdale has a population of 206,100 and covers an area of 158 square kilometres.
- There are 788 km of road consisting of 24 km motorway, 80 km A road, 25 km B road, 34 km other classified road and 625 km unclassified road.
- The average daily flow per kilometre is 95,000 vehicles on motorways, 15,300 on A roads and 11,200 on B roads.
- There were 571 injury accidents in Rochdale during 2008 resulting in 801 casualties. There were 84 killed or seriously injured (KSI) casualties.
- Rochdale has been awarded an allocation of £4.55 million through the LTP process for 2009/10, £1.20 million for integrated transport and £3.35 million for maintenance.

Traffic Flows

- The highest estimated 24-hour Annual Average Weekday Traffic (AAWT) flow was 142,900 vehicles on the M62 between Junctions 19 and 20.
- The busiest all-purpose road was the A58 Manchester Road in Sudden where the estimated 24-hour AAWT flow reached 47,000 vehicles on the stretch just east of Edinburgh Way.
- The site with the highest 12-hour pedal cycle flow was the A58 Halifax Road in Smallbridge with 147 cycles recorded between 07:00 and 19:00.
- The average 12-hour A and B road pedal cycle flows in Rochdale are 56 and 37 cycles respectively, lower than the Greater Manchester averages of 89 and 90.

Traffic Growth

- 24-hour weekday flows on motorways in Rochdale decreased by 3% between 2007 and 2008 compared to a 1% decrease in Greater Manchester as a whole.
- 12-hour weekday flows on A and B roads in Rochdale remained unchanged between 2007 and 2008 while the average for Greater Manchester fell by 2%.

- Since 1993, traffic flows on A and B roads in Rochdale have increased by 6% compared to no change in Greater Manchester and a 3% increase nationally.

Annual Vehicle Kilometres

- 832 million vehicle kilometres were travelled on motorways, 446 million on A roads and 98 million on B roads.
- Motorways, A roads and B roads in Rochdale carried 10% of the major road traffic in Greater Manchester on 9% of the major road network.

Traffic Composition

- Motorways: 71% cars, 14% light goods vehicles (LGVs) and 15% other goods vehicles (OGVs).
- A roads: 81% cars, 13% LGVs and 4% OGVs.
- B roads: 83% cars, 12% LGVs and 2% OGVs.
- Minor roads: 83% cars, 12% LGVs and 2% OGVs.
- Traffic composition on Rochdale's major road network was broadly similar to Greater Manchester.

Rail Patronage

- The number of boarders travelling inbound to Manchester on the Rochdale/Oldham line in 2008 was 1,500 in the peak (07:30-09:30) and 1,400 in the off-peak (09:30-13:30). These figures represent a decrease of 3% and increase of 16% respectively since 2007, and increases of 22% and 18% respectively since 1991.

Bus Mileage

- 4.5 million bus miles were operated in Rochdale in 2007. This was 4% less than the 2006 level (4.7 million) but 15% more than the pre-deregulation level (3.9 million) in 1985.
- Rochdale accounted for 7% of Greater Manchester bus mileage. 25% of Rochdale's bus miles were subsidised as opposed to 20% across Greater Manchester.

Key Centre Monitoring

- All traffic flows in all time periods fell back to just below their 1997 levels between 2008 and 2009.
- The number of vehicles crossing the cordon into Rochdale Key Centre in 2009 was about 4,300 in the morning peak, 4,000 in the off-peak and 3,500 in the evening peak, representing decreases of 3%, 4% and 7% respectively from vehicle numbers in 1997.

- The inbound modal share in 2009 was 57% car and 43% non-car in the morning peak, 51% car and 49% non-car in the off peak and 55% car and 45% non-car in the evening peak.

Automatic Traffic Counts at Rochdale Key Centre Cordon Sites

- There has been a 6% decrease in both weekday morning peak flows and 24-hour average weekday flows between the base year (2006/07) and 2008/09.

Road Traffic Casualties

- The total number of reported injury accidents in Rochdale was 571 in 2008, 40% lower than the average from the base years (1994-1998) and 3% lower than the 590 in 2007.
- The total number of casualties in Rochdale was 801 in 2008, 39% lower than the average from the base years (1994-1998) and 5% lower than the 847 in 2007.
- There were 84 killed or seriously injured (KSI) in 2008 compared with an average of 107 KSI in the base years.
- The 2006-2008 three-year average used for monitoring KSI GMLTP2 targets was 31% below the base years average.
- The 2006-2008 three-year average for child KSI casualties was 64% below the baseline average and 23% below the 2010 GMLTP2 target.
- Slight casualties in 2008 were 41% below the baseline average and 15% below the 2010 GMLTP2 target.

Congestion

- Since 2005, average journey time rates have decreased during the morning and evening peak hours and there has been no change in average 07:00 – 19:00 journey time rates.
- Average journey times in 2007/08 were shorter in Rochdale than in Greater Manchester in all time periods.
- 2007/08 average speeds in Rochdale were faster than in Greater Manchester in all time periods.
- The slowest roads in the morning peak (08:00-09:00) were concentrated in the town centre (in particular the approaches to the Town Head junction from the A671 Whitworth Road and A58 Yorkshire Street), at junctions with radial routes between the town centre and the M62 (i.e. north-west bound on the A664 Edinburgh Way) and Heywood centre.

2. ROAD TRAFFIC

Traffic Flows 2008

- 2.1 Road traffic figures and traffic growth for Rochdale must be treated with caution since the sample size for a single district is smaller than for the county as a whole. Appendix 1 gives 24-hour annual average weekday traffic (AAWT) flows and the most recent 12-hour (07:00-19:00) pedal cycle flow information for all major road links in Rochdale.
- The busiest motorway section was on the M62 between Junctions 19 and 20 where the traffic flow reached an estimated 142,900 vehicles.
 - The busiest all-purpose road was the A58 Manchester Road in Sudden where flows reached an estimated 47,000 vehicles on the stretch just east of Edinburgh Way.
 - The second list in Appendix 1 shows that the road with the highest recorded pedal cycle flow is the A58 Halifax Road in Smallbridge with 147 cycles between 07:00 and 19:00.
 - The average 12-hour A road pedal cycle flow in Rochdale was 56. The average B road pedal cycle flow was 37. These are considerably lower than the Greater Manchester averages of 89 and 90 respectively.

Motorway Traffic Growth 2007-2008

- 2.2 Due to insufficient reliable manual count data, motorway traffic growth has been calculated using a combination of manual counts and 24-hour average weekday ATC data supplied by the Highways Agency. ATC data is unclassified and goods vehicle estimates are based on the most recent manual counts factored to 2007 or 2008. Combined goods vehicle flow differences are thought to be more reliable than LGV and OGV differences.
- 2.3 Table 1 gives 24-hour average weekday flows on six motorway sections in Rochdale for which ATC or manual data were available in both 2007 and 2008, together with percentage changes in flow since 2007. It also gives countywide figures based on 43 motorway sections.
- Traffic flow at the surveyed sites showed an average decrease of 3% since 2007, compared to a countywide decrease of 1%.

Table 1 Average 24-Hour Weekday Motorway Flows in 2008 with Percentage Changes Since 2007									
		LGV	%	OGV	%	All Goods	%	All Motors	%
M60	Bet Jns 19 & 20	16600	(4)	8100	(-6)	24700	(0)	90200	(7)
M60	Bet Jns 20 & 21	12500	(-12)	8800	(32)	21300	(2)	84000	(0)
M62	Bet Jns 18 & 19	17900	(-23)	23800	(6)	41700	(-9)	141100	(-2)
M62	Bet Jns 20 & 21	16400	(-5)	22200	(22)	38600	(9)	119100	(-2)
M62	Bet Jns 21 & 22	15400	(0)	17800	(0)	33100	(0)	109000	(-1)
A627(M)	Bet Slattocks Link Rd & M62 Jn 20	8200	(-2)	4900	(-2)	13200	(-2)	51300	(-3)
Rochdale Sample		14500	(-8)	14300	(8)	28800	(0)	99100	(-3)
GM 43 links		14900	(-2)	11100	(6)	26000	(1)	107500	(-1)

A and B Road Traffic Growth 2007-2008

2.4 Table 2 gives average 12-hour traffic flows on A and B roads in Rochdale and Greater Manchester in 2008 together with percentage changes since 2007. The figures for A and B road growth are based on counts on 15 of the 65 A and B road links in Rochdale.

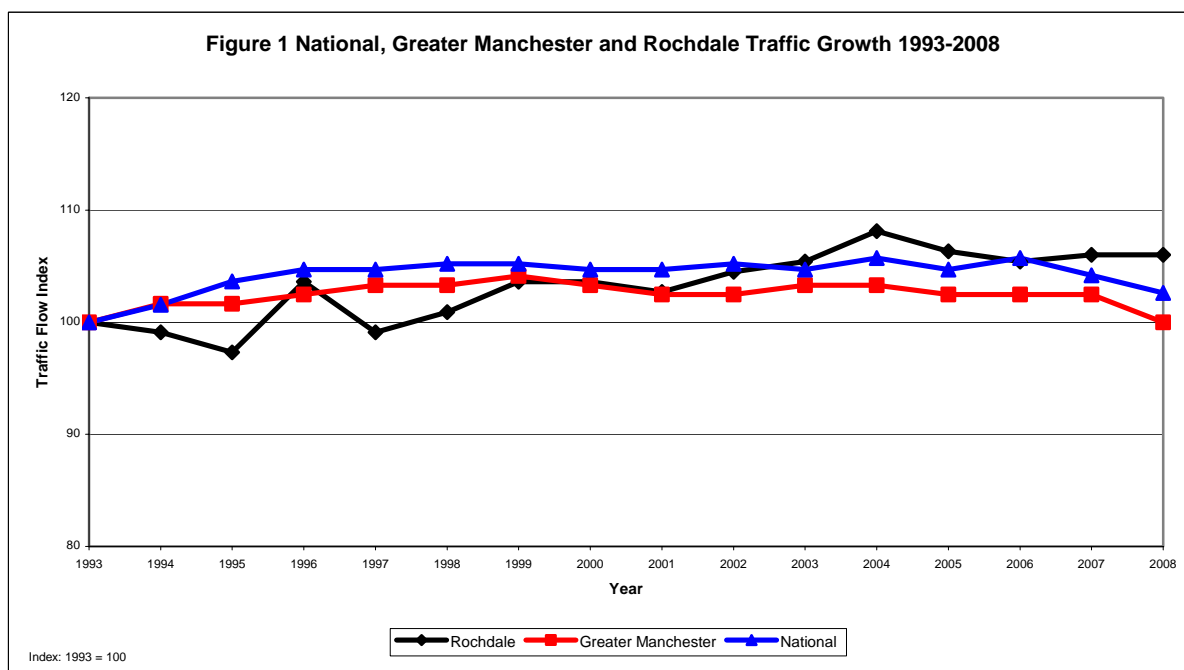
- Motor traffic in Rochdale remained unchanged between 2007 and 2008, while the average for Greater Manchester as a whole decreased by 2%.

Table 2 Average 12-Hour Weekday A and B Traffic Flows in 2008 with Percentage Changes Since 2007						
	No. of Sites	Cars (%)	LGV (%)	OGV (%)	All Motors (%)	
Rochdale	15	10099 (0)	1502 (-4)	399 (1)	12300 (0)	
Greater Manchester	166	12080 (-1)	1841 (-2)	483 (-2)	14739 (-2)	

Traffic Growth Since 1993

2.5 Table 3 and Figure 1 illustrate local and national traffic growth since 1993. Traffic growth for Rochdale and Greater Manchester is based on 12-hour average weekday flows on a sample of A and B road links throughout Rochdale and Greater Manchester. National growth is based on average 24-hour daily traffic flow data for major urban A roads published in Table 3.3 Road Statistics 2008: Traffic, Speeds and Congestion DfT.

- Since 1993 traffic has grown by 6% in Rochdale, remained unchanged in Greater Manchester and grown by 3% nationally.



	Rochdale	Greater Manchester	National
1993	100	100	100
1994	99	102	102
1995	97	102	104
1996	104	102	105
1997	99	103	105
1998	101	103	105
1999	104	104	105
2000	104	103	105
2001	103	102	105
2002	105	102	105
2003	105	103	105
2004	108	103	106
2005	106	102	105
2006	105	102	106
2007	106	102	104
2008	106	100	103

Index: 1993 = 100

Notes: Traffic growth for Rochdale and Greater Manchester has been based on 12-hour average weekday flows on a sample of A and B road links throughout Rochdale and Greater Manchester. 1993 – 2008 National growth is based on average 24-hour daily traffic flow data for major urban A Roads published in Table 3.3 Road Traffic Statistics 2008: Traffic, Speeds and Congestion DfT.

Annual Vehicle Kilometres 2008

2.6 Table 4 shows annual vehicle kilometres on major roads in Rochdale and Greater Manchester in 2008.

- Motorways (including the A627(M)) made up 19% of Rochdale's major road network and carried 60% of the traffic. These figures are higher than for the county as a whole where motorways made up 12% of the major road network and carried 45% of major road traffic.
- Motorways carried 78% of all goods traffic on major roads in Rochdale. This is much higher than for Greater Manchester as a whole where motorways carried 62% of all major road goods traffic.
- A roads made up 63% of Rochdale's major road network and carried 32% of the traffic. A roads in Greater Manchester as a whole made up 61% of the network and carried 44% of the traffic.
- B roads made up 19% of Rochdale's network and carried 7% of the traffic. These figures are lower than the respective proportions for Greater Manchester as a whole where B roads formed 27% of the major roads and carried 11% of the traffic.
- Motorways, A roads and B roads in Rochdale carried 10% of the major road traffic in Greater Manchester on 9% of the road network.

Table 4 Vehicle Kilometres in 2008								
	Road Type	Length (km)	Vehicle Kilometres (millions)					Av. Daily Flow per km
			Cars	LGV	OGV	All Goods	All Motors	
Rochdale	Motorways	24	582	118	126	244	832	95000
	A Roads	80	381	44	12	56	446	15300
	B Roads	24	86	9	2	11	98	11200
	All Roads	128	1049	171	140	311	1376	29500
Greater Manchester	Motorways	171	4373	822	651	1472	5882	94200
	A Roads	863	4967	561	184	745	5819	18500
	B Roads	375	1289	134	27	160	1479	10800
	All Roads	1409	10629	1517	862	2377	13180	25600

Notes: Figures may not sum due to rounding. Road lengths are based on the link lengths of a model road network and may differ slightly from other sources, eg Greater Manchester Network Information System (GMNIS) and as quoted by DfT form R199b.

Traffic Composition 2008

2.7 Table 5 shows the percentage composition of traffic in Rochdale in 2008 compared to the county as a whole.

- Traffic composition on Rochdale's major road network was broadly similar to Greater Manchester.
- Motorways in Rochdale carried fewer cars and more goods vehicles than the average across Greater Manchester.

Table 5 Percentage Composition of Traffic in Rochdale and Greater Manchester 2008 (0700-1900)										
		Cars	LGV	OGV1		OGV2		Buses and Coaches	Motor Cycles	Pedal Cycles
Rochdale	Motorways	70.5	13.7	6.0	(40)	9.1	(60)	0.3	0.4	0.0
	A Roads	81.1	12.5	2.9	(72)	1.1	(28)	1.4	0.6	0.4
	B Roads	82.7	11.7	1.9	(83)	0.4	(17)	2.4	0.6	0.4
	Minor Roads	82.8	11.5	1.6	(77)	0.5	(23)	2.1	0.6	0.8
Greater Manchester	Motorways	75.0	13.7	5.2	(49)	5.5	(51)	0.3	0.3	0.0
	A Roads	80.9	12.2	2.9	(67)	1.4	(33)	1.6	0.6	0.5
	B Roads	82.8	11.7	1.6	(73)	0.6	(27)	1.8	0.5	0.9
	Minor Roads	83.8	11.0	1.5	(76)	0.5	(24)	1.7	0.5	1.0

Notes: LGV = Commercial Vehicles with 2 axles and up to 6 wheels without a side bar.
 OGV1 = Medium Goods Vehicles with 2 axles and up to 6 wheels with a side bar and Heavy Goods Vehicles with 3 axles.
 OGV2 = Heavy Goods Vehicles with 4 or more axles.
 Figures in parentheses are the percentage split between OGV1 and OGV2.
 Figures may not sum due to rounding.

3. PUBLIC TRANSPORT

Rail Patronage

3.1 Tables 6 and 7 compare rail patronage on the Rochdale/Oldham corridor and in Greater Manchester as a whole in the years 1991 and 1998-2008. Comparisons are based on boarders of trains inbound to Manchester.

- The number of Manchester bound boarders on the Rochdale/Oldham corridor decreased by 3% in the peak period and increased by 16% in the off-peak period between 2007 and 2008. This compares with increases of 2% and 4% in the peak and off-peak periods respectively for Greater Manchester as a whole.

Line	1991	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rochdale/Oldham	1200	1031	1268	1377	1383	1133	1322	1572	1619	1437	1518	1442
Index	100	86	106	115	115	94	110	131	135	120	127	120
Greater Manchester	9808	9877	11177	11171	11290	10222	11448	12399	13286	13422	14400	14635
Index	100	101	114	114	115	104	117	126	135	137	147	149

Line	1991	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rochdale/Oldham	632	586	681	795	881	727	918	986	1023	1120	1192	1389
Index	100	93	108	126	139	115	145	156	162	177	189	220
Greater Manchester	4536	4911	5826	5779	6392	5599	7095	6959	7558	8631	9243	9650
Index	100	108	128	127	141	123	156	153	167	190	204	213

Notes:

Figures for 1991 are based on full counts at every station in each corridor. Rochdale/Oldham figures for 1998, 2001, 2004, 2007 and 2008 are also based on counts at every station. All other figures are estimates based on all available counts each year.

Industrial Action:

There was sustained industrial action in 2002 by employees of First North Western and Arriva. While the surveys avoided all strike days, the work to rule by First North Western staff in particular may have had an effect on passenger numbers.

3.2 Table 8 shows numbers of passengers boarding and alighting trains inbound and outbound from Manchester at all stations in Rochdale for the most recent year in which data has been collected.

3.3 Tables 9 and 10 show passengers boarding and alighting Manchester bound trains in Rochdale in 1991 and 1998-2008 in the morning peak (07:30-09:30) and off-peak (09:30-13:30) respectively. All stations in Rochdale are shown with passenger details where available.

Station	Year of Count	AM Peak 07:30-09:30					Off-Peak 09:30-13:30				
		Inbound		Outbound		AM Peak Total	Inbound		Outbound		Off Peak Total
		B	A	B	A		B	A	B	A	
Rochdale ¹	2008	451	76	62	96	685	511	85	51	149	796
Castleton	2008	98	18	12	16	144	82	6	11	8	107
Littleborough	2008	138	6	21	21	186	116	7	14	30	167
Milnrow	2008	40	2	36	5	83	37	10	36	13	96
Mills Hill	2008	172	8	16	11	207	121	12	14	37	184
Newhey	2008	23	4	14	1	42	18	3	9	4	34
Smithy Bridge	2008	84	0	7	4	95	81	3	8	27	119

Notes: B = Boarders A = Alighters

¹Rochdale inbound patronage includes patronage via Oldham.

Station		1991	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rochdale	B	322	267	378	339	394	302	355	402	604	486	506	451
	A	-	118	108	66	70	68	76	109	116	100	80	76
Castleton	B	42	38	-	-	57	-	-	74	-	-	93	98
	A	-	11	-	-	11	-	-	14	-	-	15	18
Littleborough	B	63	85	84	92	140	115	138	141	141	160	167	138
	A	-	0	5	1	1	2	1	4	6	11	1	6
Milnrow	B	72	63	-	-	53	-	-	19	-	-	44	40
	A	-	6	-	-	3	-	-	4	-	-	6	2
Mills Hill	B	124	102	114	91	90	88	96	180	153	139	138	172
	A	-	6	8	8	4	0	8	10	7	7	3	8
Newhey	B	31	30	-	-	42	-	-	34	-	-	26	23
	A	-	0	-	-	1	-	-	0	-	-	2	4
Smithy Bridge	B	65	54	-	-	77	-	-	104	-	-	111	84
	A	-	4	-	-	2	-	-	4	-	-	2	0

Notes: B = Boarders A = Alighters

From Rochdale, Manchester bound trains include those travelling via Oldham.

- = No counts available.

Station		1991	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rochdale	B	254	205	244	293	328	255	309	400	447	436	438	511
	A	-	100	121	117	143	60	69	151	110	78	118	85
Castleton	B	28	18	-	-	13	-	-	32	-	-	54	82
	A	-	1	-	-	4	-	-	4	-	-	12	6
Littleborough	B	44	44	56	48	98	55	113	86	76	124	90	116
	A	-	2	4	2	2	7	3	5	6	4	2	7
Milnrow	B	21	4	-	-	37	-	-	40	-	-	27	37
	A	-	5	-	-	3	-	-	11	-	-	7	10
Mills Hill	B	12	38	42	37	67	47	45	59	64	79	96	121
	A	-	3	2	4	2	2	0	9	2	2	4	12
Newhey	B	19	11	-	-	8	-	-	8	-	-	13	18
	A	-	1	-	-	0	-	-	0	-	-	4	3
Smithy Bridge	B	65	27	-	-	43	-	-	39	-	-	61	81
	A	-	0	-	-	9	-	-	6	-	-	2	3

Notes: B = Boarders A = Alighters

From Rochdale, Manchester bound trains include those travelling via Oldham.

- = No counts available.

Bus Mileage

- 3.4 The information for bus mileage is based on a bus registration database maintained by the GMPTE. These figures reflect the services as registered by bus operators.
- 3.5 GMPTE have revised this database and data for 2008 are not presently available in a form comparable with previous years' data. Therefore the latest data shown in the trend tables in this report are for 2007.
- 3.6 GMTU does not currently undertake bus patronage monitoring except for scheme-specific monitoring. Any information on trends in bus patronage should be obtained from GMPTE.
- 3.7 Table 11 shows commercial and subsidised annualised bus mileage from 2002 to 2007 and in 1985 (pre-deregulation year).
- Total bus mileage in Rochdale fell by 4% between 2006 and 2007 although subsidised mileage remained unchanged.
 - 7% of Greater Manchester bus mileage is operated in Rochdale.

Table 11 Commercial and Subsidised Annualised Bus Mileage in Millions, 2002-2007 and 1985 (pre-deregulation year)							
	Nov 85	Nov 02	Nov 03	Nov 04	Nov 05	Nov 06	Nov 07
Rochdale							
Commercial Mileage	-	4.3 (84)	4.6 (86)	3.0 (78)	3.4 (72)	3.6 (76)	3.4 (75)
Subsidised Mileage	-	0.8 (16)	0.8 (14)	0.8 (22)	1.3 (28)	1.1 (24)	1.1 (25)
Total Mileage	3.9	5.1	5.4	3.9	4.7	4.7	4.5
Greater Manchester							
Commercial Mileage	-	62.0 (83)	58.6 (81)	56.0 (81)	55.7 (79)	57.0 (80)	53.3 (80)
Subsidised Mileage	-	12.9 (17)	13.4 (19)	13.5 (19)	14.7 (21)	14.3 (20)	13.7 (20)
Total Mileage	65.3	74.9	72.0	69.4	70.4	71.3	66.9

Notes: Sum of commercial and subsidised mileage may not equal the total mileage due to rounding. Figures in parentheses are the percentage of the total mileage.

- 3.8 Table 12 shows bus mileage by time of day and day of week in Rochdale and Greater Manchester.
- Although it has seen a reduction since 2005, weekday off-peak bus mileage in Rochdale remains 56% above the 1985 (pre-deregulation year) level, while Greater Manchester as a whole saw an increase of 38% in this period.
 - Bus mileage in Rochdale has increased by 4% on weekday evening but has fallen in all other day/time periods between 2006 and 2007.

Year	1985	2002	2003	2004	2005	2006	2007	Index 2007
Day/Time Period								
Rochdale								
Weekday 07:00-0900	1860	2470	2650	2100	2420	2210	2050 (81)	110
Weekday 10:00-15:00	3360	6450	6640	4780	5650	5510	5230 (78)	156
Weekday 20:00-22:00	730	500	560	360	540	540	560 (51)	77
Saturday	10630	13030	14160	10010	12380	12380	12070 (75)	114
Sunday	5560	4120	4730	3040	4510	4720	4530 (60)	81
Greater Manchester								
Weekday 07:00-0900	32800	34670	33280	32720	32820	31770	29640 (84)	90
Weekday 10:00-15:00	55090	85900	82730	79090	79870	80180	75810 (83)	138
Weekday 20:00-2200	13640	9780	9070	8740	9090	9350	8710 (46)	64
Saturday	178130	202830	194920	186170	187740	190880	177520 (80)	100
Sunday	99650	75710	74920	72540	76870	81740	76370 (65)	77
Rochdale as a % of Greater Manchester								
Weekday 07:00-0900	5.7	7.1	8.0	6.4	7.4	7.0	6.9	
Weekday 10:00-15:00	6.1	7.5	8.0	6.0	7.1	6.9	6.9	
Weekday 20:00-2200	5.4	5.1	6.2	4.1	5.9	5.8	6.4	
Saturday	6.0	6.4	7.3	5.4	6.6	6.5	6.8	
Sunday	5.6	5.4	6.3	4.2	5.9	5.8	5.9	

Notes: Figures in parentheses give the percentage of mileage operated commercially in 2007. Index 2007 based on 1985 = 100.

4. KEY CENTRE MONITORING

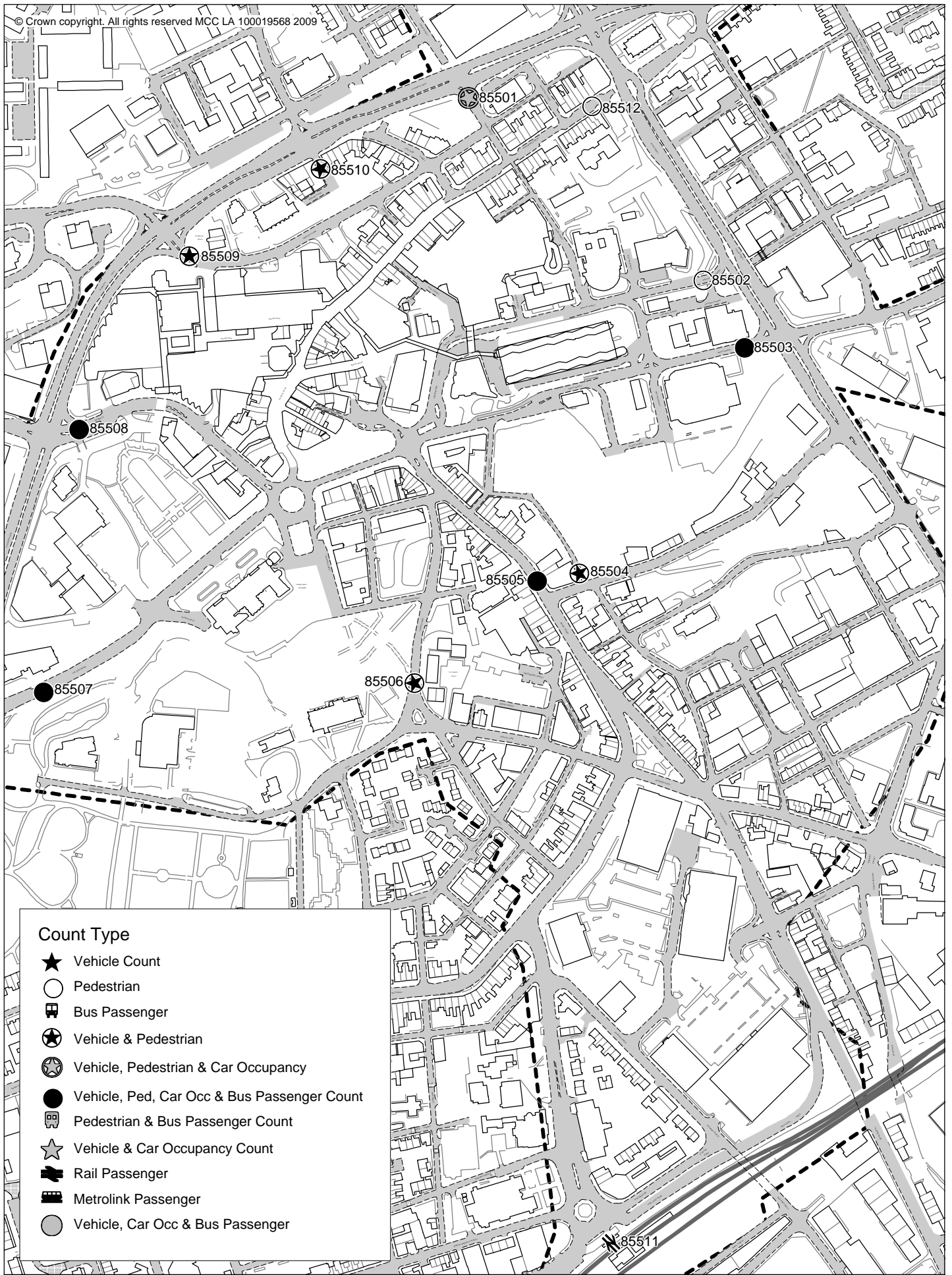
- 4.1 Traffic and rail counts were conducted on a cordon around Rochdale in 1997. Since then, Rochdale has been surveyed on a three yearly cycle (1999, 2002, 2005 and 2008) to monitor progress towards key objectives in the first Greater Manchester Local Transport Plan (GMLTP) and its successor, GMLTP2. Pedestrian surveys were added to the programme in 2002. From 2008, all these surveys will be conducted annually.
- 4.2 Tables providing details of road traffic and modal share trends are presented in this report. Before 2008, CPS (Continuous Passenger Sampling) data had been used to estimate bus trips. However this data was not designed to give an accurate picture of bus passengers at a local level and since 2008, counts of bus passengers crossing the cordon have been conducted.

Road Traffic - Inbound

- 4.3 All vehicles crossing a cordon into Rochdale key centre were counted in the three time periods 07:30-09:30, 10:00-12:00 and 16:00-18:00 on a typical weekday in April 2009.
- 4.4 Tables 13 to 15 show manual traffic counts at each individual cordon site in April 2009 by time period. Figure 2 shows the location of these sites and the key centre boundary.

Site	Site No	Car	LGV	OGV	Bus	Motor Cycle	Pedal Cycle	All Vehicles
U Union St	85501	958	81	7	4	4	0	1054
B6266 Smith St	85503	557	40	12	47	1	5	662
U River St	85504	33	8	0	0	0	1	42
B6223 Drake St	85505	724	69	20	97	8	7	925
U Church Ln	85506	76	9	6	0	1	0	92
B6266 The Esplanade	85507	503	38	13	25	6	2	587
U Newgate	85508	433	50	17	26	3	4	533
U Hunter S Ln	85509	303	19	5	0	2	1	330
U Howard Place	85510	39	7	0	0	0	3	49
Other Cycles							5	5
Total		3626	321	80	199	25	28	4279
% Composition		84.7	7.5	1.9	4.7	0.6	0.7	100.0

Note: Percentages may not sum to 100 due to rounding.



Count Type

- ★ Vehicle Count
- Pedestrian
- ☒ Bus Passenger
- ★⊙ Vehicle & Pedestrian
- ⊙⊙ Vehicle, Pedestrian & Car Occupancy
- Vehicle, Ped, Car Occ & Bus Passenger Count
- ☒⊙ Pedestrian & Bus Passenger Count
- ★⊙ Vehicle & Car Occupancy Count
- ☒ Rail Passenger
- ☒ Metrolink Passenger
- Vehicle, Car Occ & Bus Passenger

Rochdale Survey Sites and Key Centre Boundary

Site	Site No	Car	LGV	OGV	Bus	Motor Cycle	Pedal Cycle	All Vehicles
U Union St	85501	961	75	7	4	2	1	1050
B6266 Smith Street	85503	390	38	14	47	2	0	491
U River Street	85504	25	5	1	0	0	0	31
B6223 Drake Street	85505	673	80	24	92	3	2	874
U Church Lane	85506	104	14	2	0	0	0	120
B6266 The Esplanade	85507	427	38	13	18	2	1	499
U Newgate	85508	331	44	11	20	2	1	409
U Hunter's Lane	85509	403	19	5	0	0	0	427
U Howard Place	85510	46	6	1	0	0	0	53
Other Cycles							1	1
Total		3360	319	78	181	11	6	3955
% Composition		85.0	8.1	2.0	4.6	0.3	0.2	100.0

Note: Percentages may not sum to 100 due to rounding.

Site	Site No	Car	LGV	OGV	Bus	Motor Cycle	Pedal Cycle	All Vehicles
U Union St	85501	708	64	0	5	4	0	781
B6266 Smith St	85503	399	24	3	45	2	1	474
U River St	85504	58	10	0	0	0	0	68
B6223 Drake St	85505	689	72	1	100	3	6	871
U Church Ln	85506	171	11	1	0	0	0	183
B6266 The Esplanade	85507	399	39	4	15	5	5	467
U Newgate	85508	355	37	7	23	6	0	428
U Hunter S Ln	85509	201	18	0	0	1	2	222
U Howard Place	85510	34	0	0	0	0	1	35
Other Pedal Cycles							7	7
Total		3014	275	16	188	21	22	3536
% Composition		85.2	7.8	0.5	5.3	0.6	0.6	100.0

Note: Percentages may not sum to 100 due to rounding.

4.5 Table 16 gives total traffic entering Rochdale key centre in 1997, 1999, 2002, 2005, 2008 and 2009 together with indices of change between 1997 and 2009. Historic bus passenger data have been adjusted to be consistent with the new survey methodology but it should be noted that the trends are still based on CPS data.

- Results show a decrease in traffic flows in all time periods between 2008 and 2009.
- All traffic flows in all periods fell back to just below their 1997 levels in 2009.

		Cars	LGV	OGV	Buses	M/C	P/C	All
07:30-09:30	1997	3671	307	137	251	12	30	4408
	1999	3673	326	83	261	14	32	4389
	2002	3813	361	78	263	27	21	4563
	2005	3757	335	88	198	10	24	4412
	2008	3868	364	87	221	12	16	4568
	2009	3626	321	80	199	25	28	4279
	2009/1997	0.99	1.05	0.58	0.79	2.08	0.93	0.97
10:00-12:00	1997	3433	332	125	208	10	17	4125
	1999	3754	376	75	231	20	11	4467
	2002	3785	372	91	253	22	12	4535
	2005	3470	315	79	187	24	15	4090
	2008	3486	384	75	198	4	10	4157
	2009	3360	319	78	181	11	6	3955
	2009/1997	0.98	0.96	0.62	0.87	1.10	0.35	0.96
16:00-18:00	1997	3188	282	46	240	20	26	3802
	1999	3101	230	30	255	14	28	3658
	2002	3506	260	19	262	13	19	4079
	2005	3140	252	15	203	13	13	3636
	2008	3395	313	30	210	10	13	3971
	2009	3014	275	16	188	21	22	3536
	2009/1997	0.95	0.98	0.35	0.78	1.05	0.85	0.93

Car Occupancy - Inbound

4.6 Car occupancy surveys were conducted at five sites on the Rochdale key centre cordon in April 2009. Table 17 shows the observed occupancy rates by period and site for inbound vehicles. Table 18 compares inbound occupancy rates for 2002, 2005, 2008 and 2009.

- The average occupancy rates were 1.41 in the morning peak, 1.48 in the off-peak and 1.53 in the evening peak.
- Car occupancy rates changes very little during all time periods between 2002 and 2009.

Table 17 Rochdale Key Centre Inbound Car Occupancy Rates 2009		
Site & Location	07:30-09:30	
	% Driver Only	Ave Occupancy
85501 U Union St	67	1.42
85503 B6266 Smith St	67	1.41
85505 B6223 Drake St	65	1.40
85507 U The Esplanade	73	1.33
85508 U Newgate	58	1.48
All Sites	66	1.41
Site & Location	10:00-12:00	
	% Driver Only	Ave Occupancy
85501 U Union St	66	1.41
85503 B6266 Smith St	59	1.52
85505 B6223 Drake St	56	1.55
85507 U The Esplanade	65	1.41
85508 U Newgate	58	1.56
All Sites	68	1.48
Site & Location	16:00-18:00	
	% Driver Only	Ave Occupancy
85501 U Union St	64	1.47
85503 B6266 Smith St	64	1.54
85505 B6223 Drake St	58	1.57
85507 U The Esplanade	63	1.47
85508 U Newgate	55	1.64
All Sites	61	1.53

Table 18 Comparison of Rochdale Key Centre Inbound Car Occupancy Rates 2002, 2005, 2008 and 2009		
07:30-09:30		
Year	% Driver Only	Ave. Occupancy
2002	71	1.36
2005	70	1.36
2008	76	1.28
2009	66	1.41
10:00-12:00		
Year	% Driver Only	Ave. Occupancy
2002	61	1.45
2005	64	1.43
2008	70	1.34
2009	68	1.48
16:00-18:00		
Year	% Driver Only	Ave. Occupancy
2002	61	1.52
2005	64	1.49
2008	78	1.25
2009	61	1.53

Rail Patronage - Inbound

4.7 The number of people entering Rochdale key centre by rail was surveyed in April 2009. Table 19 presents the results along with those of previous surveys in 1997, 1999, 2002, 2005 and 2008.

- The number of people entering the key centre by rail increased by 61% during the morning peak, 10 % in the off-peak and by 167% during the evening peak between 1997 and 2009.

Table 19 Rail Passengers Entering Rochdale Key Centre 1997, 1999, 2002, 2005, 2008 and 2009			
Year	07:30-09:30	10:00-12:00	16:00-18:00
1997	80	115	215
1999	100	74	335
2002	104	70	441
2005	134	84	379
2008	152	105	510
2009	129	126	573
2009/1997	1.61	1.10	2.67

Walk Trips - Inbound

4.8 The number of pedestrians entering Rochdale key centre was counted at 12 locations in April 2009 (see Figure 2). Table 20 presents the number of pedestrians by site and time period.

Site No.	Location	07:30-09:30	10:00-12:00	16:00-18:00
85502	Baille Street W-Bound	187	108	57
85503	Smith Street W-Bound	138	83	70
85504	River Street N-Bound	46	39	33
85505	Drake Street N-Bound	282	460	267
85506	Church Lane N-Bound	101	96	55
85107	The Esplanade NE-Bound	199	277	168
85108	Newgate E-Bound	90	272	155
85109	Hunter's Lane E-Bound	5	6	11
85110	Howard Place S-Bound	47	30	55
85112	Yorkshire Street SW-Bound	244	492	230
85113	Subway to Market Hall	365	593	241
85114	Subway to Cheetham Street	182	237	131
	Cordon Total	1886	2693	1473

4.9 Table 21 shows the changes in the total number of pedestrians entering Rochdale key centre in between 2002 and 2009.

- Pedestrians entering the key centre in the morning peak have increased by 25% since 2002, with smaller increases of 7% and 4% respectively in the off-peak and evening peak.

Year	07:30-09:30	10:00-12:00	16:00-18:00
2002	1521	2512	1417
2005	1769	3109	1496
2008	1927	1907	1106
2009	1886	2693	1473
2009/2002	1.24	1.07	1.04

Summary of Trends in Modal Share - Inbound

4.10 Table 22 gives the modal split of car and public transport trips crossing the cordon into Rochdale key centre in 1997, 1999, 2002, 2005, 2008 and 2009 together with indices of change.

- The ratio of car to public transport trips has decreased in all time periods between 1997 and 2009.
- The percentage of car trips increased during the morning peak and off-peak periods between 2008 and 2009.

Time Period	Year	Car Trips		Bus Trips		Rail Trips		Car + PT Trips		% Car	% PT
		Number	Index	Number	Index	Number	Index	Number	Index		
07:30-09:30	1997	4993	100	1435	100	80	100	6508	100	77	23
	1999	4995	100	1305	91	100	125	6400	98	78	22
	2002	5186	104	1204	84	104	130	6494	100	80	20
	2005	5110	102	1603	112	134	168	6847	105	75	25
	2008	4951	99	1954	136	152	190	7057	108	70	30
	2009	5113	102	1770	123	129	161	7011	108	73	27
10:00-12:00	1997	4978	100	1282	100	115	100	6375	100	78	22
	1999	5443	109	989	77	74	64	6506	102	84	16
	2002	5488	110	1032	80	70	61	6590	103	83	17
	2005	4962	100	1001	78	84	73	6047	95	82	18
	2008	4671	94	1870	146	105	91	6646	104	70	30
	2009	4973	100	1946	152	126	110	7045	111	71	29
16:00-18:00	1997	4846	100	860	100	215	100	5921	100	82	18
	1999	4714	97	788	92	335	156	5837	99	81	19
	2002	5329	110	791	92	441	205	6561	111	81	19
	2005	4679	97	667	78	379	176	5725	97	82	18
	2008	4244	88	1142	133	510	237	5896	100	72	28
	2009	4611	95	1416	165	829	386	6856	116	67	33

4.11 Table 23 gives the modal split of car and non-car trips crossing the cordon into Rochdale key centre in 2002, 2005, 2008 and 2009 along with a ratio of change between 2002 and 2009.

- The proportion of car trips relative to non-car trips decreased during all time periods between 2002 and 2009.

	Year	Car	Bus	Rail	Cycle	Walk	Total	% Car	% Non-Car
07:30-09:30	2002	5186	1204	104	21	1521	8036	65	35
	2005	5110	1603	134	24	1769	8640	59	41
	2008	4951	1954	152	16	1927	9000	55	45
	2009	5113	1770	129	23	1886	8920	57	43
	2009/2002	0.99	1.47	1.24	1.10	1.24	1.11		
10:00-12:00	2002	5488	1032	70	12	2512	9115	60	40
	2005	4962	1001	84	15	3109	9171	54	46
	2008	4671	1870	105	10	1907	8562	55	45
	2009	4973	1946	126	5	2693	9743	51	49
	2009/2002	0.91	1.89	1.80	0.42	1.07	1.07		
16:00-18:00	2002	5329	791	441	19	1417	7997	67	33
	2005	4679	667	379	13	1496	7233	65	35
	2008	4244	1142	510	13	1106	7015	60	40
	2009	4611	1416	829	15	1473	8344	55	45
	2009/2002	0.87	1.79	1.88	0.79	1.04	1.04		

24-Hour Traffic Profiles into Rochdale Key Centre

4.12 For GMLTP2, the DfT requires automatic traffic counts on busy roads (more than 2,000 vehicles per day) approaching key centres in Greater Manchester. Ideally the counts should be just outside the areas where key centre parking occurs. However, it was agreed with the DfT, that in Greater Manchester, these counts could be undertaken on the existing key centre cordons for consistency with, and to complement and add value to the other key centre monitoring. The counts are continuous over a two-week period annually. The indicator for the DfT (LTP6) covers the morning peak period (07:00-10:00). Table 24 provides a comparison of the results of the surveys conducted in 2007, 2008 and 2009 for this time period and for a 24-hour average weekday. A list of the sites that meet the DfT counting requirement, a summary of all sites and individual profiles for each site are provided in Appendix 3 of this report.

Site	0700-1000 Ave Weekday				24-Hour Ave Weekday			
	Base 2006/7	2007/ 2008	2008/ 2009	% Diff 08-09/ Base	Base 2006/7	2007/ 2008	2008/ 2009	% Diff 08-09/ Base
B6223 Drake Street	1274	1226	1220	-4%	6757	6692	6651	-2%
B6266 Esplanade	843	751	744	-12%	4399	3773	3758	-15%
Newgate	833	743	727	-13%	3463	3251	3254	-6%
Hunter's Lane	455	446	416	-9%	2056	1935	1917	-7%
Union Street	1446	1736	1378	-5%	5876	6819	5290	-10%
B6266 Smith Street	877	931	904	3%	3807	4403	3940	3%
TOTAL	5728	5833	5389	-6%	26358	26873	24810	-6%

- There has been a 6% decrease in both weekday morning peak flows decreased and 24-hour average weekday flows between 2007 and 2009.

5. ROAD CASUALTIES AND ACCIDENTS

- 5.1 There were 571 accidents in Rochdale during 2008 resulting in 801 casualties. This compares with an average of 1316 casualties in the base years (the average annual casualties in the years 1994 to 1998). There were 84 killed or seriously injured (KSI) casualties in 2008 compared with an average of 107 KSI in the base years.
- 5.2 Local targets for 2010 have been set as part of the second Local Transport Plan (GMLTP2). These are a 50% reduction for KSI casualties, a 55% reduction for child KSI accidents and a 30% reduction in slight casualties relative to base years average. Unlike the first Local Transport Plan (GMLTP), the annual figures for the KSI and Child KSI are represented by a three-year average. Thus the average of 2006, 2007 and 2008 represents 2007. This has been done to reduce the variability due to the statistically small number of casualties in these groups. The targets are all more rigorous than the national targets which are for a 40% reduction in KSI casualties, a 50% reduction in child KSI casualties and a 10% reduction in slight casualties per vehicle kilometre.
- 5.3 Table 25 shows the base, the annual average trend and GMLTP2 targets for KSI and child KSI casualty groups. Table 26 shows the base, the annual trend and target for slight casualties.
- The three-year average number of KSI casualties for 2007 was 31% below the base.
 - The three-year average for child KSI casualties was 64% below the base and 23% below the 2010 GMLTP2 target.
 - Slight casualties in 2008 were 41% below the baseline average and 15% below the 2010 GMLTP2 target.

	<u>Base</u> ave 1994 to 1998	<u>2000</u> ave 1999 to 2001	<u>2001</u> ave 2000 to 2002	<u>2002</u> ave 2001 to 2003	<u>2003</u> ave 2002 to 2004	<u>2004</u> ave 2003 to 2005	<u>2005</u> ave 2004 to 2006	<u>2006</u> ave 2005 to 2007	<u>2007</u> ave 2006 to 2008	<u>Target</u> ave 2009 to 2011
KSI	107	92	90	86	85	78	72	71	74	53
Child KSI	28	22	21	20	20	18	16	13	10	13

	<u>Base</u> ave 1994 to 1998	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>Target</u> 2010
Slight	1209	1206	1180	1124	1071	1125	842	769	717	846

- 5.4 Tables 27 to 29 show the breakdown of casualties by type and age. Tables 30 and 31 show how accidents vary by day of week and month and by driving conditions.
- 5.5 Figures 3 to 5 show graphically the number of casualties in each of these three target groups from 1985 onwards. Figure 6 shows how the trend in all casualties in Rochdale compares to the Greater Manchester average.
- 5.6 Finally, Figures 7 and 8 show the trends over the last five years by casualty type for all casualties and child casualties respectively.
- 5.7 Computer plots of accident locations in Rochdale are given in Appendix 4 for the following categories of accident
- all by severity
 - KSI sub-divided into child and adult
 - pedestrian sub-divided into child and adult
 - pedal cycle sub-divided into child and adult

Table 27 Rochdale Casualty Data 1994-2008											
All Casualties	Ave 94-98	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Fatal	9	7	9	10	11	5	5	6	5	3	8
Serious	97	95	82	74	84	75	75	69	55	75	76
Slight	1209	1235	1242	1206	1180	1124	1071	1125	842	763	717
All	1316	1337	1333	1290	1275	1204	1151	1200	902	847	801
KSI	107	102	91	84	95	80	80	75	60	78	84
Population 000's	207.6	209.0	210.8	205.3	206.2	206.6	206.6	206.5	206.4	206.5	206.1
KSI Rate per 100000 Pop'n	51	49	43	41	46	39	39	36	29	38	41
Child Casualties											
Child KSI	28	27	20	18	25	17	17	20	12	7	12
Child (All)	253	252	272	271	245	221	191	180	124	97	103
Child Pop'n 000's	47.6	47.2	46.9	46.6	46.1	45.5	45.5	45.1	44.6	44.0	43.6
KSI Rate per 100000 Pop'n	58	57	43	39	54	37	37	44	27	16	28
Casualty Type											
TWPV	32	46	46	65	79	81	88	72	49	45	44
Car Occupant	875	856	868	858	835	771	752	811	618	568	543
Pedestrian	243	247	248	192	215	226	193	172	131	137	141
Pedal Cycle	78	94	90	78	61	55	55	50	48	39	37
Other	88	94	81	97	85	71	63	95	56	58	36
All	1316	1377	1333	1290	1275	1204	1151	1200	902	847	801

Note: The table uses figures provided by the Office for National Statistics for mid-year estimates of populations.

	Average 1989-93	Average 1994-98	Average 1999-2003	2004	2005	2006	2007	2008
All Casualties								
Rochdale Casualties	1246	1316	1288	1151	1200	902	847	801
Rochdale KSI Casualties	152	107	90	80	75	60	78	84
Greater Manchester Casualties	16479	16708	15671	13543	12805	11795	10702	9881
Casualty Type								
TWPV Rider	66	29	60	82	71	46	44	40
TWPV Pillion	7	3	4	6	1	3	1	4
Car Driver	401	534	503	442	491	383	349	334
Car Passenger	292	341	335	310	320	235	219	209
Pedestrian	320	243	226	193	172	131	137	141
Cyclist (Rider Only)	82	76	75	54	49	47	39	37
PCV Passenger	24	21	30	17	34	18	16	10
Total Other Driver	39	48	44	35	39	29	29	19
Total Other Passenger	14	20	13	12	23	10	13	7
Child Casualties by Type								
Driver/Rider	38	34	39	25	30	17	14	13
Passenger	71	84	92	79	76	48	38	37
Pedestrian	158	135	115	87	74	59	45	53
All Classes	267	253	246	191	180	124	97	103
Child Casualties by Age								
0 – 4	55	39	33	30	26	14	13	11
5 – 9 - pupil to/from school	13	12	11	5	4	4	0	0
- pupil not to/from school	91	83	74	49	47	34	31	34
10 – 15 - pupil to/from school	23	29	31	39	20	10	8	7
- pupil not to/from school	85	91	97	68	83	62	45	51
Drink Drive Casualties by Severity								
Fatal	0	0	0	1	0	0	1	0
Serious	7	4	4	5	3	1	3	5
Slight	36	32	35	28	27	21	33	27
Total	43	37	40	34	30	22	37	32

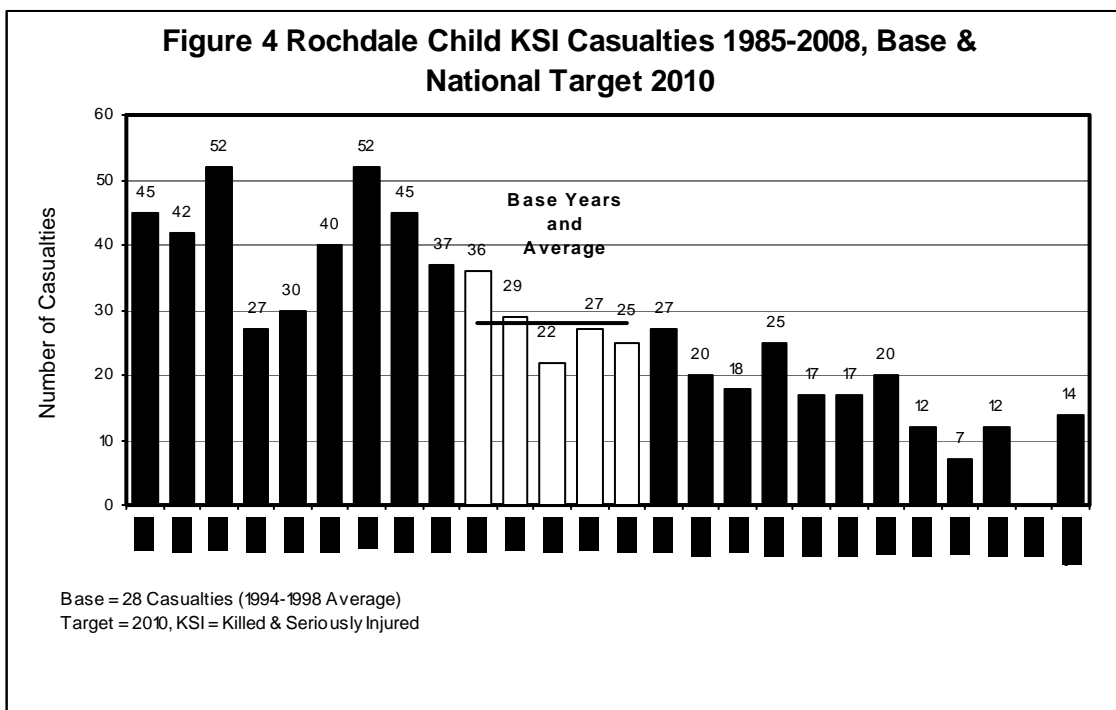
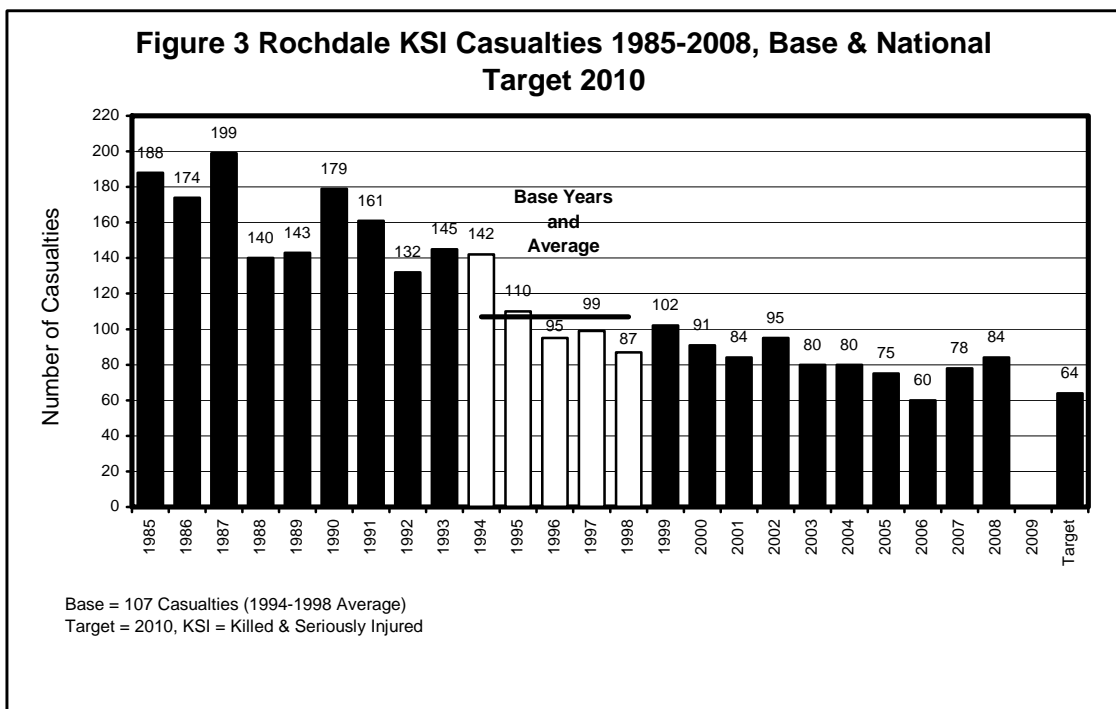
	Average 1989-93	Average 1994-98	Average 1999-2003	2004	2005	2006	2007	2008
Pedestrian Casualties								
Under 16 years								
Male	95	87	70	47	52	38	31	29
Female	63	48	45	40	22	21	14	24
16 – 59								
Male	75	49	53	61	51	31	50	43
Female	38	31	34	25	30	20	25	33
Over 59 years								
Male	22	13	10	10	7	13	9	8
Female	27	14	13	10	10	8	8	4
Total	320	243	226	193	172	131	137	141
Cyclists (Rider Only)								
Under 16 years								
Male	31	26	31	18	22	15	13	11
Female	5	6	5	6	4	2	1	2
16 – 59								
Male	42	38	34	28	20	26	23	20
Female	3	3	3	1	1	1	1	3
Over 59 years								
Male	1	2	1	1	2	3	0	1
Female	0	0	0	0	0	0	1	0
Total	82	76	75	54	49	47	39	37
TWPV Riders								
Under 20 years								
Male	18	3	14	20	20	9	7	8
Female	1	-	1	0	3	2	0	0
20 – 29								
Male	23	9	13	22	10	11	13	7
Female	1	1	2	1	1	1	0	0
Over 29 years								
Male	20	16	29	38	36	22	23	23
Female	3	1	1	1	1	1	1	2
Total	66	29	60	82	71	46	44	40
Car Drivers								
Under 20 years								
Male	28	33	28	22	25	16	17	16
Female	17	20	11	11	19	11	12	7
20 – 29								
Male	78	101	79	74	89	54	70	65
Female	71	89	67	54	57	62	45	51
Over 29 years								
Male	118	161	181	171	178	148	122	106
Female	89	130	136	110	123	92	83	89
Total	401	534	503	442	491	383	349	334

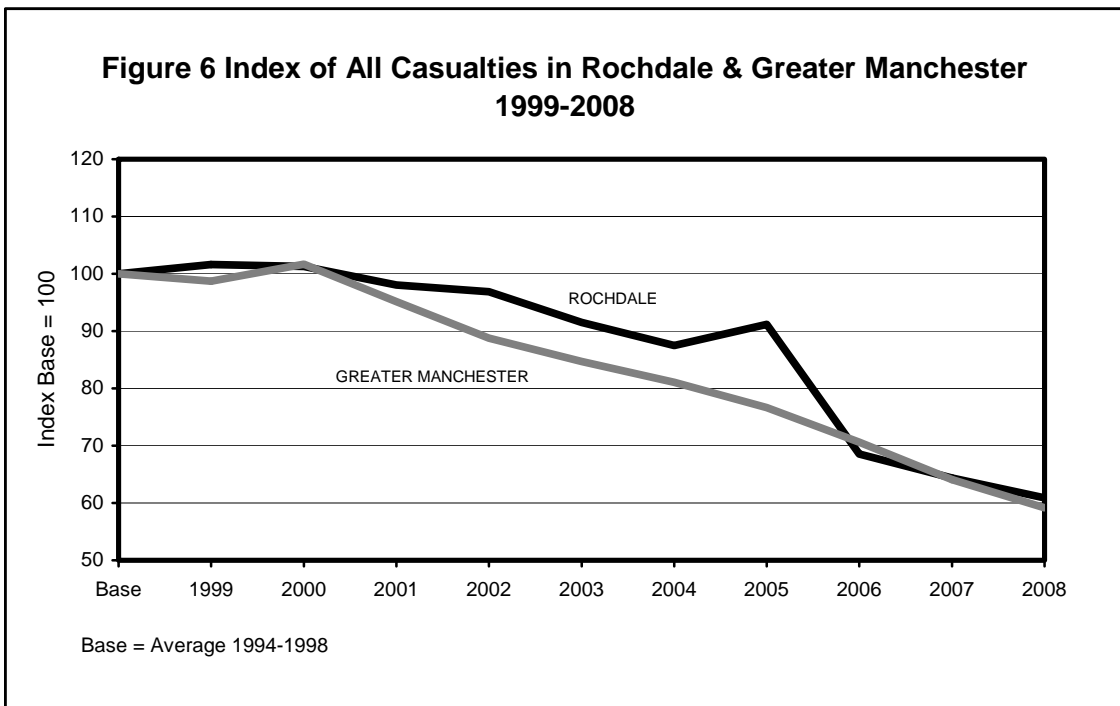
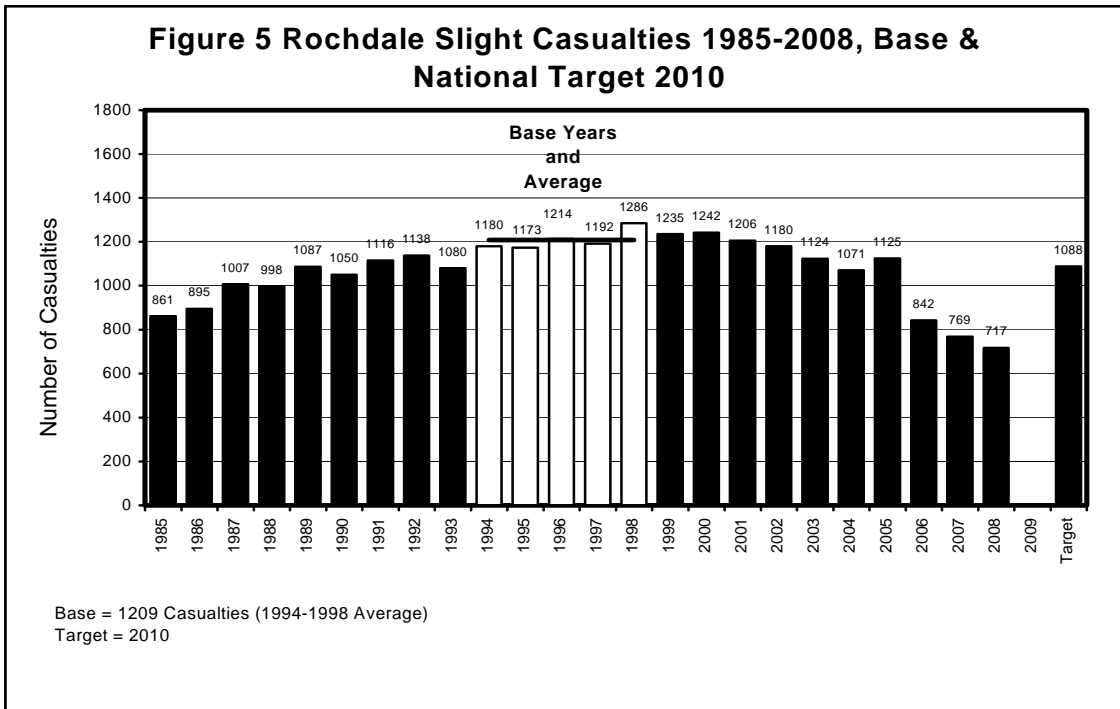
Notes: Average 1989-93, average 1994-98 and average 1999-2003 totals may not sum due to rounding.
Car – From 1/4/99 this definition was revised to exclude invalid tricycles and motor caravans.

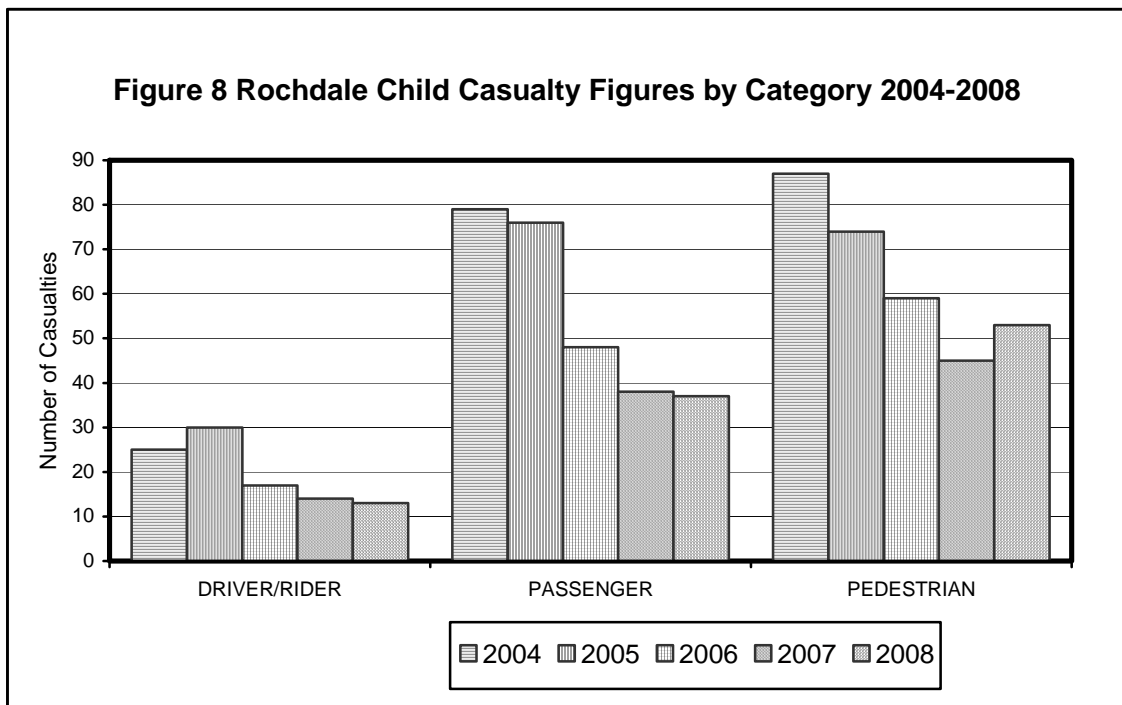
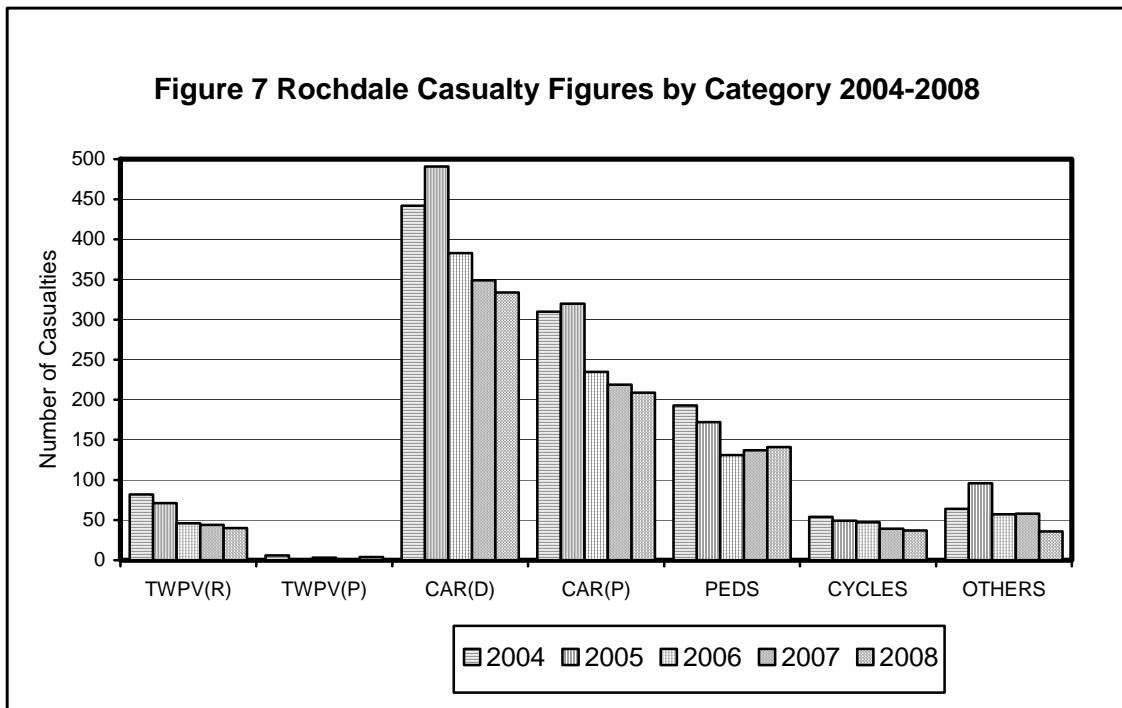
Table 30 Rochdale Injury Accident Data 1989-2008								
	Average 1989-93	Average 1994-98	Average 1999-2003	2004	2005	2006	2007	2008
Total Accidents	956	958	923	818	830	642	590	571
Total KSI Accidents	141	96	80	75	66	57	65	77
Accidents by Month								
January	76	76	76	83	68	52	54	49
February	68	74	75	56	68	50	48	47
March	72	74	65	71	64	54	46	39
April	76	75	71	84	76	48	56	45
May	78	79	81	63	78	52	43	47
June	82	86	68	63	62	57	48	63
July	79	76	80	61	70	55	48	50
August	88	79	73	71	58	44	46	55
September	77	84	82	74	61	60	56	41
October	84	81	87	57	68	61	59	56
November	96	85	85	64	93	59	37	36
December	79	88	81	71	64	50	49	43
Accidents by Day of Week								
Sunday	110	105	101	92	101	72	63	61
Monday	130	136	135	118	108	103	92	79
Tuesday	139	132	136	130	111	83	94	98
Wednesday	123	139	142	118	134	86	91	85
Thursday	138	141	137	111	113	104	81	86
Friday	170	164	151	140	127	113	95	93
Saturday	146	141	122	109	136	81	74	69

Table 31 Rochdale Injury Accident Data by Conditions 1989-2008								
	Average 1989-93	Average 1994-98	Average 1999-2003	2004	2005	2006	2007	2008
Accidents by Road Surface								
Dry	555	555	531	483	545	411	384	349
Wet/Damp	379	381	375	313	271	223	199	204
Snow	5	8	4	4	2	1	2	6
Frost/Ice	15	12	10	15	10	5	4	12
Flood	1	2	0	3	0	2	1	0
Oil or Diesel	0	0	2	0	2	0	0	0
Mud	0	0	0	0	0	0	0	0
Wet/Damp Accidents by Road Class								
Motorway	19	31	34	36	36	36	28	29
A (M)	8	9	7	11	4	4	7	6
A	200	184	181	146	125	112	80	97
B	39	50	35	36	29	18	26	19
C	35	34	40	29	29	19	21	24
U	77	73	49	55	48	34	37	29
Total	379	381	375	313	271	223	199	204
Accidents by Light/Dark								
Motorway - Dark	11	17	20	24	19	32	21	22
A (M) - Dark	3	5	5	8	8	2	3	3
A - Dark	144	126	127	113	98	105	86	81
B - Dark	29	37	30	29	31	15	23	19
C - Dark	2	22	24	27	31	13	27	22
U - Dark	55	57	53	48	45	35	25	28
Total	265	264	260	249	232	202	185	175
Motorway - Light	35	55	58	64	52	51	44	49
A (M) - Light	10	16	15	15	8	6	11	9
A - Light	311	303	282	254	292	195	166	159
B - Light	77	74	67	56	53	38	34	55
C - Light	51	59	65	45	53	51	50	39
U - Light	206	187	177	135	140	99	100	85
Total	691	694	663	569	598	440	405	396
No. of Vehicles Per Accident								
1	384	306	284	240	232	166	180	196
2	490	558	537	497	499	377	328	313
3 or more	82	93	102	81	99	99	82	62
No. of Casualties Per Accident								
1	764	729	693	616	598	474	431	423
2	135	153	151	132	145	113	108	101
3 or more	57	76	79	70	87	55	51	47

Notes: Average 1989-93, average 1994-98 and average 1999-2003 totals may not sum due to rounding. Oil/ Diesel or Mud were removed from 'Road Surface Condition' and re-introduced in 'Special Conditions at Site' on 1/4/2006







6. CONGESTION

- 6.1 The journey time data presented below has been calculated using data collected from in-vehicle GPS tracking devices from which average vehicle speeds and journey times can be derived. This report presents journey time rates in minutes per mile and speeds in miles per hour.
- 6.2 The journey time rates are the sum of the average link times divided by the sum of the link lengths for the set of links and time period under consideration. The link times are the average of observations for the 12-month period running from September to August. All journey time rates are for an average weekday excluding school holidays and bank holidays.
- 6.3 Tables 32 and 33 show respectively average journey time rates and speeds for A and B roads, for 2004/05, 2005/06, 2006/07 and 2007/08. For comparison, the 2007/08 journey time rates and speeds for Greater Manchester are also shown.
- 6.4 Figure 9 illustrates the change in average journey time rates in Rochdale over the last four years for various time periods. Figure 10 illustrates average journey time rates by quarter-hour time period for the last three years and Figure 11 illustrates average journey times by quarter hour time period during 2007/08 for Rochdale and Greater Manchester. Congestion maps showing average speeds can be found in Appendix 4.
- Average journey time rates during the morning peak have steadily declined since 2005/06. In 2007/08 they fell below the 2004/05 rates.
 - Average journey times from 07:00 to 19:00 have remained consistent for the last three years.
 - In 2007/08 average journey times were shorter in Rochdale than in Greater Manchester in all time periods.

Table 32 Rochdale and Greater Manchester Average Journey Time Rates (Mins / Mile)						
Rochdale						
Year	0700 – 1000	0800 – 0900	1000 - 1600	1700 - 1800	1600 - 1900	0700 – 1900
2004/05	3.02	3.46	2.82	3.42	3.08	2.96
2005/06	3.04	3.53	2.86	3.36	3.08	2.99
2006/07	3.02	3.49	2.88	3.35	3.10	2.99
2007/08	3.01	3.41	2.90	3.33	3.10	2.99
Greater Manchester						
2007/08	3.37	3.84	3.10	3.67	3.46	3.28

Table 33 Rochdale and Greater Manchester Average Speeds (MPH)						
Rochdale						
Year	0700 – 1000	0800 - 0900	1000 - 1600	1700 - 1800	1600 - 1900	0700 – 1900
2004/05	20	17	21	18	19	20
2005/06	20	17	21	18	19	20
2006/07	20	17	21	18	19	20
2007/08	20	18	21	18	19	20
Greater Manchester						
2007/08	18	16	19	16	17	18