

***Research Project: Evaluating the Impact of Sustainable Transport Measures in  
the Bristol North Fringe and Ports Areas***

**Summary Findings from the Travel to Work Survey Conducted in March 2014  
and Preliminary Findings from the North Bristol Commuter Panel Survey, July 2014 to April 2015**

**Updated July 2015**

This report provides a summary of results from the Travel-to-Work survey in March 2014, and preliminary findings from the first four waves of the North Bristol Commuter Panel Survey in July 2014, October 2014, January 2015 and April 2015. The final waves of the Panel Survey will be run by UWE in July and October 2015; further analysis will be provided as the panel continues, and the findings in this report may be revised. The main Travel to Work survey, led by South Gloucestershire and Bristol City Councils, was repeated in March 2015 and will continue to be run annually. The UWE research forms part of a national case study commissioned by the Department for Transport on the impact of transport measures on strategic employment sites and business parks.

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## 1. The March 2014 Travel to Work survey

### 1.1. Survey population, sample and response

The research is being conducted with 24 employer organisations across two 'strategic employment sites': the Bristol 'North Fringe' and Ports areas (Avonmouth and Severnside). All staff in the participating businesses/organisations were invited to complete the survey in March 2014. Table 1.1 shows the number of employers, total staff, and economic sectors represented by the participating employers. Table 1.2 shows the response size and response rate.

**Table 1.1 Employers taking part in the study**

	Avonmouth and Severnside	Bristol North Fringe
Number of businesses participating in the study	9	15
Total number of employees in participating businesses	1,876	33,702
Economic sectors represented	Manufacturing, distribution, energy, recycling & waste	Manufacturing, IT & communications, construction, business & financial services, health, education, government.

**Table 1.2 Sample and response size**

	Avonmouth and Severnside	Bristol North Fringe	Total
Number of responses	819	8,865	9,684
Total number of employees	1,876	33,702	35,578
Response rate	44%	26%	27%

## 1.2. The journey to work

Table 1.3 show the number and percentage of respondents travelling to work by different transport modes on the day of the survey response. They show that 51.3% of respondents from the North Fringe and 66.5% of respondents from the Ports area had driven to work alone on the day of survey, and in addition a further 14.7% and 21.0% respectively had engaged in some form of lift share (whether as driver or passenger). In total therefore, 66% of the North Fringe respondents and 87.5% of Avonmouth/Sevenside respondents used a car for their commute.

**Table 1.3 Type of transport used on the day of the survey**

Main mode used to travel to work	Bristol North Fringe		Avonmouth and Severnside		Total	
	Count	%	Count	%	Count	%
<b>Car (alone)</b>	4,550	51.3%	545	66.5%	5,095	52.6%
<b>Car share</b>	1,300	14.7%	172	21.0%	1,472	15.2%
<b>Motorbike</b>	160	1.8%	10	1.2%	170	1.8%
<b>Cycle</b>	1,086	12.3%	46	5.6%	1,132	11.7%
<b>Walk</b>	573	6.5%	16	2.0%	589	6.1%
<b>Bus/coach</b>	460	5.2%	6	0.7%	466	4.8%
<b>Employer bus</b>	81	0.9%	0	0%	81	0.8%
<b>Train</b>	454	5.1%	15	1.8%	469	4.8%
<b>Work from home</b>	115	1.3%	2	0.2%	117	1.2%
<b>Other</b>	86	1.0%	7	0.9%	93	1.0%
<b>Total</b>	<b>8,865</b>	<b>100%</b>	<b>819</b>	<b>100%</b>	<b>9,684</b>	<b>100%</b>

Table 1.4 shows the number and percentage of men and women using different types of transport for the journey to work across both areas combined. This shows that a higher proportion of women than men drive to work their own, but a slightly higher proportion of women than men car-share. Cycling to work is noticeably less common among women (6.6% of women, compared with 15.6% of men).

**Table 1.4 Type of transport used on the day of the survey, by gender (both areas combined)**

Main mode of transport used to travel to work	Female		Male		Total	
	Count	%	Count	%	Count	%
<b>Car (alone)</b>	2454	58.1%	2615	48.4%	5069	52.6%
<b>Car share</b>	715	16.9%	749	13.9%	1464	15.2%
<b>Motorbike/scooter</b>	18	0.4%	152	2.8%	170	1.8%
<b>Cycle</b>	280	6.6%	846	15.6%	1126	11.7%
<b>Walk</b>	270	6.4%	319	5.9%	589	6.1%
<b>Bus/coach</b>	234	5.5%	226	4.2%	460	4.8%
<b>Employer bus/coach</b>	36	0.9%	44	0.8%	80	0.8%
<b>Train</b>	138	3.3%	325	6.0%	463	4.8%
<b>Work from home</b>	45	1.1%	72	1.3%	117	1.2%
<b>Other</b>	32	0.8%	59	1.1%	91	0.9%
<b>Total</b>	4222	100.0%	5407	100.0%	9629	100.0%

Table 1.5 and Table 1.6 present journey times and distances for respondents in the two areas. The results for the North Fringe show that about half of all respondents have commute journey times of between 21 and 45 minutes. Most respondents in the North Fringe travel between 2 and 25 miles, but 19.2% of travellers have journeys of 25 miles or more, with a similar proportion (20.8%) having commutes of over 45 minutes.

The Avonmouth and Severnside results show a similar pattern of journey times and distances as the North Fringe, although the mean journey time is slightly lower in Portside (33.1 minutes compared to 36.1 minutes). With journey distance, the mean distance is higher in the Ports area (16.1 miles compared to 14.2 miles). This suggests that fewer Avonmouth and Severnside respondents live close to their workplace (10.5% less than 5 miles compared to 29.8% in North Fringe).

**Table 1.5 Journey times to work**

Normal journey times to work	Bristol North Fringe		Avonmouth and Severnside	
	Count	%	Count	%
<b>0 - 5 mins</b>	145	1.6%	20	2.5%
<b>6 - 10 mins</b>	450	5.1%	36	4.4%
<b>11 - 15 mins</b>	815	9.2%	79	9.7%
<b>16 - 20 mins</b>	1,198	13.5%	134	16.4%
<b>21 - 30 mins</b>	2,178	24.6%	230	28.2%
<b>31 - 45 mins</b>	2,218	25.1%	198	24.3%
<b>46 - 60 mins</b>	1,164	13.2%	75	9.2%
<b>61 - 90 mins</b>	519	5.9%	35	4.3%
<b>91 - 120 mins</b>	110	1.2%	4	0.5%
<b>121 - 240 mins</b>	45	0.5%	3	0.4%
<b>241+ mins</b>	3	0%	1	0.1%
<b>Total</b>	<b>8,845</b>	<b>100%</b>	<b>815</b>	<b>100%</b>

**Table 1.6 Distance travelled to work**

Normal distance travelled to work	Bristol North Fringe		Avonmouth and Severnside	
	Count	%	Count	%
<b>&lt; 2 miles</b>	387	4.5%	13	1.7%
<b>2 - 4.99 miles</b>	2,199	25.4%	69	8.8%
<b>5 - 9.99 miles</b>	2,342	27.0%	215	27.5%
<b>10 - 24.99 miles</b>	2,078	24.0%	356	45.6%
<b>25 - 49.99 miles</b>	1,320	15.2%	98	12.5%
<b>50 - 99.99 miles</b>	293	3.4%	23	2.9%
<b>100+ miles</b>	51	0.6%	7	0.9%
<b>Total</b>	<b>8,670</b>	<b>100%</b>	<b>781</b>	<b>100%</b>

## 2. The North Bristol Commuter Panel

The aims of the North Bristol Commuter Panel survey are to build on the annual ‘snapshot’ Travel-to-Work survey, conducted in March each year, by taking a more detailed look at people’s journey to work, and how and why it might vary or stay the same over the course of a ‘normal’ working week, and through the year. It also provides valuable insights into respondents’ individual travel experiences through the free-text, open questions. The Panel members comprise a sub-set of respondents from the March survey. To recruit the Panel members, invitations were sent to all those who had agreed to be contacted about further research in the March survey, and who had provided an email address.

### 2.1. Sample and response

3,233 respondents from the March 2014 survey were invited to take part in the Wave 1 panel survey in July 2014. At Wave 2 in October 2014, those who had not responded to the Wave 1 survey were re-invited to join the panel and take the Wave 2 survey (unless they had opted out). By Wave 3, those who had responded to the panel survey at either, or both, Waves 1 and 2 (and had not opted out), were considered to be members of the panel (1947 people). It was decided to return to these same people at each subsequent wave unless they notified the researchers that they wished to leave the panel, or if their email accounts ceased to be active. Table 2.1 shows the number<sup>1</sup> and proportion of responses to each wave of the survey.

**Table 2.1 Response at each wave**

	<b>Number of responses</b>	<b>Number invited to respond</b>	<b>Response rate</b>
<b>Wave 1, July 14</b>	1526	3233	47%
<b>Wave 2, Oct 14</b>	1539	3104	50%
<b>Wave 3, Jan 15</b>	1494	1947	77%
<b>Wave 4, April 15</b>	1382	1917	72%

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<sup>1</sup> Numbers are slightly lower than those presented in the previous version of this report, as the responses of those who had not selected the ‘I consent to UWE processing my data’ box were subsequently removed.

## **2.2. Interim Results: The journey to work**

### **2.2.1. The 'normal' journey to work**

Table 2.2 shows the type of transport used normally to travel to work by respondents at each wave of the survey. The 'normal' transport mode is defined as the one used most frequently and for the longest part of the journey.

Overall mode share for the normal journey to work remained relatively stable over the four waves of the panel, but differed from the mode share results of the March 2014 survey. The principle differences are that a smaller proportion of solo car drivers are participating in the panel (44.9%-47.9% compared with 52.2% in March 2014), and a greater proportion of cyclists have joined the panel (18%-19.4%, compared with 12.7% in March 2014). This response bias is not a major concern for the main analysis of the panel data, which is more concerned with changes or stability in transport use over time than with achieving representativeness between modes.

**Table 2.2 Transport used to travel to work normally in March 2014 and at Panel Waves 1, 2, 3 and 4**

	March 14		W1		W2		W3		W4	
	Count	%								
Car alone	4969	52.2%	708	46.4%	737	47.9%	702	46.9%	620	44.9%
Car share	1448	15.2%	210	13.8%	211	13.7%	221	14.8%	201	14.5%
Motorbike/scooter	175	1.8%	39	2.6%	44	2.9%	39	2.6%	45	3.3%
Cycle	1206	12.7%	294	19.3%	290	18.8%	269	18.0%	268	19.4%
Walk	604	6.3%	86	5.6%	85	5.5%	87	5.8%	77	5.6%
Bus/coach	448	4.7%	71	4.7%	71	4.6%	76	5.1%	66	4.8%
Employer bus/coach	89	0.9%	13	0.9%	12	0.8%	8	0.5%	10	0.7%
Train	475	5.0%	101	6.6%	85	5.5%	82	5.5%	84	6.1%
Work from home	16	0.2%	2	0.1%	3	0.2%	5	0.3%	6	0.4%
Other	98	1.0%	2	0.1%	1	0.1%	5	0.4%	5	0.4%
<b>Total</b>	<b>9528</b>	<b>100%</b>	<b>1526</b>	<b>100%</b>	<b>1539</b>	<b>100%</b>	<b>1494</b>	<b>100%</b>	<b>1382</b>	<b>100.0</b>

### 2.2.2. Changes in normal transport mode between surveys

The next three tables compare the numbers of people using each transport mode ('normal' mode) between one survey to the next.

For example, **Table 2.3** shows the number of respondents using each mode in July 2014 (Wave 1), compared with March 2014. Of the 738 people who were driving to work on their own in March (far right column), 664 were doing so in July (first column on left). The 'car alone' row shows the numbers of car drivers who had changed to each alternative mode by July (e.g. 21 had switched to car sharing and 18 had switched to cycling). The 'car alone' column shows the numbers who had switched the other way: from other modes to car alone (e.g. 30 people had switched from car sharing to driving on their own).

#### Changes in normal transport mode from March 2014 to July 2014

In total, by July, 186 respondents (12% of Wave 1 respondents) had changed from the mode they had indicated as their normal mode in March. In terms of net changes by mode, **Table 2.3** shows that solo car-use, car-sharing and walking all fell slightly overall between March and July, whilst motorcycling, cycling, bus-use and train-use all rose slightly. Numerically, the biggest net increase was in cycling (17 people - a 6% increase), and the biggest net decrease was in solo car use (30 people – a 4% drop).

The greatest change numerically was between car alone and car-sharing: 21 people who had driven on their own in March (3% of March solo car-users) were car-sharing by July, whilst 30 of those who car-shared in March (14%) were now driving on their own. In total, 10% of the March solo car users had changed to another mode by July, with a net decrease in solo car use of 4%. The greatest percentage change from the March mode was among those who walked: 30% of walkers had switched mode by July, the majority changing to cycling or taking the bus.

**Table 2.3 Changes in normal transport to work, March 2014 to July 2014 (Wave 1)**

		Mode used to travel to work normally, July 2014 (Wave 1)									Total March 14
		Car on my own	Car with another person or people	Motorbike or scooter	Cycle	Walk	Bus/ or coach	Train	Work from home	Other	
Mode used to travel to work normally, March 2014	Car alone	664	21	4	18	6	14	8	2	1	738
	Car share	30	173	0	4	1	2	1	0	0	211
	Motorbike/scooter	1	0	29	0	1	0	1	0	0	32
	Cycle	5	4	3	259	3	1	1	0	1	277
	Walk	3	6	2	9	71	10	0	0	0	101
	Bus/coach	3	3	0	1	2	55	3	0	0	67
	Employer bus/coach	0	1	0	2	1	2	0	0	0	6
	Train	2	2	1	1	1	0	87	0	0	94
Total Wave 1		708	210	39	294	86	84	101	2	2	1526

### **Changes in normal transport mode from July 2014 to October 2014**

Table 2.4 shows the respondents who completed both the Wave 1 and Wave 2 surveys (July 2014 and October 2014). Ten percent of respondents had changed their normal mode by October compared with July.

Total numbers of people driving alone, car-sharing and using the bus rose slightly between July and October, whilst the numbers cycling, walking and using the train fell. Eighteen people (8%) of those who had cycled in July were travelling by car (alone or with others) in October, although the net change in the number cycling was only 17.

### **Changes in normal transport mode from October 2014 to January 2015**

Table 2.5 shows that overall numbers of people travelling by car remained very similar over this period, whilst the net number of people cycling fell by 9. More respondents switched from cycling to the car than the other way around. The overall numbers walking and using the bus increased slightly, whilst train use fell slightly. Nine percent of respondents had changed their normal mode between October and January.

**Table 2.4 Changes in normal transport to work, July 2014 (Wave 1) to October 2014 (Wave 2)**

		Mode used to travel to work normally, October 2014 (Wave 2)								Total W1
		Car alone	Car share	Motorbike or scooter	Cycle	Walk	Bus or coach	Train	Work from home	
Mode used to travel to work normally, July 2014 (W1)	Car on my own	480	25	1	3	2	4	1	0	516
	Car with another person or people	19	126	0	1	0	3	0	0	149
	Motorbike/scooter	2	1	29	0	0	0	0	0	32
	Cycle	12	5	1	201	2	1	3	1	226
	Walk	2	2	1	2	59	1	2	0	69
	Bus/coach	1	2	0	1	2	55	0	0	61
	Train	5	1	0	1	2	1	61	0	71
	Work from home	1	0	0	0	0	0	0	1	2
Total W2		522	162	32	209	67	65	67	2	1126

Note . The table shows a sub-set of the Wave 2 sample (1126 of 1539), as only those who completed both the July and October surveys are included. It excludes those who completed the survey in March and October, but not July.

**Table 2.5 Changes in normal transport to work October 2014 (Wave 2) to January 2015 (Wave 3)**

		Mode used to travel to work normally, January 2015 (Wave 3)								Total W2	
		Car alone	Car share	Motorbike or scooter	Cycle	Walk	Bus or coach	Train	Work from home		Other
Mode used to travel to work normally, October 2014	Car on my own	542	26	0	4	2	3	1	3	2	583
	Car with another person or people	18	153	0	2	2	5	0	0	0	180
	Motorbike/scooter	3	0	34	0	1	0	0	0	0	38
	Cycle	12	1	0	223	3	1	1	1	2	244
	Walk	2	1	0	3	61	0	0	0	0	67
	Bus/coach	2	0	0	0	2	64	0	0	1	69
	Train	2	1	0	3	0	2	67	0	0	75
Total W3		581	182	34	235	71	75	69	4	5	1256

Note . The table shows a sub-set of the Wave 3 sample (1256 of 1494), as only those who completed both the October and January surveys are included. not July.

*Changes between subsequent Waves will be added to this report.*

### 2.2.3. Reasons for changing normal transport mode

Those respondents who had selected a different 'normal' transport mode compared with the last survey they completed were then asked why they had changed. Respondents could tick more than one box, and were also invited to expand on their reasons for the change through an open comments box. Table 2.6, Table 2.7 and Table 2.8 show the responses provided by the full sample at each Wave.

#### Wave 1, July 2014

Table 2.6 shows the reasons selected (from a tick box list) by those who had changed their mode of transport by July 2014, compared with March 2014. The most frequently selected reasons were: 'new method is more convenient', 'change in parking arrangements' and 'change in family circumstances'.

**Table 2.6 Reasons for change to normal transport mode, March 2014 to July 2014**  
(closed questions, multiple responses allowed)

Reason	Responses (count)
New method quicker	29
New method more convenient	37
New method cheaper	20
New method more reliable	16
New method better for environment	14
Change in parking arrangements	41
Change in family circumstances	35
Health reasons	23
New improved bus service	3
New improved train service	1
Found someone to car share	14
Others encouraged me	7

### Wave 2, October 2014

Table 2.7 shows the reasons selected by those who had changed their mode of transport by October, compared with March or July. This time the most frequently selected reason was 'change in family circumstances', followed by moving house, and greater convenience.

**Table 2.7 Reasons for change in normal transport mode by October 2014**

(closed questions, multiple responses allowed)

Reason	Responses (count)
New method quicker	19
New method more convenient	27
New method cheaper	25
New method more reliable	15
New method better for environment	12
Change in parking arrangements	12
Change in the weather	20
Health benefits	13
Health problems	7
Change in family circumstances	32
Found someone to car share with	16
I no longer have anyone to car share with	19
I moved house or my place of work	28
Others encouraged me	4

### Wave 3, January 2015

Table 2.8 shows the reasons given by respondents who had changed their normal mode by January 2015, compared with the last survey they had completed. This time the most frequently identified reason was 'I moved house or my place of work', followed by 'change in the weather'. 'Change in family circumstances' remained relatively high. As in the two previous surveys, 'new method more convenient' was selected more often than 'new method cheaper' or 'new method quicker'. Looking at the first three panel waves, 'cheaper' was chosen slightly more often than 'quicker', apart from in July 2014 (Wave 1). In July, more respondents who now normally cycled had selected the 'quicker' option than users of any other mode.

**Table 2.8 Reasons for change in normal transport mode by January 2015**

<b>Reason</b>	<b>Responses (count)</b>
New method quicker	15
New method more convenient	20
New method cheaper	16
New method more reliable	8
New method better for environment	8
Change in parking arrangements	10
Change in the weather	21
Health benefits	8
Health problems	5
Change in family circumstances	19
I found someone to car share with	12
I no longer have anyone to car share with	13
I moved house or my place of work	27
Others encouraged me	4

*Tables showing reasons for change between subsequent Waves will be added to this report shortly.*

### 2.3. Interim results – Awareness and influence of transport measures

The panel survey asks respondents whether they are aware of specific transport measures in their area, presenting a list of events, services and road changes which were, for the most part, different at each wave. The list of measures was agreed each time with Bristol City Council and South Gloucestershire Council, as well as the business networks SusCom and SevernNet. Results were passed to these partners following each survey. Respondents could select multiple options.

**Table 2.9 Respondents aware of transport measures, July 2014**

Measure	Number aware	Percentage of total respondents (1526)
The Big Commuting Challenge	625	41%
Travel West Roadshows	269	18%
Dr Bike cycle repairs	719	47%
Electric car charging points	270	18%
Recent improvements to cycle routes	396	26%
Recent improvements to cycle facilities where you work	490	32%
Improved cycle parking at railway stations	122	8%
Public bicycle pumps	141	9%
Car-share 'pairing' services	490	32%
Kings Ferry Commuter Coach (North Somerset to Bristol North Fringe)	444	29%
Kings Ferry Business Shuttle (around North Fringe)	257	17%

160 people (10.5% of the sample) said one or more of these measures had influenced how they thought about their means of travelling to work, or had actually changed the way they travelled. These respondents were invited to say, in their own words, how they had been influenced.

**Table 2.10 Respondents aware of transport measures, October 2014**

	Number aware	Percentage of total respondents (1539)
TravelWest website	636	41%
TravelWest bus checker app	365	24%
Brompton hire bikes at Temple Meads rail station	145	9%
'What's your Number?' bus advertising campaign	57	4%

117 people (11.5% of the sample) said one or more of these measures had influenced how they thought about their means of travelling to work, or had actually changed their means of travel.

**Table 2.11 Respondents aware of transport measures, January 2015**

	Number aware	Percentage of total respondents (1494)
Extended Number 41 First Bus Service around Avonmouth	82	5%
Kings Ferry Business Shuttle, linking Employers in the Bristol North Fringe	488	33%
Free travel offer on the x18 First Bus service (26 Jan to 6 Feb)	477	32%
Sustainable Business Travel Awards, held in November 2014	91	6%
Winter Cycling Safety Information (e.g. on the TravelWest website)	147	10%
Cycle/pedestrian paths and junction improvements at Hambrook Junction (A4174 Ring Road and Bristol Road intersection)	465	31%
Toucan crossing under construction on southbound slip road from the A4174 on to the M32 at Junction 1	214	14%

95 (6.4%) said one or more of these measures had influenced how they thought about their means of travelling to work, or had actually changed their means of travel.

**Table 2.12 Respondents aware of transport measures, April 2015**

	Number aware	Percentage of total respondents (1382)
The new TravelWest website	291	21%
Electric vehicle charging points in North Bristol/South Gloucestershire	350	25%
Public bicycle pumps/maintenance stands in North Bristol/South Gloucestershire	182	13%
Cycle path improvements to Lawrence Weston Road, Avonmouth	101	7%*
First Bus X48 (Bristol City Centre to Emersons Green)	213	15%
Stagecoach's Belles Express Coach Service (Gloucester to North Bristol)	140	10%

52 (3.7%) said one or more of these measures had influenced how they thought about their means of travelling to work, or had actually changed their means of travel.

*This summary will be updated as further waves of the Panel Survey are carried out, and as the analysis progresses.*

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