12. School travel

12.1 Introduction

This chapter presents the evidence on changes in travel patterns for the journey to school in the three towns over the period of the Sustainable Travel Town project.

All three towns had collected annual monitoring data on school travel in a fairly systematic way since 2004 (with data for a few schools in Peterborough from 2003). However, in all three towns there were data 'gaps', with some schools failing to return results in some years. Since the schools returning results were not the same in each year, it is difficult to gain a robust overview of changes in mode share from year to year simply by looking at the total number of pupils reported to be travelling by each mode in each annual survey.

In the analysis that follows, two approaches have been used to overcome this problem. First, for individual schools, we have compared figures for the *earliest* year for which data are available with results for the *most recent* year. Inevitably, this means that the period over which the change is reported is different for different schools. However, most of the reported changes for individual schools are over a period of about three years (from 2004 or 2005 to 2008 in Darlington; from 2005 or 2006 to 2008 in Peterborough; and from 2004 to 2007 or 2008 in Worcester). The changes in mode share for individual schools have then been combined, weighted according to pupil numbers, to derive a figure for the overall change in mode share across all schools. This approach has the merit that it includes all schools for which monitoring data are available.

Second, we have compared changes in mode share in sub-sets of schools that have monitoring data for the same years. For example, in the case of Peterborough, we have looked at the subset of schools with data returns for both 2005 and 2008 (including somewhat under half of all pupils), and also at the subset of schools with data returns for both 2006 and 2008 (including nearly two-thirds of pupils)[1]. While this approach uses data from a smaller number of schools, it has the advantage that the time interval, and 'before' and 'after' survey dates, are the same for all schools. However, it makes no allowance for differing response rates between schools – effectively, it pools all survey responses and treats them as a single set.

In addition to examining changes in mode share across schools in general, we have also examined whether there are any differences between schools according to their level of engagement in school travel work. In particular, we have looked at schools which were judged by officers in the three towns to have a 'level A' travel plan, and schools which were judged to have a 'level C' travel plan, or not to be engaged in school travel work at all. By way of recap, the definitions for the different levels of school travel plan activity were as follows:

A – active school travel plan; many school travel initiatives; a generally safe walking and cycling environment and/or some engineering work to provide safe routes;

[1] Note that some schools (e.g. in the case of Peterborough, those with data returns for 2005 *and* 2006) feature in both datasets.

B – school travel plan agreed; some school travel initiatives in place;
B- – school travel plan agreed but little evidence of activity;
C – school contacted and starting to develop school travel work;
C- – school contacted but no work to develop school travel plan yet.

In the sections that follow, we look at each town in turn, in each case reviewing:

- the approach to monitoring and data collection;
- change in car use at individual schools;
- overall change in car use across all schools with monitoring data;
- overall change in active travel (walking and cycling) across all schools with monitoring data.

Finally, section 12.5 examines national benchmarking data, and section 12.6 compares the change in car trips to school in the three towns with the estimates in the original smarter choices study (Cairns et al., 2004) of 'typical' area-wide reductions in car use as a result of school travel interventions.

12.2 Darlington

12.2.1 Approach to monitoring and data collection

Most Darlington schools had participated in an annual 'hands up' school travel survey since 2004. This took place on a single day each year and was conducted in the classroom by teaching staff who asked pupils to respond to the question 'how did you travel to school today?' In 2006 the timing of these surveys was moved to September instead of being conducted in January, in order to fit with the collection of Schools Census data. Thus, survey results were available for January 2004, 2005 and 2006, and for September 2006, 2007 and 2008.

Of the 36 schools in the urban area of Darlington (i.e. excluding schools outside the area that was the focus of the Sustainable Travel Town work), 31 had monitoring data. The five schools that had not become involved in monitoring included two independent schools (Polam Hall and Yarm at Raventhorpe), two nurseries (Borough Road Nursery and George Dent Nursery) and a special school (Beaumont Hill Technical College). A pupil referral unit (Phoenix Centre) had also not become involved in monitoring. Taken together, the schools that had become involved in monitoring covered roughly 95% of all pupils attending schools in Darlington.

Monitoring data were available for only 19 schools in the first year of the survey (January 2004). However, by the following year (January 2005), results were reported for all 31 schools that had become engaged, and results were available for all of these schools for each subsequent survey, apart from a few gaps in the September 2006 survey.

Survey response rates were high, although variable between schools. The overall response rate (that is, the ratio of the number of responses to the number of pupils at surveyed schools) lay between 70% and 80% for the five surveys between January 2005 and September 2008.

From January 2005, the surveys distinguished between pupils who travelled by 'car alone' and those by 'car share'. However, the January 2004 survey appears to have only collected data on car travel generally, as all entries for 'car sharing' in the database supplied by Darlington Borough Council were zero for this year.

Darlington officers reported a number of concerns with the quality of other monitoring data reported via the Schools Census. These included anecdotal evidence that pupils were asked their travel mode when they started at a school and that this stayed 'on record' and was unchanged until they left the school; and examples where parents had identified that the travel mode recorded for their children was incorrect. As a result of these concerns, Darlington had continued to collect 'hands up' data directly from schools rather than relying on Schools Census results. All the data analysed for this study are results of 'hands up' surveys supplied by Darlington Borough Council.

12.2.2 Changes in car use at individual schools

In order to understand changes in levels of car use, the number of cars per 100 pupils for each survey at each school was calculated as follows:

Cars per 100 pupils = 100*[(number of pupils travelling by 'car alone') + 0.5*(number of pupils travelling by 'car share)] / number of survey responses

This assumes that pupils reported to be travelling as a 'car share' travelled with just one other pupil. This is a conservative assumption (i.e. it tends to over-estimate the number of cars per 100 pupils, since some cars will carry more than two pupils).

Because the January 2004 survey did not distinguish between 'car alone' and 'car share', the returns from that survey have not been used to analyse changes in car use. Thus, January 2005 is treated as the 'baseline' year.

Of the 31 schools with monitoring data, all but nine had achieved reductions in the number of cars per 100 pupils between the survey in January 2005 and their most recent survey in September 2008[2]. Eight schools had reduced car use by more than 20%, and five schools had achieved reductions of between 10% and 20%. The results for individual schools are summarised in Table 12.1 and illustrated in Figures 12.1 and 12.2.

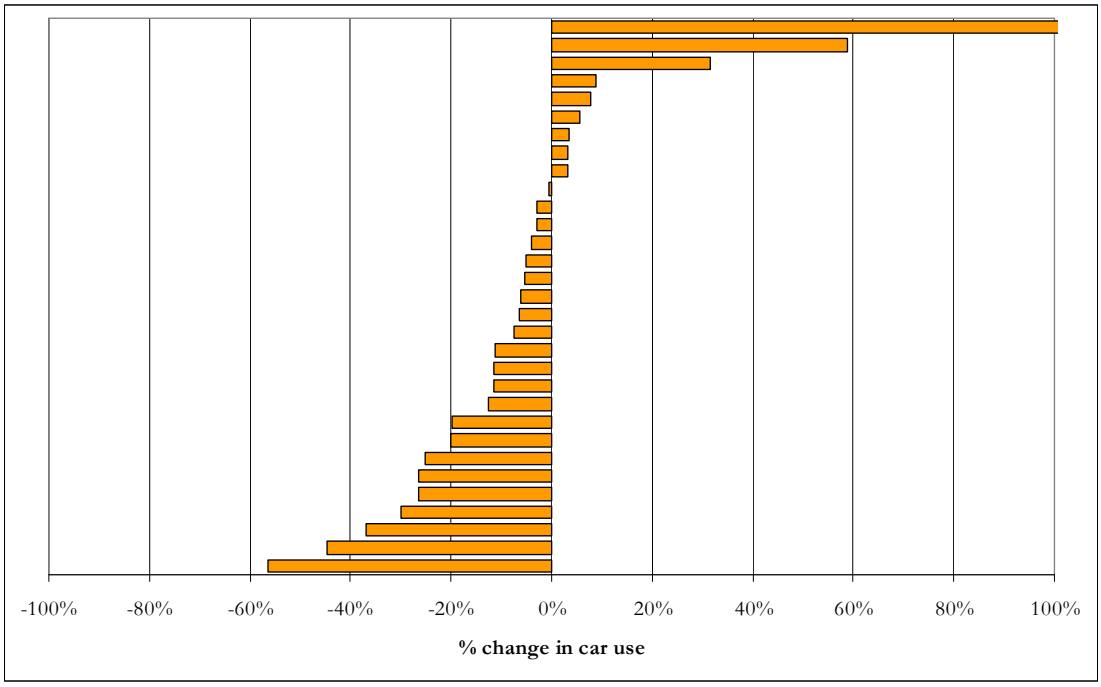
Comparing the number of cars per 100 pupils in the first survey at each school with the figures in the second survey, a paired sample one-tailed T-test gives a p-value of 0.001 (in other words, the probability that the reduction in car use is real is more than 99.9%), indicating that the reduction in car use at the schools is highly statistically significant.

[2] There is a potential concern that the change in the date of the survey from January to September could have distorted these results. However, Figure 12.3, discussed later, shows no discontinuity in the change in car use between the earlier (January) surveys and the later (September) surveys, suggesting that this is unlikely to be an issue.

Table 12.1: Percentage change in car use between first survey and most recent survey at Darlington schools

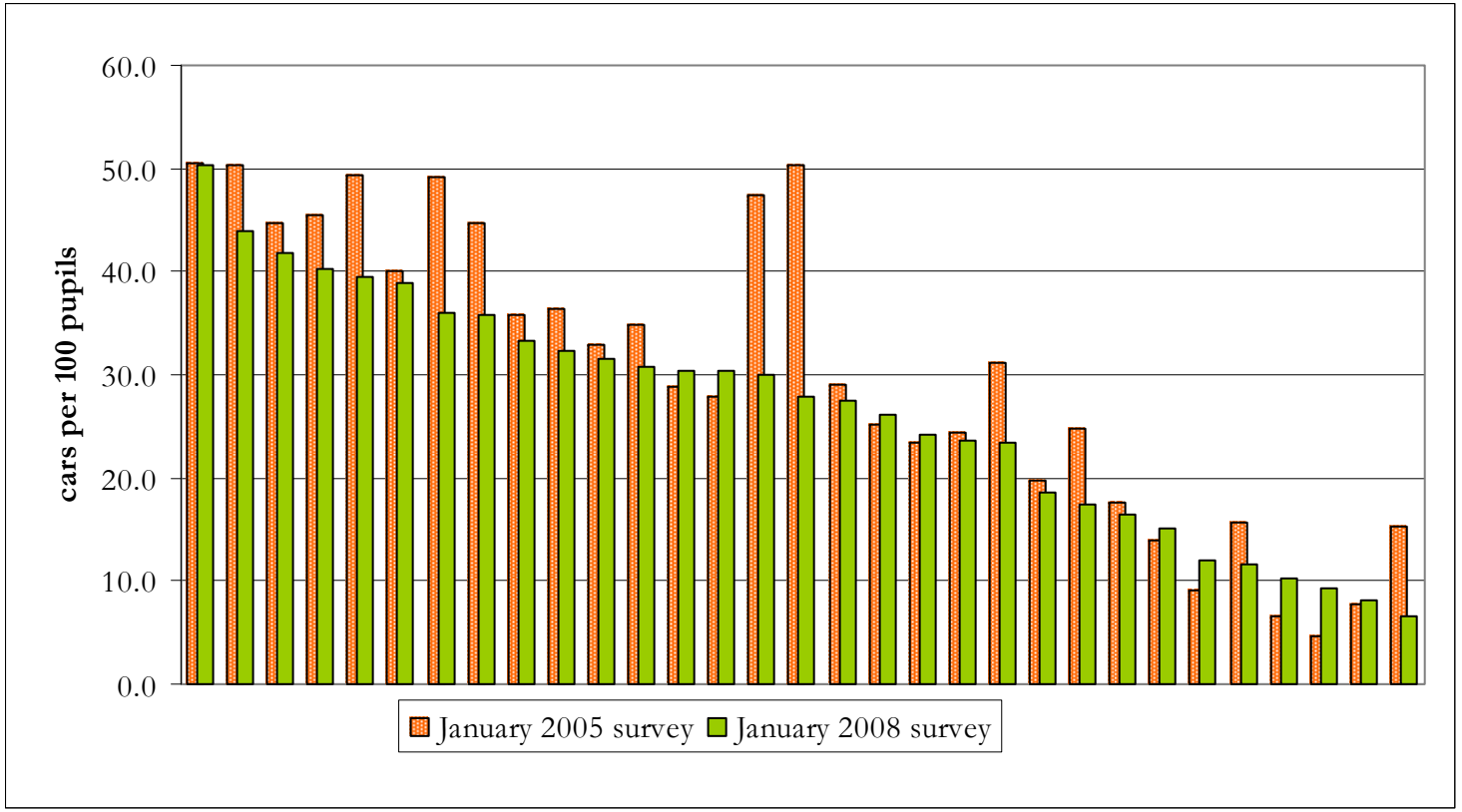
	Change in car use	Number of schools
Reduction	Over 40%	2
	30-40%	1
	20-30%	5
	10-20%	5
	0-10%	9
Increase	0-10%	6
	10-20%	0
	20-30%	0
	30-40%	1
	Over 40%	2

Figure 12.1: Percentage change in car use between first survey and most recent survey at 31 Darlington schools



Note: data used for 'first' survey was from January 2005; 'most recent' survey was in 2008. Figures are % changes (*not* %-point changes) in the number of cars per 100 pupils. The scale runs from -100% to +100% for consistency with equivalent graphs for Peterborough and Worcester. However, one school showed a 105% increase in car use between its first survey (with 4.6 cars per 100 pupils) and its most recent survey (with 9.4 cars per 100 pupils). This school is represented by the top bar in the chart.

Figure 12.2: Cars per 100 pupils at Darlington schools, at time of first survey and at time of most recent survey



Note: Data used for 'first' survey is from January 2005 (even if a survey was carried out in January 2004), because 2004 survey did not distinguish between 'car alone' and 'car share'.

12.2.3 Overall change in car use for school travel

As described in section 12.1, two approaches were used to assess the overall (town-wide) change in car use for school travel.

First, the figures for changes in car use at each school between January 2005 and its most recent survey in 2008 were combined, weighted according to pupil numbers, to give an 'overall' figure for the change in car use across all Darlington schools with monitoring data. The results using this approach are shown in Table 12.2.

Using this method, car use across all Darlington schools fell by 10% between January 2005 and September 2008[3]. Car use at schools which were judged to be level 'A' in terms of their school travel work fell by 11% over the same period, while car use at schools which were judged to be level 'C' in terms of their school travel work stayed broadly unchanged (increasing by 1%).

Table 12.2: Overall changes in car trips to school, using January 2005 survey at each school as baseline

Schools included	All schools with monitoring data	Schools with level 'A' travel plan	Schools with level 'C' travel plan
Number of schools	31	18	8
Proportion of Darlington pupils attending these schools	95%	59%	23%
Date selected for baseline survey	January 2005	January 2005	January 2005
Date of most recent survey	September 2008	September 2008	September 2008
Cars per 100 pupils in 'baseline' survey	25.6	26.2	19.6
Cars per 100 pupils in most recent survey	23.1	23.4	19.7
Weighted change in car use between baseline and most recent surveys	-9.8%	-10.7%	+0.6%

Second, we examined changes in cars per 100 pupils between January 2005 and September 2008 by pooling all survey responses and treating them as a single 'set' (with no allowance for different response rates at different schools). The results using this approach are shown in Table 12.3. Car use across all 31 schools with monitoring data fell by 9% between January 2005 and September 2008.

For the group of schools with a level 'A' travel plan, car use fell by 7% over the same period. For the group of schools with a level 'C' travel plan, car use fell by 5%.

[3] Note that these figures are calculated on the assumption that total pupil numbers have remained constant at individual schools (i.e. that the approximate number of pupils at each school was the same in 2005 as the reported number in 2008).

Table 12.3: Overall changes in car trips to school, for subsets of schools with the same survey return dates

Subset of schools included	All schools with monitoring data	Schools with level 'A' travel plan	Schools with level 'C' travel plan
Number of schools in subset	31	18	8
Proportion of Darlington pupils attending these schools	95%	59%	23%
Date selected for 'baseline'	January 2005	January 2005	January 2005
Cars per 100 pupils in 'baseline' survey	27.2	27.6	21.6
Cars per 100 pupils in September 2008 survey	24.8	25.7	20.5
Change in car use	**-8.8%**	**-6.9%**	**-5.2%**

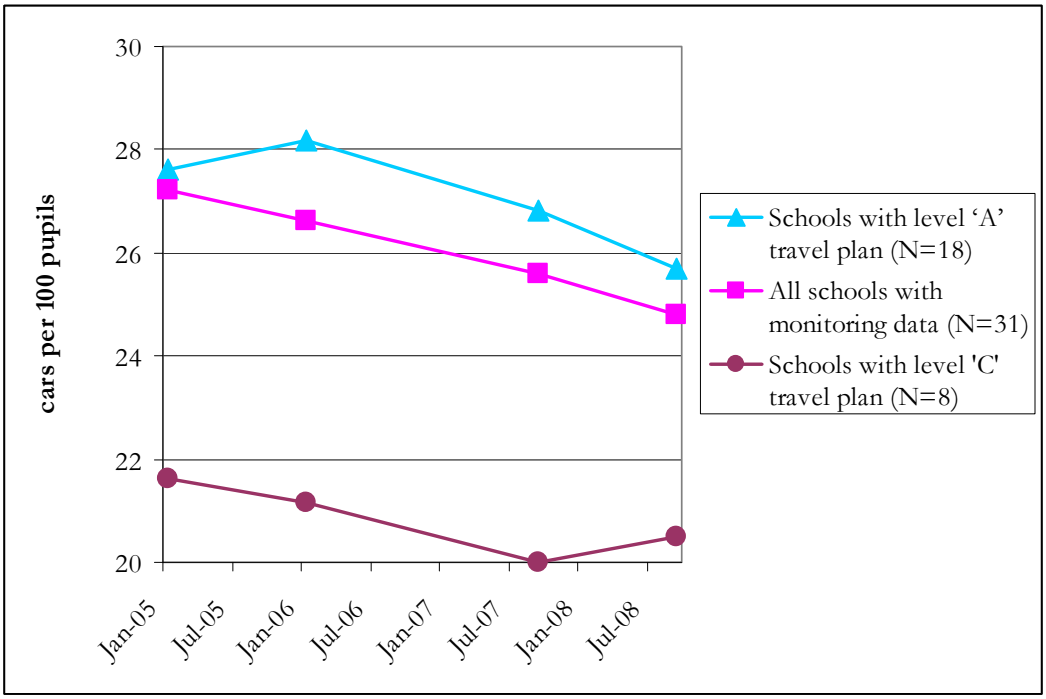
The same subsets of schools described above and in Table 12.3 may also be examined graphically, looking at trends in car use over time. These trends are illustrated in Figure 12.3. For the purposes of this exercise, the results from the September 2006 survey have been excluded because several schools did not return data for that survey, and amongst those that did there appears to be an anomalously low level of car-sharers and an anomalously high level of pupils travelling by 'car alone' compared to the previous and subsequent surveys.

All three groups show a progressive reduction in the number of cars per 100 pupils over time, with no sense that any limit had been reached by the time of the latest survey in September 2008. This may indicate that a sustained travel behaviour change programme can achieve progressive reduction in car use over a period of years, and that the longer such a programme has been in place, the more it can achieve.

It is also interesting to note that schools with level 'A' travel plans have generally *higher* levels of car use than the 'overall' figures in any particular year, while schools with level 'C' travel plans have *lower* levels of car use. It seems plausible that the level 'A' schools may have become enthusiastic participants in travel planning precisely because high levels of car use were giving rise to school gate congestion and related problems.

Despite their lack of engagement in school travel planning, the level 'C' schools do appear to have achieved a reduction in car use between January 2005 and September 2008. It is possible that this is an effect of the other travel behaviour interventions in Darlington, or of wider national changes.

Figure 12.3: Change in car use over time for subsets of schools with the same survey return dates



12.2.4 Change in walking and cycling for school travel

Of the 31 schools with monitoring data, 21 had achieved a net increase in the proportion of pupils travelling by active means (i.e. walking or cycling) between their first monitoring survey (in either January 2004 or January 2005) and their most recent survey (in September 2008), as shown in Table 12.4.

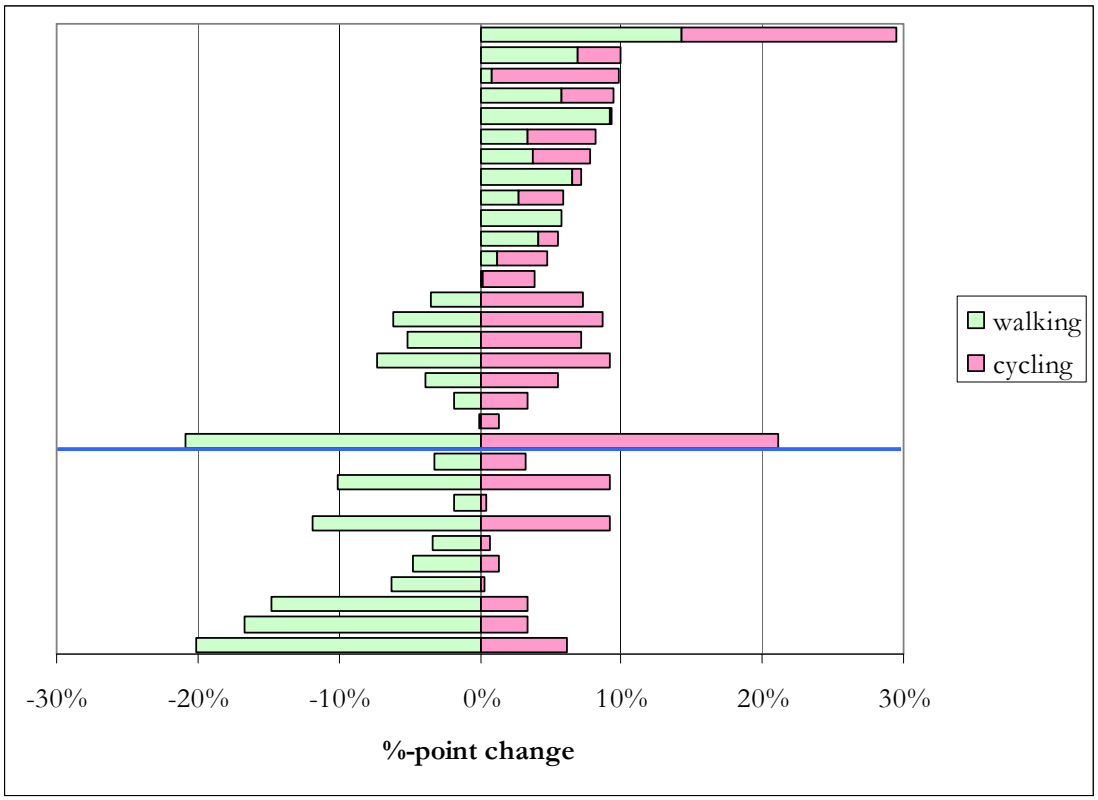
Table 12.4: Percentage-point change in active travel (walking and cycling) between first survey and most recent survey at Darlington schools

	Net change in walking and cycling (%-point)	Number of schools
Increase	20-30% point	1
	10-20% point	1
	0-10% point	19
Reduction	0-10% point	7
	10-20% point	3
	20-30% point	0

Note: %-point change rather than percentage change used to group schools in this table, to avoid the skew that can occur when calculating percentage changes from a small baseline.

At all but one of the schools, cycling had increased. However, the picture with respect to walking was more variable, with 18 schools demonstrating a fall in the number of pupils walking to school and only 13 demonstrating an increase. As is illustrated by Figure 12.4, there appear to be two groups of schools: those where *both* walking and cycling increased between the first and the most recent survey, and those where an increase in cycling was partially or wholly offset by a fall in walking (or even, in some cases, more than offset).

Figure 12.4: Percentage-point change in walking and cycling between first survey and most recent survey at 31 Darlington schools



Note: The 'first' survey was in either 2004 or 2005; the 'most recent' survey was in 2008. Figures are %-point changes. Schools are ranked according to net increase/decrease in combined levels of walking and cycling; schools with a net increase in walking + cycling are above the blue line.

As described in section 12.1, two approaches were used to assess the overall (town-wide) change in walking and cycling to school.

First, the figures for changes in walking between each school's first survey in either 2004 or 2005 and its most recent survey in 2008 were combined for all schools, weighted according to pupil numbers, to give an 'overall' figure for the change across all Darlington schools with monitoring data. This exercise was repeated for cycling, and for overall active travel (walking + cycling). The results using this approach are shown in Table 12.5.

Using this method, cycling across all Darlington schools increased by 425% or 5%-points between January 2004/2005 and September 2008[4], while walking *fell* by 5% or 3%-points over the same period, giving a net increase in active travel of 3% or 2%-points. A paired sample one-tailed T-test on the figures for the overall change in active travel gives a p-value of 0.0498, indicating that the change is just statistically significant at the 95% confidence level.

[4] Note that these figures are calculated on the assumption that total pupil numbers have remained constant at individual schools (i.e. that the approximate number of pupils at each school was the same in 2004/2005 as the reported number in 2008).

Looking just at schools that were judged to be level 'A' in terms of their school travel work, the figures are quite similar. Cycling increased by 353% or 6%-points, while walking fell by 6% or 3%-points, giving a net increase in active travel of 5% or 3%-points between January 2004/2005 and September 2008 (p-value 0.06, not statistically significant).

For schools which were judged to be level 'C' in terms of their school travel work, cycling increased (from a very low base) by 1067% or 3%-points, but walking fell by a similar amount (in terms of %-points), such that levels of active travel remained broadly unchanged.

Table 12.5: Overall changes in walking and cycling to school, using earliest survey at each school as baseline

Schools included	All schools with monitoring data	Schools with level 'A' travel plans	Schools with level 'C' travel plans
Number of schools	31	18	8
Proportion of Darlington pupils attending these schools	95%	59%	23%
Date selected for baseline survey	Earliest available survey for each school (January 2004 or January 2005)	Earliest available survey for each school (January 2004 or January 2005)	Earliest available survey for each school (January 2004 or January 2005)
Date of most recent survey	September 2008	September 2008	September 2008
Weighted change in walking between baseline and most recent surveys	-5% or -3.1%-point *(from 60.1% to 57.0%)*	-6% or -3.3%-point *(from 55.8% to 52.5%)*	-6% or -3.3%-point *(from 57.0% to 53.6%)*
Weighted change in cycling between baseline and most recent surveys	+425% or +5.1%-point *(from 1.2% to 6.2%)*	+353% or +6.0%-point *(from 1.7% to 7.6%)*	+1067% or +3.2%-point *(from 0.3% to 3.6%)*
Weighted change in walking + cycling between baseline and most recent surveys	+3% or +2.0%-point *(from 61.3% to 63.3%)*	+5% or +2.7%-point *(from 57.4% to 60.1%)*	-0.2% or -0.1%-point *(from 57.3% to 57.2%)*

Second, we examined changes in levels of walking and cycling in the subset of schools with survey returns in January 2004; and in schools with survey returns in January 2005. The results using this approach are shown in Table 12.6.

Table 12.6: Overall changes in walking and cycling to school, for subsets of schools with the same survey return dates

Subset of schools included	Schools with survey returns for January 2004	Schools with survey returns for January 2005	Schools with level 'A' travel plan and survey returns for January 2004	Schools with level 'A' travel plan and survey returns for January 2005	Schools with level 'C' travel plan and survey returns for January 2005
Number of schools in subset	19	31	11	18	8
Proportion of Darlington pupils attending these schools	58%	95%	31%	59%	23%
Date selected for 'baseline'	January 2004	January 2005	January 2004	January 2005	January 2005
Change in walking between baseline and most recent survey	-6% or -3.8%-point *(from 61.6% to 57.7%)*	-1% or -0.8%-point *(from 57.7% to 56.9%)*	-6% or -3.3%-point *(from 52.8% to 49.6%)*	-4% or -2.3%-point *(from 54.7% to 52.4%)*	-3% or -1.8%-point *(from 65.4% to 63.5%)*
Change in cycling between baseline and most recent survey	+425% or +5.1%-point *(from 1.2% to 6.3%)*	+540% or +5.4%-point *(from 1.0% to 6.4%)*	+332% or +6.3%-point *(from 1.9% to 8.2%)*	+471% or +6.6%-point *(from 1.4% to 8.0%)*	+4500% or +4.5%-point *(from 0.1% to 4.6%)*
Change in walking + cycling between baseline and most recent survey	+2% or +1.3%-point *(from 62.7% to 64.0%)*	+8% or +4.7%-point *(from 58.7% to 63.3%)*	+5% or +3.0%-point *(from 54.7% to 57.8%)*	+7% or +4.2%-point *(from 56.2% to 60.4%)*	+4% or +2.7%-point *(from 65.4% to 68.1%)*

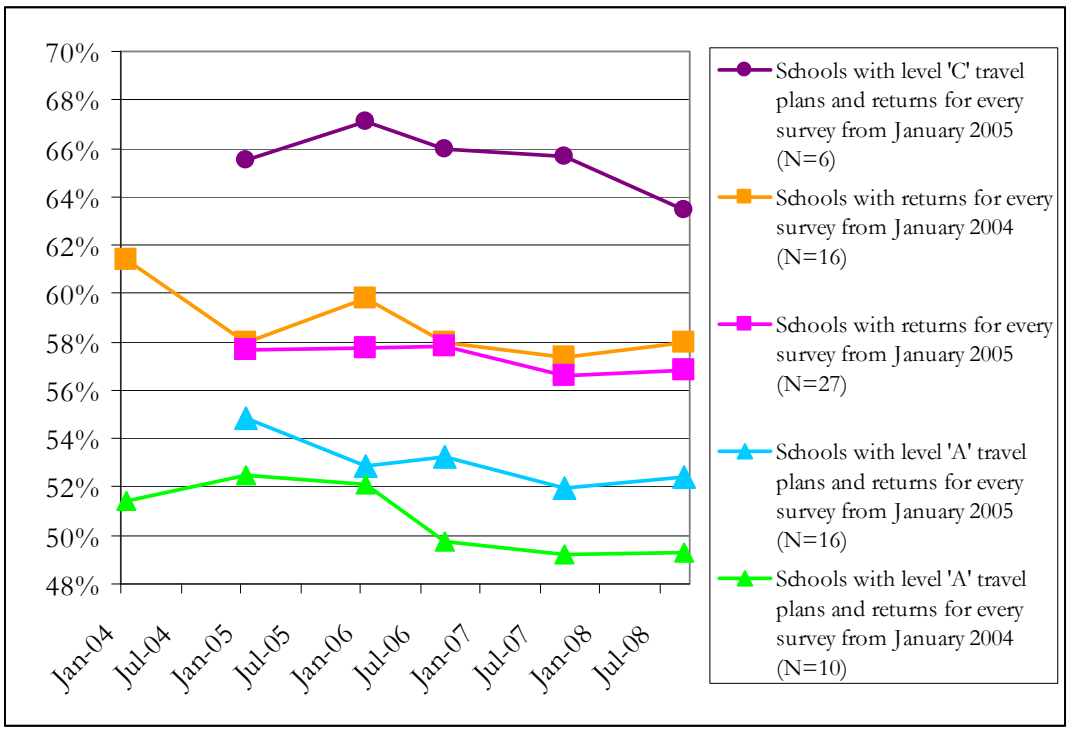
Walking levels at the 19 schools with a survey in January 2004 fell by 6% or 4%-points between that date and September 2008, while walking levels across the 31 schools with a survey in January 2005 (i.e. in fact, across *all* Darlington schools with monitoring results) fell by 1% (and 1%-point) between January 2005 and September 2008. Cycling increased by 425% and 540% respectively (in both cases, 5%-points) in these two groups of schools. Overall levels of active travel (walking +cycling) increased by 2% (1%-point) and 8% (5%-points) in the same groups of schools.

Looking just at the schools which had a level 'A' travel plan, walking at the 11 schools with a survey in January 2004 fell by 6% or 3%-points between that date and September 2008, while walking at *all* 18 'level A' schools fell by 4% or 2%-points between January 2005 and September 2008. Cycling increased by 332% (6%-points) and 471% (7%-points) respectively, in the same two groups of schools. Overall levels of active travel (walking +cycling) increased by 5% (3%-points) and 7% (4%-points) in the same groups of schools.

Looking just at the schools which had a level 'C' travel plan, walking at the eight schools with a survey in January 2005 fell by 3% (2%-points) between that date and September 2008. Cycling increased by 4500% (5%-points) and overall levels of active travel (walking +cycling) increased by 4% (3%-points).

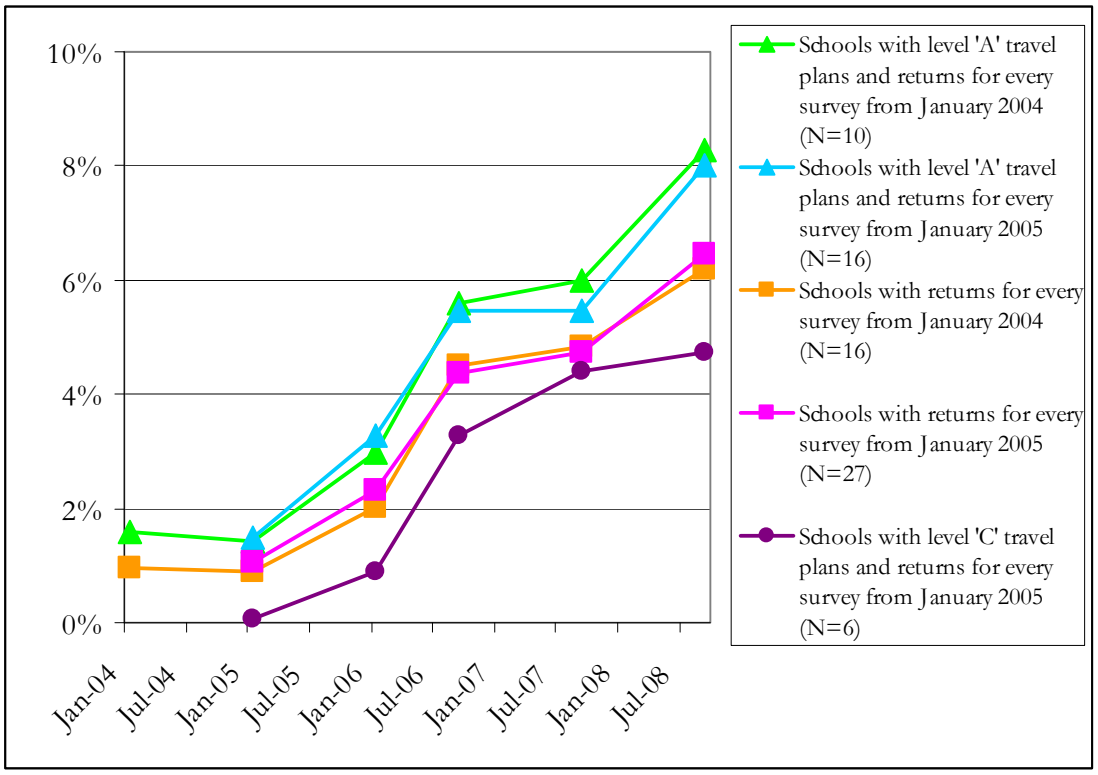
The subsets of schools described above and in Table 12.6 may also be examined graphically, looking at trends in walking and cycling over time. These trends are illustrated in Figures 12.5 and 12.6.

Figure 12.5: Change in walking over time for subsets of schools with the same survey return dates



Note: Schools with missing survey returns for September 2006 have been excluded

Figure 12.6: Change in cycling over time for subsets of schools with the same survey return dates



Note: Schools with missing survey returns for September 2006 have been excluded

For each subset, the graphs show a steady increase in cycling over time, accompanied by a decrease in walking, although the fall in walking is generally at a lesser rate. It is notable that the increase in cycling appears to be fairly steady, with no discontinuity between the first three survey dates (in January) and the later survey dates (in September). In other words, there is no reason to suppose that the increase in cycling is an artificial result of the change in survey dates.

Schools with level 'A' travel plans start off with lower levels of walking, and higher levels of cycling, while the reverse is true for schools with level 'C' travel plans. However, the rate of increase in cycling (and decrease in walking) in the level 'C' schools is similar to the rate amongst schools in general.

12.2.5 Summary of changes in school travel patterns in Darlington

Apparent changes in school travel can be summarised as follows:

- During the period of the Sustainable Travel Town work, car trips to school decreased at some schools in Darlington, but increased at others. More schools (roughly speaking, 70%) experienced a fall in car use than experienced an increase (30%).
- Looking at all schools with monitoring data, it appears that overall levels of car use for the journey to school fell by 9-10% (depending on which method of calculation is used) over the period of the Sustainable Travel Town work.
- Active modes of travel (walking and cycling) showed a net increase of 2-8% (between 1%-point and 5%-points), depending on which baseline survey dates and which

method of calculation are used. Almost all schools achieved an increase in cycling, but in some schools this appears to have been partially or wholly due to a transfer from walking.

- Cycling (a particular focus of school travel work in Darlington because of its Cycling Demonstration Town status) increased by over 500%, from around 1% to over 6% of trips to school.
- The schools which became most engaged in the travel planning process (the 'level A' schools) appear to be the ones where car use was generally higher. They achieved reductions in car use of between 7% and 11% (depending on which baseline survey dates and which method of calculation are used) over the period of the Sustainable Travel Town work.
- The 'level A' schools also had lower levels of walking, and marginally higher levels of cycling, from the outset. Although we have not obtained any direct evidence (e.g. from data on free school meal eligibility) it seems quite likely that the more engaged, level 'A' schools tend to draw from a more middle class catchment.
- The schools which were least engaged in the travel planning process (the 'level C' schools) appear to be the ones where car use was generally lower, and walking generally higher. Despite their apparent lack of engagement in the travel planning process, these schools may still have achieved a small reduction in car use over the period of the Sustainable Travel Town work (depending on which method of calculation is used). They also achieved an increase in cycling. It is possible that this is an effect of the other travel behaviour interventions in Darlington, although this conclusion must be treated with caution because the number of schools being considered is small.

12.3 Peterborough

12.3.1 Approach to monitoring and data collection

In the early days of its school travel work, Peterborough City Council managed a 'hands up' monitoring survey at schools. This mainly took place in January, although results were also available for some schools from surveys carried out at other times of year. It is not known whether the question asked was 'How did you travel to school today?' or 'How do you usually travel to school?'

'Hands up' monitoring was superseded by the Schools Census. Data were collected for each pupil in January each year, in response to the question 'How do you usually travel to school?'

Survey results were available for most schools for January 2005, 2006, 2007 and 2008. However, for all these survey dates, a proportion of schools did not return any data. There were also survey results for a few schools from 2003 and 2004 (at various times of the year).

Of the 67 schools in the urban area of Peterborough (i.e. excluding schools that are outside the area that was the focus of the Sustainable Travel Town work), 62 had schools

at least two useable monitoring surveys (and generally more than this)[5]. This included monitoring data for nine of the 13 schools that had *not* become engaged in school travel work in any way (i.e. had carried out no school travel plan work at the time of our interviews in May 2008; had received no funding for Safer Journeys to School infrastructure; and had had no school-travel-related planning condition applied).

The five schools that had not become involved in monitoring included one independent school (Peterborough High School); three primary schools where there was no or only one survey (Ravensthorpe, Matley and Old Fletton); and a specialist unit (Nenegate). Taken together, the schools that had become involved in monitoring covered roughly 96% of all pupils attending schools in Peterborough.

The overall response rate (that is, the ratio of the number of responses to the number of pupils at the 62 schools which had become engaged in monitoring) was roughly 50% for the surveys in January 2005 and 2006, and 75% for the surveys in 2007 and 2008. The lower figures for 2005 and 2006 reflect the smaller number of schools engaged in monitoring at that time, rather than the proportion of responses gained from the schools.

The surveys distinguished between pupils who travelled by 'car/van' and those by 'car share'.

12.3.2 Changes in car use at individual schools

In order to understand changes in levels of car use, the number of cars per 100 pupils for each survey at each school was calculated as follows:

Cars per 100 pupils = 100*[(number of pupils travelling by 'car/van') + 0.5*(number of pupils travelling by 'car share')] / number of survey responses

This assumes that pupils reported to be travelling as a 'car share' travelled with just one other pupil. This is a conservative assumption (i.e. it tends to over-estimate the number of cars per 100 pupils, since some cars will carry more than two pupils).

Of the 62 schools with monitoring data, all but 19 had achieved reductions in the number of cars per 100 pupils between their first monitoring survey and their most recent survey. (It is important to note that the date of the first monitoring survey differs widely amongst Peterborough schools, ranging from 2003 to 2007, although generally the first survey is in 2005 or before.)

[5] The picture in Peterborough is complicated by the fact that several new schools had opened, and old ones merged and/or closed, during the period of the Sustainable Travel Town work. By 2008 there were 65 schools in Peterborough, but for the purpose of analysis of travel patterns, monitoring data from some schools that closed during the period of the Sustainable Travel Town work is included. Walton Community School and Bretton Woods Community School merged to form the Voyager School in 2007, and are treated as a single school because the Voyager School had monitoring data for 2008; Deacons School and John Mansfield School became part of a new Thomas Deacon Academy but are treated as two schools with independent data as there was no monitoring data for Thomas Deacon Academy; Walton Junior School became part of the Discovery School during 2007 but these are treated as two schools as there was no monitoring data for the Discovery School in 2008.

Twenty-three schools had reduced car use by more than 20%, and 12 schools had achieved reductions of between 10% and 20%. The results for individual schools are summarised in Table 12.7 and illustrated in Figures 12.7 and 12.8.

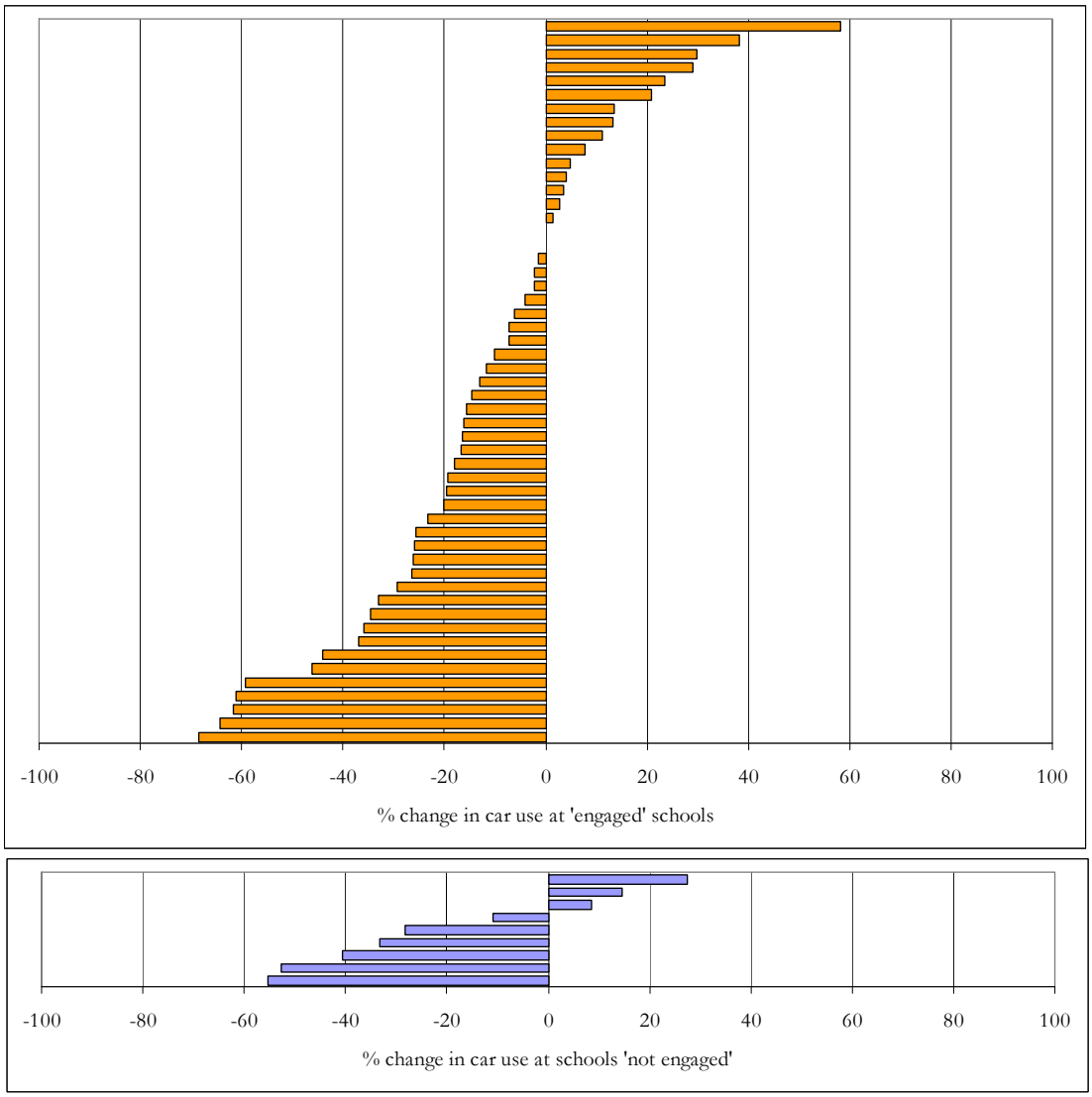
In the table and the figures, data for the nine schools that had not become engaged in school travel work in any way are presented separately. It is notable that the changes in car use at these nine schools show a similar range to the changes in car use at the schools that *had* become engaged. The possible reasons for this are discussed below.

Looking just at the schools which were engaged in school travel work, a paired sample, one-tailed T-test of cars per 100 pupils in the first and most recent monitoring surveys gives a p-value of 0.0001 (in other words, the probability that there has been a reduction in car use is more than 99.99%), suggesting that the reduction in car use at the schools is highly statistically significant. For the smaller group of schools which had not become engaged in school travel work, the same test gives a p-value of 0.03, indicating statistical significance at the 95% confidence level.

Table 12.7: Percentage change in car use between first survey and most recent survey at Peterborough schools

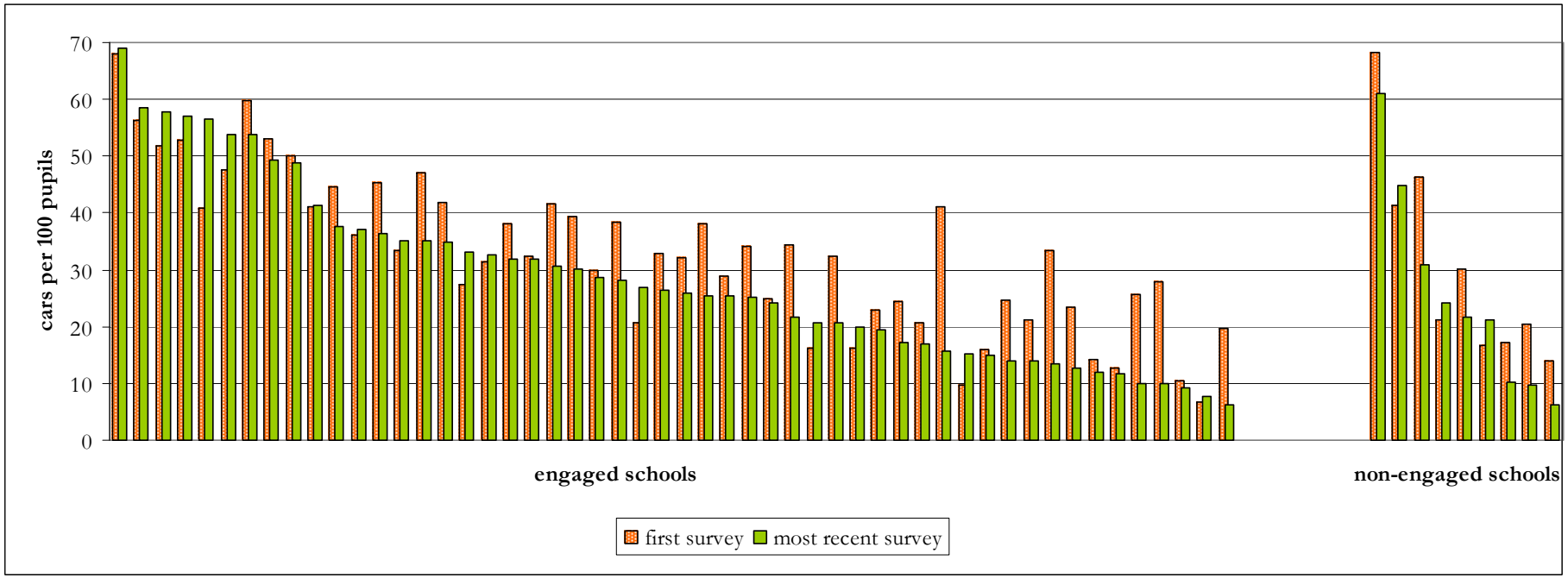
	Change in car use	Number of 'engaged' schools	Number of 'non-engaged' schools
Reduction	Over 40%	7	3
	30-40%	4	1
	20-30%	7	1
	10-20%	11	1
	0-10%	8	0
Increase	0-10%	7	1
	10-20%	3	1
	20-30%	4	1
	30-40%	1	0
	Over 40%	1	0

Figure 12.7: Percentage change in car use between first and most recent survey at Peterborough schools (53 'engaged' and 9 'non-engaged')



Note: Dates of 'first' surveys range from 2003 to 2007; 'most recent' surveys usually in 2008 but sometimes in 2007 or even earlier. Figures are % changes (*not* %-point changes) in the number of cars per 100 pupils.

Figure 12.8: Cars per 100 pupils at Peterborough, at time of first survey and at time of most recent survey



Note: Dates of 'first' surveys differ widely, ranging from 2003 to 2007; 'most recent' surveys were usually in 2008 but sometimes in 2007 or even earlier.

12.3.3 Overall change in car use for school travel

As described in section 12.1, two approaches were used to assess the overall (town-wide) change in car use for school travel.

First, the figures for changes in car use between each school's first survey and most recent survey were combined, weighted according to pupil numbers, to give an 'overall' figure for the change in car use across all Peterborough schools with monitoring data. The results using this approach are shown in Table 12.8.

Using this method, it appears that car use across all Peterborough schools with monitoring data fell by 14% between their earliest and most recent surveys[6].

At the schools with level 'A' travel plans, car use fell by 16%. Almost all of this reduction was due to a fall in car use at the two secondary schools in the group. One of these schools had been identified by Peterborough officers as especially engaged in travel planning, and the other was a newly opened PFI school where the 'before' data is drawn from the two schools which it replaced.

Car use across the small number of schools which had *not* become engaged in school travel work in any way still fell by a significant amount, at 13%.

Second, we examined changes in cars per 100 pupils in subsets of schools with survey returns in both 2005 and 2008; and in subsets of schools with survey returns in both 2006 and 2008. (There were too few schools with surveys in both 2004 and 2008 for worthwhile analysis.)

The results using this approach are shown in Table 12.9. Car use across the 30 schools with a survey in January 2005 fell by 11% between that date and January 2008, while car use across the 40 schools with a survey in January 2006 fell by 15% between that date and January 2008.

Looking just at the schools that had a level 'A' travel plan, car use across the seven schools with a survey in January 2006 fell by 23% between that date and January 2008. There was also a substantial reduction in car use across the five schools with surveys in January 2006 and 2008 which had not become engaged in travel planning; for this group, car use fell by 22%.

[6] Note that these figures are calculated on the assumption that total pupil numbers have remained constant at individual schools (i.e. that the approximate number of pupils at each school was the same at the time of the earliest survey as the reported number in 2008).

Table 12.8: Overall changes in car trips to school, using earliest survey at each school as baseline

Schools included	All schools with monitoring data	All 'engaged' schools with monitoring data	All 'non-engaged' schools with monitoring data	All schools with monitoring data and level 'A' travel plans*
Number of schools	62	53	9	8
Proportion of Peterborough pupils attending these schools	96%	90%	6%	16%
Date selected for baseline survey#	Earliest survey for each school	Earliest survey for each school	Earliest survey for each school	Earliest survey for each school
Date of most recent survey~	Most recent survey for each school	Most recent survey for each school	Most recent survey for each school	Most recent survey for each school
Cars per 100 pupils in 'baseline' survey	31.6	32.1	27.1	37.2
Cars per 100 pupils in most recent survey	27.1	27.5	23.7	31.4
Weighted change in car use between baseline and most recent surveys	-14.2%	-14.3%	-12.6%	-15.6%

Notes: * One 'level A' school was newly opened and hence had no monitoring data. # Date of earliest available survey differs widely amongst Peterborough schools, ranging from 2003 to 2007, although generally the first survey is in 2005 or before. ~ 'Most recent' surveys were usually in 2008 but sometimes in 2007 or even earlier.

Table 12.9: Overall changes in car trips to school, for subsets of schools with the same survey return dates

Subset of schools included	Schools with survey returns for January 2005	Schools with survey returns for January 2006	Non-engaged schools with survey returns for 2006	Schools with level 'A' travel plan and survey returns for 2006
Number of schools in subset	30	40	5	7
Proportion of Peterborough pupils attending these schools	39%	57%	3%	16%
Date selected for 'baseline'	January 2005	January 2006	January 2006	January 2006
Cars per 100 pupils in 'baseline' survey	35.3	34.4	35.4	39.4
Cars per 100 pupils in January 2008 survey	31.3	29.3	27.7	30.5
Change in car use	**-11.3%**	**-14.9%**	**-21.8%**	**-22.7%**

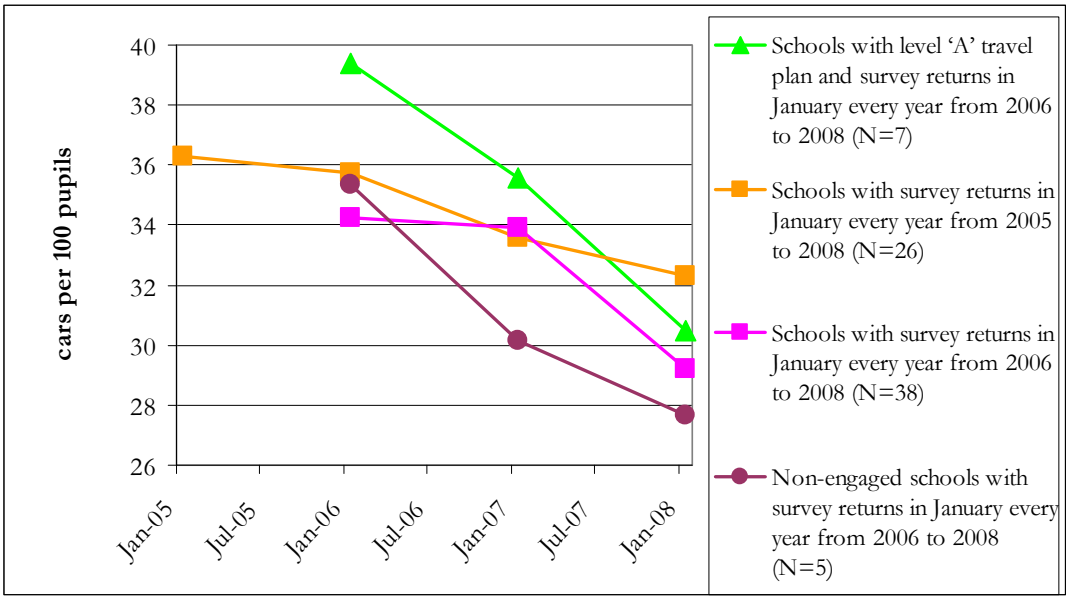
Note: No figures are presented for the subsets of 'level A' schools and non-engaged schools with survey data in 2005, as these subsets included too few schools.

The same subsets of schools described above and in Table 12.9 may also be examined graphically, looking at trends in car use over time. These trends are illustrated in Figure 12.9. For the purposes of this exercise, a few schools have been excluded because they lacked data returns for intermediate years between the first and most recent surveys. The graph shows that the subset of 26 schools with early (January 2005) monitoring data has a progressive reduction in cars per 100 pupils over time. The larger group of 39 schools with data from January 2006 onwards also shows a reduction in car use over time.

As in Darlington, it is also interesting to note that schools with level 'A' travel plans have somewhat *higher* levels of car use than the 'overall' figures for the group of schools of which they are a subset in any particular year. They appear to have begun with higher levels of car use, but to have reduced these steadily over time.

Schools at the other end of the spectrum – those with no engagement in school travel initiatives – appear to have started with somewhat *lower* levels of car use than the schools with level 'A' travel plans. Despite their lack of engagement in the school travel planning process, their levels of car use have also fallen steadily over the period from 2006 to 2008. As in Darlington, it may be speculated that this is an effect of the other travel behaviour interventions taking place over this period in Peterborough.

Figure 12.9: Change in car use over time for subsets of schools with the same survey return dates



Note: Numbers of schools in each subset do not exactly match numbers shown in Table 12.9 because some schools lacked data returns for intermediate years between their first and last surveys.

12.3.4 Change in walking and cycling for school travel

Of the 62 schools with monitoring data, 48 had achieved a net increase in the proportion of pupils travelling by active means (i.e. walking or cycling) between their first monitoring survey and their most recent survey, as shown in Table 12.10.

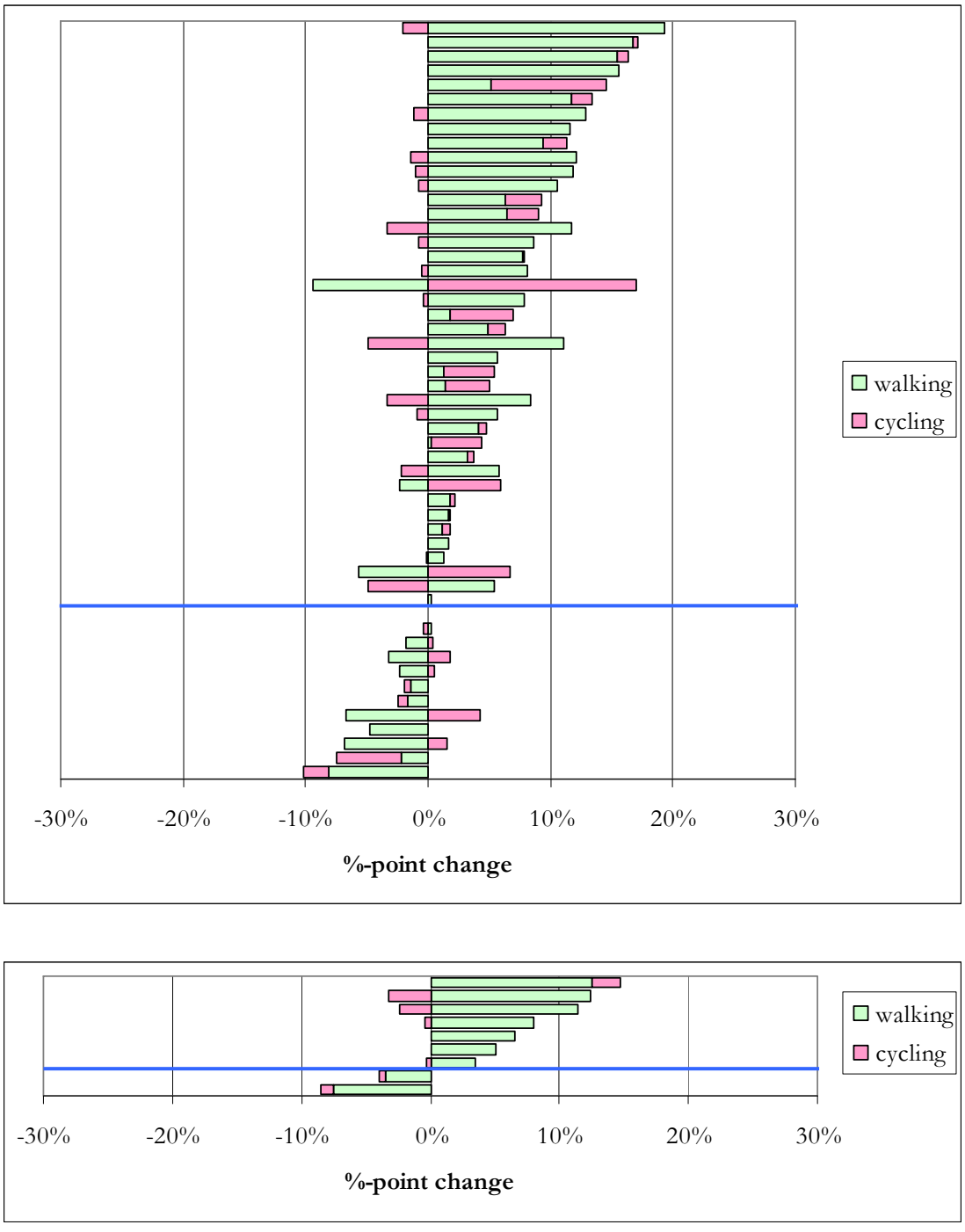
Table 12.10: Percentage-point change in active travel (walking and cycling) between first survey and most recent survey at Peterborough schools

	Net change in walking and cycling (%-point)	Number of engaged schools	Number of non-engaged schools
Increase	20-30% point	0	0
	10-20% point	11	1
	0-10% point	30	6
Reduction	0-10% point	11	2
	10-20% point	1	0
	20-30% point	0	0

Note: %-point change rather than percentage change used to group schools in this table, to avoid the skew that can occur when calculating percentage changes from a small baseline.

The results for individual schools are illustrated in Figure 12.10, with the nine schools that had not become engaged in school travel work in any way shown separately.
In contrast to Darlington, few schools showed substantial increases in cycling, and the main reason for the increase in active travel was a growth in walking. At the few schools that *had* achieved a substantial increase in cycling, this was quite commonly offset by a decline in walking to school. The picture for the 'non-engaged' schools appears very similar to that for the 'engaged' schools.

Figure 12.10: Percentage-point change in walking and cycling between first survey and most recent survey at 53 Peterborough schools which had become engaged in school travel work, and 9 Peterborough schools which had not become engaged



Note: Dates of 'first' surveys differ widely, ranging from 2003 to 2007; 'most recent' surveys were usually in 2008 but sometimes in 2007 or even earlier. Figures are %-point changes. Schools are ranked according to net increase/decrease in combined levels of walking and cycling; schools with a net increase in walking + cycling are above the blue line.

As described in section 12.1, two approaches were used to assess the overall (town-wide) change in walking and cycling to school.

First, the figures for changes in walking between each school's first survey and its most recent survey were combined for all schools, weighted according to pupil numbers, to give an 'overall' figure for the change across all Peterborough schools with monitoring data. This exercise was repeated for cycling, and for overall active travel (walking + cycling). The results using this approach are shown in Table 12.11.

Table 12.11: Overall changes in walking and cycling to school, using earliest survey at each school as baseline

Schools included	All schools with monitoring data	All 'engaged' schools with monitoring data^	All 'non-engaged' schools with monitoring data^	All schools with monitoring data and level 'A' travel plans*
Number of schools	62	51	8	8
Proportion of Peterborough pupils attending these schools	96%	82%	6%	16%
Date selected for baseline survey #	Earliest survey for each school	Earliest survey for each school	Earliest survey for each school	Earliest survey for each school
Date of most recent survey ~	Most recent survey for each school	Most recent survey for each school	Most recent survey for each school	Most recent survey for each school
Weighted change in walking between baseline and most recent surveys	+10% or +5.1%-point *(from 52.7% to 57.8%)*	+9% or +4.9%-point *(from 51.8% to 56.7%)*	+11% or +7.1%-point *(from 64.7% to 71.8%)*	+21% or +7.8%-point *(from 37.5% to 45.3%)*
Weighted change in cycling between baseline and most recent surveys	+10% or +0.6%-point *(from 6.1% to 6.6%)*	+9% or +0.6%-point *(from 6.4% to 7.0%)*	-29% or -0.6%-point *(from 2.1% to 1.5%)*	-6% or -0.4%-point *(from 6.6% to 6.3%)*
Weighted change in walking + cycling between baseline and most recent surveys	+10% or +5.6%-point *(from 58.8% to 64.4%)*	+9% or +5.5%-point *(from 58.2% to 63.7%)*	+10% or +6.5%-point *(from 66.7% to 73.2%)*	+17% or +7.4%-point *(from 44.1% to 51.5%)*

Notes: ^ Two 'engaged' schools and one 'non-engaged' school with monitoring data were excluded from these calculations because they closed before 2008, and hence pupil numbers were unknown and walking/cycling mode share as proportion of all travel could not be calculated.
* One level 'A' school was newly opened and hence had no monitoring data
# Date of earliest available survey differs widely amongst Peterborough schools, ranging from 2003 to 2007, although generally the first survey is in 2005 or before
~ 'Most recent' surveys were usually in 2008 but sometimes in 2007 or even earlier.

Using this method, walking at all Peterborough schools with monitoring data increased by 10% or 5%-points between first and most recent surveys, while there was little change in the amount of cycling (an increase of 1%-point). This gave a net increase in active travel of 10% or 6%-points. For these schools, a paired sample one-tailed T-test on the

figures for the overall change in active travel gives a p-value of 0.000, suggesting that the change is highly statistically significant.

At the schools with level 'A' travel plans, walking increased rather more, by 21% or 8%-points, but there was little change in the amount of cycling (a fall of 0.4%-points). This gave a net increase in active travel of 17% or 7%-points (p-value 0.09, not statistically significant).

At the schools which had *not* become engaged in school travel work in any way, there was still an increase in walking of 11% (+7%-points), and, again, little change in the amount of cycling (a fall of 1%-point), giving a net increase in active travel of 10% or 7%-points (p-value 0.02, statistically significant at the 95% confidence level).

Second, we examined changes in levels of walking and cycling in subsets of schools with survey returns in both 2005 and 2008; and in subsets of schools with survey returns in both 2006 and 2008. The results using this approach are shown in Table 12.12.

Table 12.12: Overall changes in walking and cycling to school, for subsets of schools with the same survey return dates

Subset of schools included	Schools with survey returns for January 2005	Schools with survey returns for January 2006	Non-engaged schools with survey returns for 2006	Schools with level 'A' travel plan and survey returns for 2006
Number of schools in subset	30	40	5	7
Proportion of Peterborough pupils attending these schools	39%	57%	3%	16%
Date selected for 'baseline'	January 2005	January 2006	January 2006	January 2006
Change in walking between baseline and most recent survey	+8% or +4.0%-point *(from 49.3% to 53.3%)*	+12% or +6.2%-point *(from 50.4% to 56.6%)*	+15% or +8.7%-point *(from 59.1% to 67.8%)*	+30% or +10.5%-point *(from 35.1% to 45.5%)*
Change in cycling between baseline and most recent survey	+2% or +0.1%-point *(from 4.2% to 4.3%)*	+7% or +0.3%-point *(from 4.5% to 4.8%)*	-55% or -1.7%-point *(from 3.1% to 1.4%)*	+2% or +0.1%-point *(from 6.4% to 6.5%)*
Change in walking + cycling between baseline and most recent survey	+8% or +4.1%-point *(from 53.5% to 57.7%)*	+12% or +6.6%-point *(from 54.9% to 61.5%)*	+11% or +7.0%-point *(from 62.2% to 69.2%)*	+25% or +10.5%-point *(from 41.5% to 52.0%)*

Walking levels at the 30 schools with a survey in January 2005 increased by 8% or 4%-points between that date and January 2008, while walking levels across the 40 schools with a survey in January 2006 increased by 12% or 6%-points.

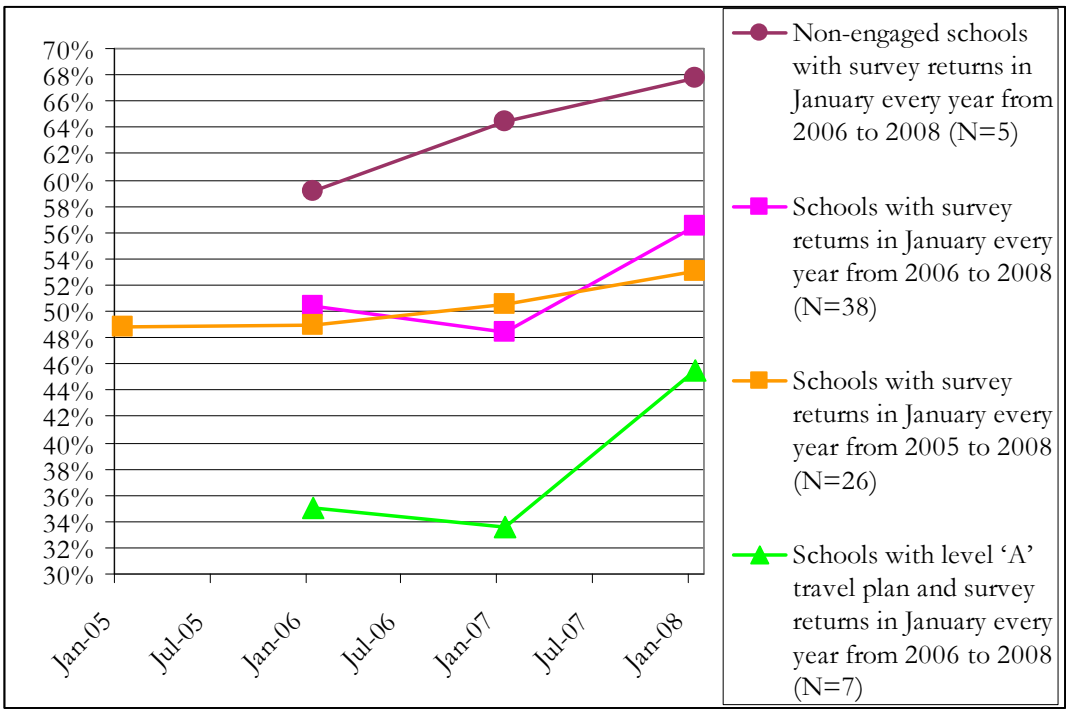
Walking levels at the seven level 'A' schools increased by rather more: 30% or 11%-points between January 2006 and January 2008. At the schools which had not become

engaged in travel planning, walking also increased, by 15% or 9%-points, over the same period.

In all cases, changes in cycling levels were small, and hence overall changes in active travel closely mirrored the figures for walking.

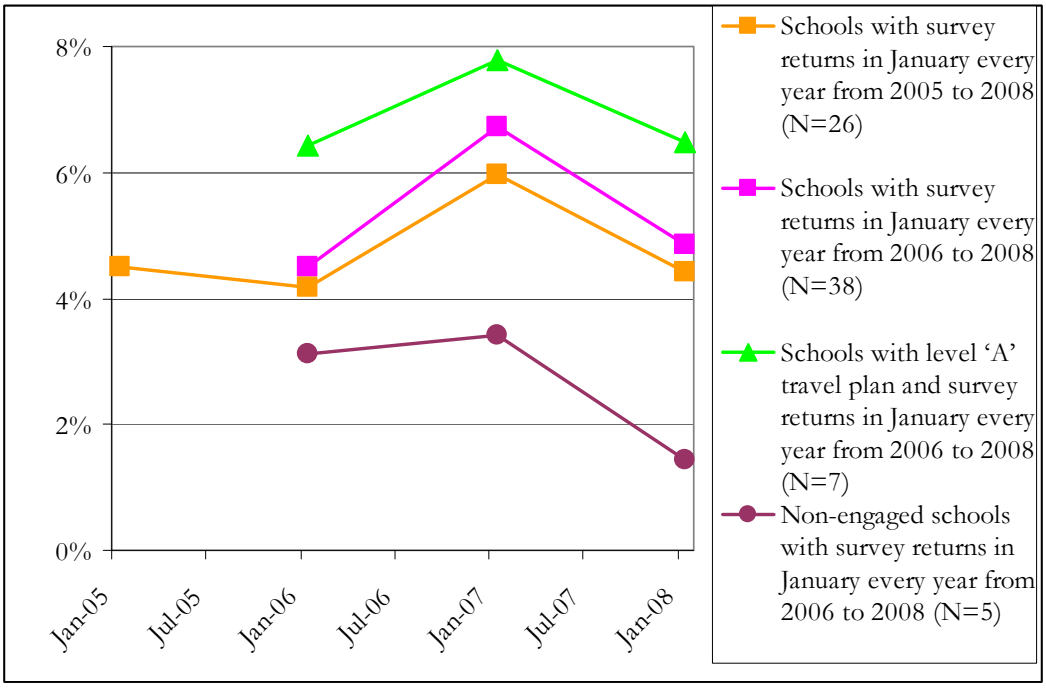
The subsets of schools described above and in Table 12.12 may also be examined graphically, looking at trends in walking and cycling over time. These trends are illustrated in Figures 12.11 and 12.12.

Figure 12.11: Change in walking over time for subsets of schools with the same survey return dates



Note: Numbers of schools in each subset do not exactly match numbers shown in Table 12.12 because some schools lacked data returns for intermediate years between their first and last surveys.

Figure 12.12: Change in cycling over time for subsets of schools with the same survey return dates



Note: Numbers of schools in each subset do not exactly match numbers shown in Table 12.12 because some schools lacked data returns for intermediate years between their first and last surveys.

It appears from the graphs that walking is tending to increase over time. The pattern for cycling is somewhat erratic, but not showing any systematic trend either up or down.

Schools with level 'A' travel plans have lower levels of walking, and higher levels of cycling, while the reverse is true for the schools that had not become engaged in travel planning. Despite not having become engaged in school travel work, the latter group of schools appear to be showing an increase in walking.

12.3.5 Summary of changes in school travel patterns in Peterborough

Apparent changes in school travel can be summarised as follows:

- During the period of the Sustainable Travel Town work, car trips to school decreased at some schools in Peterborough, but increased at others. More schools (roughly speaking, 70%) experienced a fall in car use than experienced an increase (30%). The proportion experiencing a decrease in car use was similar at both 'engaged' and 'non-engaged' schools.
- Looking at all schools with monitoring data, it appears that overall levels of car use for the journey to school fell by between 11% and 15% (depending on which baseline survey dates and which method of calculation are used) over the period of the Sustainable Travel Town work.
- Active modes of travel (walking and cycling) showed a net increase of 8-12% (between 4%-points and 7%-points), depending on which baseline survey dates and which method of calculation are used. This was largely due to an increase in walking.
- The schools which became most engaged in the travel planning process (the 'level A' schools) appear to have started with somewhat higher levels of car use. They

achieved somewhat greater reductions in car use than the average for all schools, of between 15% and 23% (depending on which method of calculation is used) over the period of the Sustainable Travel Town work.

- The 'level A' schools also started with lower levels of walking and higher levels of cycling. They achieved somewhat greater increases in active travel than the average for all schools, of 17%-25% or 7%-points to 11%-points (depending on which method of calculation is used). This was largely due to increased walking. Although we have not obtained any direct evidence (e.g. from data on free school meal eligibility) it seems quite likely that the more engaged, level 'A' schools tend to draw from a more middle class catchment.
- The schools that had not become engaged in the travel planning process appear to have had somewhat lower levels of car use. Despite their lack of engagement in travel planning, these schools still achieved a reduction in car use of between 13% and 22% (depending on which method of calculation is used) over the period of the Sustainable Travel Town work. They also achieved an increase in walking which was comparable to the average for all schools. It is possible that this is an effect of the other travel behaviour interventions in Peterborough, although this conclusion must be treated with caution because the number of schools being considered is small.

12.4 Worcester

12.4.1 Approach to monitoring and data collection

Most Worcester schools had participated in an annual 'hands up' school travel survey since 2004. This took place on a single day each year, usually in October. The survey asked about usual mode of travel to school.

Of the 36 schools in Worcester, 32 had at least two useable monitoring surveys (and there were generally more than this). The four schools that had not become involved in monitoring are all independent schools (The Grange, The Kings School, Kings Hawford and The Royal Grammar School/Alice Ottley School). Taken together, the schools that had become involved in monitoring covered 82% of all pupils attending schools in Worcester.

For all five survey dates between October 2004 and October 2008, there were some 'gaps' i.e. schools which did not return any data. The overall response rate (that is, the ratio of the number of responses to the number of pupils at the 32 schools which had become engaged in monitoring) is roughly 60% for the surveys in October 2004 and 2005, and 70-80% for the surveys in October 2006 and 2007. The response rate for the October 2008 survey was lower, at 38%.

The surveys distinguished between pupils who travelled by 'car alone' and those by 'car with siblings/others'. The 2004 survey also included an option of 'park and walk', which was not included as a modal option in subsequent surveys. Surveys asked about mode of travel both *to* school and *from* school, but for the purposes of this analysis (and consistency with data from Darlington and Peterborough), only data on travel *to* school have been used.

In addition to reporting the results of the annual 'hands up' survey to the county council, schools with travel plans also took part in the Schools Census. However, there have been some problems with the collection of this data, and the data supplied by the Worcestershire school travel team are all from the 'hands up' surveys.

12.4.2 Changes in car use at individual schools

In order to understand changes in levels of car use, the number of cars per 100 pupils for each survey at each school was calculated as follows:

Cars per 100 pupils = 100*[(number of pupils travelling by 'car alone') + 0.5*(number of pupils travelling by 'car with siblings/others' or 'park and walk')] / number of survey responses

This assumes that pupils reported to be travelling in a car with siblings or others travelled with just one other pupil. This is a conservative assumption (i.e. it tends to over-estimate the number of cars per 100 pupils, since some cars will carry more than two pupils). It also treats 'park and walk' (in the 2004 survey) as equivalent to travel by 'car with siblings/others'. In practice, only some pupils who used 'park and walk' will have travelled with others. However, this avoids artificially inflating the number of cars per 100 pupils in the first year of the survey, and thus is again a conservative assumption[7].

Of the 32 schools with monitoring data, all but seven had achieved reductions in the number of cars per 100 pupils between their first monitoring survey and their most recent survey[8]. Ten schools had reduced car use by more than 20%, and a further 10 schools had achieved reductions of between 10% and 20%. The results for individual schools are summarised in Table 12.13 and illustrated in Figures 12.13 and 12.14. Comparing the number of cars per 100 pupils in the first survey at each school with the figures in the second survey, a paired sample one-tailed T-test gives a p-value of 0.0004 (in other words, the probability that the reduction in car use is real is more than 99.96%), indicating that the reduction in car use at the schools is highly statistically significant.

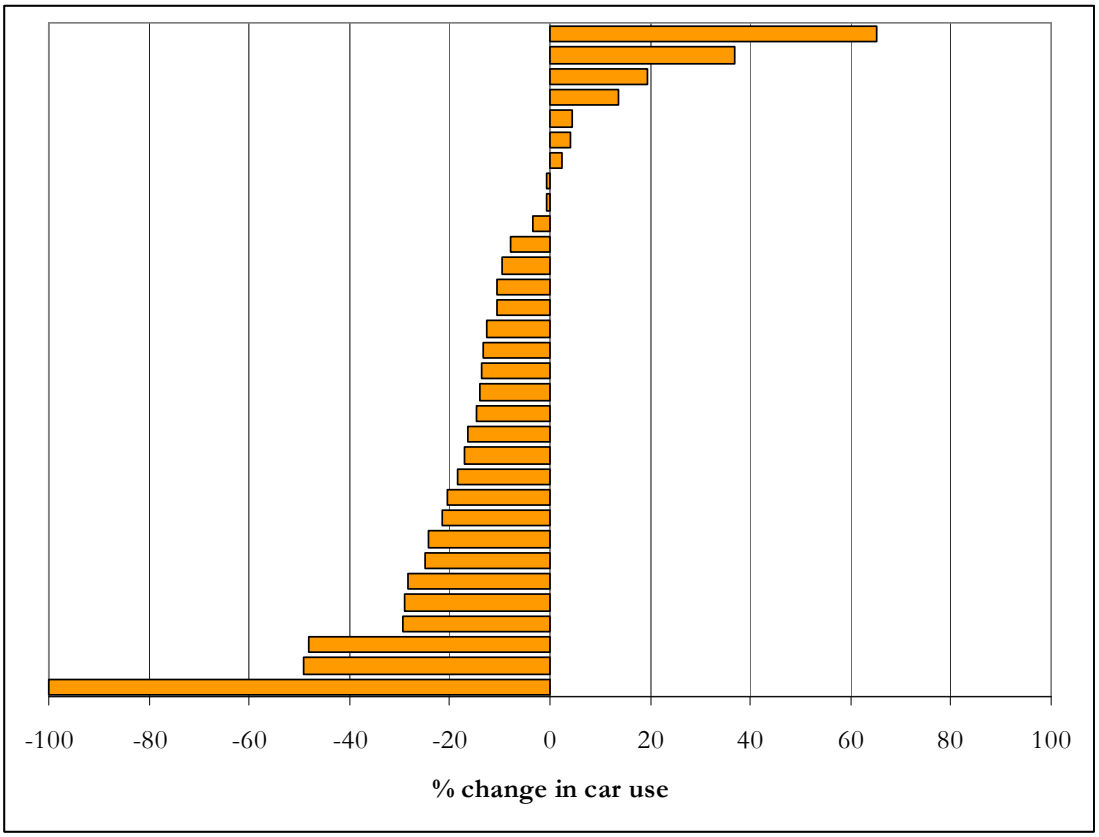
[7] That is, our assumption has the effect of producing a *minimum* figure for the number of cars per 100 pupils in the earliest survey, and hence tends to make smaller the reported reduction in car use between the earliest and most recent surveys.

[8] It is important to note that the dates of the 'first' and 'most recent' surveys differ significantly between schools. Although the first survey was generally in either October 2004 or October 2005, there are seven schools where the first survey was in the period December 2004-February 2005 and four schools where the first survey took place in October 2006. The most recent survey was generally in either October 2007 or October 2008. Exceptions were three schools and a pupil referral unit whose most recent data were for October 2006; one school whose most recent data were for October 2005; and for another school whose most recent data were for January 2007.

Table 12.13: Percentage change in car use between first survey and most recent survey at Worcester schools

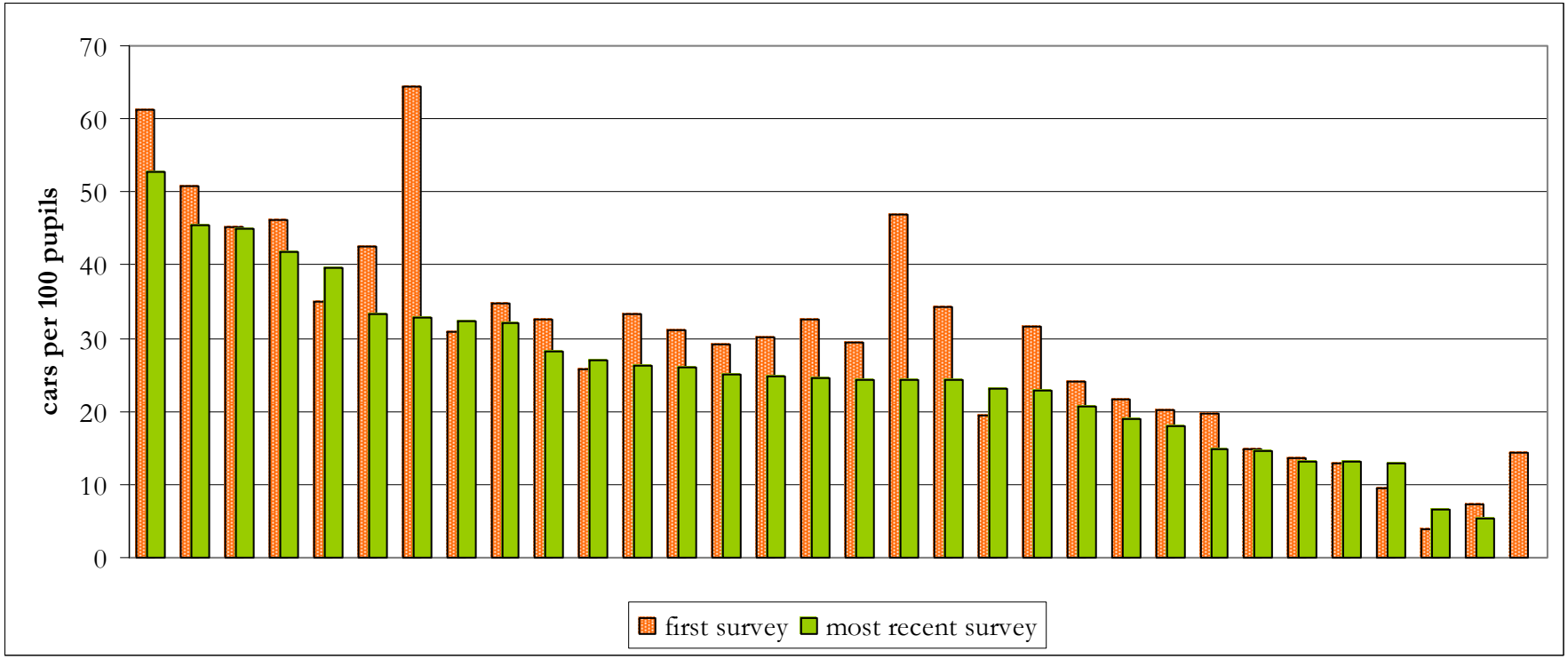
	Change in car use	Number of schools
Reduction	Over 40%	3
	30-40%	0
	20-30%	7
	10-20%	10
	0-10%	5
Increase	0-10%	3
	10-20%	2
	20-30%	0
	30-40%	1
	Over 40%	1

Figure 12.13: Percentage change in car use between first survey and most recent survey at 32 Worcester schools



Notes: The 'first' survey was usually in October 2004 or 2005, but with some exceptions; the 'most recent' survey was usually in October 2007 or 2008, but with some exceptions. Figures are % changes (*not* %-point changes) in the number of cars per 100 pupils.

Figure 12.14: Cars per 100 pupils at Worcester schools, at time of first survey and at time of most recent survey



Note: The 'first' survey was usually in October 2004 or 2005, but with some exceptions; the 'most recent' survey was usually in October 2007 or 2008, but with some exceptions.

12.4.3 Overall change in car use for school travel

As described in section 12.1, two approaches were used to assess the overall (town-wide) change in car use for school travel.

First, the figures for changes in car use at each school between its first survey (usually in either 2004 or 2005) and its most recent survey (usually in 2007 or 2008) were combined, weighted according to pupil numbers, to give an 'overall' figure for the change in car use across all Worcester schools with monitoring data. The results using this approach are shown in Table 12.14.

Using this method, it appears that car use across all Worcester schools fell by 12% between October 2004/2005 and October 2007/2008[9].Car use across all schools that were judged to be level 'A' in terms of their school travel work fell by 15% over the same period.

Table 12.14: Overall changes in car trips to school, using earliest survey at each school as baseline

Schools included	All schools with monitoring data	All schools with level 'A' travel plans
Number of schools	32	16
Proportion of Worcester pupils attending these schools	82%	34%
Date selected for baseline survey	Earliest available survey for each school (usually October 2004 or October 2005)	Earliest available survey for each school (usually October 2004 but 4 in January/February 2005)
Date of most recent survey	Usually October 2007 or October 2008	Usually October 2007 or October 2008
Cars per 100 pupils in 'baseline' survey	27.3	31.1
Cars per 100 pupils in 'most recent' survey	24.0	26.3
Weighted change in car use between baseline and most recent surveys	-11.9%	-15.4%

[9] Note that these figures are calculated on the assumption that total pupil numbers have remained constant at individual schools (i.e. that the approximate number of pupils at each school was the same in 2004/2005 as the reported number in 2008).

Second, we examined changes in cars per 100 pupils in the subset of schools with survey returns in 2004 and 2008; and in the somewhat larger subset of schools with survey returns in 2004 and 2007. In both cases, all schools with surveys in the relevant years were included, even if the survey was not in October but in the period December-February[10]. The results using this approach are shown in Table 12.15. Car use across the 14 schools with surveys in 2004 and 2008 fell by 14% between those dates, while car use across the 20 schools with surveys in 2004 and 2007 fell by 22% between those dates. Looking just at the schools which had a level 'A' travel plan, car use across the eight schools with surveys in 2004 and 2008 fell by 14% between those dates, while car use across the 13 schools with surveys in 2004 and 2007 fell by 18% between those dates.

Table 12.15: Overall changes in car trips to school, for subsets of schools with the same survey return dates

Subset of schools included	Schools with survey returns for 2004 and 2008	Schools with survey returns for 2004 and 2007	Schools with level 'A' travel plan and survey returns for 2004 and 2008	Schools with level 'A' travel plan and survey returns for 2004 and 2007
Number of schools in subset	14	20	8	13
Proportion of Worcester pupils attending these schools	30%	50%	15%	29%
Date selected for 'baseline'	2004 (usually October)	2004 (usually October)	2004 (usually October)	2004 (usually October)
Date selected for 'after' survey	2008 (usually October)	2007 (usually October)	2008 (usually October)	2007 (usually October)
Cars per 100 pupils in 'baseline' survey	33.0	30.3	35.5	31.9
Cars per 100 pupils in 'after' survey	28.5	23.8	30.5	26.1
Change in car use	**-13.7%**	**-21.5%**	**-14.1%**	**-18.3%**

The same subsets of schools described above and in Table 12.15 may also be examined graphically, looking at trends in car use over time. These trends are illustrated in Figure 12.15. For the purposes of this exercise, some schools have been excluded because they lack data returns for intermediate years between the first and most recent surveys.

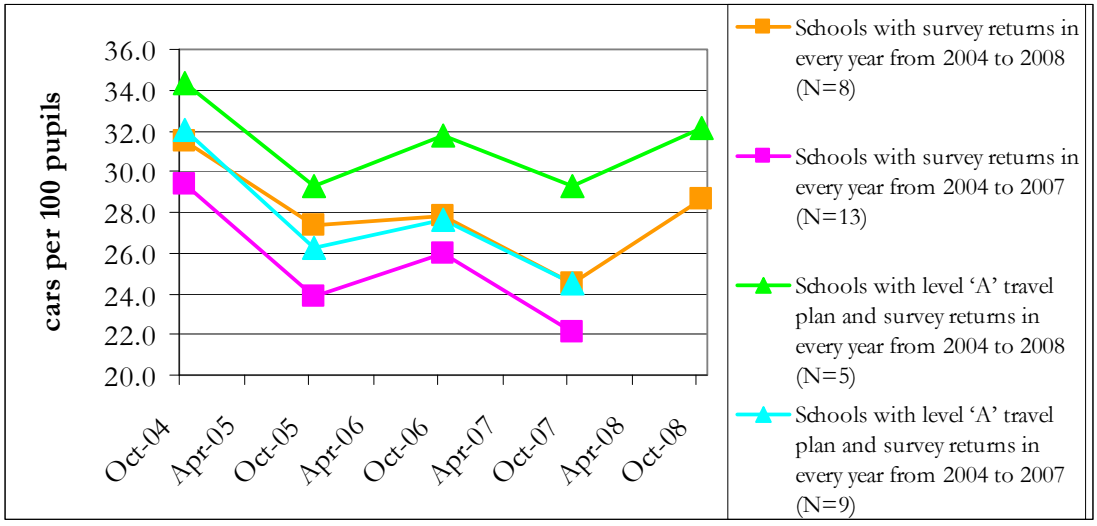
The graph shows that the subset of eight schools with monitoring data for each year from 2004 to 2008 had a fairly steady decline in car use until October 2007, but with an

[10] The calculations were repeated with *only* those schools where the survey took place in October, and it was established that this did not materially affect the result. This is unsurprising, since survey dates were always in the winter months (December – February), and in any event, the question asked, about 'usual mode of travel' might be expected to show less variation in response by time of year than if it had been 'how did you travel today?'.

increase in October 2008. However, both this group and the group of schools with monitoring data for each year between 2004 and 2007 are in broad terms showing declining car use.

Schools with 'level A' travel plans appear to have higher levels of car use for every survey than the levels for all schools in their respective subsets. This appears consistent with the picture from Darlington and Peterborough.

Figure 12.15: Change in car use over time for subsets of schools with the same survey return dates



Note: Numbers of schools in each subset do not match numbers shown in Table 12.15 because many schools lacked data returns for intermediate years between their first and last surveys.

In both Darlington and Peterborough, we were able to examine changes in car use in schools that had been less involved in travel planning but had still collected monitoring data. In the case of Worcester, this is not possible because there are no survey results for 'level C' schools[11].

12.4.4 Change in walking and cycling for school travel

Of the 32 schools with monitoring data, 20 had achieved a net increase in the proportion of pupils travelling by active means (i.e. walking or cycling) between their first monitoring survey and their most recent survey, as shown in Table 12.16.

At schools that had experienced an overall increase in active travel, the main reason for this was a growth in walking, and changes in the amount of cycling were generally quite small, as may be seen from Figure 12.16. However, the contribution of cycling to overall active travel was still important, and the number of schools where cycling increased was slightly greater than the number of schools where walking increased.

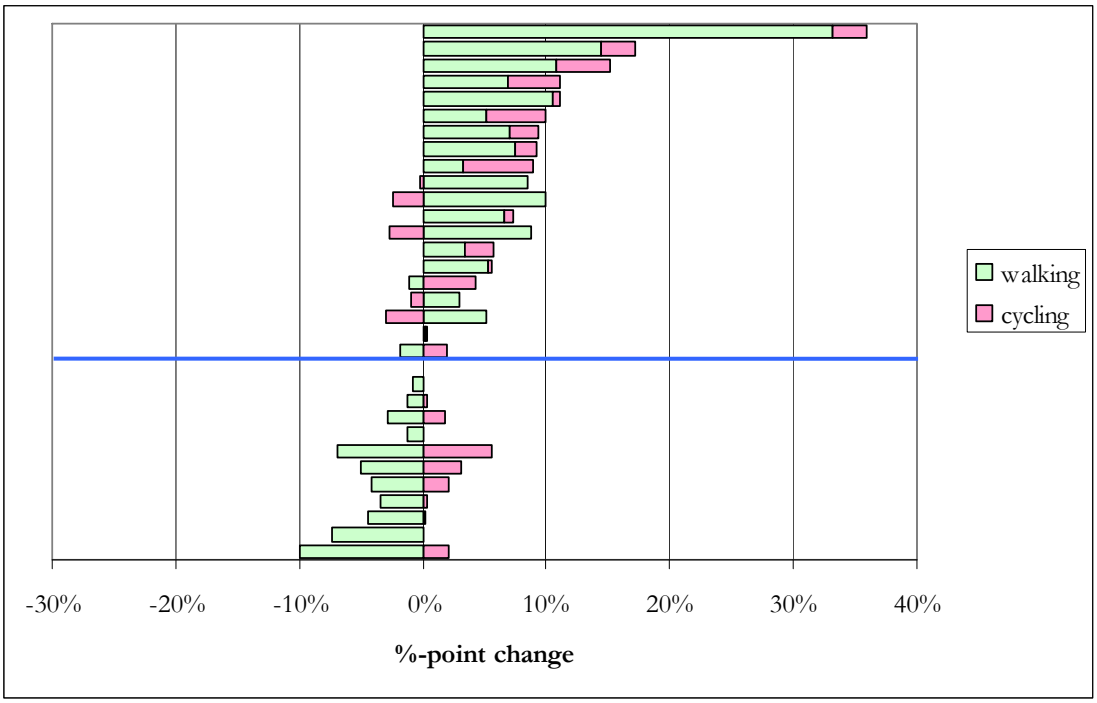
[11] There were survey results in 2005 and 2006 for a pupil referral unit which is classed as level 'C' in terms of its school travel work, but this unit had only a small number of pupils.

Table 12.16: Percentage-point change in active travel (walking and cycling) between first survey and most recent survey at Worcester schools

	Net change in walking and cycling (%-point)	Number of schools
Increase	>30%-point	1
	20-30% point	0
	10-20% point	4
	0-10% point	15
Reduction	0-10% point	12
	10-20% point	0
	20-30% point	0

Note: %-point change rather than percentage change used to group schools in this table, to avoid the skew that can occur when calculating percentage changes from a small baseline.

Figure 12.16: Percentage-point change in walking and cycling between first survey and most recent survey at 32 Worcester schools



Notes: The 'first' survey was usually in October 2004 or 2005, but with some exceptions; the 'most recent' survey was usually in October 2007 or 2008, but with some exceptions. Figures are %-point changes. Schools are ranked according to net increase/decrease in combined levels of walking and cycling; schools with a net increase in walking + cycling are above the blue line.

As described in section 12.1, two approaches were used to assess the overall (town-wide) change in walking and cycling to school.

First, the figures for changes in walking between each school's first survey and its most recent survey were combined for all schools, weighted according to pupil numbers, to give an 'overall' figure for the change across all Worcester schools with monitoring data. This exercise was repeated for cycling, and for overall active travel (walking + cycling). The results using this approach are shown in Table 12.17.

Using this method, both cycling and walking rose across Worcester schools, by similar amounts in terms of percentage-points, between the first surveys and most recent surveys (cycling by 100% or 2%-points and walking by 4% or 2%-points)[12], giving a net increase in active travel of 7% or 4%-points. A paired sample one-tailed T-test on the figures for the overall change in active travel gives a p-value of 0.003, suggesting that the change is statistically significant.

Looking just at schools which were judged to be level 'A' in terms of their school travel work, there was a similar increase in cycling (+62% or +2%-points) and a slightly greater increase in walking (+8% or +4%-points), giving a net increase in active travel of 12% or 6%-points (p-value 0.007, statistically significant).

Table 12.17: Overall changes in walking and cycling to school, using earliest survey at each school as baseline

Schools included	All schools with monitoring data	Schools with level 'A' travel plans
Number of schools	32	16
Proportion of Worcester pupils attending these schools	82%	34%
Date selected for baseline survey	Earliest available survey for each school (usually October 2004 or October 2005)	Earliest available survey for each school (usually October 2004 but 4 in January/February 2005)
Date of most recent survey	Usually October 2007 or October 2008	Usually October 2007 or October 2008
Weighted change in walking between baseline and most recent surveys	+4% or +1.9%-point *(from 51.5% to 53.4%)*	+8% or +3.9%-point *(from 53.0% to 57.0%)*
Weighted change in cycling between baseline and most recent surveys	+100% or +2.1%-point *(from 2.1% to 4.2%)*	+62% or +2.4%-point *(from 1.5% to 3.9%)*
Weighted change in walking + cycling between baseline and most recent surveys	+7% or +4.0%-point *(from 53.6% to 57.6%)*	+12% or +6.3%-point *(from 54.5% to 60.9%)*

Second, we examined changes in levels of walking and cycling in the subset of schools with survey returns in 2004 and 2008; and in the somewhat larger subset of schools with survey returns in 2004 and 2007. In both cases, all schools with surveys in the relevant years were included, even if the survey was not in October but in the period December-February[13]. The results using this approach are shown in Table 12.18.

[12] Note that these figures are calculated on the assumption that total pupil numbers remained constant at individual schools (i.e. that the approximate number of pupils at each school was the same in the school's first survey as in its most recent survey).

[13] The calculations were repeated with *only* those schools where the survey took place in October, and it was established that this did not materially affect the result.

Table 12.18: Overall changes in walking and cycling to school, for subsets of schools with the same survey return dates

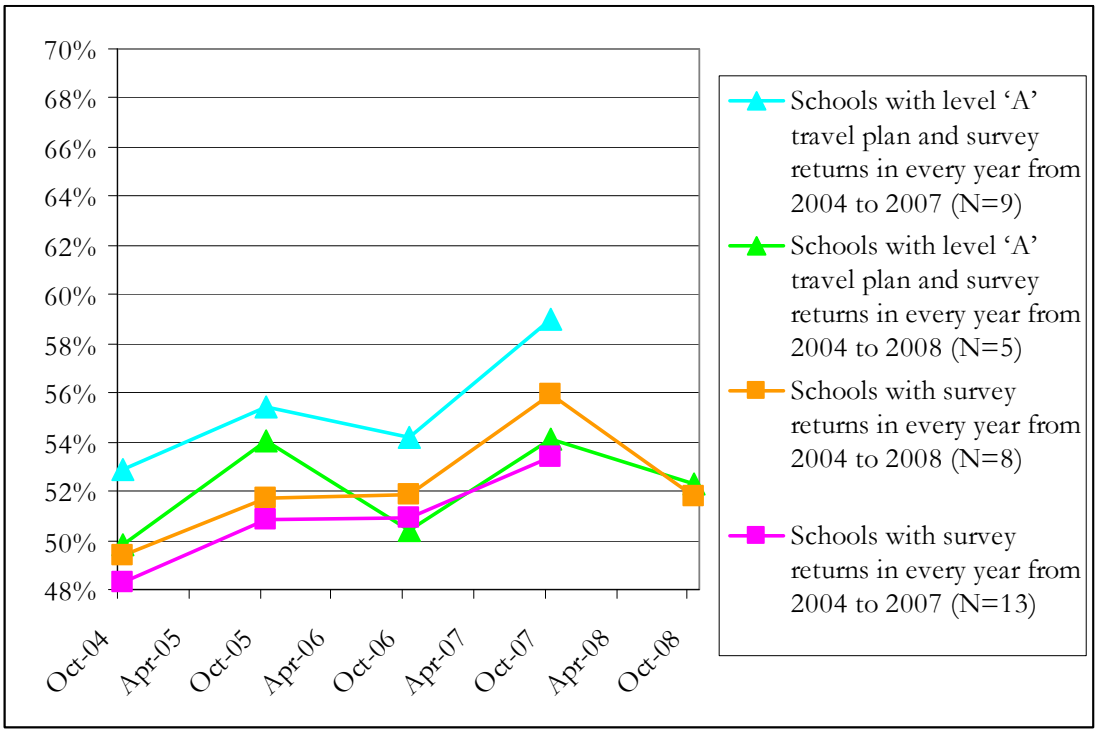
Subset of schools included	Schools with survey returns for 2004 and 2008	Schools with survey returns for 2004 and 2007	Schools with level 'A' travel plan and survey returns for 2004 and 2008	Schools with level 'A' travel plan and survey returns for 2004 and 2007
Number of schools in subset	14	20	8	13
Proportion of Worcester pupils attending these schools	30%	50%	15%	29%
Date selected for 'baseline'	2004 (usually October)	2004 (usually October)	2004 (usually October)	2004 (usually October)
Date selected for 'after' survey	2008 (usually October)	2007 (usually October)	2008 (usually October)	2007 (usually October)
Change in walking between baseline and most recent survey	+9% or +4.1%-point *(from 47.3% to 51.4%)*	+8% or +4.1%-point *(from 48.5% to 52.6%)*	+12% or +5.9%-point *(from 47.1% to 52.9%)*	+8% or +4.3%-point *(from 52.2% to 56.5%)*
Change in cycling between baseline and most recent survey	+233% or +2.8%-point *(from 1.2% to 4.0%)*	+126% or +2.4%-point *(from 1.9% to 4.3%)*	343% or +2.4%-point *(from 0.7% to 3.1%)*	+171% or +2.4%-point *(from 1.4% to 3.8%)*
Change in walking + cycling between baseline and most recent survey	+14% or +6.9%-point *(from 48.5% to 55.4%)*	+13% or +6.5%-point *(from 50.4% to 56.9%)*	+17% or +8.3%-point *(from 47.8% to 56.0%)*	+13% or +6.7%-point *(from 53.6% to 60.3%)*

Walking levels at the 14 schools with surveys in 2004 and 2008 increased by 9% (4%-points) over that period. Walking levels at the 20 schools with surveys in 2004 and 2007 increased by a similar amount, 8% or 4%-points. Cycling increased by 233% (3%-points) and 126% (2%-points) respectively, in the same two groups of schools. Overall levels of active travel (walking + cycling) increased by 13-14% (7%-points) in both groups of schools.

Looking just at the schools which had a level 'A' travel plan, walking at the eight schools with surveys in 2004 and 2008 increased by 12% (6%-points) over that period. Walking at the 13 'level A' schools with surveys in 2004 and 2007 increased by 8% (4%-points). Levels of cycling in these two groups went up by 343% (2%-points) and 171% (2%-points) respectively. Overall levels of active travel (walking +cycling) increased by 13-17% (7-8%-points).

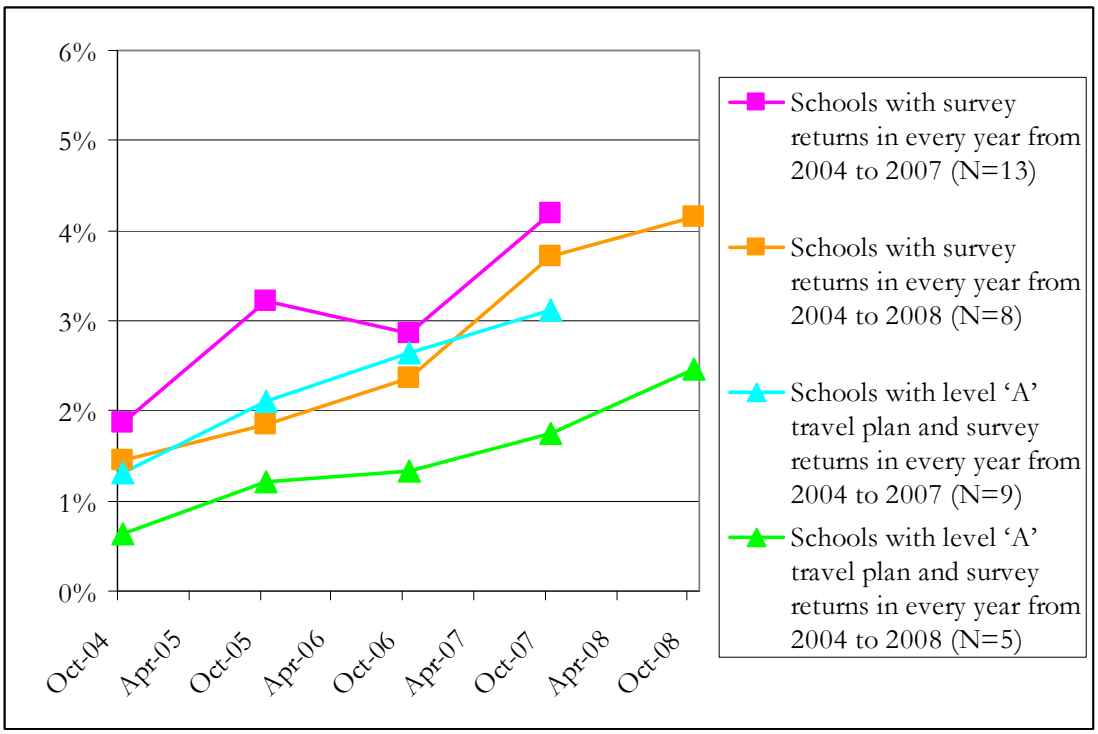
The subsets of schools described above and in Table 12.18 may also be examined graphically, looking at trends in walking and cycling over time. These trends are illustrated in Figures 12.17 and 12.18.

Figure 12.17: Change in walking over time for subsets of schools with the same survey return dates



Note: Numbers of schools in each subset do not match numbers shown in Table 12.18 because many schools lacked data returns for intermediate years between their first and last surveys.

Figure 12.18: Change in cycling over time for subsets of schools with the same survey return dates



Note: Numbers of schools in each subset do not match numbers shown in Table 12.18 because many schools lacked data returns for intermediate years between their first and last surveys.

Levels of both walking and cycling appear to be generally rising. However, between 2007 and 2008 there appears to have been a drop back in walking levels, albeit within a subset involving a small number of schools.

12.4.5 Summary of changes in school travel patterns in Worcester

Apparent changes in school travel can be summarised as follows:

- During the period of the Sustainable Travel Town work, car trips to school decreased at some schools in Worcester, but increased at others. More schools (roughly speaking, 80%) experienced a fall in car use than experienced an increase (20%).
- Looking at all schools with monitoring data, it appears that overall levels of car use for the journey to school fell by between 12% and 21% (depending on which survey dates and which method of calculation are used) over the period of the Sustainable Travel Town work.
- Active modes of travel (walking and cycling) showed a net increase of between 4%-points and 7%-points (7% to 14% compared to baseline levels), depending on which survey dates and which method of calculation are used. This was due to increases in both walking and cycling.
- The schools which became most engaged in the travel planning process (the level 'A' schools) appear to have had somewhat higher levels of car use throughout the period of the Sustainable Travel Town work. However, they achieved reductions in car use of between 14% and 18% (depending on which survey dates and which method of calculation are used) over this period.
- In contrast to Darlington and Peterborough, the level 'A' schools had rather similar levels of walking to other schools, and lower levels of cycling.
- All the schools in Worcester with monitoring data had become at least moderately engaged in the travel planning process (i.e. they were either level 'A' or level 'B'). Thus it is not possible to assess 'underlying' trends in school travel in schools that were not engaged in the school travel planning work.

12.5 Comparison with national benchmark

From the evidence presented in Section 10.2.2 and Table 10.5, it appears that the national trend in car passenger mode share for education/escort education trips in medium-sized urban areas was slightly downwards during the Sustainable Travel Town period[14]. Car passenger mode share fell from 23.5% of trips in 2004 to 21.9% of trips in 2008, a decline of 1.6%-points or 6.9%. Over the same period, walk mode share also fell, from 47.4% to 45.5% of trips, a decline of 1.8%-points or 3.8%. Cycle mode share was stable at 1.5%, and bus mode share increased from 4.1% to 6.5%.

It is possible, therefore, that wider national changes may have contributed towards the reduction in car use for the journey to school in the three towns. However, all three towns achieved town-wide reductions in car use that were larger than the benchmark for

[14] Comparison with the national data should be treated as indicative only, since national figures include travel for both education and escort education, and for further and higher education as well as travel to school. Thus, they include a substantial proportion of car driver trips (20.2% in 2004 and 19.9% in 2008).

medium-sized urban areas. It is also worth noting that all three towns achieved substantial increases in active travel, which are not evident in medium-sized urban areas.

12.6 Conclusions on school travel

12.6.1 Comparison with earlier evidence

It is instructive to compare the reductions in car travel to school in the three Sustainable Travel Towns with the evidence in the original smarter choices report (Cairns et al., 2004a) as to the 'typical' reduction in car trips to school achieved by local authorities which, at that time, were implementing school travel planning.

The original smarter choices report included evidence from eight local authorities which had 'before' and 'after' data from schools which were engaged in school travel initiatives (Buckinghamshire, Cambridgeshire, Hertfordshire, York, Merseyside, Knowsley, Cornwall and Devon), together with monitoring data from 80 individual schools gathered as part of a parallel (but currently unpublished) research project in 2004, *Making school travel plans work* (Cairns et al., forthcoming). Taken together, this evidence suggested that a programme of school travel work might reasonably be expected to result in a reduction in car use at between 60% and 90% of engaged schools, but that some schools (10-40%) would not experience a reduction in car use. Cairns et al. (2004) further concluded that in any group of schools that became engaged in school travel work, 45-50% of schools would reduce car use by less than 20%; and 15-40% of schools would reduce car use by more than 20%. The *overall* effect of an area-wide programme of school travel work was estimated to be a reduction in car use of 8-15%.

Table 12.19 summarises these figures and compares them with the results from the three Sustainable Travel Towns. The profile of all three towns (i.e. the proportion of schools with reductions in car use, and the proportion where car use fell by 0-20% and over 20%) is remarkably similar to the range identified by Cairns et al. (2004). The overall percentage reduction in car use across all schools is also very similar in Darlington and Peterborough, and somewhat higher in Worcester.

Table 12.19: Comparison of reductions in car use at schools in Sustainable Travel Towns and typical area-wide reductions in car trips to schools from Cairns et al. (2004)

	Cairns et al (2004)	Darlington	Peter-borough*	Worcester
Proportion of schools achieving a reduction in car use	**60-90%**	71%	69%	78%
Proportion of schools *not* experiencing a reduction in car use	**10-40%**	29%	31%	22%
Proportion of schools where car use fell by 0-20%	**45-50%**	45%	32%	47%
Proportion of schools where car use fell by >20%	**15-40%**	26%	37%	31%
Overall reduction in car use across all schools	***8-15%***	*9-10%*	*11-15%*	*12-21%*

Note: * Figures quoted for Peterborough are for all schools with monitoring data, including 'non-engaged' schools. However, the proportions are similar if non-engaged schools are excluded.

At the time of the Cairns et al. (2004) study, school travel work was generally less developed and there was a concern that any conclusions as to its effects might be unduly influenced by 'early adopter' schools that were particularly enthusiastic about tackling car travel, and that the quoted figures might therefore be an over-estimate of the potential. It is thus encouraging to see that the changes in car use across all (or very nearly all) schools in the Sustainable Travel Towns are comparable to – and in one town, higher than – the figures drawn from the earlier evidence.

12.6.2 Comparison between the three towns

While all three towns achieved reductions in car use and an increase in active travel to school, there are some differences between them. These may be summarised as follows:

Car use
Darlington started off with the lowest level of car use, which was, roughly speaking, around 27 cars per 100 pupils. Over 3.5 years, this fell to around 25 cars per 100 pupils.

Peterborough started with the highest level of car use, at about 35 cars per 100 pupils. Over the next 2-3 years, this fell to about 30-31 cars per 100 pupils.

Worcester had the second highest level of car use, at around 30-33 cars per 100 pupils. Over 3 to 4 years, this fell to about 24-28 cars per 100 pupils.

Cycling
Darlington and Worcester both began with low levels of cycling to school, at roughly 1% (Darlington) and 1.5-2% (Worcester). Over roughly four years, cycling in Darlington increased to about 6% of all trips to school, while cycling in Worcester increased more slowly to about 4% of all trips to school.

Peterborough started with a somewhat higher level of cycling, at roughly 4% of trips to school. This showed little change over the period of the Sustainable Travel Town project.

Walking
Darlington started with the highest level of walking to school, at about 58-61% of trips to school. Over the period of the Sustainable Travel Town project, this *fell* slightly, to about 57% of trips, most probably because cycling became significantly more attractive. However, the fall in walking was less than the increase in cycling, so there was an overall increase in active travel.

Peterborough and Worcester began with similar levels of walking. In Peterborough, walking rose from roughly 49-52% to about 53-57% over the period of the Sustainable Travel Town project. In Worcester, walking increased from about 48-51% to about 52-53%.

Active travel
In general terms, the key success in Darlington in terms of active travel was in getting more pupils cycling to school, although this was partially at the expense of walking. In Peterborough, the main success was in increasing the number of pupils walking to school, and there was little change in the amount of cycling. Finally, in Worcester there were moderate increases in both walking and cycling.

12.6.3 Possible reasons for reductions in car use

Throughout this chapter we have tried so far as possible to avoid the inference that the reduction in car trips to school in the three towns is *solely* the result of their school travel work. Whilst it seems highly probable that the school travel work has been a major factor, it is also plausible that the other smart interventions in the towns (and perhaps especially, personal travel planning and general travel awareness campaigns) may have influenced parents' and pupils' travel choices. It is also plausible that attitudes to the 'school run' may have changed as a result of national publicity, as perhaps is indicated by changes in car passenger mode share in medium-sized urban areas.

There are two pieces of evidence that suggest that either or both of these factors may have played a part. In Darlington, schools with a 'level C' travel plan appear to have achieved reductions in car use. And in Peterborough, schools which had monitoring data but had not become engaged in school travel planning also appear to have achieved reductions in car use.

Nevertheless, the town-wide reductions in car use, and increases in active travel, in the three towns are greater than the changes nationally.

12.7 References

Cairns S, Sloman L, Newson C, Anable J, Kirkbride A and Goodwin P (2004) *Smarter Choices – changing the way we travel* Report for the Department for Transport

Cairns S, Newson C, Davis A (forthcoming) *Making school travel plans work: Research report* Report for the Department for Transport

Annex

A12.1 Monitoring results for Darlington schools

	cars per 100 pupils						%-point change between 2005 and most recent survey
	2008	2007	Sep-06	Jan-06	2005	2004	
Abbey Infant	31.5	39.5	25.1	29.7	32.8	35.9	-1.3
Dodmire Infants	27.5	27.4	30.7	38.5	29.0	31.8	-1.5
Mowden Infant	36.0	39.9	36.1	49.4	49.1		-13.0
Abbey Junior	41.8	34.7	36.1	46.2	44.7	52.6	-2.9
Dodmire Junior	30.3	27.6	20.2	23.4	27.9	31.5	2.5
Mowden Junior	40.2	34.7	41.3	39.8	45.4	40.1	-5.2
Alderman Leach	30.8	48.4	38.6	38.3	34.8	38.8	-4.0
Cockerton CE VA	32.3	36.2	38.7	34.9	36.5		-4.2
Corporation Road	15.0	12.6	13.9	14.4	14.0	15.3	1.1
Firthmoor	17.4	19.0	14.2	22.0	24.7		-7.4
Gurney Pease	24.3	19.7		31.7	23.5		0.7
Harrowgate Hill	33.2	33.2	25.7	32.1	35.9	35.8	-2.7
Heathfield	38.9	41.0	28.0	39.8	40.0		-1.1
Holy Family RC VA	43.9	38.9	44.6	51.2	50.2		-6.4
Mount Pleasant	23.6	22.8	18.8	23.7	24.3	9.0	-0.7
North Road	29.9	32.8	33.6	32.3	47.5	40.0	-17.6
Red Hall	6.6	4.9	5.6	10.0	15.3		-8.6
Reid Street	23.3	26.1	29.2	30.3	31.1		-7.8
Skerne Park	11.6	19.2	10.8	16.3	15.7	14.6	-4.2
Springfield	26.1	21.3		23.6	25.3	29.2	0.9
St Augustine's RC VA	27.8	46.2	49.5	52.5	50.2	56.5	-22.5
St Bede's RC VA	50.2	48.5	35.1	45.4	50.5		-0.2
St John's CE Aided	30.4	37.7		28.4	28.8	20.5	1.6
St Teresa's RC VA	35.8	40.3		41.3	44.8	37.7	-9.0
Whinfield	39.6	46.1	44.8	43.2	49.3		-9.7
Branksome	10.3	10.3	7.7	10.3	6.5	15.3	3.8
Carmel RC Tech College	16.5	20.2	13.4	15.5	17.6	22.8	-1.1
Eastbourne CE	9.4	9.4	6.9	6.5	4.6	6.1	4.8
Haughton Community	11.9	9.6	12.1	9.8	9.1	10.5	2.9
Hummersknott	18.7	22.2	17.7	21.6	19.7		-1.1
Longfield	8.1	7.6	8.7	10.3	7.8		0.2

	% walking						% cycling					
	2008	**2007**	**Sep-06**	**Jan-06**	**2005**	**2004**	**2008**	**2007**	**Sep-06**	**Jan-06**	**2005**	**2004**
Abbey Infant	56.7%	53.8%	55.3%	60.9%	61.4%	50.2%	6.3%	3.8%	11.8%	4.3%	1.5%	5.6%
Dodmire Infants	56.1%	63.7%	52.5%	52.4%	57.0%	61.3%	8.9%	3.5%	6.4%	1.9%	9.3%	1.7%
Mowden Infant	36.0%	50.0%	48.3%	43.7%	47.9%		9.1%	6.5%	7.4%	1.8%	0.0%	
Abbey Junior	49.3%	53.7%	52.8%	50.0%	50.0%	43.5%	5.0%	7.9%	8.2%	2.1%	0.9%	1.4%
Dodmire Junior	60.6%	64.5%	63.3%	71.6%	62.1%	64.5%	5.6%	2.9%	1.8%	0.5%	1.1%	0.0%
Mowden Junior	49.4%	48.2%	45.3%	54.2%	50.0%	55.7%	2.5%	15.0%	5.2%	1.3%	0.5%	2.1%
Alderman Leach	36.5%	32.5%	37.0%	42.7%	59.5%	57.4%	21.2%	10.0%	17.1%	11.3%	0.0%	0.0%
Cockerton CE VA	51.7%	47.2%	57.8%	55.2%	55.2%		8.9%	9.0%	0.0%	1.6%	1.6%	
Corporation Road	76.1%	81.4%	79.5%	75.6%	77.9%	80.9%	1.3%	0.4%	0.9%	0.9%	0.0%	0.0%
Firthmoor	70.6%	75.4%	76.1%	69.0%	66.8%		4.5%	0.0%	0.0%	0.0%	0.5%	
Gurney Pease	69.3%	70.9%		61.8%	63.6%		0.0%	1.8%		1.5%	0.0%	
Harrowgate Hill	63.3%	63.3%	69.8%	63.1%	61.4%	63.4%	1.3%	1.3%	1.2%	0.4%	0.0%	0.0%
Heathfield	50.1%	44.9%	49.3%	46.0%	49.9%		5.9%	4.8%	9.6%	7.3%	2.2%	
Holy Family RC VA	45.6%	48.7%	44.8%	44.6%	42.3%		4.9%	6.2%	1.5%	0.5%	0.0%	
Mount Pleasant	70.8%	68.2%	70.2%	69.6%	69.7%	85.5%	3.4%	4.6%	2.3%	0.5%	0.0%	0.0%
North Road	59.0%	54.2%	60.9%	61.7%	44.0%	52.2%	3.6%	2.0%	0.3%	0.0%	0.4%	0.4%
Red Hall	92.2%	90.1%	92.7%	88.7%	83.0%		0.6%	0.5%	0.0%	0.0%	0.5%	
Reid Street	70.0%	63.7%	67.0%	66.5%	65.9%		1.5%	3.5%	0.8%	0.0%	0.0%	
Skerne Park	75.7%	69.8%	77.9%	77.3%	80.9%	83.0%	9.2%	6.1%	4.1%	1.3%	0.0%	0.0%
Springfield	62.0%	65.4%		69.8%	66.0%	63.9%	4.9%	6.9%		0.0%	0.0%	1.5%
St Augustine's RC VA	52.8%	38.2%	38.9%	43.6%	46.4%	38.5%	15.3%	11.1%	4.8%	1.0%	0.0%	0.0%
St Bede's RC VA	39.9%	45.1%	46.9%	48.8%	41.7%		0.5%	0.4%	0.0%	0.0%	0.0%	
St John's CE Aided	51.9%	48.7%		66.5%	65.2%	72.0%	12.2%	7.5%		0.6%	0.5%	6.0%
St Teresa's RC VA	52.5%	51.5%		52.1%	44.0%	51.4%	4.7%	2.2%		0.0%	0.0%	1.1%
Whinfield	43.9%	38.3%	44.7%	43.1%	43.1%		9.2%	7.3%	3.9%	2.9%	0.2%	
Branksome	64.3%	68.8%	66.2%	63.6%	69.1%	80.9%	3.4%	0.8%	0.0%	0.5%	0.5%	0.0%
Carmel RC Tech College	29.3%	27.5%	30.0%	31.6%	26.4%	26.5%	5.3%	5.1%	4.5%	4.5%	2.8%	2.2%
Eastbourne CE	80.6%	80.6%	81.3%	76.9%	77.0%	84.0%	0.7%	0.7%	1.0%	1.4%	0.0%	0.0%
Haughton Community	60.2%	61.7%	57.9%	71.1%	68.1%	70.3%	10.1%	10.6%	11.1%	1.0%	0.2%	0.9%
Hummersknott	43.3%	42.7%	40.7%	40.6%	49.5%		11.7%	7.1%	10.4%	6.1%	3.0%	
Longfield	76.9%	81.3%	80.5%	77.3%	80.1%		5.0%	1.0%	0.9%	0.9%	1.7%	

A12.2 Monitoring results for Peterborough schools

Schools engaged in travel planning	cars per 100 pupils						%-point change between first and most recent survey
	2008	2007	2006	2005	2004	2003	
Caverstede Nursery School		58.5	56.4				2.1
Abbotsmede Primary	13.8	14.8	22.0	21.1			-7.3
All Saints Juniors	21.7	27.3	34.5				-12.8
Bishop Creighton		33.2		27.5			5.7
Braybrook Primary		20.7	20.9	14.1	16.1		4.7
Brewster Avenue Infants	35.1		43.8	33.4			1.7
Discovery		25.2	34.0				-8.8
Dogsthorpe Infants	26.9	17.4	30.9	43.6	19.8	20.7	6.2
Dogsthorpe Juniors	15.7	27.6	27.8	37.1		41.0	-25.3
Eyrescroft Primary	20.7	25.6	25.5	28.6	32.3		-11.6
Fulbridge Primary	30.6	35.2	31.2	41.5			-10.9
Gladstone Primary	11.7	14.3	14.6	12.6			-0.9
Gunthorpe Primary	35.1	41.5	34.4	45.9	47.1		-12.0
Hampton Hargate	10.0	25.7					-15.7
Hampton Vale		6.2	27.3	19.7			-13.5
Heltwate School	7.7	14.3	6.7				0.9
Highlees Primary	12.6	6.9		14.5	23.4		-10.8
Leighton Primary	25.5	23.5	33.5	28.9			-3.4
Longthorpe Primary		53.7	53.1	59.7			-6.0
Marshfields School	0.0	0.0		0.0			0.0
Nene Valley Primary	25.9	33.5	31.4	34.5	32.1		-6.2
Newark Hill Primary	37.6	43.1	48.4	44.6			-7.0
Norwood Primary		49.3	52.3	53.1			-3.9
Orton Wistow	53.8	51.2	54.8	52.0		47.5	6.3
Parnwell Primary	26.3	30.6	38.3	33.0			-6.7
Paston Ridings Primary	17.2	24.5	24.4	24.3			-7.1
Phoenix School	11.9	12.9	14.3				-2.4
Queens Drive Infants	30.1	33.0	36.5	29.8	39.3		-9.2
Sacred Heart	69.0	26.1	68.1				0.9
Southfields Infants		28.2	38.4				-10.2
Southfield Juniors	32.0	40.1	38.2				-6.2
St Botolphs	57.0	53.4	51.5	52.9			4.1
St Thomas Moore	48.8	39.2	49.7	50.0			-1.2
Stanground St John's Primary	31.8	37.7	32.3				-0.5
The Beeches Primary	15.0	21.7	16.4	16.0			-1.0
Thorpe Primary	56.6	54.6	48.4	41.0			15.7
Walton Junior		35.0	34.1	39.9	41.9		-6.9
Watergall Primary	20.0	24.6	27.4	16.2			3.8
Welbourne Primary	41.3	40.8	43.8	41.2			0.1
Welland Primary	16.8	20.1	20.2	20.6			-3.7
Werrington Primary	57.7	50.1	57.0	53.1	51.9		5.8
William Law Primary	37.0	35.8	36.0	36.1			1.0
Woodston Primary	25.5		38.1				-12.6
Bushfield Comm. College		9.2	7.7	10.5			-1.4
Hampton College	10.0	13.7	27.9				-17.9
Jack Hunt Secondary School	24.2	44.3	24.8				-0.6

Ken Stimpson	19.5	22.8					-3.3
Orton Longueville School				13.6	33.3		-19.8
Stanground College	15.2	9.6					5.6
St John Fisher	28.6	27.1	29.8	29.8			-1.2
The Kings School	36.5	36.8	45.4	45.4			-9.0
Voyager School	13.9	31.1	24.7				-10.9
Bretton Woods		34.6	32.9				-
Walton Community School		22.7	16.3	20.7			-
Deacons School			32.7	31.5			1.2
Non-engaged schools							
Heritage Park Primary	21.6	20.3	30.1				-8.5
John Clare Primary	44.7	44.2	38.1	41.2			3.5
Middleton Primary		24.1	19.6	21.1			3.1
Oakdale Primary	61.0	59.2	68.3				-7.4
St Augustines Juniors	31.0	40.5		46.3			-15.3
St John's Primary	9.6	16.4	20.4				-10.7
West Town Primary	10.2	17.1					-6.9
Winyates Primary	6.2	13.6	20.5	13.8			-7.7
John Mansfield Secondary		21.3	16.7				4.6

Note to above and following table: First 'true' figures for Voyager School are in 2008; 2006 and 2007 figures (in red) are calculated from the figures for the two schools which merged to form it, Bretton Woods and Walton Community

Schools engaged in travel planning	% walking						% cycling					
	2008	2007	2006	2005	2004	2003	2008	2007	2006	2005	2004	2003
Caverstede Nursery		35.3%	29.6%					0.7%	1.6%			
Abbotsmede Primary	84.0%	83.0%	68.2%	76.2%			0.4%	0.4%	0.8%	0.8%		
All Saints Juniors	77.0%	71.9%	61.6%				0.8%	0.8%	0.0%			
Bishop Creighton		60.0%		61.4%				3.5%		4.1%		
Braybrook Primary		73.6%	74.6%	85.3%	62.5%			0.5%	2.6%	0.6%	5.4%	
Brewster Ave Infants	58.6%		51.1%	61.8%			3.0%		2.2%	1.3%		
Discovery		70.6%	58.8%					1.7%	5.0%			
Dogsthorpe Infants	71.0%	81.8%	55.6%	44.7%	72.8%	73.2%	0.8%	0.0%	3.9%	7.9%	7.4%	6.1%
Dogsthorpe Juniors	59.4%	68.0%	64.9%	52.9%		53.0%	6.9%	3.8%	4.3%	5.4%		4.0%
Eyrescroft Primary	72.0%	64.8%	67.3%	63.9%	60.4%		7.1%	8.8%	5.1%	7.1%	7.0%	
Fulbridge Primary	67.2%	61.0%	66.0%	56.6%			0.9%	1.8%	1.4%	1.7%		
Gladstone Primary	87.6%	84.9%	82.7%	87.4%			0.0%	0.0%	0.0%	0.0%		
Gunthorpe Primary	60.0%	52.1%	55.8%	47.8%	47.1%		3.4%	4.6%	3.7%	3.3%	4.6%	
Hampton Hargate	54.9%	64.3%					27.0%	10.0%				
Hampton Vale		93.8%	58.2%	78.2%				0.0%	12.1%	0.0%		
Heltwate School	0.0%	1.1%	0.0%				0.0%	0.0%	0.0%			
Highlees Primary	80.9%	87.4%		84.6%	74.5%		4.7%	4.9%		0.0%	2.2%	
Leighton Primary	68.4%	69.7%	62.0%	66.7%			0.4%	0.0%	0.0%	0.0%		
Longthorpe Primary		41.8%	41.6%	37.0%				2.7%	3.1%	1.3%		
Marshfields School	7.0%	6.8%		5.7%			1.3%	0.0%		1.4%		
Nene Valley Primary	61.9%	61.8%	54.0%	52.4%	60.6%		11.1%	4.7%	6.2%	13.1%	7.0%	
Newark Hill Primary	57.3%	52.1%	42.2%	48.6%			3.2%	3.6%	4.2%	3.9%		
Norwood Primary		48.5%	47.2%	46.9%				0.0%	0.5%	0.0%		
Orton Wistow	36.8%	38.2%	30.7%	36.8%		38.5%	6.6%	9.2%	9.7%	8.3%		7.4%
Parnwell Primary	61.6%	57.0%	54.9%	60.2%			9.5%	10.4%	5.2%	5.8%		
Paston Ridings Primary	76.7%	69.7%	70.3%	68.6%			6.1%	5.1%	3.3%	6.6%		
Phoenix School	4.8%	7.1%	9.5%				0.0%	0.0%	0.0%			
Queens Drive Infants	65.9%	63.2%	58.4%	64.5%	60.2%		0.5%	0.0%	1.0%	0.5%	0.5%	
Ravensthorpe Primary	68.8%						13.8%					
Sacred Heart	26.5%	73.9%	14.4%				0.0%	0.0%	1.4%			
Southfields Infants		63.2%	51.4%					3.8%	4.8%			
Southfield Juniors	59.6%	52.7%	51.2%				3.4%	5.3%	6.8%			
St Botolphs	32.2%	33.1%	38.0%	37.9%			9.5%	12.2%	7.0%	2.9%		
St Thomas Moore	37.3%	36.6%	33.6%	27.9%			2.6%	3.1%	2.0%	0.7%		
Stanground St John's	54.8%	54.0%	57.1%				12.1%	7.4%	6.2%			
The Beeches Primary	83.8%	78.1%	80.2%	82.2%			0.2%	0.2%	0.0%	0.0%		

Thorpe Primary	36.3%	39.0%	37.2%	44.4%			1.5%	2.3%	4.0%	3.6%		
Walton Junior		59.6%	57.9%	57.6%	57.7%			5.4%	5.2%	0.4%	0.4%	
Watergall Primary	77.4%	74.2%	70.1%	79.3%			1.3%	1.2%	1.3%	0.8%		
Welbourne Primary	52.3%	55.8%	54.1%	51.1%			5.8%	1.8%	0.0%	5.1%		
Welland Primary	79.3%	76.1%	74.4%	76.1%			3.3%	3.3%	4.8%	2.8%		
Werrington Primary	33.2%	37.7%	39.1%	38.3%	40.0%		8.7%	11.7%	3.8%	6.6%	7.1%	
William Law Primary	45.1%	41.1%	38.6%	39.2%			17.0%	22.3%	19.2%	19.4%		
Woodston Primary	65.3%		46.0%				5.1%		7.1%			
Bushfield		71.2%	69.5%	70.9%				7.5%	8.5%	3.5%		
Hampton College	54.9%	51.5%	49.7%				27.0%	26.1%	17.6%			
Jack Hunt Secondary	63.0%	27.0%	58.8%				9.0%	17.6%	8.4%			
Ken Stimpson	40.7%	47.4%					29.4%	25.2%				
Orton Longueville				61.3%	49.6%					11.5%	9.9%	
Stanground College	57.6%	52.2%					4.3%	9.2%				
St John Fisher	33.6%	27.8%	27.9%	25.8%			4.4%	13.7%	4.6%	4.3%		
The Kings School	9.6%	9.2%	9.3%	9.3%			1.5%	1.2%	1.9%	1.9%		
Voyager School	72.5%	40.7%	55.8%				6.7%	6.9%	6.3%			
Bretton Woods		33.9%	42.8%					2.8%	3.7%			
Walton		57.2%	69.2%	59.6%				16.7%	9.0%	16.0%		
Deacons School			49.8%	52.2%					5.3%	4.8%		
Non-engaged schools												
Heritage Park Primary	77.3%	76.7%	65.9%				1.1%	0.0%	3.4%			
John Clare Primary	36.8%	40.0%	42.3%	44.3%			4.2%	11.6%	9.3%	5.2%		
Middleton Primary		73.5%	70.2%	70.1%				2.3%	2.5%	2.7%		
Oakdale Primary	34.2%	37.3%	29.1%				2.0%	3.5%	2.0%			
St Augustines Juniors	63.6%	57.1%		51.1%			2.3%	1.2%		0.0%		
St John's Primary	86.8%	79.1%	74.4%				0.5%	2.5%	3.8%			
West Town Primary	89.1%	82.5%					0.0%	0.0%				
Winyates Primary	92.6%	80.3%	76.2%	84.6%			0.6%	4.1%	0.0%	1.1%		
John Mansfield		67.5%	71.0%					9.5%	10.0%			

A12.3 Monitoring results for Worcester schools

	cars per 100 pupils					% point change between first and most recent survey
	2008	2007	2006	2005	2004	
Cherry Orchard Primary School		32.3	31.3		30.9	1.3
Claines CE Primary School	45.4	47.5	45.0	55.5	50.7	-5.4
Cranham Primary School		26.4		22.6	33.2	-6.8
Dines Green Primary School		13.2			12.9	0.3
Gorse Hill Community Primary School			13.0	14.4	9.5	3.5
Northwick Manor Infants School			32.0	30.8	34.8	-2.8
Northwick Manor Junior School		24.7	26.2	30.1	30.3	-5.6
Nunnery Wood Primary School	33.3	39.8	35.4	31.9	42.5	-9.2
Oldbury Park Primary School	24.2		35.2	33.3	34.3	-10.1
Our Lady Queen of Peace Catholic Primary		32.8	43.0	33.2	64.4	-31.6
Perdiswell Primary School	44.9	35.2	32.8	39.4	45.2	-0.3
Perry Wood Primary & Nursery School	26.9	22.3	31.1	25.5	25.8	1.0
Pitmaston Primary School	26.0	29.4	31.1			-5.1
Red Hill CE Primary School			24.4	30.4	32.5	-8.1
St. Barnabas CE Primary School	28.2	25.7	19.1	23.8	32.5	-4.3
St. Clements CE Primary School	39.7				34.9	4.8
St. George's CE Primary School	24.4	24.1	33.5	28.3	29.5	-5.1
St. George's Catholic Primary School	24.3	40.1	38.6		46.9	-22.6
St. Joseph's Catholic Primary School	41.7	38.0	38.6		46.1	-4.3
Stanley Road Primary School		13.2	18.7	13.6	13.7	-0.5
The Fairfield Community Primary School	18.9	22.1	21.7	19.6	21.6	-2.7
The Lyppard Grange Primary School		22.7		19.2	31.7	-9.0
Warndon Community Primary School	24.9		24.7		29.2	-4.2
Whittington CE Primary School	52.8		56.0	61.2		-8.4
Bishop Perowne CE College		23.2	19.4			3.8
Blessed Edward Oldcorne Catholic College		18.0	22.3	13.6	20.1	-2.1
Christopher Whitehead Language College		14.7	14.9	14.7		-0.1
Elgar Technology College		14.9	13.4	15.7	19.7	-4.8
Nunnery Wood High School	20.7	13.1	23.3	22.5	24.0	-3.3
Riversides Special School	5.3	2.5	15.4		7.4	-2.1
Thornton House School (inc Nursery Unit)				6.6	4.0	2.6
St John's PRU			0.0	14.3		-14.3

	% walking					% cycling				
	2008	2007	2006	2005	2004	2008	2007	2006	2005	2004
Cherry Orchard Primary School		45.3%	52.5%		52.2%		6.9%	1.7%		1.3%
Claines CE Primary School	25.8%	17.2%	18.2%	16.3%	17.2%	6.2%	4.9%	8.2%	4.7%	6.4%
Cranham Primary School		57.6%		55.6%	47.0%		3.2%		9.3%	2.7%
Dines Green Primary School		80.8%			80.6%		1.8%			1.7%
Gorse Hill CP School			82.4%	81.1%	83.7%			0.4%	0.0%	0.0%
Northwick Manor Infants			52.3%	60.5%	55.8%			1.6%	1.2%	1.2%
Northwick Manor Junior School		57.4%	55.7%	53.6%	52.2%		4.8%	3.0%	1.7%	0.0%
Nunnery Wood Primary School	46.8%	45.7%	45.5%	47.7%	47.9%	4.3%	0.0%	1.7%	0.7%	0.0%
Oldbury Park Primary School	57.1%		44.5%	47.2%	46.2%	5.8%		2.0%	3.5%	1.5%
Our Lady Queen of Peace		37.6%	26.8%	41.3%	23.2%		4.5%	6.4%	1.9%	1.7%
Perdiswell Primary School	37.4%	41.6%	49.8%	43.6%	30.5%	4.8%	4.8%	2.8%	2.8%	0.6%
Perry Wood Primary School	62.5%	65.5%	50.4%	59.8%	63.8%	0.0%	0.2%	0.5%	0.6%	0.0%
Pitmaston Primary School	57.0%	53.9%	50.4%			1.2%	1.2%	0.5%		
Red Hill CE Primary School			63.6%	51.2%	58.4%			0.4%	1.2%	0.0%
St. Barnabas CE Primary School	56.7%	59.9%	69.1%	63.4%	61.1%	0.7%	0.0%	0.2%	0.8%	0.6%
St. Clements CE Primary School	38.3%				48.3%	2.1%				0.0%
St. George's CE Primary School	60.0%	61.5%	49.2%	52.9%	50.0%	0.0%	0.0%	1.0%	2.1%	2.5%
St. George's Catholic Primary	60.2%	31.7%	31.3%		27.1%	3.3%	7.4%	2.5%		0.5%
St. Joseph's Catholic Primary	28.5%	40.1%	31.3%		33.5%	3.1%	3.7%	2.5%		0.0%
Stanley Road Primary School		77.7%	72.2%	73.6%	74.7%		0.4%	0.4%	1.4%	1.4%
The Fairfield CP School	64.3%	59.3%	63.6%	66.7%	56.8%	4.1%	3.5%	0.0%	0.0%	2.3%
The Lyppard Grange Primary		65.5%		62.2%	60.4%		3.0%		7.8%	6.0%
Warndon Community Primary	59.9%		52.0%		52.9%	2.7%		2.7%		0.4%
Whittington CE Primary School	18.4%		21.5%	9.6%		1.8%		0.0%	4.6%	
Bishop Perowne CE College		54.8%	57.6%				3.3%	1.5%		
Blessed Edward Oldcorne		28.2%	25.3%	40.6%	30.0%		5.2%	2.8%	7.9%	3.2%
Christopher Whitehead		61.1%	61.6%	65.2%			8.0%	8.6%	6.0%	
Elgar Technology College		69.9%	68.8%	60.0%	66.6%		6.3%	5.6%	5.4%	4.0%
Nunnery Wood High School	54.1%	64.0%	52.2%	50.2%	50.9%	7.6%	7.7%	3.7%	2.5%	1.9%
Riversides Special School	0.0%	5.0%	7.7%		7.4%	0.0%	0.0%	0.0%		0.0%
Thornton House School				0.0%	0.8%				0.0%	0.0%
St John's PRU			0.0%	0.0%				0.0%	0.0%	