

Outcomes of the Cycling City and Towns programme: monitoring project report

Describing the impacts of investment in the 12 Cycling City and Towns

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1 Key findings

Analysis of several data sources across the 12 Cycling City and Towns indicates a growth in cycle trips across all towns. The magnitude of this positive change over time, evidenced by several indicators, is highly variable across the 12 locations.

The overall picture presented by the count data is:

- An average growth in cycle trips¹ of +24% across all towns in 2011² relative to a 2007 baseline. At the individual town level, growth ranged from +6% to +62%
- an increase in counts of cyclists over time for 13 of 20 partial cordons and screenlines, and a decrease for seven of these groups of counts when comparing pooled manual count data collected in the early and later stages³ of the programme
- with the exception of Blackpool and Bristol, towns with lower baseline cycle trips have seen a greater percentage change over time than those towns beginning the programme with a generally higher level of cycling. Towns with higher baseline counts of cycle trips did, however, achieve greater absolute increases in counts per counter per year.

Amongst school children:

- The proportion of children reporting that they usually cycle to school increased in all towns between 2007 and 2011. Although year-to-year change is variable between the towns, overall the proportion usually cycling to school increased from 3.1% to 5.0% between 2007 and 2011
- in schools engaged in Bike It, the proportion of pupils cycling to school everyday increased from 4.7% to 10.2%, whilst the proportion never cycling to school decreased from 65.9% to 47.1%.

Amongst adults:

- Active People Survey data suggest an overall decline between 2007/08 and 2010/11 in the proportion of adults cycling for at least 30 minutes either once or more a month, or 12 times or more a month, with the exception of Greater Bristol where the data suggest an increase in both measures over the same period of time.

A limited comparison of data from the Cycling City and Towns with data from different locations, or from different periods in the same towns, suggests:

- A slower growth in cycle trips in the years prior to the Cycling City and Towns programme than during the programme delivery period for the three towns for which this analysis was possible
- growth in cycle trips (based on automatic cycle counter data) in areas matched to Cycling City and Towns, with a greater rate of growth than in the intervention towns for two of three matched areas (although possible confounding factors are noted)

¹ Calculated as the unweighted mean of the percentage change values calculated for each of the 12 towns

² 2010 for Blackpool and Southend

³ The frequency at which counts were undertaken and the duration of the time series of manual counts was highly variable across the 12 towns hence it is not possible to make an overall estimate of change in cycling trips over time based on this indicator

- a lesser decline in the proportion of adults cycling for 30 minutes or more once a month in matched areas than in local authorities with Cycling City and Towns interventions
- a similar decline in the proportion of adults cycling for 30 minutes or more 12 times a month or more in matched areas as in local authorities with Cycling City and Towns interventions
- a greater growth in the proportion of pupils reporting that they cycle to school in Cycling City and Towns than in matched towns without Cycling City and Towns interventions.

2 Expenditure in the Cycling City and Towns

Whilst this report is primarily concerned with the monitoring evidence around outcomes of the Cycling City and Towns programme, it is useful to place these in context through summarising the programme inputs in terms of capital and revenue expenditure. Investment from Cycling England and the Department for Transport⁴ totalled £8 per capita per annum. This investment was matched by the local authorities. Investment in each town is summarised in Table 2-1.

Capital spend was in the region of two to four times revenue spend in the majority of the towns. The ratio was lower in Greater Bristol, with 43% of the overall expenditure being on revenue. In Cambridge investment in capital was higher, with seven times more spent on capital than on revenue.

⁴ The programme was also supported by funding from the Department of Health, which was routed via the Department for Transport

Table 2-1 Capital and revenue investment made in the Cycling City and Towns

	Population	Funding claimed from Cycling England/ Department for Transport ^a		Total investment ^b		Annual expenditure per head ^c
		Capital	Revenue	Capital	Revenue	
Blackpool	142,000	£2,095,000	£1,240,000	£6,890,000	£1,330,000	£19
Cambridge	180,000	£2,708,272	£1,131,728	£7,819,272	£1,134,728	£17
Chester	120,000	£881,022	£1,174,612	£2,672,022	£1,280,612	£11
Colchester	104,000	£1,213,539	£1,126,459	£3,619,015	£1,252,786	£16
Greater Bristol	570,000	£7,641,625	£3,996,743	£11,269,363	£8,444,559	£12
Leighton	38,000	£881,203	£787,887	£1,878,141	£787,887	£23
Shrewsbury	75,000	£1,517,697	£578,303	£2,837,449	£805,669	£16
Southend	160,000	£1,888,034	£1,621,726	£4,979,034	£1,720,526	£14
Southport	90,000	£1,607,712	£551,847	£2,490,391	£1,179,520	£14
Stoke-on-Trent	240,000	£3,675,878	£1,325,514	£6,032,327	£2,499,366	£12
Woking	91,000	£1,472,105	£698,963	£3,475,935	£865,657	£16
York	184,000	£2,444,080	£1,380,949	£6,172,080	£1,380,949	£12
Total	1,994,000	£28,026,167	£15,614,731	£60,135,029	£22,682,259	£14

^a Funding claimed from Department for Transport/Cycling England (as reported in End of Programme Reports for the individual towns (<https://www.gov.uk/government/publications/cycling-england-cycling-city-and-towns-end-of-programme-reports>)).

^b Calculated based on the funding claimed from Department for Transport/Cycling England plus matched expenditure for cycling-specific schemes

^c Calculated as the sum of expenditure divided by the population divided by three

3 Sources of data and information generated

A suite of monitoring tools was employed across the 12 Cycling City and Towns, tailored to reflect the emphasis of the programme delivered in each location. Common indicators of change in cycling across the 12 towns are summarised in Table 3-1.

Table 3-1 Common indicators of change in cycling across the Cycling City and Towns

Change	Population	Indicator
Overall cycle trips	Adults and children	Continuous count data from automatic cycle counters located on both traffic-free and trafficked routes, but predominantly on traffic-free routes Manual counts of cyclists performed on both traffic-free and trafficked routes, but predominantly on trafficked routes
Behaviour change	Adults	Active People Survey
	Children	Pupil Level Annual School Census Bike It monitoring data

4 Automatic cycle count data

4.1 Programme-wide changes in automatic cycle counts

All 12 towns saw an increase in cycle trips over time as measured by automatic cycle counters, presented in Table 4-1 and Chart 4-1.

Four of the 12 towns saw a decline in counts recorded in 2010 relative to 2009, whilst others saw a substantial uplift in counts recorded in 2011 compared to 2010. This may be attributable in part to the poor weather conditions experienced nationwide in the early and late parts of 2010. The change in cycle counts over time compared to the baseline year was recalculated including a factor to represent the impact of adverse weather conditions. This adjustment moderates the drop in counts in 2010 relative to previous years (Chart 4-2).

Table 4-1 Change in count recorded in 2011 compared to a 2007 baseline

	Count in 2011 against a 2007 baseline ^{a,b,c}	Average daily count per counter in 2007 ^b	Average daily count per counter in 2011 ^a	Absolute change in count in 2011 against a 2007 baseline ^d
Blackpool	109%	87	95	7
Cambridge	109%	495	540	44
Chester	121%	163	197	34
Colchester	119%	111	132	21
Greater Bristol	140%	260	364	104
Leighton	135%	40	55	14
Shrewsbury	115%	118	135	17
Southend	117%	185	217	32
Southport	130%	50	65	15
Stoke-on-Trent	162%	31	51	19
Woking	126%	99	125	26
York	106%	209	222	13
All towns^e	124%			

^a 2010 for Blackpool and Southend

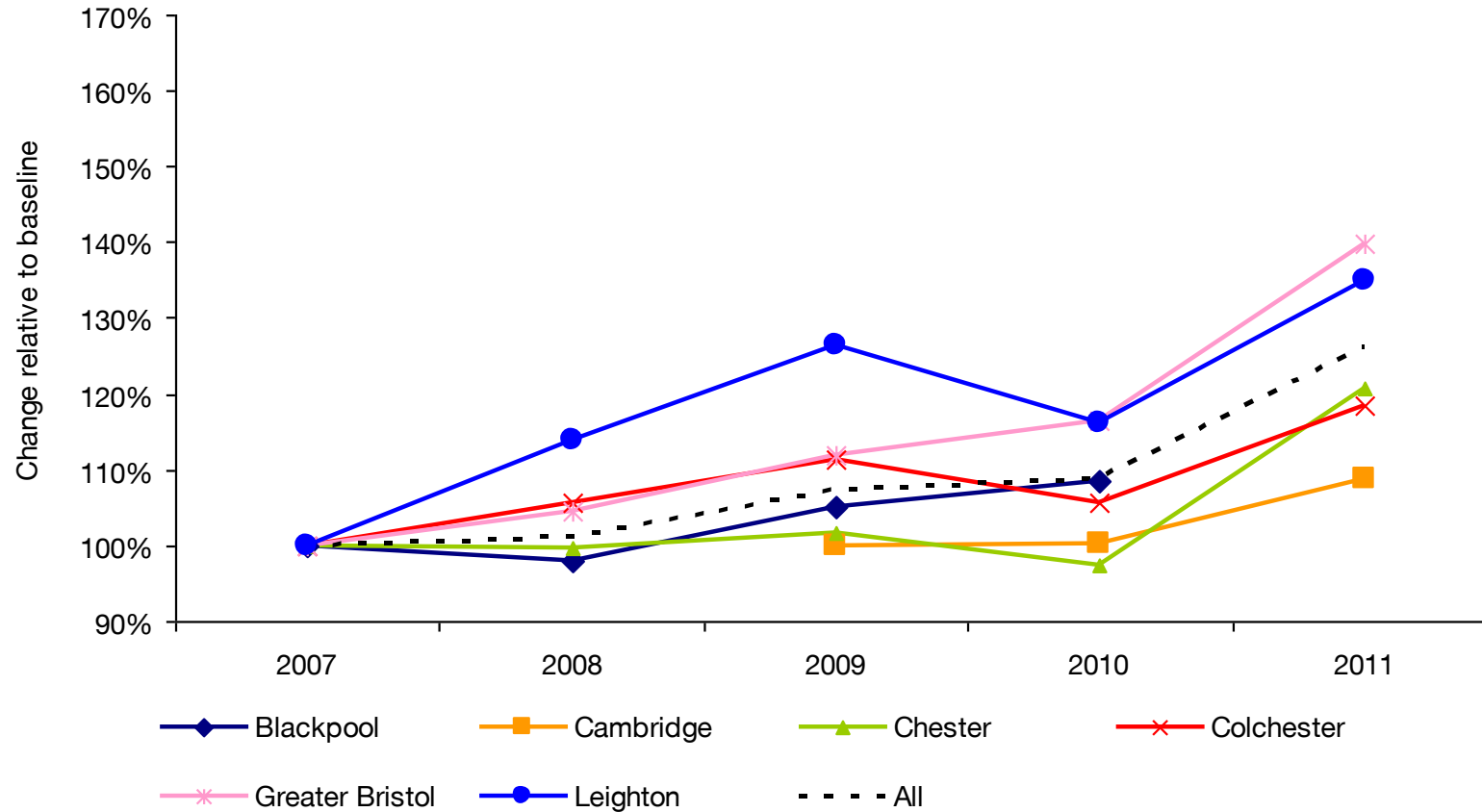
^b Baseline = 100%

^c Increase between baseline year and 2011 is statistically significant in each of the 12 cities and towns ($p < 0.05$)

^d 2009 for Cambridge and Southport

^e Unweighted mean calculated using 2010 change against baseline for Blackpool and Southend and 2011 change against baseline for all other towns

Chart 4-1 Change in counts recorded by automatic cycle counters in each year of the programme against a 2007 baseline (2009 for Cambridge and Southport) – the line labelled 'All' represents data across all 12 towns



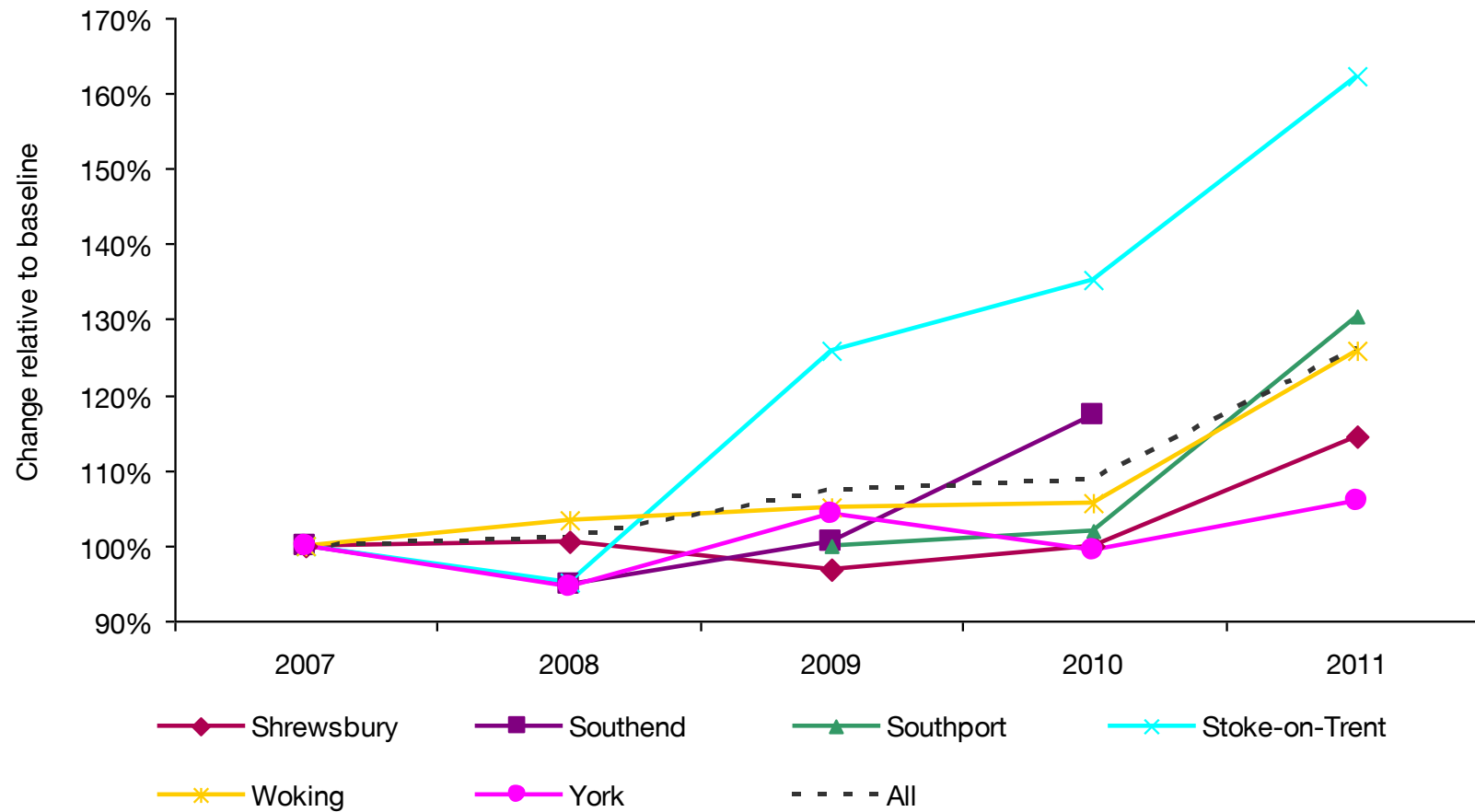
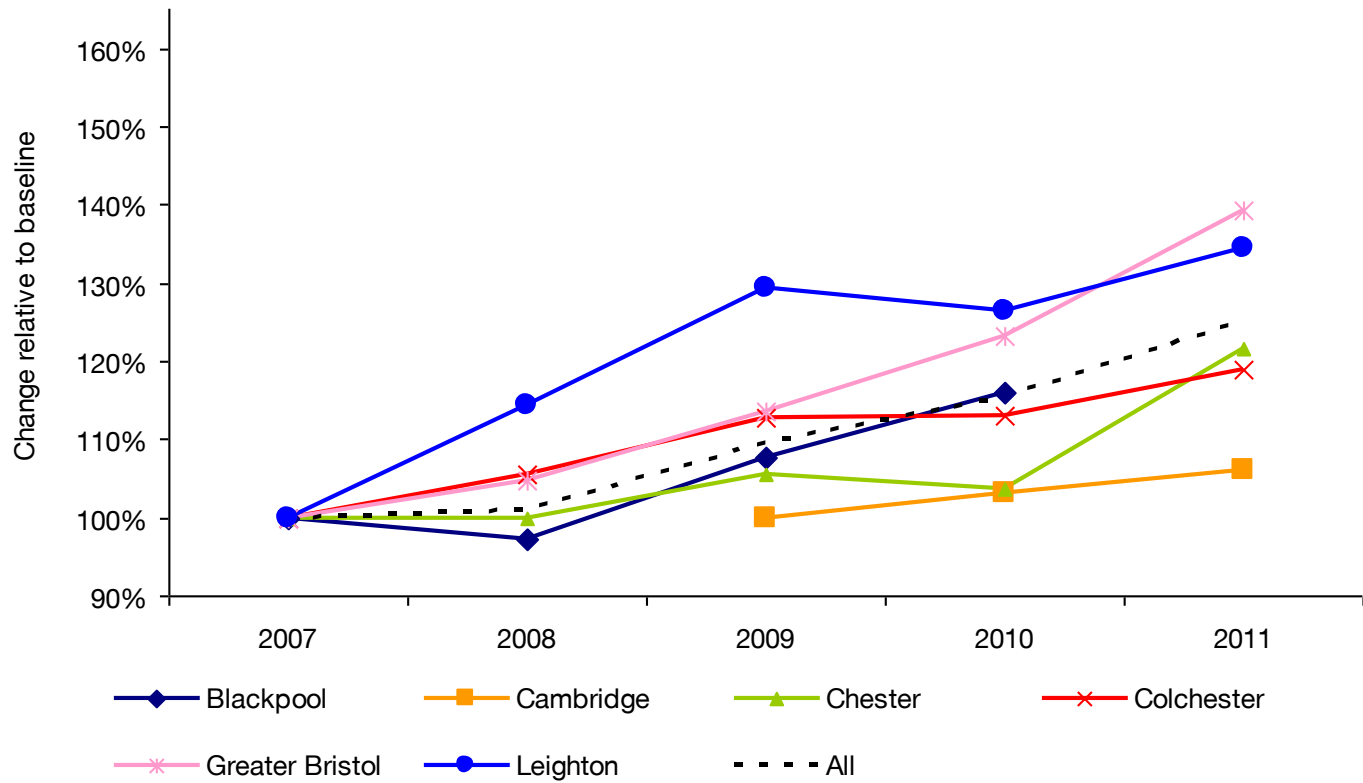
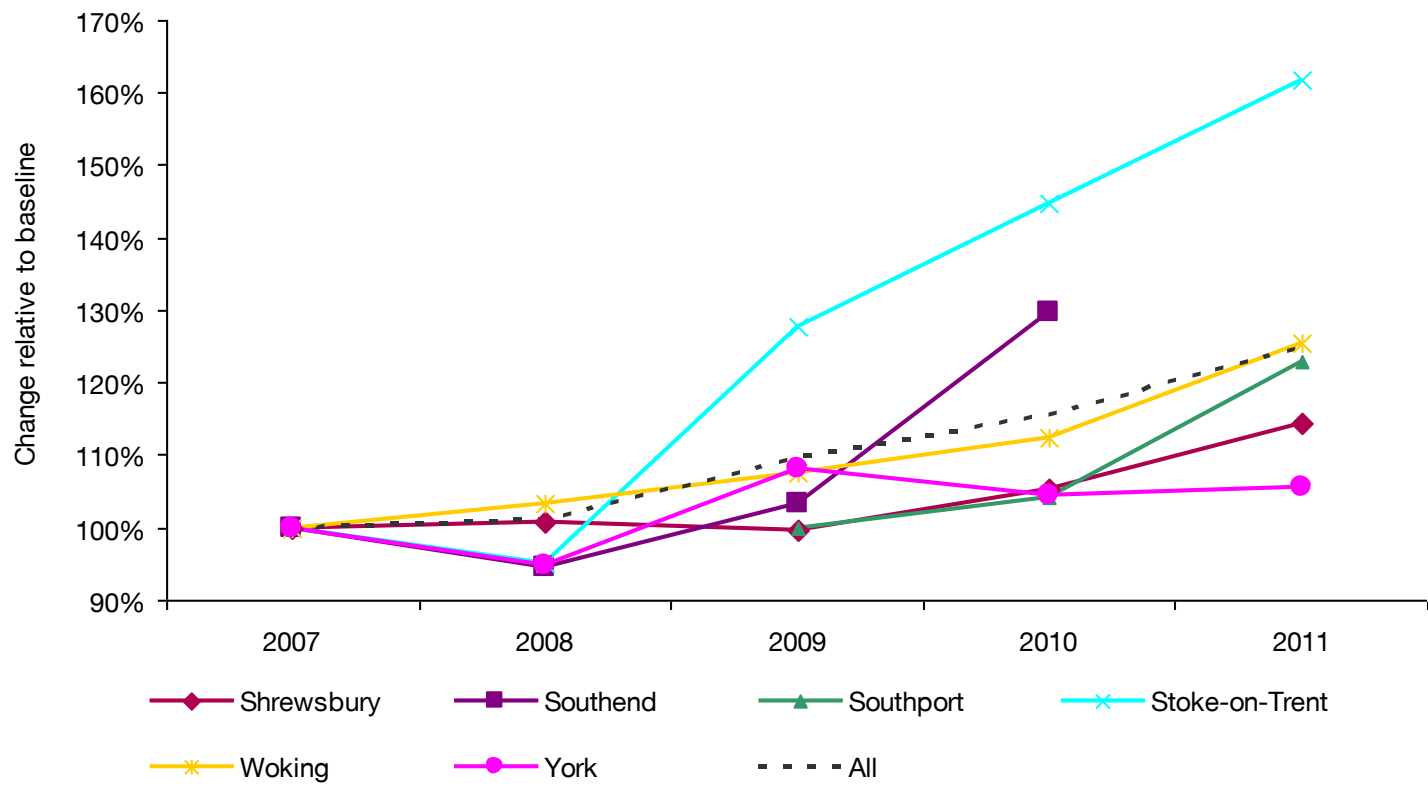


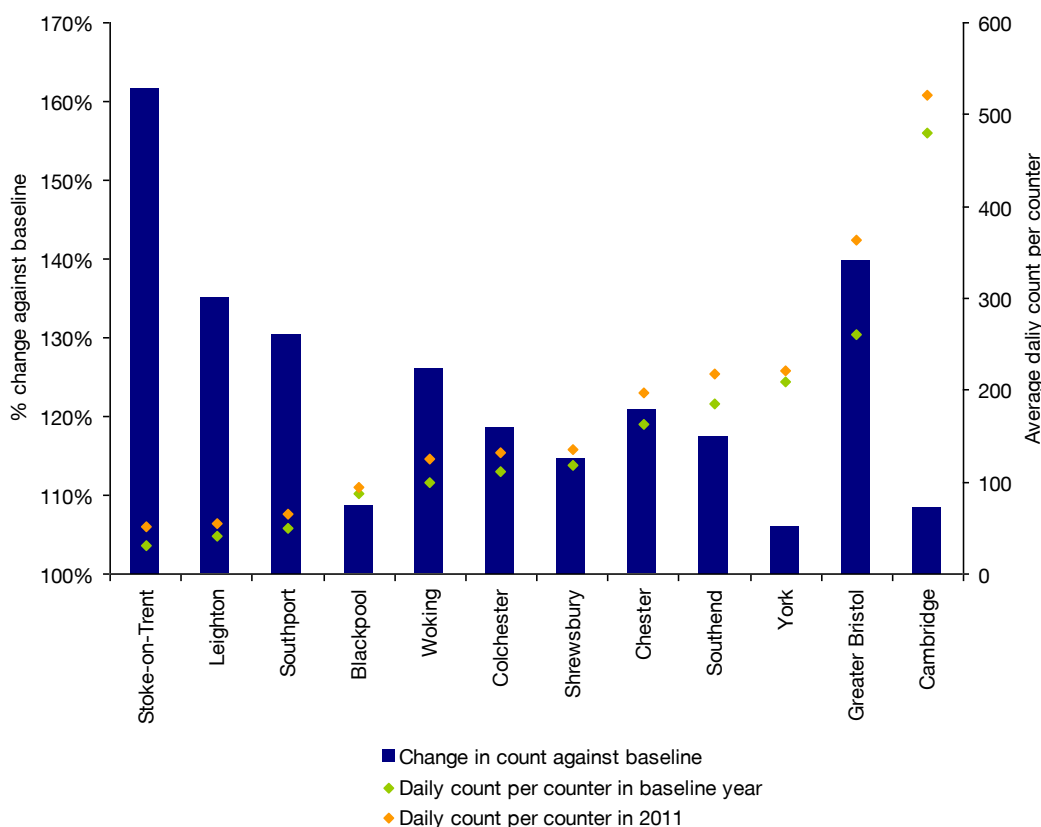
Chart 4-2 Percentage change in counts recorded by automatic cycle counters in each year of the programme against a 2007 baseline (2009 for Cambridge and Southport) including a factor for poor weather conditions – the line labelled 'All' represents data across all 12 towns





The percentage change in counts at the end of the programme is presented in Chart 4-3 (in order of increasing count per day per counter in the baseline year) for each town, together with the average daily count of cyclists per counter in the baseline year and in 2011.⁵ These plots broadly suggest that, with the exception of Blackpool and Bristol, towns with lower baseline numbers of cycle trips have seen a greater percentage change over time than those towns beginning the programme with generally higher levels of cycle trips. In towns starting from a lower baseline count, change over time expressed as a proportion appears greater than towns starting from a higher base level of cycling when the absolute change in counts is similar. For example, the absolute change in counts for Stoke-on-Trent and Shrewsbury is similar, at 19 and 17 additional counts per counter per day in 2011 compared to the baseline year (Table 4-1). Due to Shrewsbury starting from a higher baseline (118 counts per counter per day in the baseline year) than Stoke-on-Trent (31 counts per counter per day in the baseline year), change over time expressed as a percentage appears greater for Stoke-on-Trent than for Shrewsbury (+62% and +15%, respectively).

Chart 4-3 Change in counts recorded by automatic cycle counters in 2011 (2010 for Blackpool and Southend) against a 2007 baseline (2009 for Cambridge and Southport), and counts per day recorded across all counters in the baseline year and 2011 – plotted in order of increasing average daily count per counter in the baseline year

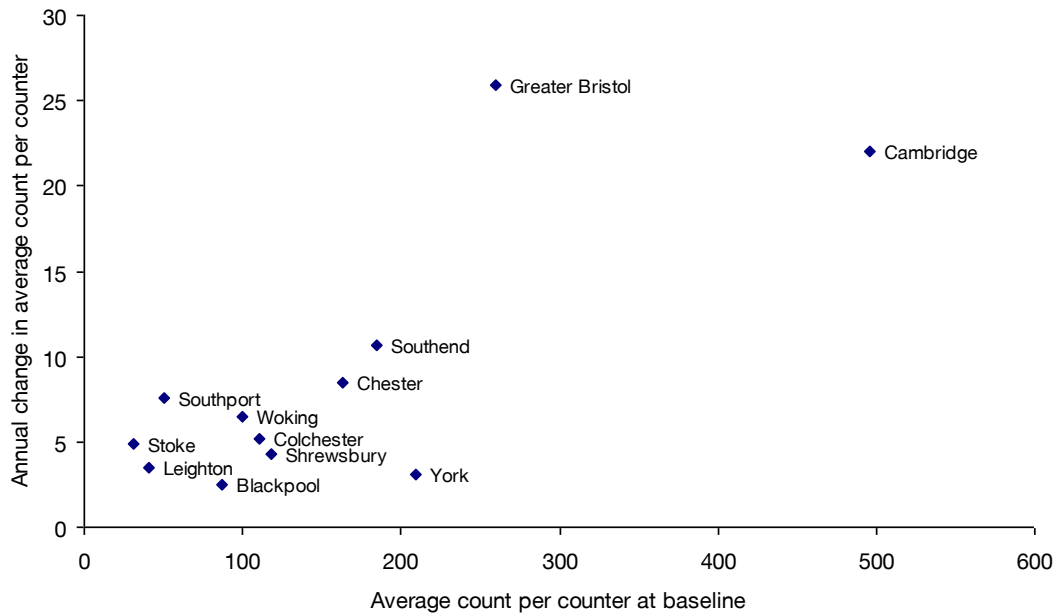


The absolute increase in counts (per counter per year) is presented in Chart 4-4 together with the average daily count per counter in the baseline year. When absolute rather than percentage increases are considered, a more consistent

⁵ Calculated as the total count of cyclists in the baseline year and in 2011 (2010 for Southend and Blackpool) divided by the total number of automatic cycle count sites in the town

pattern emerges: there appears to be some relationship between volumes of cycle trips in the baseline year and the absolute increase in cycle trips observed.

Chart 4-4 Average annual change in daily counts recorded per automatic cycle counter between 2007 (2009 for Cambridge and Southport) and 2011 (2010 for Blackpool and Southend), and average daily count per counter in the baseline year



Data from a total of 193 count sites across the 12 towns have been analysed. The number of counters located in each town and the number of counters displaying positive or negative change over time are presented in Table 4-2. Chart 4-5 presents the range of median annual percentage change across all counters in each town.⁶

⁶ The number of counters for which positive, negative or no change over time is recorded (Table 4-2) encompass all count sites regardless of whether sufficient data were available to robustly quantify change over time, or whether insufficient data were available and only a tentative indication of the direction of change over time is possible. Chart 4-5 is based only upon those counters where enough data were available to robustly quantify the annual rate of change at an individual site level (at least three years of data for each month). This was not possible for any count sites in Cambridge hence its omission from Chart 4-4.

Table 4-2 Number of automatic cycle counters in each town and number of counters with positive, negative and no change over time

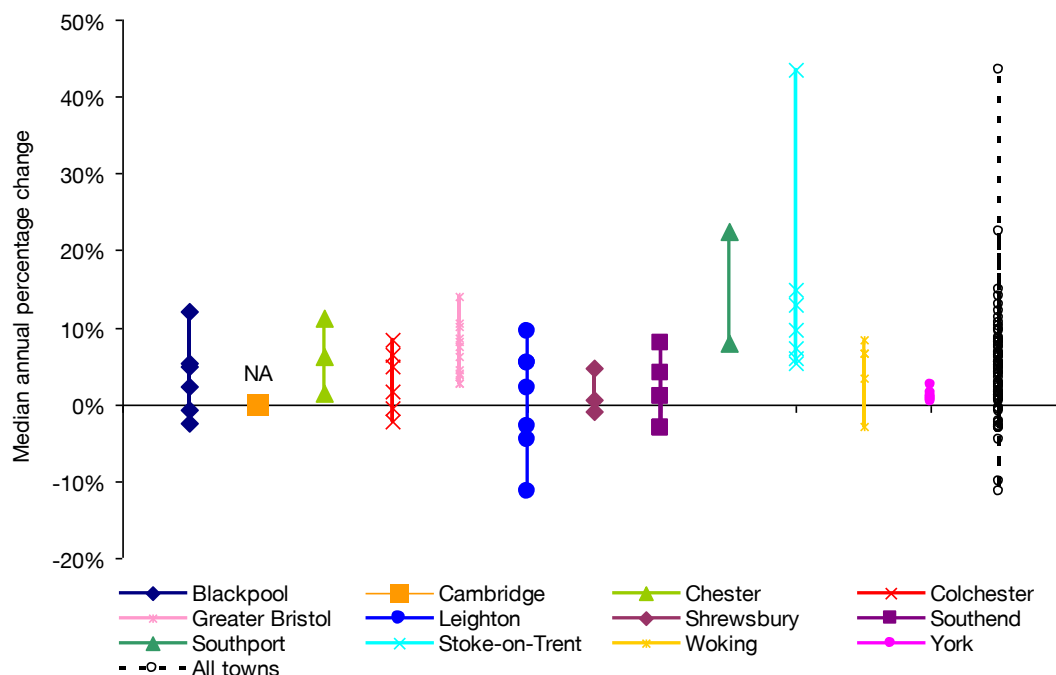
Town	Number of counters ⁷			
	Total	with positive annual change	with no change over time	with negative annual change
Blackpool	9	4	0	5
Cambridge ^a	17	9	2	4
Chester	10	6	1	3
Colchester	14	9	1	4
Greater Bristol	31	29	0	2
Leighton	13	5	2	6
Shrewsbury ^a	21	16	1	3
Southend ^b	7	4	0	3
Southport	10	10	0	0
Stoke-on-Trent ^a	17	13	0	3
Woking	10	8	0	2
York	34	24	2	8
All towns	193	137	9	43

^a Two sites in Cambridge and one each in Shrewsbury and Stoke-on-Trent had insufficient data to make any estimate of change in counts recorded over time

^b As the data in the programme period in Southend was not sufficient to estimate annual percentage changes for any of the counters, data from 2006 to 2010 has been used for this analysis only

⁷ At the individual counter level, no sites recorded a significant change over time. Details are provided in section B (Data collection and analytical methodologies) of this report.

Chart 4-5 Range of median annual percentage change recorded across counters in each town



Of the count sites analysed, the average annual change in the median daily count of cyclists was positive for 72% and negative for 23%. For the remaining 5%, there was no change overall in the time period included in the analysis.

4.2 Comparison of automatic cycle count data with equivalent data in matched towns

For a subset of towns, limited counter data were available for a comparable matched local authority area⁸. This analysis was performed using data from towns matched to Shrewsbury, York and Stoke-on-Trent. The matched towns for Shrewsbury and York were categorised as ‘extremely similar’ and the matched town for Stoke-on-Trent, ‘very similar’. Data from 2007 onwards were included in the analysis. The towns for which matched data were available were also those with smaller absolute changes in levels of cycling (Table 4-1, Chart 4-1). Sufficient data were not available to allow the same analysis for other towns, some of which had greater absolute changes in cycling levels.

Table 4-3 below summarises several key statistics for each town and matched area. In order to give some indication of the comparability of the baseline level of cycling in each location, data from the 2001 Census on mode of travel to work, and the counts per day per counter recorded in the baseline year are presented. Based on the 2001 Census data, the proportion of people cycling to work is lower in the matched areas than in the cycling towns, suggesting that these areas are starting from a lower base level of cycling. However, this is contradicted by the counts per day per counter in the matched areas, all of which are greater than in the cycling towns. It should be noted, however, that there are substantially fewer counters for

⁸ The National Statistics 2001 Area Classification gives for each local authority up to four other corresponding local authorities classified as being extremely similar; very similar; similar or somewhat similar.

which data are available within the matched areas. Whilst the distribution of counters in the cycling towns was, on the whole, designed to provide a well rounded coverage of cycling across the whole town area, the monitoring team had no input into the location of counters in matched areas. These counters may have been sited in response to locally delivered initiatives or to monitor routes of local interest, and possibly therefore sites of the most intensive usage. As such they may not necessarily give a complete picture of town-wide trends in cycling in these areas over time.

The percentage change in cycling in 2011 compared to a 2007 baseline is presented in Table 4-3, and year-to-year change in counts of cyclists in Table 4-4 and Chart 4-6 for Shrewsbury, Stoke-on-Trent and York and their respective matched areas

Table 4-3 Details of cycling in matched and intervention areas derived from the 2001 Census and automatic cycle counter data, and change in cycle trips in 2011 against a 2007 baseline in the intervention and matched areas

Town	Number of count sites included in analysis		% cycling (2001 census, mode of travel to work ^a)		Baseline (2007) counts per day per counter		2011 count per day per counter		Absolute change in counts per day per counter (2007 to 2011)		Change in cycling in 2011 against a 2007 baseline ^{b,c}	
	Intervention	Matched	Intervention	Matched	Intervention	Matched	Intervention	Matched	Intervention	Matched	Intervention	Matched
Shrewsbury	21	8	3.8%	3.7%	118	158	135	193	17	35	115%	122%
Stoke-on-Trent	17	8	1.0%	0.8%	31	87	51	112	19	24	162%	128%
York	34	3	7.8%	1.7%	209	258	222	310	13	52	106%	120%

^a Calculated as the percentage of those travelling to work (excluding those working from home) travelling by bicycle (http://data.gov.uk/dataset/method_of_travel_to_work_-_daytime_population_2001_census)

^b Baseline = 100%

^c A significant increase in counts was observed at each of the intervention and matched towns when comparing 2011 against the baseline year ($p < 0.05$)

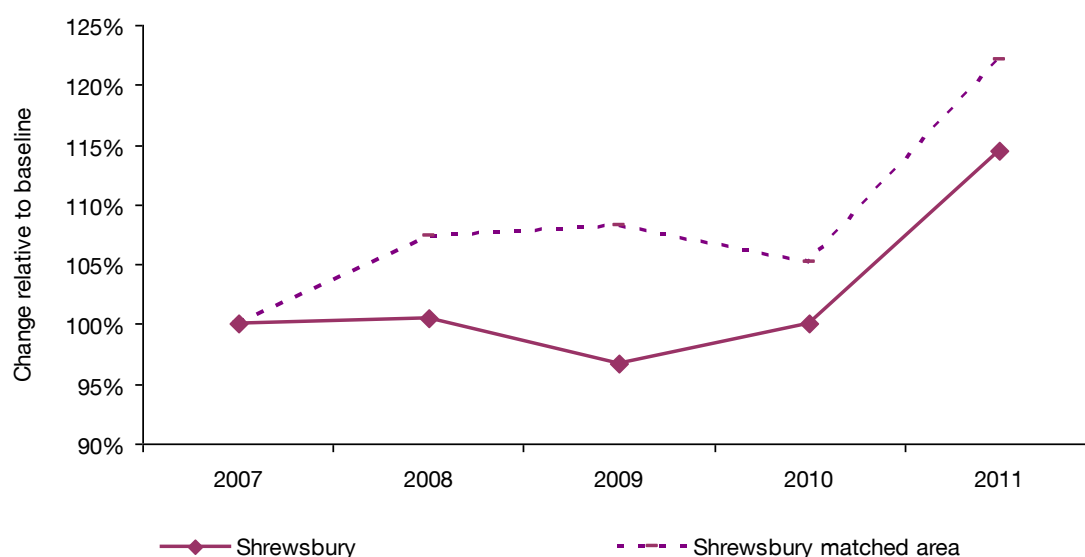
Table 4-4 Change in count against a 2007 baseline for Shrewsbury, York and Stoke-on-Trent compared to matched local authority areas

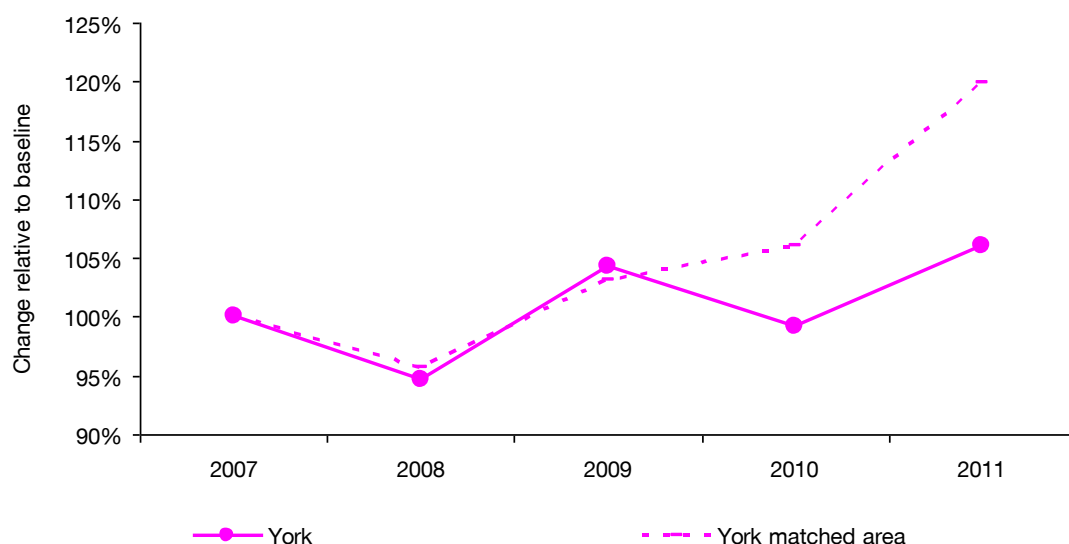
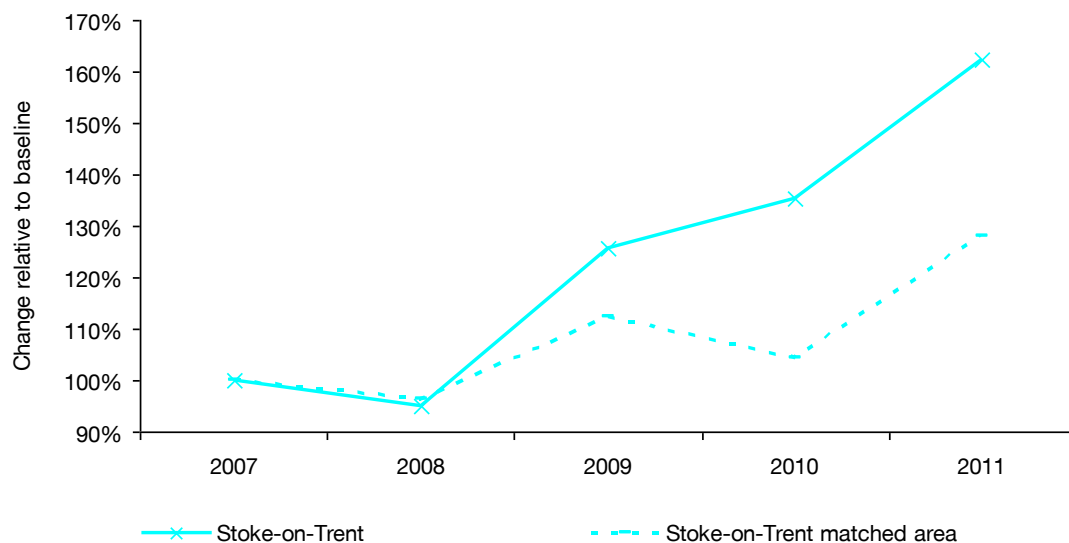
Town	Change in count against baseline ^{a, b}				
	2007	2008	2009	2010	2011
Shrewsbury	100%	101%	97%	100%	115%
Shrewsbury matched area	100%	107%	108%	105%	122%
Stoke-on-Trent	100%	95%	126%	135%	162%
Stoke-on-Trent matched area	100%	96%	112%	104%	128%
York	100%	95%	104%	99%	106%
York matched area	100%	96%	103%	106%	120%

^a Baseline = 100%

^b A significant increase in counts was observed for each of the intervention and matched towns when comparing 2011 against the baseline year ($p < 0.05$)

Chart 4-6 Percentage change in counts against a 2007 baseline recorded by automatic cycle counters in Shrewsbury, York and Stoke-on-Trent compared to counters in similar areas without Cycling City and Towns





There has been a growth in cycle trips in the matched areas over the Cycling City and Towns period, with a lesser change over time in the area matched to Stoke-on-Trent than in the intervention town. A greater growth was recorded in the matched area for both York and Shrewsbury.

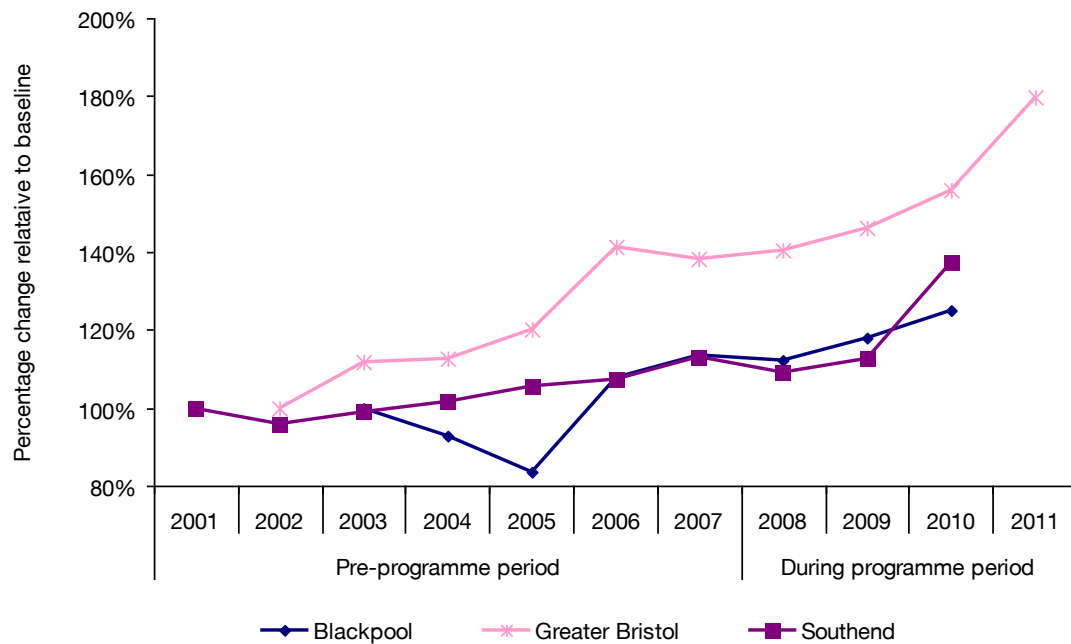
Whilst there was no significant investment in cycling in the area matched to York, there was some small scale delivery of cycling schemes, and a general move to restrict car movement and increase permeability of the town centre to cyclists, including the installation of cycle contraflows. Political leadership that was strongly supportive of cycling is reported in this location during the corresponding period.

The area matched to Shrewsbury received funding through the Community Infrastructure Fund (2) between 2008/09 and 2010/11. This funding was in part spent on cycling schemes, including dedicated cycle routes and other links to the National Cycle Network. Both factors may have resulted in an enhanced growth in cycling in these particular matched areas compared to the intervention areas.

4.3 Comparison of automatic cycle count data with equivalent data gathered prior to the Cycling City and Towns programme

In a subset of the towns, a limited number of counters were identified for which data are available extending back several years before the start of the Cycling City and Towns programme. Data from these counters were analysed in order to investigate change in levels of cycling over the years prior to the programme. This analysis was performed using count data from Blackpool (six count sites), Greater Bristol (nine count sites) and Southend (seven count sites).. An analysis was made of the rate of change in counts over the years prior to the programme and the rate of change during the programme for these count sites.⁹ The percentage change in counts recorded for counters with data for the pre-programme period are presented in Chart 4-7¹⁰, and the average percentage change per year in the pre-programme and programme period, in Table 4-5.

Chart 4-7 Change in counts recorded by automatic cycle counters in each year of the programme against a pre-programme baseline



⁹ To allow a direct comparison to be made of growth in the pre and during programme period, only data from counters where pre programme data are available are included in the analysis; change against baseline is therefore not comparable to the earlier reported analysis using all counters regardless of the year in which data collection started

¹⁰ Due to variability in the duration of data available for each town in the pre-programme period, it is not possible to use a consistent baseline. Change in the pre programme period is expressed against a 2003 baseline for Blackpool, 2002 for Bristol and 2001 for Southend. In analysing the 'in programme' data in Table 4-5 for Bristol, change in 2011 is compared to the baseline year; for Southend and Blackpool counter data were not available for 2011

Table 4-5 Average percentage change in count per year for Blackpool, Bristol and Southend in years before and during the Cycling City and Towns programme

Town	Average change per year	
	Pre-programme period	In-programme period
Blackpool	3.4%	3.9%
Greater Bristol	7.7%	10.3%
Southend	2.2%	8.1%

For the subset of counters in the three towns where it is possible to compare growth before and during the Cycling City and Towns programme, a greater increase has been recorded in the count of cyclists over the period of time when Cycling City and Towns interventions have been delivered.

5 Manual cycle count data

5.1 Programme-wide changes in manual counts of cycles

Series of 12 hour manual counts of cyclists were implemented across all towns. In several towns, counts were performed over more than one cordon or screenline. The duration of the manual count time series and the frequency of counts were variable across the towns. Insufficient data in terms of duration were available for any of the 12 towns to allow robust estimation of an annual rate of change in cycle trips recorded using manual counts. Counts performed in like periods in different years were compared. Percentage change in the aggregated count across all sites in each town, the total number of sites for which data are available and the number of sites for which a significant change was recorded between the two time periods compared are presented in Table 5-1.

We observe an increase in counts of cyclists over time for 13 of 20 partial cordons and screenlines, and a decrease for seven of these groups of counts when comparing pooled manual count data collected in the early and later stages of the programme. Of particular note are the variability of results on different cordons and screenlines in the same towns in some instances.

Table 5-1 Percentage change in aggregated 12 hour manual counts of cyclists

Town	Time periods compared ^a	% change	Number of sites		
			Total included in comparison	with significant increase ^c	with significant decrease ^c
Blackpool	2010 - 2011	42%	14	8	0
Cambridge (cordon)	2005/06 – 2009/10	12%	23	14	4
Cambridge (river screenline)	2005/06/07 – 2009/10/11	10%	11	6	2
Chester	2009/10 – 2010/11	-8%	19	2	5
Colchester	2009/10 – 2010/11	-2%	17	4	5
Greater Bristol	2009/10 – 2010/11	24%	14	6	2
Leighton (town centre)	2009/10-2010/11	-6%	5	1	2
Leighton (railway screenline)	2009/10-2010/11	-13%	4	1	2
Shrewsbury (C counts) ^b	2006/07/08 – 2009/10/11	1%	10	3	3
Shrewsbury (M counts) ^b	2006/07/08 – 2009/10/11	12%	11	4	2
Southend (town centre)	2010-2011	-7%	7	1	3
Southend (outer cordon)	2010-2011	25%	11	6	1

Town	Time periods compared ^a	% change	Total included in comparison	with significant increase ^c	with significant decrease ^c
Southend (western screenline)	2010-2011	36%	6	4	0
Southend (eastern screenline)	2010-2011	-8%	2	0	0
Southport	2010-2011	29%	8	4	0
Stoke-on-Trent (city centre cordon)	2008-2011	42%	28	9	1
Stoke-on-Trent (A500 screenline)	2009-2010	11%	17	7	1
Woking	2009 – 2011	-4%	16	2	3
York (inner cordon)	2009/10-2010/11	2%	8	4	2
York (bridges)	2006/07-2010/11	3%	5	2	2

^a Comparisons are made between aggregated 12 hour manual counts performed in like quarters in different years or annual counts in different years

^b M counts monitor movement towards the centre of Shrewsbury; C counts monitor movement at junctions more remote from the town centre

^c p<0.05

6 Comparison of change in the Cycling City and Towns with national trends in cycling

6.1 Department for Transport Annual Road Traffic Estimates

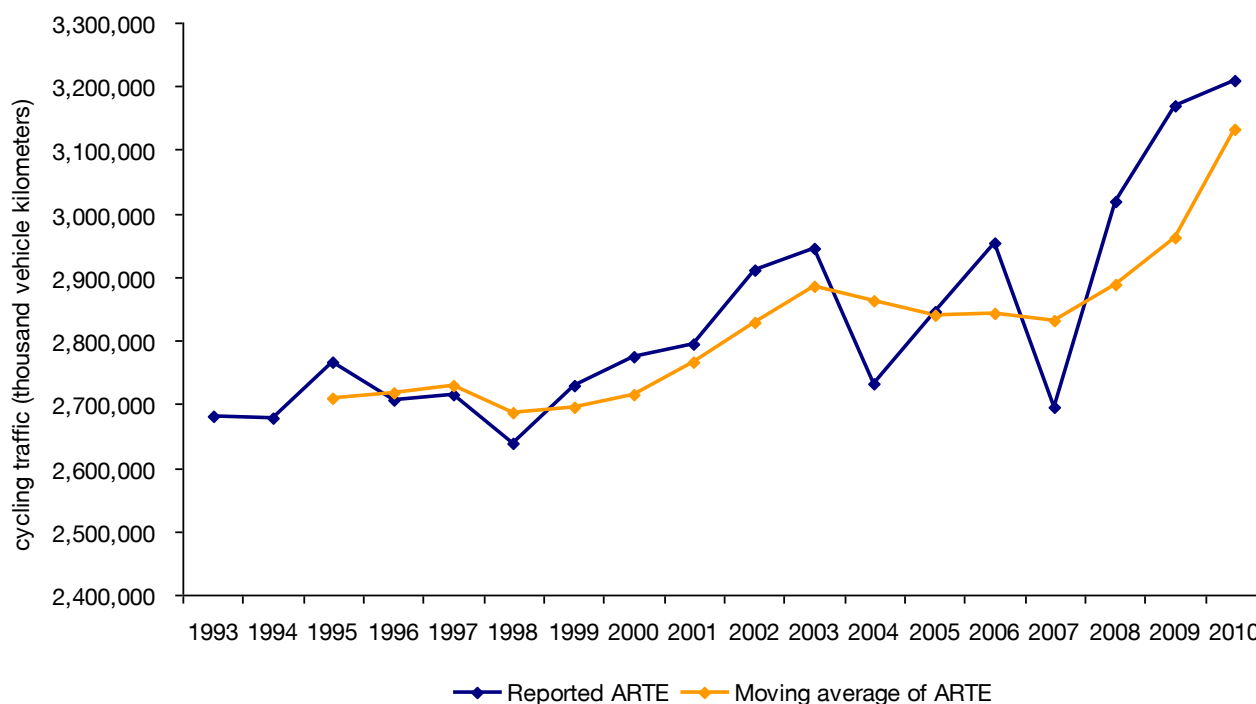
Annual Road Traffic Estimates (ARTE) published by Department for Transport in 2012¹¹ reported a year to year increase in cycle traffic from 2007 onwards. Cycle traffic increased by 2.2% between 2010 and 2011, and by 17.7% over the previous ten years.

Detailed data on cycle traffic were made available by the Department for Transport (DfT) for the period 1993 to 2010. Although the data were not sufficiently robust to assess levels of cycling at a town level using this source, it is possible to use the data to provide an indication of national trends. In order to make as direct a comparison as possible given the limitations of the data set, the cycle traffic estimates (expressed as thousands of vehicle kilometres) were summed across the English local authority areas, excluding London and metropolitan counties. The resulting values give an indication of national trends in on-road cycling on roads similar to those within the Cycling City and Towns. It has not been possible to exclude data from areas involved in the programme from this dataset. Departmental advice is that any analysis based only on data from the Cycling City and Towns, even if combined, would not be robust. The cycling traffic estimates (in thousands of vehicle kilometres) for each year, and estimates based on a three year moving average¹² are presented in Chart 6-1.

¹¹ Department for Transport (2012) 'Annual Road Traffic Estimates 2012' Department for Transport (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9059/Road-Traffic-estimates-2011-Revised.pdf)

¹² The moving average has been calculated by taking the mean of the given year plus the two previous years. Two and four year moving averages were also calculated, but were less satisfactory than the three year moving average in demonstrating underlying trends over time.

Chart 6-1 Cycling traffic estimates for non-metropolitan areas in England



The ARTE data for cycle traffic fluctuate between 2003 and 2008, with an apparent increase from 2007. Levels of cycle traffic are relatively stable between 1995 and 2000, followed by a steady increase to 2003 after which cycling levels drop between 2003 and 2007. A substantial uplift is apparent in data collected between 2007 and 2010.

6.2 National Travel Survey

The National Travel Survey (NTS) is a household survey collecting data on personal travel. Cycle trip data were obtained from special tabulations of the NTS for the whole of Britain, medium urban areas (population of between 25,000 and 250,000) and large urban areas (population greater than 250,000). Bicycle miles per person per year, and bicycle stages per person per year are presented in Chart 6-2 and Chart 6-3 for the period 2002-2010. The national data suggest a slight increase in distance cycled per person during the Cycling City and Towns period. Due to the small sample size, both measures show erratic fluctuation over the time period considered.

Chart 6-2 Bicycle miles per person per year, 2002-2010 (National Travel Survey)

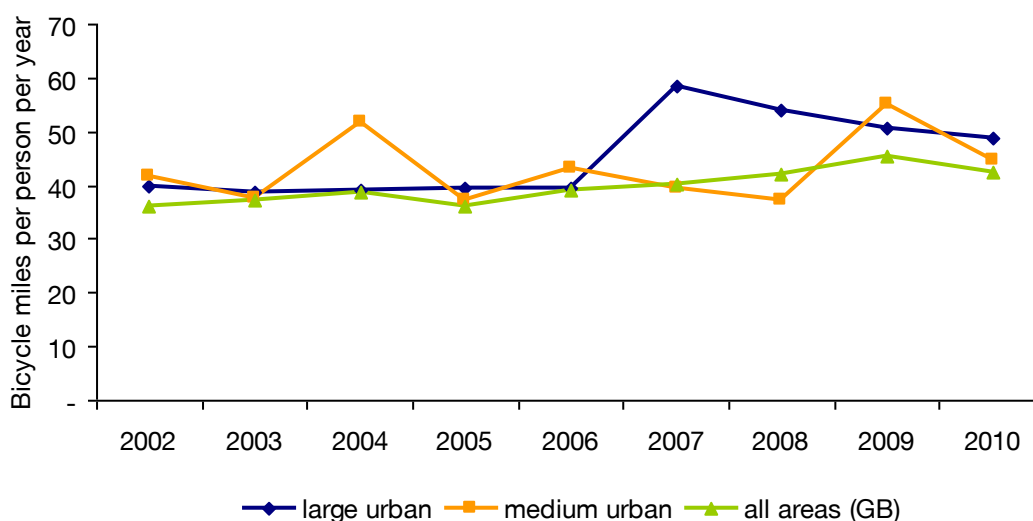
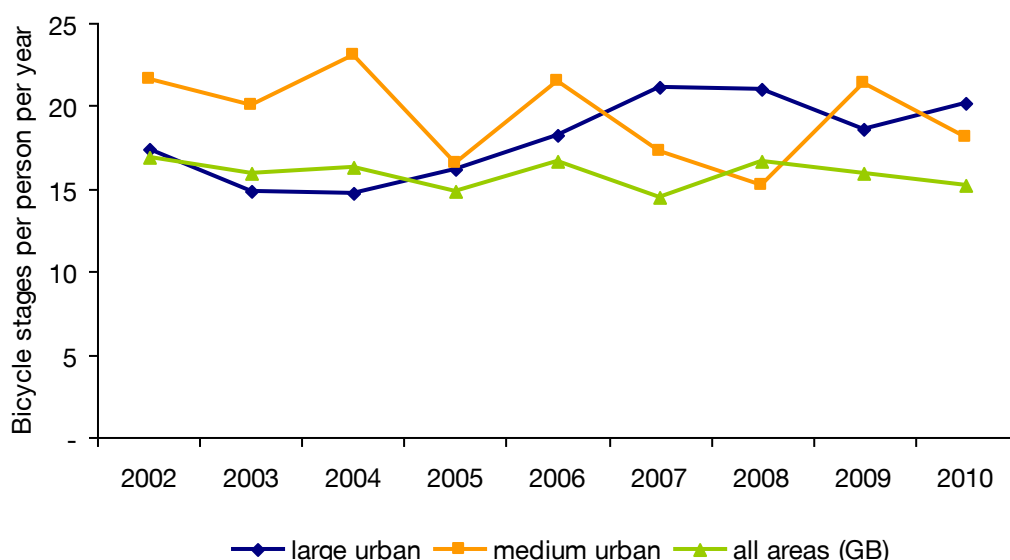


Chart 6-3 Bicycle stages per person per year, 2002-2010 (National Travel Survey)



7 Physical activity and participation in cycling

7.1 Comparison with changes in physical activity and participation in cycling in matched towns

7.1.1 Active People Survey

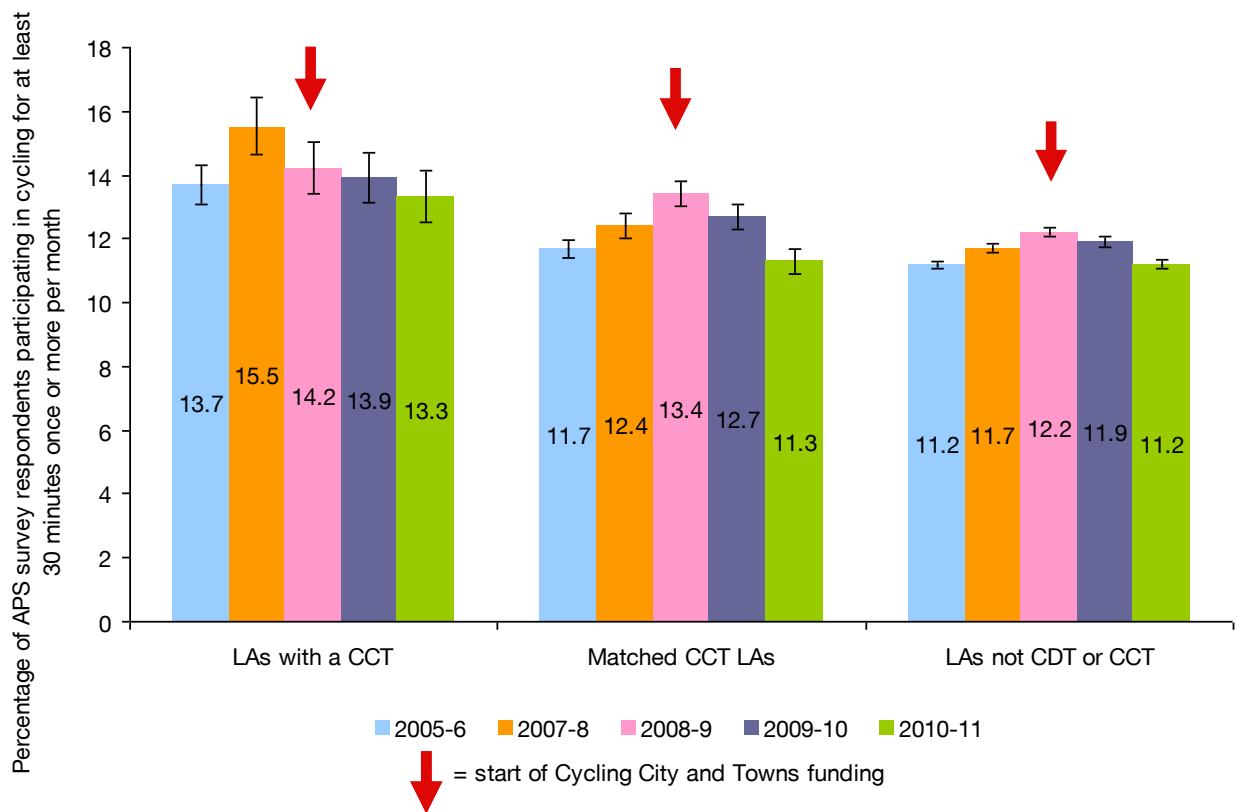
A secondary analysis of Sport England's Active People Survey (APS) compared levels of cycling in local authorities containing a Cycling City and Town with local authorities without Cycling City and Towns. This is not an ideal comparison in so much as APS data relate to the whole local authority area, whilst Cycling City and Towns interventions have not been applied across entire local authorities in many cases. We compared both a general sample of non-Cycling City and Town

authorities, and a sample of non-Cycling City and Towns authorities matched by demographics. However, it should be noted that data from the APS survey refer only to cycling in bouts of 30 minutes or more. This measure may therefore under represent overall cycling in the towns as shorter journeys are not included.

Funding for the Cycling City and Towns programme began in November 2008¹³; Active People Survey data are therefore available for two years prior to the programme and all three years of the project (Chart 7-1).

Comparing 2007/8 with 2010/11 there was a decline of 2.2%-points in cycling for at least 30 minutes once or more per month in the Cycling City and Towns authorities (from 15.5% to 13.3%¹⁴). This is a larger decline than seen in the sample of matched local authorities without a Cycling City and Town (a decline of 1.1%-points from 12.4% to 11.3%¹⁵) and in the general sample of local authorities without a Cycling City and Town (a decline of 0.5%-points from 11.7% to 11.2%¹⁶).

Chart 7-1 Proportion of APS respondents cycling for at least 30 minutes once or more a month



There was also a decline in cycling for at least 30 minutes 12 or more times per month (Chart 7-2) in all the Cycling City and Towns combined, of 0.6%-points (from 3.5% to 2.9%¹⁷). There was a similar decline in the matched authorities (0.7%-

¹³ Department for Transport (2009) 'Making a Cycling Town: a compilation of practitioners experiences from the Cycling Demonstration Towns programme. Qualitative survey 2005-2009'. Department for Transport.

¹⁴ A significant decrease (p<0.05)

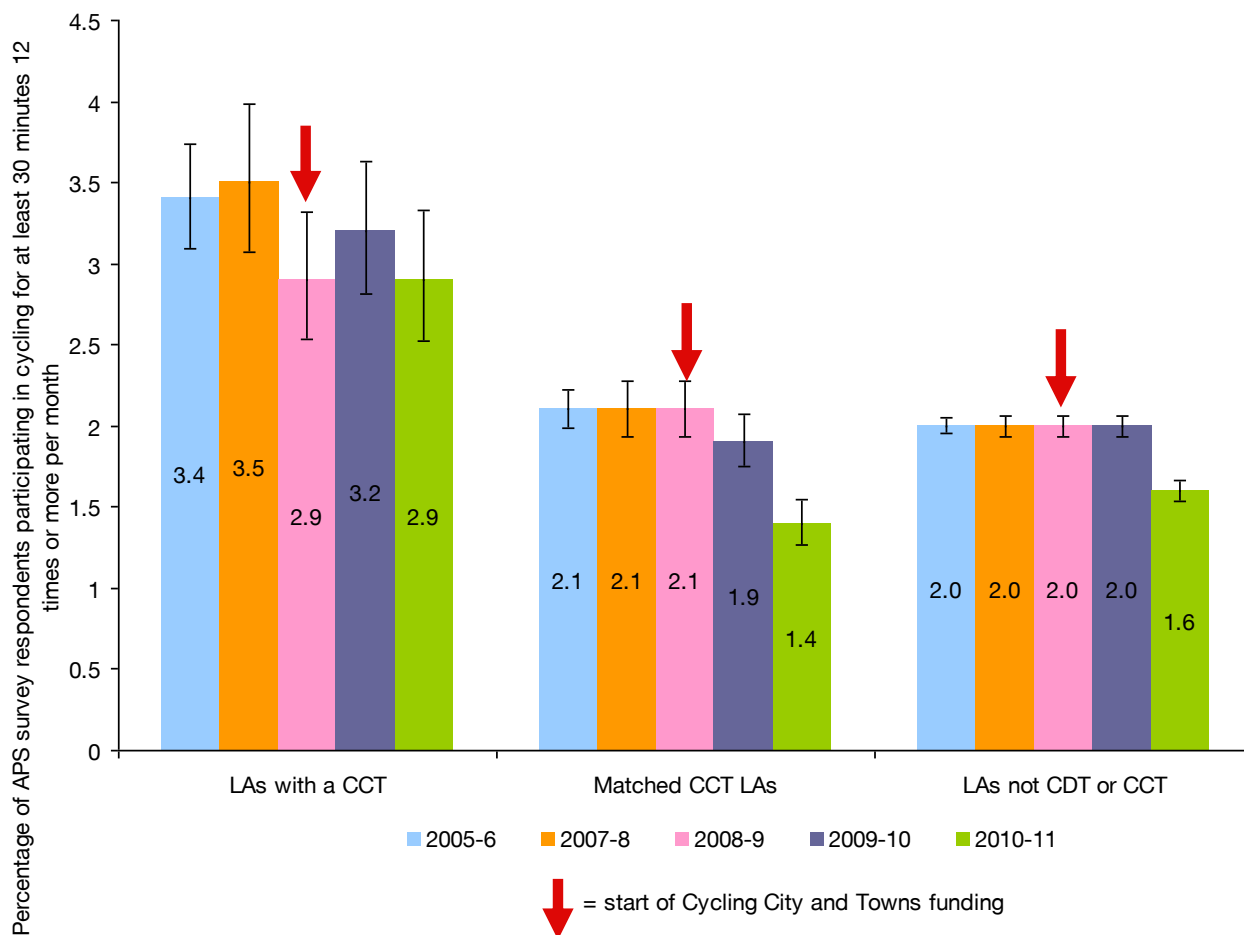
¹⁵ A significant decrease (p<0.05)

¹⁶ A significant decrease (p<0.05)

¹⁷ Not a significant decrease (p>0.05)

points, from 2.1% to 1.4%¹⁸) and in the general sample of non-Cycling City and Towns authorities (0.4%-points, from 2.0% to 1.6%¹⁹).

Chart 7-2 Proportion of APS respondents cycling for at least 30 minutes 12 times or more a month



In Greater Bristol there was a significant increase in both measures between 2007/8 and 2010/11 ($p < 0.05$). The proportion cycling once or more per month rose by 6.7%-points (from 12.7% to 19.5%). The proportion cycling 12 or more times per month rose by 3.4%-points (from 3.1% to 6.5%), although with an apparent decline in 2009/10. In all other towns there were either no significant changes or significant decreases in cycling.

8 Travel to school data

8.1 Pupil Level Annual School Census data

PLASC data aggregated for the 12 towns are presented in Table 8-1 and Chart 8-1. The proportion of children reporting that they usually cycle to school increased in all towns between 2007 and 2011. Although year to year change is variable between

¹⁸ Significant decrease ($p < 0.05$)

¹⁹ Significant decrease ($p < 0.05$)

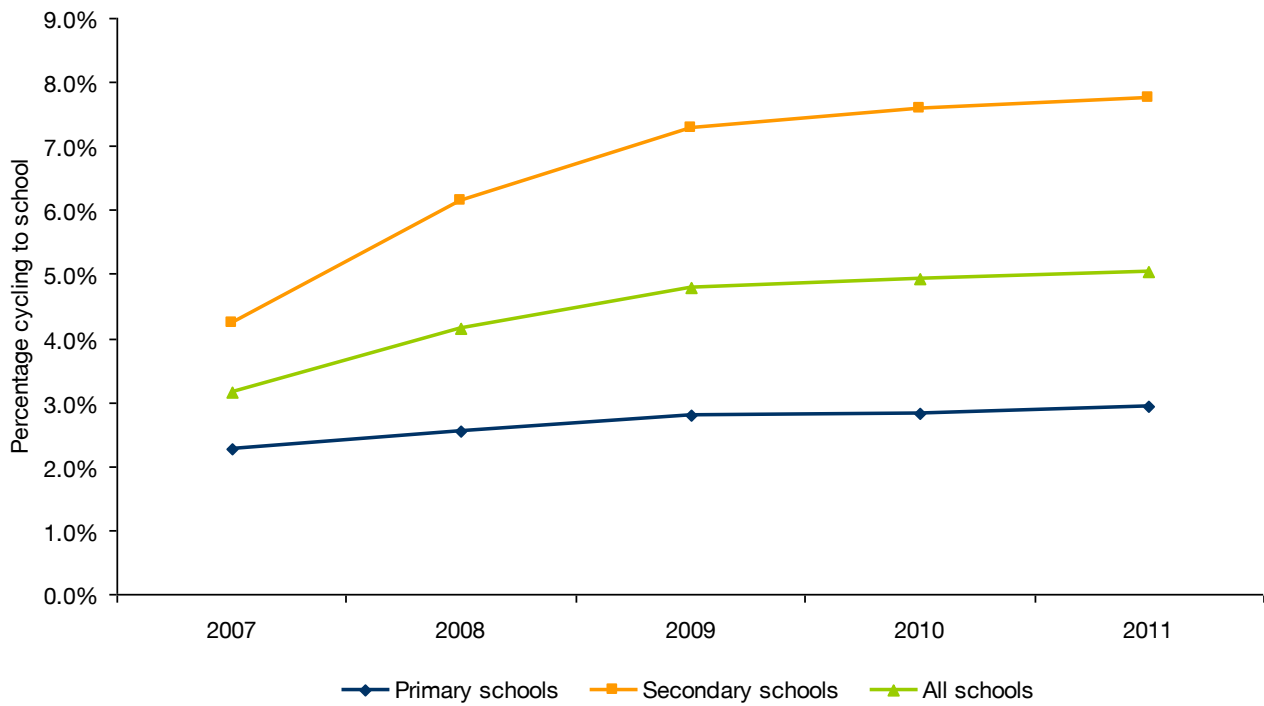
towns, overall the proportion increased from 3.1% in 2007 to 5.0% in 2011. Cycling to both primary and secondary schools increased over the course of the programme. The relative change was greater in secondary schools than in primary schools. The proportion cycling to secondary schools increased from 4.2% to 7.8% between 2007 and 2011, compared to an increase from 2.3% to 2.9% in primary schools.

Table 8-1 Percentage of pupils cycling to school in the Cycling City and Towns – PLASC data

	2007	2008	2009	2010	2011
Blackpool	1.2%	1.5%	1.5%	1.5%	1.7%*
Cambridge	10.5%	16.1%	19.6%	20.0%	20.5%*
Chester	2.5%	3.0%	3.5%	3.1%	3.2%*
Colchester	3.5%	4.1%	4.4%	5.1%	4.1%*
Greater Bristol	1.5%	2.8%	2.9%	3.0%	3.0%*
Leighton	0.9%	1.1%	1.4%	1.5%	1.8%*
Shrewsbury	7.4%	7.0%	7.8%	7.4%	8.7%*
Southend	2.2%	2.7%	3.0%	3.5%	3.5%*
Southport	6.0%	5.9%	6.5%	6.1%	6.4%
Stoke-on-Trent	0.4%	0.4%	0.3%	0.7%	1.5%*
Woking	0.8%	2.4%	3.3%	3.3%	3.1%*
York	7.8%	6.8%	7.2%	6.5%	6.1%*
All towns – all schools	3.1%	4.2%	4.8%	4.9%	5.0%*
All towns – primary schools	2.3%	2.5%	2.8%	2.8%	2.9%*
All towns – secondary schools	4.2%	6.1%	7.3%	7.6%	7.8%*

* significant change between 2007 and 2011 ($p < 0.05$)

Chart 8-1 Proportion of pupils cycling to school in primary, secondary and all schools in the Cycling City and Towns



8.2 Bike It data

Pre and post survey data²⁰ are available for a total of 148 schools across the 10 towns where Bike It was delivered. The proportion of children cycling to school everyday calculated from pooled pre survey data was 4.7%, compared to 10.2% in the post survey. The proportion of children reporting that they 'never' cycle to school decreased from 65.9%, based on pooled pre survey data to 47.1%, based on pooled post survey data. The proportions of Bike It survey respondents cycling to school everyday and never cycling to school are presented for each town in Table 8-2.

Table 8-2 Proportion of pupils surveyed in schools engaged with Bike It cycling to school 'everyday' and 'never' in pre and post surveys

	% cycling to school everyday		% never cycling to school	
	Pre	Post	Pre	Post
Blackpool	2.2%	6.5%*	84.0%	63.5%*
Cambridge	13.0%	21.2%*	49.0%	28.2%*
Chester	3.6%	6.2%*	63.5%	42.0%*
Colchester	6.5%	10.6%*	60.4%	48.4%*
Greater Bristol	2.5%	7.9%*	73.5%	50.8%*
Shrewsbury	6.1%	11.9%*	59.7%	43.0%*
Southend	5.4%	15.6%*	56.1%	41.7%*
Southport	5.3%	11.4%*	54.6%	29.2%*
Stoke-on-Trent	2.4%	7.6%*	81.0%	61.2%*
York	10.9%	16.9%*	48.5%	41.7%*
All towns	4.7%	10.2%*	65.9%	47.1%*

* post survey results are significantly different to the pre-intervention survey results ($p < 0.05$)

The proportion of children surveyed cycling to school on the day of the survey more than doubled, from 5.4% based on pooled pre survey data to 12.2% based on post survey data. The proportion of children travelling to school by car on the day of the survey decreased from 42.5% to 38.1%. The overall increase in cycling is countered by a decrease in the proportion of children walking to school, and the proportion travelling by car and bus. It is not possible to say from this data what proportion of the increase in cycling represents mode shift from car use. The proportions of Bike It survey respondents cycling to school on the day of the survey are presented for each town in Table 8-3.

²⁰ Schools for which data are available for a 'pre' survey at the beginning of the first academic year of engagement and for a 'post' survey at the end of the first academic year of engagement are included in the analysis presented herein

Table 8-3 Proportion of pupils surveyed in schools engaged with Bike It reporting that they cycle to school on the day of the survey in pre and post surveys

	% cycling to school on the day of the survey	
	Pre	Post
Blackpool	2.6%	7.2%*
Cambridge	14.6%	25.2%*
Chester	4.8%	11.2%*
Colchester	6.5%	11.6%*
Greater Bristol	3.2%	9.1%*
Shrewsbury	5.8%	15.5%*
Southend	5.3%	19.0%*
Southport	7.0%	13.2%*
Stoke-on-Trent	3.1%	9.5%*
York	13.7%	19.2%*
All towns	5.4%	12.2%*

* post survey results are significantly different to the pre-intervention survey results ($p < 0.05$)

For a subset of 62 schools²¹, data are available for additional post intervention surveys performed at the end of the second academic year following initial engagement with Bike It. The proportion of children surveyed cycling to school everyday and the proportion 'never' cycling are presented in Table 8-4.

²¹ No data were available from surveys performed at the end of the second academic year following initial engagement for schools in Cambridge or Shrewsbury

Table 8-4 Proportion of pupils surveyed in schools engaged with Bike It cycling to school ‘everyday’ and ‘never’ in pre and two post surveys

	% cycling to school everyday			% never cycling to school		
	Pre	Post 1	Post 2	Pre	Post 1	Post 2
Blackpool	2.4%	8.8%*	6.5%*	77.8%	55.6%*	55.9%*
Chester	3.5%	6.5%	4.4%	56.5%	38.4%*	39.1%*
Colchester	8.1%	12.3%*	11.8%*	55.4%	47.8%*	50.7%*
Greater Bristol	2.6%	7.6%*	5.9%*	73.0%	50.4%*	52.2%*
Southend	6.6%	23.8%*	16.3%*	58.5%	37.5%*	34.0%*
Southport	4.2%	11.0%*	8.5%*	62.2%	30.6%*	29.5%*
Stoke on Trent	2.1%	7.5%*	6.3%*	80.2%	63.4%*	57.9%*
York	8.6%	17.3%*	5.7%*	51.6%	39.5%*	42.9%*
All towns	4.0%	10.7%*	8.0%*	68.5%	48.6%*	48.7%*

* results are significantly different to the pre-intervention survey results (p<0.05)

Comparing data collected at the end of the first and second academic years following engagement with Bike It suggests that the uplift in cycling recorded after initial engagement continues. However, it should be noted that schools may continue to have the support of Bike It officers beyond the first year of Bike It delivery, with some level of engagement ‘at distance’,

8.3 Comparison with changes in travel to school in matched towns

Aggregated proportions of pupils cycling to school in the Cycling City and Towns and matched towns are presented in Table 8-5. Matched areas are based on the National Statistics 2001 Area Classification and largely reflect demographic and socio-economic factors; there is no guarantee that the match is good in terms of other factors which may affect cycling, such as baseline levels of cycling, local policy and cycling infrastructure.

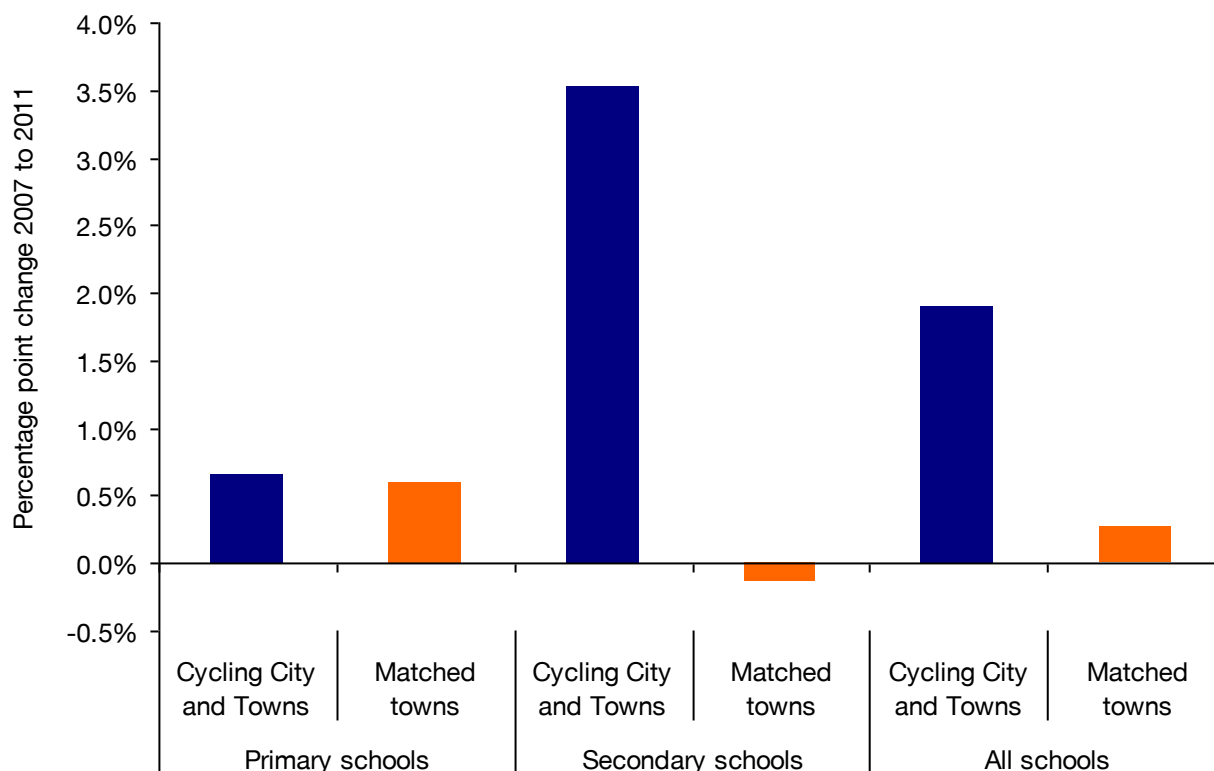
The percentage point change in levels of cycling to school recorded by PLASC in the Cycling City and Towns and matched towns are presented in Chart 8-2. Based on pooled data, the percentage point change between cycling in 2007 and 2011 is greater in the Cycling City and Towns than in the matched areas for secondary and all schools, although similar for primary schools.

Table 8-5 Percentage of pupils cycling to primary, secondary and all schools in the Cycling City and Towns and matched towns – PLASC data

	2007	2008	2009	2010	2011
Cycling City and Towns – primary schools	2.3%	2.5%	2.8%	2.8%	2.9%*
Matched towns – primary schools	0.9%	1.2%	1.4%	1.4%	1.5%*
Cycling City and Towns – secondary schools	4.2%	6.1%	7.3%	7.6%	7.8%*
Matched towns – secondary schools	4.8%	5.0%	5.1%	5.0%	4.7%
Cycling City and Towns – all schools	3.1%	4.2%	4.8%	4.9%	5.0%*
Matched towns – all schools	2.5%	2.8%	3.0%	2.9%	2.8%*

* significant change between 2007 and 2011 (p<0.05)

Chart 8-2 Percentage point change between 2007 and 2011 in the proportion of pupils cycling to primary, secondary and all schools in the Cycling City and Towns and matched towns as recorded by PLASC



9 Cycling casualty data

Data concerning accident rates in the Cycling City and Towns were obtained via the Department for Transport²². Data available up to 2010 were included in the analysis. The average number of accidents per year in the pre-programme period (2003-2008) was compared to the average number of accidents per year during the programme (2009-2010)²³. Considering the limited data available for two of the twelve towns, there appears to be no substantial differences in the occurrence of accidents involving cyclists during compared to before the Cycling City and Towns programme²⁴.

²² In the case of Leighton Linlade and Southport, data were obtained directly from the relevant local authority

²³ In the Reported Road Casualties in Great Britain: 2010 Annual Report, DfT report that nationally the number of cyclists being seriously injured has risen annually since 2004 and those slightly injured have risen each year since 2008. The number of cyclists who have been killed fluctuates far more due to the much smaller numbers involved.

²⁴ See section B (Data collection and analytical methodologies) of this report for a description of the caveats relating to this data source.

10 Summary

Data source	Data included	Short description of metric	Result
WHOLE TOWN ACTIVITY			
Automatic cycle counts	Unweighted mean percentage change relative to 2007 baseline (2009 for Cambridge and Southport) calculated using data collected between January 2007 and September 2011 (December 2010 for Blackpool and Southend)	Cycle activity	+24% relative to baseline
ADULT POPULATION (>16)			
Active People Survey	Active People Survey data, all towns, 2007/08 and 2010/11 <i>Relative change in proportion of adults cycling for 30 minutes or more once a month or more</i>	Cycle activity	-14.2% or -2.2%-points (from 15.5% to 13.3%)
	Active People Survey data, all towns, 2007/08 and 2010/11 <i>Relative change in proportion of adults cycling for 30 minutes or more 12 times a month or more</i>	Cycle activity	No statistically significant change
CHILD POPULATION (<16)			
School Census (PLASC) data	Annual pupil-level survey, all schools, pooled data for 2006/07 and 2010/11 academic years <i>proportion of pupils for which cycling is the usual mode of travel to school</i>	Cycling mode share for trips to school (SC)	+1.9%-points (from 3.1% to 5.0%)
'Hands up' surveys of Bike It schools	Surveys of Bike It schools, pooled data from 'baseline' surveys (in September 2008/2009/2010) and 'ex-post' surveys (in July 2009/2010/2011) <i>proportion of pupils cycling to school 'every day'</i>	Number of children cycling to school everyday (HU)	+5.5%-points (from 4.7% to 10.2%)
'Hands up' surveys of Bike It schools	Surveys of Bike It schools, pooled data, change in cycling mode share between 'baseline' surveys (in September 2008/2009/2010) and 'ex-post' surveys (in July 2009/2010/2011) <i>proportion of pupils for which cycling is the mode of travel to school on day of survey</i>	Cycling mode share for trips to school (HU)	+6.8%-points (from 5.4% to 12.2%)