Road Network Performance & Research

RNPR Traffic Note 9 September 2009

Trends in Cycling Levels in London









Précis:

A summary of trends in cycling levels in London, looking at surveyed cordons and screenlines and data from automatic cycle counters.



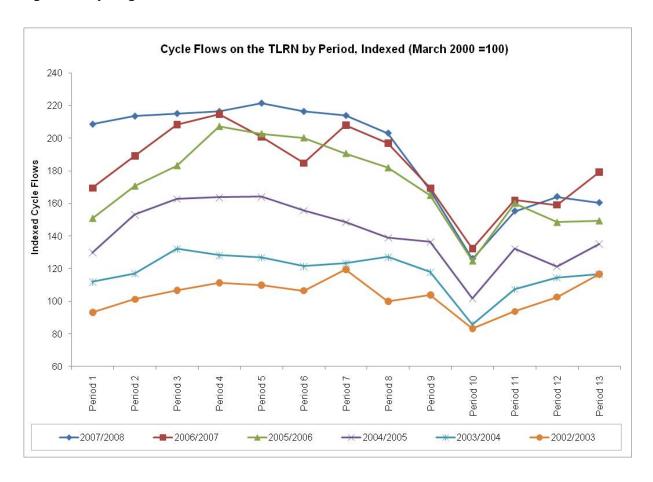
Contents

Contents	1
Tables	1
Figures	
1 Introduction	
2 Central Cordon Cycle Flows and Trends	
3 Inner Cordon Cycle Flows and Trends	
4 Boundary Cordon Cycle Flows and Trends	
5 Thames Screenline Cycle Flows and Trends	
6 Automatic Cycle Counter Flows and Trends	
7 Cycling at DfT National Road Traffic Census Count Sites	
8 Summary	20
9 Contacts for further information	
10 Library of traffic notes	
11 Other useful documents	22
Tables	•
Table 1 – Cycle flows over the Central Cordon (2003-2008)	
Table 2 – Cycle flows over the Inner Cordon	
Table 3 – Cycle flows over the Boundary Cordon	
Table 4 – Cycle Flows at each site on the Thames Screenline	
Table 5 - AADF for Cycle Flows on the TLRN by Year (April to March)	
Table 7 – DfT NRTCC cycle flow summary, by Borough	
Table 8 – Growth in London cycle flows by count source	
Figures	
Figure 1 – Cycling Levels on the TLRN	
Figure 3 – Change in cycle flows across the Central Cordon 2003 - 2008	
Figure 4 – Percentage change cycle flows across the Central Cordon 2003 - 2008	
Figure 5 – Actual cycle flows across the Inner Cordon 2008	
Figure 6 - Change in cycle flows across the Inner Cordon 2004 - 2008	
Figure 7 - Percentage change in cycle flow across the Inner Cordon 2004 - 2008	
Figure 8 – Actual cycle flows across the Boundary Cordon 2007	
Figure 9 – Change in cycle flows across the Boundary Cordon 2004 - 2007	
Figure 10 – Percentage change in cycle flow across the Boundary Cordon 2004 - 2007	8
Figure 11 – Actual Cycle Flow across the Thames Screenline 2008	10
Figure 12 – Change in Cycle Flows across the Thames Screenline 1998-2008	
Figure 13 – Percentage Change in Cycle Flow across the Thames Screenline 1998-2008	
Figure 14 – Actual cycle flow on the TLRN 2007	
Figure 15 – Change in cycle flows on the TLRN 2003 - 2007	
Figure 16 – Percentage change in cycle flows on the TLRN 2003 - 2007	14
Figure 17 – Actual cycle flows on the BPRN 2007	۱۵
Figure 19 – Change in cycle flow on the BPRN 2003 - 2007	17 17
Figure 20 – Most recent 12 Hour National Road Traffic Census Count for pedal cycles by Site	19

1 Introduction

- 1.1 This traffic note, produced by Road Network Performance and Research (RNPR) within TfL provides a summary and analysis of London-wide cycling flows.
- 1.2 Cycling levels are currently monitored in three ways. Flows are recorded through a programme of cordon and screenline surveys, for which RNPR manage the TfL database of validated survey data. Additional flows are continuously counted by a network of 94 Automatic Cycle Counters (ACCs), managed and maintained by RNPR. The final source of data, one day 12-hour manual counts undertaken on a rotational basis, is obtained from the DfT's NRTCC manual count survey programme, maintained by RNPR.
- 1.3 ACC TLRN cycle trends are reported periodically as part of TfL's performance monitoring. This reporting has highlighted a 91% increase in TLRN cycling levels post 2000 refer to Figure 1 below. As a result, the number of cycle trips in London is now estimated to be in the order of 500,000.

Figure 1 - Cycling Levels on the TLRN



1.4 This report seeks to document the current and historical levels of cycling experienced in all London zones and networks, by drawing upon all cycle data sources mentioned in paragraph 1.2. In particular, it seeks to determine whether the TLRN is alone in achieving a 91% increase in cycling over the past 9 years.

2 Central Cordon Cycle Flows and Trends

2.1 The Central Cordon is made up of over 100 sites located within 3kms of Aldwych. Originating in 1974, the cordon was, until 2001, surveyed every two years. Since then, surveys have been carried out annually. A summary of cycle flows over the Central Cordon between 2003 and 2008 is given in Table 1. Figures show the number of cyclists crossing the Central Cordon to have increased by almost 40,000 cycles a day in 2008 compared to 2003 recorded flows.

Table 1 - Cycle flows over the Central Cordon (2003-2008)

Thousands of cycles per day

Cordon	2003	2004	2005	2006	2007	2008	Actual Growth 2003-2008	% Growth 2003-2008
Central	65	72	87	98	103	104	39	60%

2.2 Figure 2 presents the number of cycles crossing the Central Cordon by site for 2008. It shows a large number of sites to have daily flows of over 1,500. Sites with flows of less than 500 cycles a day are seen to be predominantly situated on unclassified roads. Comparisons between 2008 and 2003 flows are shown in Figure 3 (actual flow change) and Figure 4 (percentage change) overleaf. They show noticeable growth in cycle flows in the east of London, from Kings Cross in the north, clockwise to the Elephant and Castle area in the south, with half of all sites across London increasing by more than 50% between 2003 and 2008. Few sites show a decrease in cycle flows. Those that do have a typically low baseline flow (less than 250 cycles a day).

Figure 2 – Actual cycle flows across the Central Cordon 2008

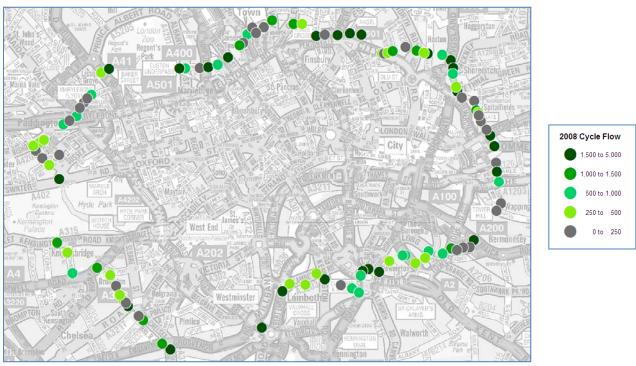


Figure 3 – Change in cycle flows across the Central Cordon 2003 - 2008

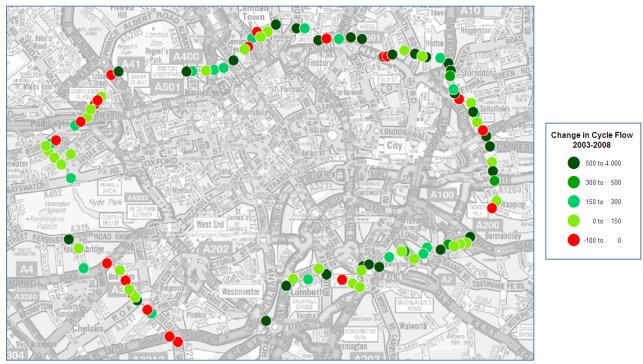
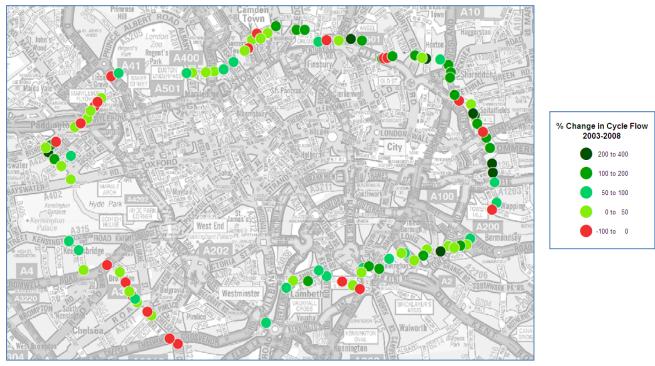


Figure 4 – Percentage change cycle flows across the Central Cordon 2003 - 2008



3 Inner Cordon Cycle Flows and Trends

3.1 The Inner Cordon is made up of over 90 sites, surveyed every three years (since 1972) in June or July. A summary of cycle flows over the Inner Cordon can be found in Table 2 below. The number of cyclists crossing the Inner Cordon on a daily basis can be seen to have grown by over 40% since 2004 (76% since 2002), with an additional 13,000 cycles recorded each day.

Table 2 - Cycle flows over the Inner Cordon

Thousands of cycles per day

Cordon	1996	1999	2002	2004	2005	2008	Actual Growth 2004-2008	% Growth 2004-2008
Inner	30	31	25	31	34	44	13	42%

3.2 Figure 5 below shows the number of cycles crossing the Inner Cordon at every survey location in 2008. It shows the majority of high level flows (greater than 1,000 cycles) to be recorded on "A" class roads and the smallest flows, on Unclassified roads. Comparisons between 2008 and 2004 flows can be seen in Figure 6 (actual flow change) and Figure 7 (percentage change) overleaf. They show a number of sites, particularly those in the south, to have experienced falling cycling levels and negative percentage growth change between 2004 and 2008. However, it is worth observing that the majority of these occur at sites where flow levels are historically small, i.e. in the south east where Figure 5 showed daily cycle flows of between 0 and 250.

Figure 5 – Actual cycle flows across the Inner Cordon 2008

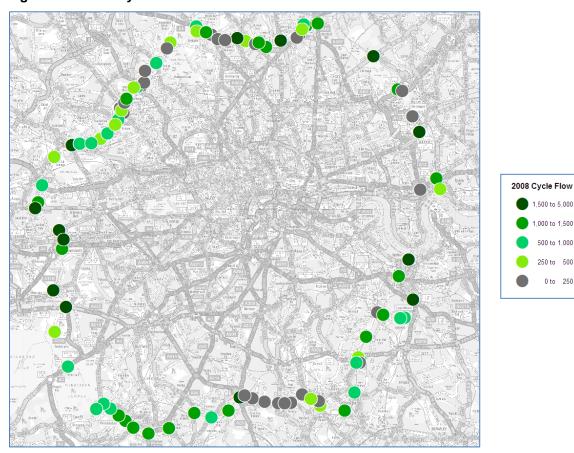


Figure 6 - Change in cycle flows across the Inner Cordon 2004 - 2008

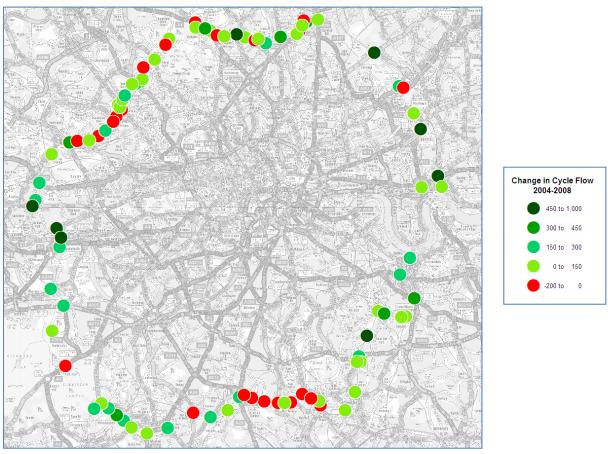
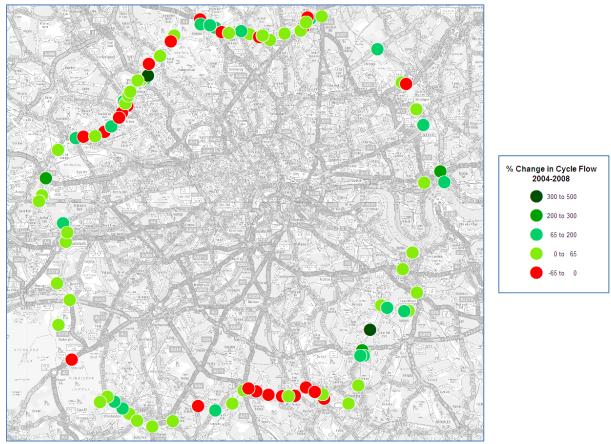


Figure 7 - Percentage change in cycle flow across the Inner Cordon 2004 - 2008



4 Boundary Cordon Cycle Flows and Trends

4.1 The Boundary Cordon is made up of 117 sites, surveyed every three years (since 1971) in June or July. A summary of cycle flows over the Boundary Cordon can be found in Table 3 below. The number of cyclists crossing the Boundary Cordon on a daily basis can be seen to have grown by 2,000 or 22% between 2004 and 2007, although it is worth noting that flows were at their highest in 1995.

Table 3 – Cycle flows over the Boundary Cordon

Thousands of cycles per day

Cordon	1992	1995	1998	2001	2004	2007	Actual Growth 2004-2007	% Growth 2004-2007
Boundary	12	13	9	9	9	11	2	22%

4.2 Figure 8 below shows the number of cycles crossing the Boundary Cordon at every survey location in 2007. It shows over half of all sites experience flows of fewer than 50 cycles a day; the majority of these are located from North London clockwise round to South London. Only 3% of sites witnessed flows of over 300 cycles a day in 2007. Comparisons between 2007 and 2004 flows can be seen in Figure 9 (actual flow change) and Figure 10 (percentage change) overleaf. They show around 19% of all sites to have increased by 50 cycles or more over the 3 year period, with only 11 sites having increased by more than 100.

Figure 8 – Actual cycle flows across the Boundary Cordon 2007

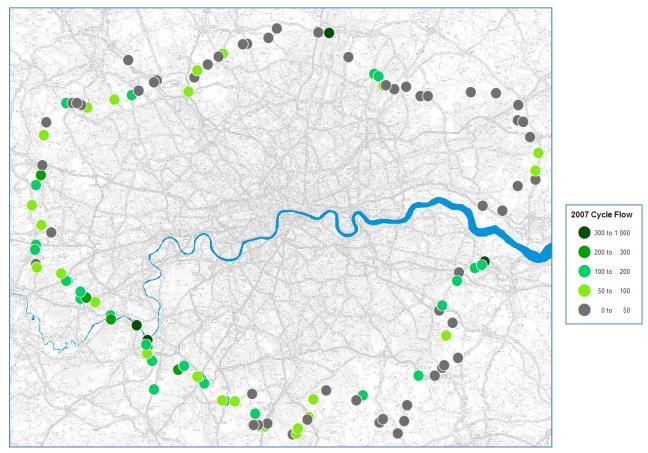


Figure 9 - Change in cycle flows across the Boundary Cordon 2004 - 2007

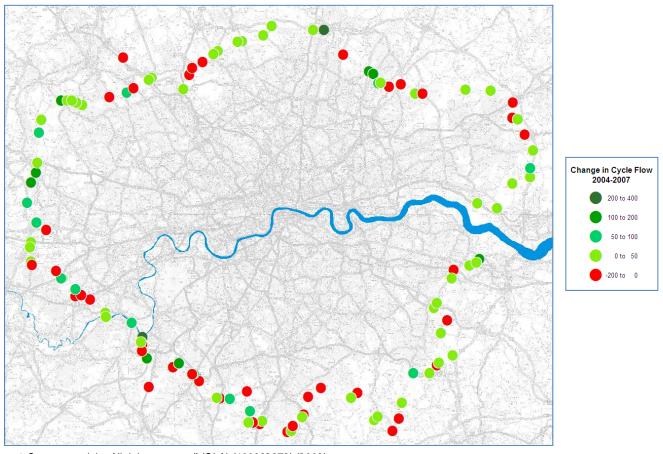
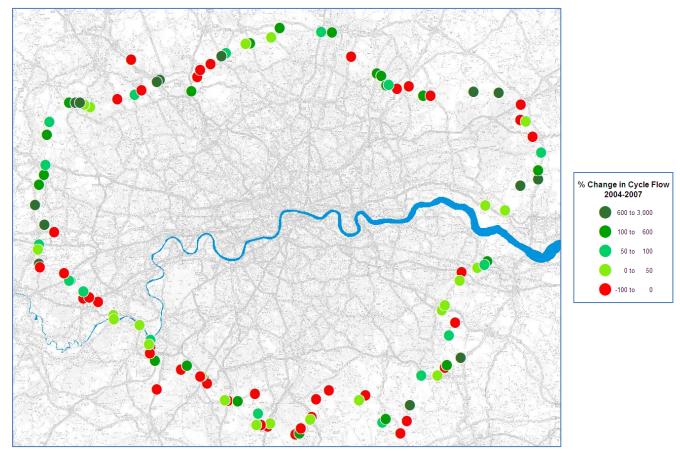


Figure 10 – Percentage change in cycle flow across the Boundary Cordon 2004 - 2007



5 Thames Screenline Cycle Flows and Trends

- 5.1 The Thames Screenline is made up of 30 sites surveyed every two years in June or July since 1986, and includes all bridges and tunnels crossing the River Thames open to vehicles. A summary of cycle flows over the Thames Screenline can be seen in Table 4.
- 5.2 All but three sites show an increase in cycle flows between 1998 and 2008. Sites in Central and Inner London are seen to have the highest cycle flow growth. The greatest of these (an increase of 4,858 in 2008, or 193% when compared to the decade before) can be seen at London Bridge. Chiswick Bridge saw the highest percentage growth, with a rise of 622%, or 1,431 cycles. The only sites to experience a fall in cycling levels are those situated in Outer London. The most significant of these, Chertsey Bridge, has seen its flow halved, but this is only by 272 cycles. Overall, total flows for the entire Thames Screenline has increased by over 100% between 1998 and 2008.

Table 4 - Cycle Flows at each site on the Thames Screenline

								Cycles per day
Site Name	1998	2000	2002	2004	2006	2008	Flow Change 1998 - 2008	% Change 1998 - 2008
Chiswick Bridge	230	277	557	639	695	1661	1431	622%
Rotherhithe Tunnel	39	91	102	305	139	228	189	485%
Wandsworth Bridge	646	1700	1540	1475	2301	2739	2093	324%
Hampton Court Bridge	550	819	487	837	1347	2088	1538	280%
Southwark Bridge	752	1012	1612	1674	2539	2531	1779	237%
London Bridge	2518	3142	3341	3710	5149	7376	4858	193%
Chelsea Bridge	1276	1741	2472	2825	4019	3689	2413	189%
Kew Bridge	526	854	821	1098	1261	1347	821	156%
Albert Bridge	1025	1052	1191	1213	1412	2457	1432	140%
Waterloo Bridge	2769	3680	3578	4329	6559	6559	3790	137%
Blackfriars Bridge	2505	2338	2645	3859	4034	5740	3235	129%
Twickenham Bridge	512	386	571	641	1131	1113	601	117%
Westminster Bridge	1334	1565	1832	1754	1324	2829	1495	112%
Lambeth Bridge	1407	1296	1391	1732	3139	2939	1532	109%
Putney Bridge	2398	2813	2060	3375	4796	4425	2027	85%
Vauxhall Bridge	2033	2197	1864	2630	3594	3221	1188	58%
Woolwich Ferry	74	115	79	116	69	104	30	41%
Richmond Bridge	1375	1397	1415	1259	1053	1928	553	40%
Tower Bridge	1433	1469	1601	2094	1476	1937	504	35%
Battersea Bridge	1526	893	1703	1952	1691	2017	491	32%
Kingston Bridge	1589	1132	1349	1248	2003	2100	511	32%
Walton Bridge	422	171	409	468	335	492	70	17%
Hammersmith Bridge	1984	N/A	1820	2137	2630	2098	114	6%
Staines Bridge	595	726	1044	1013	965	415	-180	-30%
Kingston Bridge	1589	1132	1349	1248	2003	2100	511	32%
Runnymede Bridge (A 30)	32	35	43	8	3	20	-12	-38%
Chertsey Bridge	543	245	310	368	385	271	-272	-50%
Runnymede Bridge (M 25)		-	-	-	-	-	-	-
Dartford Crossings		-	-	-	-	-	-	-
Blackwall Tunnels		-	-	-	-	-	-	-
Elizabeth Bridge (M 3)		-	-	-	-	-	-	-
Total	31682	32278	37186	44007	56052	64424	32742	103%

5.3 Figures 11 to 13 present data given in Table 4 spatially. Figure 11 shows the number of cycles crossing the Thames Screenline at each location in 2008, whilst Figure 12 shows the change in cycle flows across the Thames Screenline between 1998 and 2008 and Figure 13 the percentage change in cycle flows.

Figure 11 – Actual Cycle Flow across the Thames Screenline 2008

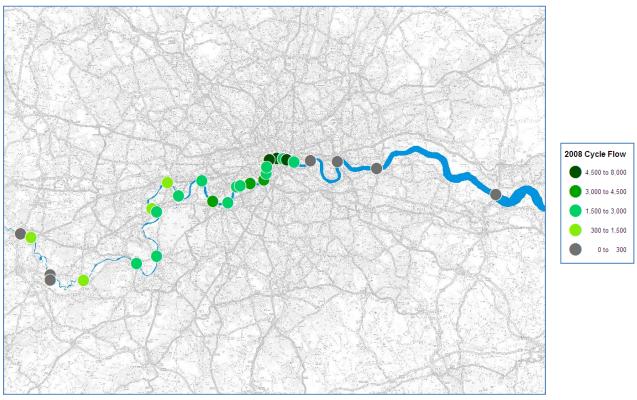


Figure 12 - Change in Cycle Flows across the Thames Screenline 1998 - 2008

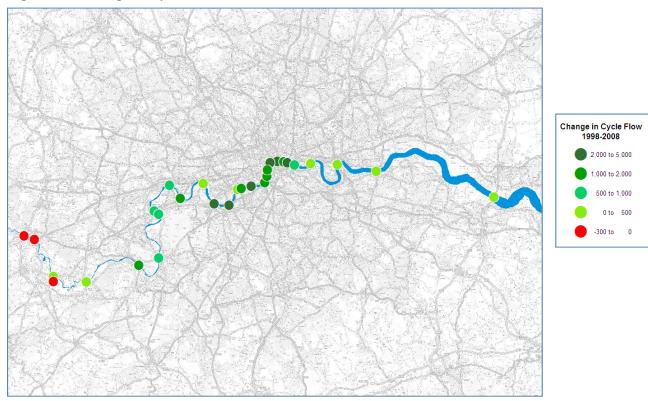
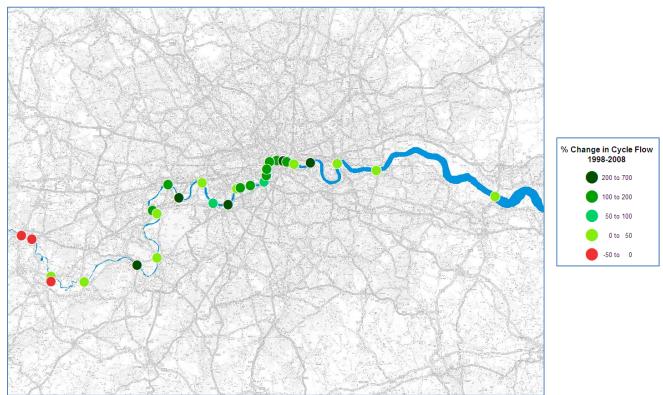


Figure 13 – Percentage Change in Cycle Flow across the Thames Screenline 1998 - 2008



Automatic Cycle Counter Flows and Trends 6

Transport for London Road Network

There are 28 Automatic Cycle Counter locations on the TLRN. Table 5 shows the 6.1 average annual daily flows for cycles, changes in cycle flows, together with the percentage growth experienced at each automatic cycle counter location.

Table 5 - AADF for Cycle Flows on the TLRN by Year (April to March)

				Average Annual Daily Cycle Flows on the TLRN				
	2003/04	2004/05	2005/06	2006/07	2007/08	Actual Growth 2003-2007	Growth 2003- 2007	
Stockwell Rd	2075	3096	3508	4405	5045	2971	143%	
Streatham Hill	1715	2627	2786	2336	5072	3357	196%	
York Road	4526	4849	5506	6991	9047	4521	100%	
Clapham Road	5935	9031	9958	11122	13426	7491	126%	
Homerton High Street	1943	1670	2088	2194	2461	518	27%	
Vauxhall Bridge	5894	5991	6814	9146	11687	5793	98%	
Blackfriars Bridge	8014	10361	10076	12296	13441	5427	68%	
Chiswick Bridge	3484	2690	2842	2262	2766	-718	-21%	
Upper Richmond Road	2613	2769	3202	3803	5616	3003	115%	
Pound Street	422	388	450	487	165	-257	-61%	
Tooting Bec Road	660	774	847	1157	1294	634	96%	
East Hill	886	1836	3047	3507	4385	3499	395%	
Great West Road	995	836	1275	1362	1473	478	48%	
Harlington Road East	406	299	366	322	331	-75	-18%	
Camden Road	4359	4700	4812	2302	6438	2079	48%	
Finchley Road	2533	2608	2345	3349	2500	-33	-1%	
High Rd Tottenham	1050	1213	1293	1812	2398	1348	128%	
Seven Sisters Road	984	975	956	1439	2238	1254	127%	
Mile End Road	1793	3801	3938	4820	5851	4058	226%	
Pentonville Road	3174	3125	3868	3295	1341	-1833	-58%	
East India Dock Road	1134	1371	1490	1821	2161	1027	91%	
Tower Bridge Road	2128	2182	2439	3595	4560	2432	114%	
Kennington Lane	1141	1098	1322	1304	1785	644	56%	
New Cross Road	2533	3124	3866	5718	6998	4465	176%	
Well Hall Road	179	367	360	400	411	232	130%	
London Road	201	205	209	380	279	78	39%	
Brompton Road	2723	2742	6616	5466	6282	3559	131%	
Twickenham Bridge	1907	1352	3264	3478	4265	2358	124%	

- 6.2 Half of all sites are seen to have experienced a 100% or more increase in cycle flows in 2007/08 when compared to 2003/04. The highest increase of 395% is evident at East Hill, where flows more than doubled between 2003/04 and 2004/05 and continued to increase through to 2007/08. A small number of sites, 5, show a decrease in cycling. It is however worth noting that the majority of these sites are those with a 1,000 cycles a day, or fewer, baseline. Pentonville Road is the exception, with a reduction of close to 2,000 cycles per day.
- 6.3 Figures 14 to 16 present data given in Table 5 in a graphical format. Figure 14 shows the 2007/08 average annual daily flows on the TLRN. Overleaf, Figure 15 shows the change in flow at each location and Figure 16 the percentage change between 2003/04 and 2007/08. The maps highlight Central and Inner London as having the highest cycle flows and subsequent growth.

Figure 14 - Actual cycle flow on the TLRN 2007

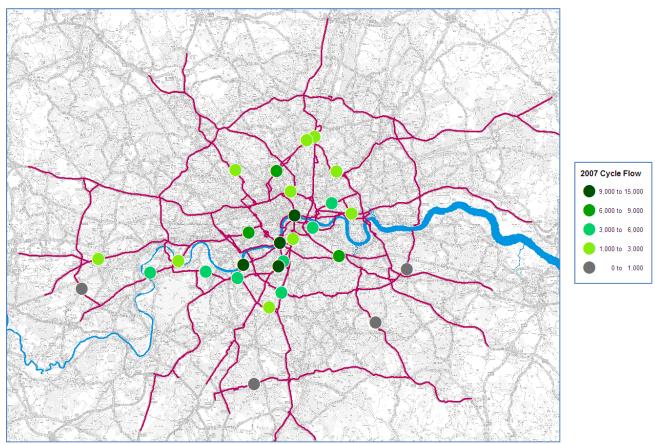


Figure 15 - Change in cycle flows on the TLRN 2003 - 2007

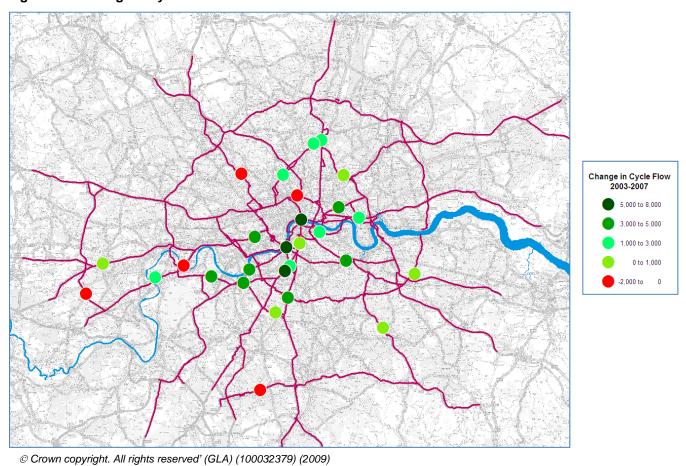
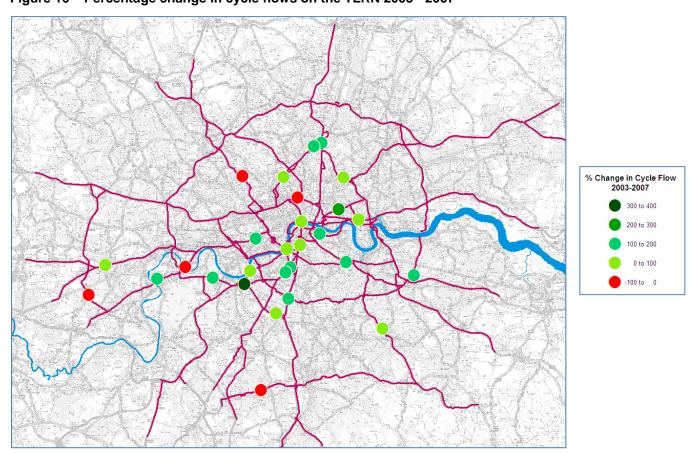


Figure 16 - Percentage change in cycle flows on the TLRN 2003 - 2007



Borough Principal Road Network

There are 33 Automatic Cycle Counter locations on the BPRN. Table 6 shows the AADF for cycles on the BPRN, and shows the growth between 2003 and 2007.

Table 6 – AADF for Cycle Flows on the BPRN by Year

Average Annual Daily Cycle Flows on the BPRN

				Average	e Alliluai Da	ally Cycle Flows o	
	2003/04	2004/05	2005/06	2006/07	2007/08	Actual Growth 2003-2007	% Growth 2003-2007
Edgware Road	184	878	444	618	395	211	114%
Lower Boston Road	450	392	452	462	447	-3	-1%
Woodfood New Road	562	579	627	796	768	206	37%
Chigwell Road	113	116	203	230	236	123	108%
Waterfall Road	81	79	87	180	170	89	109%
Mollison Avenue	601	519	519	425	408	-193	-32%
Brecknock Road	726	545	449	573	573	-153	-21%
Manchester Road	468	569	681	706	686	218	47%
Carshalton Road	103	236	113	849	812	709	686%
Gravel Hill	306	484	1347	1347	1347	1041	340%
Central Way	118	106	111	111	108	-10	-8%
Broadmead Road	196	172	224	296	291	95	48%
Court Road	191	145	140	184	182	-9	-5%
Greenwich South St	851	766	694	1239	1176	325	38%
Grove Vale	1695	1553	2023	2197	2167	472	28%
Willesden Lane	914	740	869	881	834	-80	-9%
Hale Lane	144	178	120	224	222	78	54%
Grange Road	2097	1953	2195	2195	2195	98	5%
Harrow Road	1675	1562	1921	2120	2008	333	20%
Heston Road	668	642	567	644	626	-42	-6%
High Street	486	479	481	511	489	3	1%
Village Way	945	933	1196	1402	1351	406	43%
Norwood Road	1284	1225	1444	1805	1713	429	33%
Manor Road	349	293	339	381	367	18	5%
St James' Road	765	687	767	946	896	131	17%
Queenstown Road	6771	7417	8971	8983	10560	3789	56%
Old Street	8523	8007	9146	9146	9146	623	7%
Theobald Road	11254	9594	9873	6727	6258	-4996	-44%
Charing Cross Road	3448	3169	3957	4499	4166	718	21%
Oxford Street WB	4471	3466	3599	4210	4032	-439	-10%
The Green	983	864	894	731	712	-271	-28%
Rush Green Road	424	452	456	926	878	454	107%
Brookshill	126	108	143	129	129	3	2%

- 6.5 Queenstown Road in Wandsworth can be seen to have the highest BPRN flow. This site has also experienced the highest 2007/08 increase (3,800 cycles). Ten of the 33 sites show a decrease in the level of cycling when comparing 2007/08 with 2003/04 flows. The most significant of these, Theobald Road, saw a decrease of 4,996 cycles, equivalent to 44%. In terms of percentage growth, Carshalton Road in Sutton has seen the greatest increase (potentially resultant from measures introduced as part of TfL's Smarter Travel Sutton scheme), although it is worth noting that this growth stems from a low baseline.
- 6.6 Figures 17 to 19 present data given in Table 6 in a graphical format. Figure 17 shows the number of cycles using the BPRN in 2007. Overleaf, Figure 18 shows the change in cycle flows at each automatic cycle counter location and Figure 19 the percentage change between 2003 and 2007. The maps show a concentration of high cycle flows (over 1,500 a day) in Central and Inner London, alongside continued growth across the whole of London, albeit with reduced flows at a number of sites across London.

2007 Cycle Flow

② 3,000 to 12,000
② 1,500 and over
② 500 to 1,500
② 250 to 500
② 1 to 250

Figure 17 – Actual cycle flows on the BPRN 2007

Figure 18 - Change in cycle flow on the BPRN 2003 - 2007

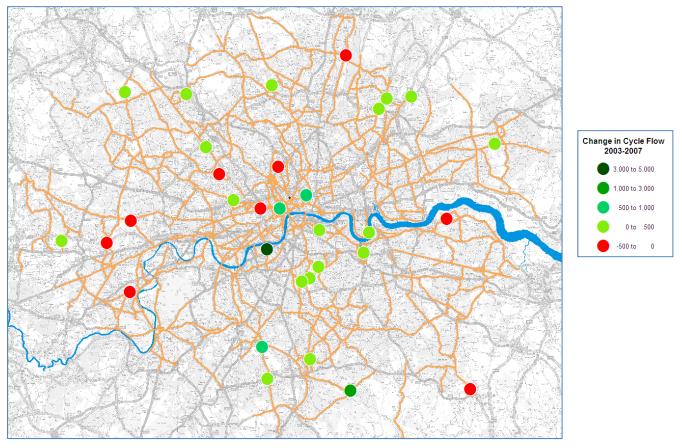
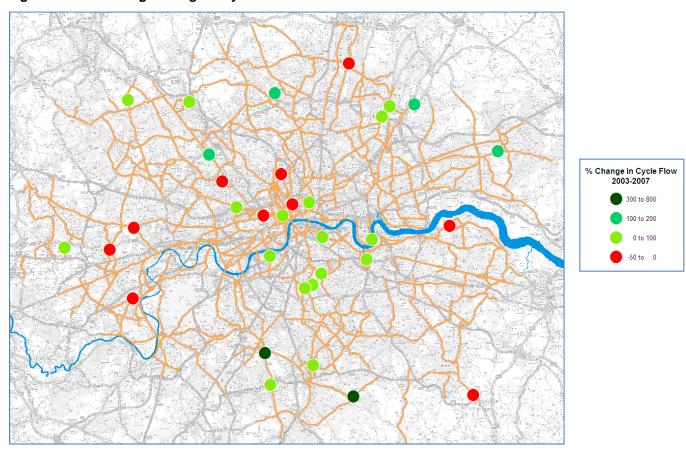


Figure 19 - Percentage change in cycle flow on the BPRN 2003 - 2007



7 Cycling at DfT National Road Traffic Census Count Sites

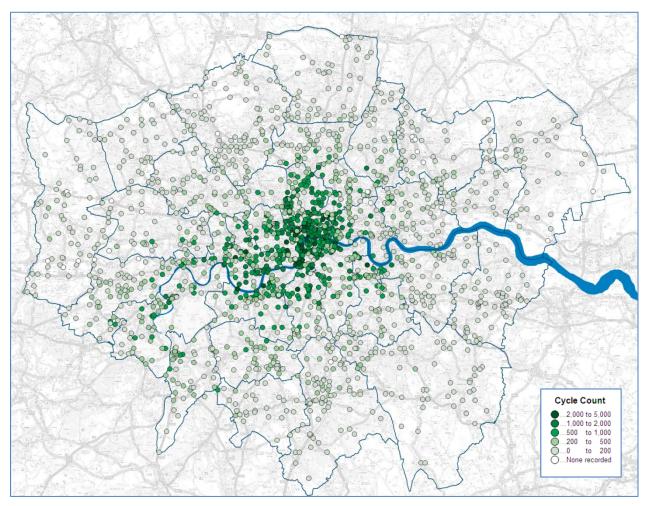
- 7.1 The Department for Transport have a rotating programme of manual classified counts on the DfT monitoring network (made up of approximately 1780km of major roads split into links). Twelve hour manual classified counts are undertaken on each link, on a 1, 2, 4 or 8 year frequency, depending on the variability and level of traffic.
- 7.2 Table 7 provides a summary of cycle flows (recorded by the DfT), by Borough.

Table 7 - DfT NRTCC cycle flow summary, by Borough

Borough	Number of sites	Total daily cycle flow (all sites)	Average daily cycle flow (per site)
City of London	38	41,447	1,091
Westminster	103	101,053	981
Central London	141	142,500	1,011
% of Greater London	7.4%	19.4%	262.8%
Camden	74	66,455	898
Hackney	57	33,191	582
Hammersmith and Fulham	37	25,320	684
Haringey	45	8,592	191
Islington	66	52,825	800
Kensington and Chelsea	46	36,752	799
Lambeth	74	57,139	772
Lewisham	54	16,316	302
Newham	53	8,804	166
Southwark	99	79,934	807
Tower Hamlets	54	24,007	445
Wandsworth	73	42,779	586
Inner London	732	452,114	618
% of Greater London	38.2%	61.4%	160.6%
Barking and Dagenham	29	1,819	63
Barnet	92	6,857	75
Bexley	64	4,099	64
Brent	52	7,458	143
Bromley	60	6,206	103
Croydon	79	7,602	64
Ealing	48	6,798	142
Enfield	57	3,511	62
Greenwich	61	9,874	162
Harrow	35	2,218	63
Havering	40	1,466	37
Hillingdon	65	5,018	77
Hounslow	80	19,745	247
Kingston	53	11,823	223
Merton	43	10,039	233
Redbridge	45	3,035	67
Richmond	64	23,821	372
Sutton	28	3,307	118
Waltham Forest	46	6,873	149
Outer London	1,041	141,569	136
% of Greater London	54.4%	19.2%	35.4%
Total Greater London	1,914	736,183	385

- 7.3 Central London sites are seen to have the highest average daily cycle flow. However, where total cycle flows are concerned, Inner London is the highest, with 61% of the Greater London total. Outer London has 900 more sites than Central London and 309 more than Inner London, yet the lowest daily cycle flow total and average daily cycle flow per site.
- 7.4 Of the Central London Boroughs, City of London has the highest average number of daily cycles per site (1,091). However, Westminster flows are also high, with a site average of 981 cycles. London Boroughs of Camden, Southwark, Islington and Kensington and Chelsea, all have sites with an average daily cycle flow of 800 or more. The lowest average flows in Inner London is in Haringey. In Outer London the highest daily cycle flow is apparent in Richmond, with an average flow of 372. The lowest average in Outer London, 37 cycles per site, is evident in the London Borough of Havering.
- 7.5 Figure 20 shows the most recent DfT 12 hour manual count for each site in London. It clearly shows the concentration of high cycle flow sites in Central and Inner London. Interestingly, pockets of high cycle flows are evident at a number of Outer London sites situated in the South West. A number of these are concentrated close to The River Thames. Outer London flows in the remaining sectors are predominantly low, at less than 200 cycles a day.

Figure 20 – Most recent 12 Hour National Road Traffic Census Count for pedal cycles by Site



8 Summary

8.1 Cycling continues to grow in London. A summary of growth by count source is presented in Table 8 below.

Table 8 – Growth in London cycle flows by count source

	Thousa	ands of cycles
Count Source	Actual Growth (2003 or 2004 - 2007 to 2008)	% Growth
Central Cordon	39	60%
Inner Cordon	13	42%
Boundary Cordon	2	11%
Thames Screenline	2	46%
TLRN ATCs	59	92%
BPRN ATCs	4	8%

- 8.2 The largest growth in cycling levels is evident at TLRN ATC sites. Individual site data show the greatest increases to have occurred at Inner London sites. Central Cordon data shows the next highest growth over the past four years, with a 60% increase evident. In fact, all count sources show some increase in cycling levels over the growth period, the smallest of which being evident in Outer London and on Borough roads.
- 8.3 Despite a lack of trend data for DfT NRTCC sites (due to count frequency variability), the data provides an indication as to the areas of Greater London where cycle journeys are both high and low. In particular, they identify potential areas where cycle growth initiatives could be targeted.

9 Contacts for further information

9.1 If you require further information on this traffic note or have any other related queries please contact:

Mike Tarrier 0203 054 0891 mike.tarrier@tfl.gov.uk

Lee Abbott 0203 054 0894 lee.abbott@tfl.gov.uk

Hannah Batchelor 0203 054 0898 hannah.batchelor@tfl.gov.uk Martin Obee 0203 054 0893

martin.obee@tfl.gov.uk

Parvin Miah 0203 054 0897 parvin.miah@tfl.gov.uk

10 Library of traffic notes

Other technical notes in the RNPR series include:

Technical notes

- ITIS Validation Paper July 2005
- RNPR Technical Note 1 ITIS Speed Survey Data
- RNPR Technical Note 2 Traffic Delays in London on Weekdays, Saturdays and Sundays
- RNPR Technical Note 3 Total vehicle delay for London
- RNPR Technical Note 4 Validation of radar traffic monitoring equipment (published as an internal working document)
- RNPR Technical Note 6 Validation of automatic traffic & cycle counters 2006 (published as an internal working document)

Traffic Notes

DfT NRTCC Counts

 RNPR Traffic Note 1 – Traffic levels on major roads in Greater London 1993-2007 (Published November 2008. Update with 2008 flows due in Autumn 2009)

TfL Automatic Traffic Counts

 RNPR Traffic Note 2 – Expansion factors for road traffic counts in London

TfL Cordon and Screenline Counts

- RNPR Traffic Note 3 TfL Cordon and Screenlines 1975 to 2008 (2008 update due Autumn 2009)
- RNPR Traffic Note 5 Major and Minor traffic flows measured through TfL Cordon surveys

ITIS and Moving Observer Survey Data

- RNPR Traffic Note 4 Traffic Speed in London 2003-2007 (Draft in preparation – publication date TBC)
- RNPR Traffic Note 6 Traffic delays in the London Boroughs 2007 (published on LondonStreetWorks website)

Cycling

- RNPR Traffic Note 7 Weather conditions and the levels of cycling on the TLRN
- RNPR Traffic Note 8 Proportion of cyclists violating red lights
- RNPR Traffic Note 9 Cycling trends in London
- RNPR Traffic Note 10 TfL Pedestrian and Cycle Thames Screenline Surveys 2006-2007
- RNPR Traffic Note 11 Cycling journey time reliability

11 Other useful documents

- Travel in London 2008 http://www.tfl.gov.uk/assets/downloads/corporate/travel-in-london-report-number-1.pdf
- Transport Statistics for Great Britain 2008 http://www.dft.gov.uk/adobepdf/162469/221412/221546/226956/261695 /roadstats08tsc.pdf