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

Individual town results: Colchester

April 2017

Report authors: Andy Cope, Research and Monitoring Unit, Sustrans
Angela Kennedy, Research and Monitoring Unit, Sustrans
Fiona Crawford, Research and Monitoring Unit, Sustrans
Nick Cavill, Cavill Associates
John Parkin, University of the West of England, Bristol
Lynn Sloman, Transport for Quality of Life

PART A: INTRODUCTION
PART B: DATA COLLECTION AND ANALYTICAL METHODOLOGIES
PART C: OVERALL FINDINGS
PART D: INDIVIDUAL TOWN RESULTS
PART D1: BLACKPOOL
PART D2: CAMBRIDGE
PART D3: CHESTER
PART D4: COLCHESTER
PART D5: GREATER BRISTOL
PART D6: LEIGHTON LINSLADE
PART D7: SHREWSBURY
PART D8: SOUTHEND
PART D9: SOUTHPORT
PART D10: STOKE-ON-TRENT
PART D11: WOKING
PART D12: YORK
About Sustrans

Sustrans is the charity making it easier for people to walk and cycle. We are engineers and educators, experts and advocates. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute. Sustrans works in partnership, bringing people together to find the right solutions. We make the case for walking and cycling by using robust evidence and showing what can be done. We are grounded in communities and believe that grassroots support combined with political leadership drives real change, fast.

Join us on our journey. www.sustrans.org.uk

Head Office
Sustrans
2 Cathedral Square
College Green
Bristol
BS1 5DD

© Sustrans April 2017
Registered Charity No. 326550 (England and Wales) SC039263 (Scotland)
VAT Registration No. 416740656

Acknowledgments
The authors are grateful for the extensive assistance of officers in the twelve Cycling City and Towns in supplying monitoring data for this research.

We are also grateful for additional support provided by Lisa Muller, Katie Pullen, George Macklon, Katie Thomson, James O’Hare, Richard Sanders, Alison Janes, Hannah Delaney, Laurence Bonner, Peter Stephenson, Charlotte Draycott and Jo Watson.

Disclaimer
Although this report was commissioned by the Department for Transport (DfT), the recommendations are those of the authors and do not necessarily represent the views of the DfT. While every effort has been made to ensure the information in this document is accurate, DfT does not guarantee the accuracy, completeness or usefulness of that information; and it cannot accept liability for any loss or damages of any kind resulting from reliance on the information or guidance this document contains.

Mapping (c) Crown Copyright licence no 100039241. Also OpenStreetMap (c)
www.OpenStreetMap.org (and) contributors licence CC-BY-SA (www.creativecommons.org).
Table of contents

1 Introduction ........................................................................................................................... 4
1.1 Description of the Cycling City and Towns programme in Colchester ....................... 4
1.2 Expenditure ......................................................................................................................... 4
1.3 Summary of available monitoring data .............................................................................. 5
1.4 Summary of headline findings .......................................................................................... 5
2 Analysis of automatic cycle counter data ........................................................................... 6
2.1 Town-wide analysis ........................................................................................................... 6
2.2 Analysis of data from individual sites ............................................................................... 7
2.3 Relationship between programme activity and automatic count data ......................... 12
3 Analysis of manual count data ............................................................................................ 14
4 Combined manual and automatic count data .................................................................. 17
5 Analysis of school related data ........................................................................................... 17
5.1 PLASC .............................................................................................................................. 17
5.2 Bike It ............................................................................................................................... 18
6 Analysis of counts of parked bicycles ................................................................................. 20
7 Analysis of personal travel planning surveys ................................................................... 21
8 Analysis of casualty data ..................................................................................................... 21
9 Analysis of physical activity data ....................................................................................... 22
10 Maps .................................................................................................................................. 22
1 Introduction

1.1 Description of the Cycling City and Towns programme in Colchester

The Cycling City and Towns programme delivered in Colchester – ‘Cycle Colchester’ - focused on improving links between existing cycle routes and to key locations, and introducing more training and smarter choice measures.¹

Cycling initiatives focused on children included Bike It, Dr Bike maintenance sessions, bike breakfasts and ‘Learn2Cycle’. In total, more than 1,500 children received Bikeability training during the programme. Adults have been encouraged to take part in cycle training through a variety of approaches, including ‘Healthy Living Solutions’ delivered in partnership with CTC and ‘Parents Plus’.

Infrastructure developments included the addition of 12km of cycle routes and a comprehensive signage programme. Six new traffic signal controlled cycle crossings have been introduced, as well as ‘Elephant Feet’ road markings. Cycle parking facilities have been added and/or improved at 10 locations in the town centre.

Smarter choice measures included the award of small grants to local organisations, such as the purchase of a collection of pool bikes for Colchester YMCA. Cycle Colchester Pledge Bike attracted 1,600 pledges in 2009/10. Personalised Travel Planning focused on three communities, and 1,200 residents requested information to help increase their levels of cycling.

1.2 Expenditure

While this report is primarily concerned with the monitoring evidence around outcomes of the Cycling City and Towns programme, it is useful to place these in context through summarising the programme inputs in terms of capital and revenue expenditure. Details of expenditure in Colchester during the Cycling City and Towns programme are summarised in Table 1-1.

Table 1-1 Funds invested in cycling in Colchester

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycling England/DfT/DH investment</td>
<td>£1,126,459</td>
<td>£1,213,539</td>
<td>£2,339,998</td>
</tr>
<tr>
<td>Matched funding</td>
<td>£126,327</td>
<td>£2,405,476</td>
<td>£2,531,803</td>
</tr>
<tr>
<td>Total</td>
<td>£1,252,786</td>
<td>£3,619,015</td>
<td>£4,871,801</td>
</tr>
</tbody>
</table>

1.3 Summary of available monitoring data

The following data sources are available:

- Data from 14 automatic cycle counters
- 12 hour manual counts performed in alternate quarters since 2009 at 15 locations
- Pupil Level Annual School Census (PLASC) travel data and monitoring data from Bike It
- Counts of parked bicycles performed at Colchester railway station
- Surveys performed to monitor the impact of Personalised Travel Planning (PTP)
- STATS19 casualty data
- Active People Survey (APS) data.

1.4 Summary of headline findings

Mixed evidence of growth in cycling over time from a moderate initial baseline

The most complete data sets, time series data from automatic cycle counters located predominantly on traffic-free cycle routes, suggest an increase in levels of cycling in Colchester over time. There is contradictory evidence from manual count data which, overall, suggest a decrease in volumes of cyclists recorded. It is thus difficult to draw conclusions regarding the magnitude and direction of change in levels of cycling in Colchester. Notwithstanding the limitations of the data source, levels of cycling to primary schools decreased during the programme period, whilst cycling to secondary schools increased. This mixed evidence makes it difficult to draw firm conclusions around the impact of the programme on levels of cycling to school. Where Bike It has been delivered, everyday cycling to school has increased significantly.

- Automatic cycle counter data indicate an increase in volumes of cycles counted of +19% against a 2007 baseline. Based on data from 14 automatic cycle counters, this estimated growth corresponds to an increase from 1,553 trips per day counted in 2007 to 1,841 in 2011
- An increase was observed at nine of the automatic cycle count sites, a decrease at four and no change at one location
- Analysis of manual count data collected in comparable periods at 15 count locations indicates a significant change at nine sites – an increase at four and a decrease at five locations
- Combined analysis of data from manual and automatic counts indicates a significant decrease in volumes of cyclists crossing a cordon around the centre of Colchester
- Across all schools, the percentage of children cycling to school as measured by PLASC was 5.4% in 2010/11 compared to 3.1% in 2006/07
- Bike It data indicate an increase in children cycling to school on the day of the survey from 6.5% in pre surveys to 11.6% in post surveys, and an increase in children cycling to school everyday from 6.5% in pre surveys to 10.6% in post surveys
- An improvement in the perception of cycling as well as increased cycling levels were identified in a survey performed in an area where PTP had been delivered
Compared to pre-programme data, the number of cycling casualties was not significantly different during the Cycling City and Town programme.

Active People Survey data indicate a decrease in Colchester in the proportion of respondents cycling once or more per month and in the proportion cycling 12 or more times per month between 2007/8 and 2010/11.

2. Analysis of automatic cycle counter data

Data from a total of 14 automatic cycle counters have been analysed. In the following sections information regarding the location, volumes of cyclists recorded and change in volumes of cyclists recorded over time are presented for each location. The majority of cycle counters are located to the north of the town centre. Six of the count sites were installed in 2006, two in 2008, three in 2009 and the remaining three in 2010. In order to be consistent across the Cycling City and Towns, data from 2007 onwards are included in the analysis.

Two distinct sets of analysis have been undertaken using cycle counter data in Colchester. In the first, all available data were analysed using a regression model to allow an estimate of change in cycle trips recorded over the programme period against a baseline. In the second, data from individual sites were analysed in order to determine the average volumes of cyclists recorded, distribution of cycle trips over the course of the day and (where sufficient data were available) the annual percentage change in the count of cyclists.

2.1 Town-wide analysis

Table 2-1 presents the percentage change in cycle counts relative to a 2007 baseline including data to the end of September 2011.

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change against 2007 baseline</td>
<td>100%</td>
<td>106%*</td>
<td>111%*</td>
<td>106%*</td>
<td>119%*</td>
</tr>
</tbody>
</table>

* indicates a significant difference (p<0.05) compared to the 2007 baseline

The counter data indicate a decline in the volume of cyclists recorded in 2010 compared to previous years, potentially a result of prolonged periods of severe weather conditions during late 2009 and early and late 2010. A substantial uplift in counts is observed between 2010 and 2011. An additional element was added into the regression model to account for poor weather conditions at these times. Table 2-2 presents the findings of this analysis. When adjusting the model in this way, there is an increased percentage change between 2008 and 2009, and no growth in the volumes of cyclists recorded between 2009 and 2010.
Table 2.2 Change in cycle count in Colchester at the end of the Cycling City and Towns period relative to a 2007 baseline including an adjustment for snow (baseline = 100%)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change against 2007 baseline</td>
<td>100%</td>
<td>106%*</td>
<td>113%*</td>
<td>113%*</td>
<td>119%*</td>
</tr>
</tbody>
</table>

* indicates a significant difference (p<0.05) compared to the 2007 baseline

2.2 Analysis of data from individual sites

Data from individual cycle counters were analysed in order to determine the rate of change in volumes of counts recorded at each location over time. The results of this analysis are summarised in Table 2-3 and alongside more detailed information for each counter in Table 2-4. Sufficient data were available to calculate an annual percentage change for eight of the 14 sites. For the remaining six, the available data suggest an increase in counts recorded over time for three sites and a decrease in counts at the remaining three sites. Insufficient data are available to quantify this.

Table 2-3 Summary of findings of detailed analysis of data from individual count sites

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of counters for which data are available</td>
<td>14</td>
</tr>
<tr>
<td>Number of counters for which sufficient data are available to quantify change over time</td>
<td>8</td>
</tr>
<tr>
<td>Number of counters with quantifiable increase</td>
<td>6</td>
</tr>
<tr>
<td>Number of counters with no change</td>
<td>1</td>
</tr>
<tr>
<td>Number of counters with quantifiable decrease</td>
<td>1</td>
</tr>
</tbody>
</table>

In the following table counters are ordered by their location relative to the centre of Colchester, starting with those located closest to the town centre. Map references refer to the accompanying map (section 10).

2 None of the changes at individual counters are statistically significant.
## Table 2-4 Description of automatic cycle counters in Colchester

<table>
<thead>
<tr>
<th>Map reference</th>
<th>Location</th>
<th>Time period</th>
<th>Annual change</th>
<th>Average daily count</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Crossing the River Colne near Mason Road</td>
<td>2008 - 2011</td>
<td>Weekday: +10% Sat/Sun: +7%</td>
<td>Overall: 211 Weekdays: 236 Weekend days: 136</td>
<td>Located on a traffic-free shared use bridge over the River Colne, close to residential housing and sports centres and approximately a quarter of a mile north-east of the centre of Colchester. Weekday counts show ‘commuting’ peaks.</td>
</tr>
<tr>
<td>2.</td>
<td>Near the River Colne on Worcester Road</td>
<td>2008-2011</td>
<td>Weekday: +8% Sat/Sun: +3%</td>
<td>Overall: 147 Weekdays: 158 Weekend days: 122</td>
<td>Located on a traffic-free shared use path in an urban green space, close to residential housing and sports centres and approximately a quarter of a mile north-east of the centre of Colchester. Weekday counts show ‘commuting’ peaks.</td>
</tr>
<tr>
<td>3.</td>
<td>Westway underpass</td>
<td>2007-2011</td>
<td>Weekday: +8% Sat/Sun: +9%</td>
<td>Overall: 60 Weekdays: 74 Weekend days: 19</td>
<td>Located on a traffic-free shared use underpass, approximately half a mile to the west of the centre of Colchester. Weekday counts show ‘commuting’ peaks.</td>
</tr>
<tr>
<td>4.</td>
<td>North Bridge, North Station Road South</td>
<td>2007-2011</td>
<td>Weekday: +5% Sat/Sun: +5%</td>
<td>Overall: 124 Weekdays: 150 Weekend days: 51</td>
<td>Located on a traffic-free shared use pavement adjacent to North Station Road, approximately half a mile from the centre of Colchester and close to a school and high street shops. Weekday counts show ‘commuting’ peaks.</td>
</tr>
<tr>
<td></td>
<td>Location and Description</td>
<td>Year Period</td>
<td>Weekday Counts</td>
<td>Overall Counts</td>
<td>Detailed Information</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>---------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>5.</td>
<td>Petrolea Close, approximately three quarters of a mile north-west of the centre of Colchester and close to a railway station and a large supermarket. Weekday counts show ‘commuting’ peaks.</td>
<td>2007-2011</td>
<td>Weekday: +7% Sat/Sun: 0%</td>
<td>Overall: 145 Weekdays: 171 Weekend days: 85</td>
<td>Located on a traffic-free segregated cycle path adjacent to Petrolea Close.</td>
</tr>
<tr>
<td>6.</td>
<td>Located on a traffic-free route adjacent to the A133, passing through a retail area and close to a sports centre. Weekday counts show ‘commuting’ peaks.</td>
<td>2007-2011</td>
<td>Weekday: -1% Sat/Sun: 0%</td>
<td>Overall: 158 Weekdays: 176 Weekend days: 88</td>
<td>Toucan, Cowdray Avenue</td>
</tr>
<tr>
<td>7.</td>
<td>Located on a traffic-free greenway through a residential area approximately one mile north-east of the centre of Colchester. Weekday counts show ‘commuting’ peaks.</td>
<td>2007-2011</td>
<td>Weekday: -4% Sat/Sun: -2%</td>
<td>Overall: 115 Weekdays: 137 Weekend days: 76</td>
<td>Spring Close, Highwoods</td>
</tr>
<tr>
<td>8.</td>
<td>Located on a traffic-free shared use pavement adjacent to North Station Road, approximately half a mile from the centre of Colchester and close to a school and high street shops. Weekday counts show ‘commuting’ peaks.</td>
<td>2007-2011</td>
<td>Weekday: 0% Sat/Sun:+1%</td>
<td>Overall: 123 Weekdays: 146 Weekend days: 55</td>
<td>North Bridge, North Station Road North</td>
</tr>
<tr>
<td>9.</td>
<td>Located on a traffic-free shared use pavement adjacent to Cowdray Avenue, approximately a quarter of a mile east of the centre of Colchester and close to a supermarket and residential areas. Weekday counts show ‘commuting’ peaks.</td>
<td>2009-2011</td>
<td>Negative</td>
<td>Overall: 166 Weekdays: 187 Weekend days: 109</td>
<td>Cowdray_Avenue_near_Ipswich_Road</td>
</tr>
<tr>
<td></td>
<td>Location</td>
<td>Year</td>
<td>Outcome</td>
<td>Overall:</td>
<td>Weekdays:</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------</td>
<td>----------</td>
<td>---------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>10.</td>
<td>East Street</td>
<td>2009-2011</td>
<td>Positive</td>
<td>Overall: 203</td>
<td>Weekdays: 228</td>
</tr>
<tr>
<td>11.</td>
<td>St Andrew’s Avenue</td>
<td>2009-2011</td>
<td>Positive</td>
<td>Overall: 104</td>
<td>Weekdays: 120</td>
</tr>
<tr>
<td>12.</td>
<td>Sheepen Place Underpass</td>
<td>2010-2011</td>
<td>Positive</td>
<td>Overall: 39</td>
<td>Weekdays: 54</td>
</tr>
<tr>
<td>13.</td>
<td>Middle Mill Bridge</td>
<td>2010-2011</td>
<td>Negative</td>
<td>Overall: 126</td>
<td>Weekdays: 137</td>
</tr>
</tbody>
</table>
|   | St Botolph's Circus | 2010-2011 | Negative | Overall: 50  
Weekdays: 56  
Weekend days: 33 | Located on a traffic-free shared use path, at the entrance to an underpass to the south-east of the centre of Colchester, close to Colchester Town railway station, residential areas and Colchester Garrison. Weekday counts show 'commuting' peaks. |

---

a data are also available for earlier periods, but to ensure consistency across the Cycling City and Towns these have not been included in the analysis

b for counters with less than 36 months of data only a tentative indication as to the direction of the change can be reported, positive, negative or no change
2.3 Relationship between programme activity and automatic count data

2.3.1 High Woods

The High Woods Route, linking a residential area to the north of Colchester to the town centre and other key destinations including the railway station, health care facilities and High Woods Country Park, was the first route developed during Cycle Colchester and opened in November 2009.

Map 2-1 High Woods routes and counter (site numbers refer to Table 2-4)

An automatic cycle counter is located on Spring Close in the High Woods area, on a route linking to the improved route, rather than on the main route itself. Average daily counts of cyclists recorded at this location are presented in Chart 2-1. There was no immediate surge in levels of cycling after the route opened, and indeed, levels of use appear somewhat lower in winter 2009 and winter 2010 (although this may be partially due to the poor weather conditions in these years). However, data for every month up to September (Chart 2-2) shows an increase in cycle activity between 2010 and 2011, perhaps suggesting that the route improvements (and associated personal travel planning) are starting to have an effect.
Chart 2-1 Average daily count of cyclists recorded at Spring Close, High Woods

<table>
<thead>
<tr>
<th>Month</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>100</td>
<td>120</td>
<td>110</td>
</tr>
<tr>
<td>Feb</td>
<td>120</td>
<td>130</td>
<td>120</td>
</tr>
<tr>
<td>Mar</td>
<td>140</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Apr</td>
<td>160</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>May</td>
<td>180</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>Jun</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Jul</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Aug</td>
<td>240</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Sep</td>
<td>260</td>
<td>260</td>
<td>260</td>
</tr>
</tbody>
</table>

High Woods route opened November 2009

All of the analysis of Cycling City and Towns data has included data up to the end of September 2011 only. Chart 2 only includes months in which data are available for 2009, 2010 and 2011.

Chart 2-2 Average daily count of cyclists recorded at Spring Close, Highwoods in comparable months (2009, 2010 and 2011)
3 Analysis of manual count data

Biannual manual counts have taken place at 22 sites in Colchester since 2009 in March and November of each year. Eighteen of the sites form a cordon around the centre of Colchester, three monitor routes to the north of the town and one site is to the south east of the town. All of these locations were strategically selected in order to monitor key routes within the area which were not captured by automatic cycle counters. The count sites, indicated in the accompanying map (section 10) are as follows:

- High Street - North Hill to East Stockwell Street (map reference A)
- High Street - East Stockwell Street to St.Nicholas Street (map reference B)
- Middle Mill Road (Kings Meadow) (map reference C)
- High Street - St.Nicholas Street to Cowdray Crescent (map reference D)
- River Colne (map reference E)
- Colchester Town Station (map reference F)
- St Botolph’s (map reference G)
- River Colne crossing (map reference H)
- Abbey Gate Street (map reference I)
- North Bridge, North Station Road (map reference J)
- Middleborough Street (north) (map reference K)
- Middleborough Street (south) (map reference L)
- Balkerne Hill Bridge (map reference M)
- Headgate (map reference N)
- East Street (map reference O)
- Cowdray Avenue (toucan crossing) (map reference P)
- Crouch Street (map reference Q)
- Brook Street (map reference R)
- Sheepen Road/Westway (map reference S)
- Petrolea Close (map reference T)
- Highwoods (map reference U)
- Hythe Station (map reference V)

Counts did not begin at the River Colne, River Colne crossing, East Street, North Bridge, North Station Road or Petrolea Close sites until quarter 1 of 2010. These sites have therefore been excluded from the following analysis. Chart 3-1 presents the total counts in each period across the 17 count sites with data since quarter 4 2009. The three count sites on the High Street are located close together and therefore if individuals cycle the full length of the High Street, they are likely to be counted at each site.

As the counts were biannual over a relatively short period of time, identifying a trend over time from Chart 3-1 is not possible. Biannual as opposed to quarterly data collection limits the value which can be placed on the data, particularly in this case where counts in November 2010 may have been impacted by poor weather. Chart 3-2 compares data from quarter 4 2009 and quarter 1 2010 with data from quarter 4 2010 and quarter 1 2011.
Chart 3-1 Total counts for 17 manual count sites in Colchester

April 2017
Chart 3-2 Comparison of manual count data collected in Colchester in quarter 4 2009 and quarter 1 2010 with data collected in quarter 4 2010 and quarter 1 2011

Outcomes of the Cycling City and Towns programme: monitoring project report
Individual town results: Colchester

Marked as significant where p<0.05
There are nine sites where a significant change in counts has been identified between the two periods analysed. Five of these are significant decreases and four are significant increases. Combining the data for all 17 sites indicates a non significant decrease in counts between these two time periods.

4 Combined manual and automatic count data

Data from 13 manual count sites and three automatic cycle counters forming a cordon around the centre of Colchester were combined. When comparing data collected in quarter 4 2009 and quarter 1 2010 with data collected in quarter 4 2010 and quarter 1 2011, analysis indicates a significant decrease in counts crossing the cordon (p<0.05).

5 Analysis of school related data

During the Cycling City and Towns programme, Cycle Colchester has engaged with 15 ‘Partner Schools’ to encourage cycling amongst parents, students and staff. Bike It has been delivered in 17 schools. During 2009/10, 137 pupils were trained to Bikeability Level One and 285 to Bikeability Level Two, whilst in 2010/11, 250 pupils were trained to Bikeability Level One and 782, to Bikeability Level Two. Learn2Cycle training, for children unable to ride a bike, benefited more than 100 children. Infrastructure developments, focused on establishing links between existing cycle routes, included the improvement of access to a number of schools.

5.1 PLASC

The percentage of pupils in Colchester stating cycling to be their usual mode of travel to school are summarised in Table 5-1. The proportion of pupils usually cycling to primary school has decreased significantly between 2006/07 and 2010/11 (from 2.8% to 1.8%), whilst levels of cycling to secondary schools have seen a significant increase over the same time period (from 3.4% to 9.0%). Considering data across all schools, the proportion of children cycling to school increased significantly from 3.1% in the 2006/07 academic year to 5.4% in 2010/11.

Table 5-1 Percentage of pupils surveyed stating cycling to be their usual mode of travel to school

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.8%</td>
<td>2.1%</td>
<td>1.8%</td>
<td>2.4%</td>
<td>1.8%*</td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.4%</td>
<td>9.0%</td>
<td>9.9%</td>
<td>9.8%</td>
<td>9.0%*</td>
</tr>
<tr>
<td>All schools a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.1%</td>
<td>5.8%</td>
<td>6.0%</td>
<td>6.3%</td>
<td>5.4%*</td>
</tr>
</tbody>
</table>

* These figures are based on data from 34 primary schools and eight secondary schools
* indicates a significant change in cycling in the 2010/2011 academic year compared to the 2006/07 academic year (p<0.05)

These changes are heavily influenced by a secondary school which recorded counts of zero cyclists in 2007 and relatively high counts of cyclists (over 200) in all other years. Table 5-2 includes the percentage of pupils cycling to school if the data from this school are excluded.
Table 5-2 Percentage of pupils surveyed stating cycling to be their usual mode of travel to school (excluding data from one secondary school)

<table>
<thead>
<tr>
<th></th>
<th>Academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>2.8%</td>
</tr>
<tr>
<td>Secondary</td>
<td>4.2%</td>
</tr>
<tr>
<td>All schools</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

* These figures are based on data from 34 primary schools and seven secondary schools

* indicates a significant change in cycling in the 2010/2011 academic year compared to the 2006/07 academic year (p<0.05)

Considering data across 41 schools (excluding one secondary school), there was a significant decrease in the proportion of children cycling to primary schools and a significant increase in pupils cycling to secondary schools. Combining primary and secondary school data, the proportion of children cycling to school has increased significantly, from 3.5% to 4.1%.

5.2 Bike It

Bike It has been delivered in 17 schools in Colchester during the Cycling City and Towns programme. Data are available in the standard format (i.e. pre survey followed by a post intervention survey at the end of the first academic year of engagement) for all 17 schools. Aggregated percentages of children cycling everyday for schools starting Bike It in each academic year during the programme are presented in Chart 5-1. The change in the proportion of children reporting to cycle to school everyday between the pre and post survey is significant for schools starting Bike It in both the 2009/10 and 2010/11 academic years.
Aggregating together data from all pre intervention and first post intervention surveys performed during the project, the percentage of children reporting to cycle to school everyday increased from 6.5% to 10.6%\(^5\), whilst the proportion cycling to school regularly increased from 23.6% to 30.7%\(^6\). The proportion ‘never’ cycling to school decreased from 60.4% to 48.4%\(^7\). The proportion of children cycling to school on the day of the survey increased from 6.5% to 11.6%\(^8\).

For six schools in Colchester, data are available from hands up surveys performed at the end of the second academic year after initial engagement. The proportion cycling to school everyday, regularly and never are presented in Table 5-3. These data suggest that levels of cycling in schools engaged with Bike It are sustained into the years following initial engagement. However, it should be noted that schools may continue to have the support of Bike It officers beyond the first year of Bike It delivery, with some engagement ‘at distance’.

\(^5\) Significant increase (p<0.05)  
\(^6\) Significant increase (p<0.05)  
\(^7\) Significant decrease (p<0.05)  
\(^8\) Significant increase (p<0.05)
Table 5-3 Proportion of children cycling to school everyday, regularly and never before Bike It and at the end of the first and second academic years of engagement

<table>
<thead>
<tr>
<th>% Cycling to school</th>
<th>Pre survey a</th>
<th>First post survey b</th>
<th>Second post survey c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Everyday</td>
<td>8.1%</td>
<td>12.3%*</td>
<td>11.8%*</td>
</tr>
<tr>
<td>Regularly</td>
<td>28.0%</td>
<td>30.9%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Never</td>
<td>55.4%</td>
<td>47.8%*</td>
<td>50.7%*</td>
</tr>
</tbody>
</table>

a pre-Bike It survey (in September of the first academic year of engagement)
b first Bike It survey performed at the end of the first academic year of engagement
c second Bike It survey performed at the end of the second academic year of engagement
* results are significantly different to the pre-intervention survey results (p<0.05)

Table 5-4 presents levels of cycling to school as recorded by PLASC in schools where Bike It was delivered between 2006 and 2011. In the table below non-Bike It schools are those not engaged in Bike It at any point between 2006 and 2011 (excluding the data from the secondary school excluded from Table 5-2 above).

Table 5-4 Comparison of PLASC data from non-Bike It schools and Bike It schools grouped by year of first engagement in Colchester

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Bike It schools a</td>
<td>2.3%</td>
<td>3.9%</td>
<td>4.1%</td>
<td>4.4%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Bike It in 2009 b,d</td>
<td>3.6%</td>
<td>2.6%</td>
<td>2.5%</td>
<td>6.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Bike It in 2010 c,d</td>
<td>6.5%</td>
<td>5.2%</td>
<td>5.7%</td>
<td>6.3%</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

a Data for 22 primary schools and six secondary schools that were not engaged in Bike It
b Data for four primary schools initially engaged in Bike It in 2009
c Data for eight primary schools and one secondary school initially engaged in Bike It in 2010
d PLASC data are collected in January. Bike It engages with schools from the beginning of the academic year. For schools starting Bike It in, for example, 2008, the relevant PLASC year is 2009

6 Analysis of counts of parked bicycles

Counts of parked bikes at Colchester railway station were performed in October 2008 and March 2011. A total of 205 cycles were counted in October 2008, and 263 in March 2011.
7 Analysis of personalised travel planning surveys

Personalised Travel Planning (PTP) was delivered in the High Woods area in 2009 and coincided with the start of the infrastructure improvements on the key cycle corridor in the area discussed earlier. Baseline surveys were performed in August 2009. PTP was delivered between the 7th of October 2009 and the 13th of November 2009. A second survey of 508 residents, 6% of residents living in the area targeted by PTP, was conducted between 5th and 16th October 2010.

The baseline survey, a telephone survey of 605 residents (6.7% of the population), found that:

- 55% of respondents had used a bike in the past 12 months
- 21% of cycling trips were for commuting to work
- 83% were not aware of any cycling initiatives in Colchester or Highwoods
- a third of respondents stated that there was nothing that could be done which would make them cycle more often

As part of the PTP initiative travel advisers aimed to contact all of the 4,200 households in the area. Residents answered the door to the travel advisor at 51% of households and 21% of households in the area took part in a conversation with a travel adviser.

A second, new sample of residents was taken for the survey performed after PTP, although participants in the second survey were asked if they had been contacted in the baseline survey. Of those surveyed, 38% had taken part in the 2009 PTP, and 40% had had some contact with the PTP project before the follow up survey. This could mean that those who participated in PTP were over-represented in the sample, or it could be that people who answered the door to travel advisers considered themselves to have taken part in the initiative.

The survey performed following PTP found that:

- 69% of respondents had used a bike in the past 12 months
- 2% of respondents were new to cycling in the past 12 months whilst 4% had started to cycle again after a break of 12 months or more
- 29% of respondents were cycling more frequently than 12 months previously compared to 21% who were cycling less often; 50% were cycling as frequently
- 38% of respondents reported that their perception of cycling had changed for the better over the past two years.

The surveys indicate an increasingly positive perception of cycling, with an increase in respondents stating that they have cycled in the past 12 months, that they are cycling more frequently and that they have a better perception of cycling.

8 Analysis of casualty data

Cycle user casualty data were derived for Colchester from STATS19 collision data. The average number of killed, seriously injured and slightly injured in each year prior to the Cycling City and Towns programme (2003-2008) are compared to those occurring during the programme in Table 8-1. The difference between the time periods compared is not significant.
Table 8-1 Annual average number of cyclists killed or injured in Colchester before (2003-2008) and during (2009-2010) the Cycling City and Towns programme

<table>
<thead>
<tr>
<th>Annual average number of casualties</th>
<th>Killed</th>
<th>Seriously injured</th>
<th>Slightly injured</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-programme</td>
<td>1.2</td>
<td>8.8</td>
<td>47.3</td>
<td>57.3</td>
</tr>
<tr>
<td>During programme</td>
<td>0.5</td>
<td>7.0</td>
<td>37.5</td>
<td>45.0</td>
</tr>
</tbody>
</table>

* indicates a significant change between cycling casualties recorded before and during the Cycling City and Town programme

9 Analysis of physical activity data

Data are available from Sport England’s Active People Survey (APS) for two years prior to the Cycling City and Towns programme and all three years of the project. The APS data provide information on the proportion of people cycling for at least 30 minutes once or more per month and the proportion cycling for at least 30 minutes, 12 or more times per month. It should be noted that the data refer only to cycling in bouts of 30 minutes or more and therefore this measure may under represent overall cycling in the towns as shorter journeys are not included.

The proportion cycling once or more per month fell by 3.9%-points (from 14.9% to 11.0%) in Colchester between 2007/8 and 2010/11. The proportion cycling 12 or more times per month decreased by 0.9%-points (from 2.7% to 1.8%) over the same period. Neither of these are significant changes.

10 Maps

The following pages contain maps indicating the location of manual count and automatic cycle counter locations, and the estimated change in volumes of cycles recorded at these sites.

9 Decrease not significant (p=0.07)
10 Decrease not significant (p=0.32)