Cambridgeshire Guided Busway Post-Opening User Research

Cambridgeshire County Council

Final Report

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Plan Design Enable

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Executive Summary

Purpose of this Report

The Cambridgeshire Guided Busway opened on 7 August 2011 with core routes between Huntingdon, St Ives, Cambridge City Centre, Addenbrooke's Hospital and Trumpington Park and Ride. Almost immediately the bus operators reported overcrowding and the frequency has been enhanced considerably since the initial start of service to cope with the passenger numbers. Cambridgeshire County Council and Atkins have funded jointly market research amongst Busway users in order to establish not only user opinions but also why it appears that so many people in the A14 corridor have taken to the Busway. Atkins developed a passenger interview strategy in consultation with Cambridgeshire County Council. Crucially, it sought to determine not only what mode passengers had used in cases where mode shift had taken place, but also whether the Busway had influenced passengers' choice of journey destination. Passenger interview surveys were undertaken over two days. A total of 855 responses were collected, exceeding the target of 800 interviews.

Ridership

The Cambridgeshire Guided Busway is expected to carry around 2.5 million passenger journeys in its first year, with 1.65 million journeys made between its opening on 7 August 2011 and the end of March 2012, The increase in patronage can be illustrated by the increase in the number of buses leaving St Ives in the morning peak period. Before the Busway opened five buses left St Ives for Cambridge between 07:30 and 08:30. The number of services at this time was increased in September 2011 and again in October 2011 to meet demand, such that there are now twelve Busway services and two conventional on road services leaving St Ives, a nearly threefold increase. Observations made as part of this work indicate high levels of bus occupancy. In the AM peak period, 9 out of 14 buses leaving Orchard Park for Cambridge were observed to be at least half full.

Forecasts for the Busway suggested that it would carry 1.75 million passengers in its first year, with demand increasing to 2.625 million in year 2 and 3.5 million in year 3. So ridership at 2.5 million passengers in year 1 is around 40% above that forecast. Our survey findings suggest that in the overall Busway corridor, bus ridership is up by around 33%. Amongst Busway halt users (largely journeys between St Ives Park and Ride and Orchard Park) the estimated increase in bus ridership is around 55% - 60%.

Who's Using the Busway

Car Availability

Eighty percent of Busway users have a car available in the household, and 48% have a car available to drive for the journey (with a further 14% as a passenger). Nearly 54% of Busway halt users could have driven. Even amongst the cohort who told us that they had changed location (as opposed to mode), 36% had a car available for their journey. Further, of those within this cohort who told us that the Busway had influenced their decision to change location; around half had a car available for their journey.

Access to Bus Stops and Busway Halts

Seventeen percent of passengers make their journey from home to Busway halt or bus stop by car (9% parking; 8% being given a lift). At Park and Ride Busway halts, the percentage of users parking rises to 33%. At other Busway halts, 10% of passengers are given a lift. Many passengers travel long distances between their homes and the Busway: 54% of journeys made to Park and Ride Busway halts are longer than 2km. At other Busway halts 22% of home to Busway journeys are longer than 2km, and even at conventional bus stops the figure is 17%.

Journey Purpose and Frequency

Forty percent of respondents were using the Busway to commute, with a further 20% for education and 6% for healthcare. At Busway halts, the percentages making these journeys increase to 47% (work); 23% (education) and 9% (healthcare). Note that the figures for education exclude under 16 year-olds, who for legal reasons were not interviewed.

Forty-four percent of respondents were using the Busway daily, with the percentage of daily users at Busway halts rising to 49%. Eighty percent of commuters used the Busway on a daily basis. Car is the main competitor to the Busway, with 76% of passengers who used alternative modes for the same journey reporting that they used car (39% as driver and 37% being given lifts), and only 5% using conventional bus services.

It's worth mentioning that only 20% of those interviewed stated that they were using concessionary travel passes.

Why People Are Using the Busway

Length of time using the Busway

Seventy-seven percent of bus stop users reported that they had used the Busway since the start of the service, but only 54% of Busway halt users had done so. Most of these were former bus users, but of the 54 people interviewed who stated that they had started using the Busway since the end of January 2012, 29 (or 54%) were former car users.

Change of Journey Made

A surprise to us was the high percentage (31%) of users who stated that they had started to make a journey with a different origin or destination with the introduction of the Busway. This rises to 40% for users of Busway halts. Of those now making different journeys, roughly one third were for education and one third were for commuting. Thirty-six percent had a car available for their journey, with a further 19% having the option of a lift for all or part of the way.

Change of Journey Mode

Of people making the same journey both before and after their use of the Busway commenced, 24% of respondents reported that they had previously driven, with a further 13% reporting that they car shared or were given a lift. These percentages increase at Busway halts to 36% and 14% respectively – so 50% of Busway halt users previously used car to complete all or part of their journeys.

Overall, 28% of commuting journeys, and 44% of healthcare journeys, were previously made by car.

We expected parking charges paid at the destination to be a major incentive for people to switch to a high quality public transport alternative. Surprisingly, our results suggest that up to 74% of those who had parked had enjoyed free parking.

Fewer younger people (16-25 year olds) had previously driven than other age groups, but more had accepted lifts. Overall, 35% of 16-24 year olds using Busway halts had previously used car, against 42% of all Busway halt users.

The percentages of each socio-demographic group previously driving are fairly consistent except for 'professional / higher technical', where at Busway halts 24% had previously been given a lift or car shared, against 12% as a whole.

Contrary to expectation, whether there is one car in the household or more than one car, does not influence very much the mode previously used for the journey. We would expect proportionately mode transfer from car to be higher from households with more cars, since National Travel Survey suggests that it is in these households that local bus use is lowest. Similarly, whether there is one car in the household or more than one car does not appear to influence availability of a car for the journey being made on the Busway.

However, the results suggest that household income does have an influence on transfer from car, with the percentage of Busway users previously using bus falling from 74% in the £15,000 to £29,999 bracket to 39% in the £50,000 to £79,999 bracket, Interestingly, the results suggest that those on the lowest incomes – up to £15,000 – have transferred from car to bus in a greater proportion than those from slightly higher incomes, with 22% of this bracket being former car drivers against 11% of the £15,000 to £29,999 bracket. This suggests that the Busway may be influencing patterns of car ownership and use amongst those on very low incomes.

Attitudes to the Busway

Our research suggests positive attitudes to the Busway. Firstly, we asked respondents to state to which extent they agreed or disagreed with a series of statements. Seventy-four percent of respondents agreed that it was quicker than using the car, and 92% said it was comfortable. Attitudes to the ability to utilise time on the Busway were positive, with 60% agreeing that the free WiFi was useful to them, and 60% appreciating the ability to "productively use" their time. Not surprisingly, younger respondents particularly appreciated WiFi, with 80% of 16-25 year olds appreciating its availability. Both free WiFi and the ability to use time productively are appreciated more by users from multiple car ownership households. Facilities provided as part of the Busway also scored highly, with 83% stating that the Real Time was useful, and 81% stating that the Busway halts were pleasant places to wait.

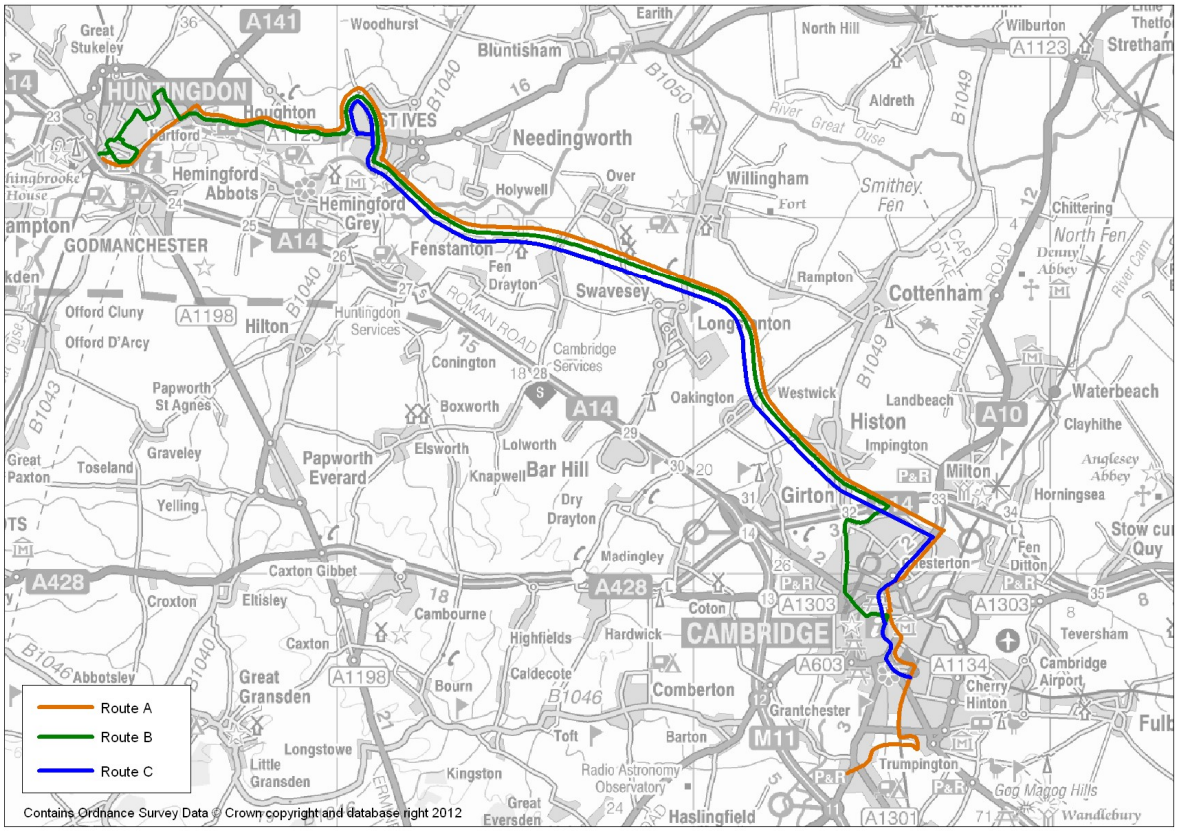
We then asked for additional comments. Forty six percent of respondents wanted more buses at peak times – but 31% volunteered that it was a good service that they were happy with. Thirteen percent made comments about information, with 17 respondents highlighting the lack of signage (either at halt or on-bus) at Busway halts.

These themes were also reflected in the question 'How can the Busway be improved?', in which 37% wanted more buses, 13% more (or more operating) ticket machines, 10% clearer mapping and information and 10% on-bus stop announcements or visual indications.

1. Introduction and Context for the Cambridgeshire Guided Busway Scheme

The Cambridgeshire Guided Busway opened on 7 August 2011. Figure 1 below shows the main routes in geographical context.

Figure 1. Principal Busway Routes



Almost immediately, there were reports of overcrowding, and frequency enhancements quickly followed. The success of the Busway can be gauged by comparing out-turn patronage with that forecast. The forecast for the number of passenger journeys per month in the first three years operation compare with the out-turn for the first three months operation as follows:

- Year 1: 150,000; August 179,000;
- Year 2: 225,000; September 209,000;
- Year 3: 300,000; October 222,000

So in other words, the Busway practically reached its forecast monthly patronage for year 2 in the second month of operation.

Atkins has a long association with the Cambridgeshire Guided Busway. Atkins prepared the patronage forecasts for the scheme on behalf of Cambridgeshire County Council, and presented them at the Public Inquiry held in 2004. It provided supervision services for construction. Atkins is Cambridgeshire's term consultant for highway modelling and highway design services. Atkins is a leading consultancy providing

services for Bus Rapid Transit system demand forecasting and business case development (inter alia Belfast, South Hampshire, West of England). Atkins therefore has a strong interest in understanding why the Cambridgeshire Guided Busway has exceeded its original patronage forecasts and in understanding any lessons to be learned for system appraisal and business case development.

Similarly, Cambridgeshire County Council wishes to understand why the Busway has exceeded its patronage forecasts and the role that it is now playing in providing public transport services in Cambridgeshire. When it became apparent that Department for Transport were not looking to commission any research in this area, Cambridgeshire and Atkins agreed to fund jointly a cost-effective and concise piece of market research to seek to understand the factors influencing patronage growth on the Busway.

Passenger interviews were conducted on 30 April and 1 May by Freeman Research Associates working under contract to Atkins, and the primary focus of this report is to report and assess the results of these surveys. The remainder of this report is structured as follows:

- Chapter 2 provides context for the Cambridgeshire Guided Busway: results from other UK transit schemes; the original demand forecasts for the scheme; and the local socio-demographic and transport context;
- Chapter 3 describes the approach to the study;
- Chapter 4 reports on the profile of respondents to the market research exercise;
- Chapter 5 describes the journeys that those respondents are making;
- Chapter 6 assess why they are using the Busway;
- Chapter 7 assesses what they think of the Busway; and
- Chapter 8 reports on the socio-demographic profile of Busway users.

2. Cambridgeshire BRT in Context

2.1. Results from other Bus Rapid Transit and bus improvement schemes

Whilst results are available for patronage (and patronage growth) for Rapid Transit schemes, there appears to be relatively little research publicly available on mode shift.

Research was conducted on the Kent Fastrack BRT scheme, where a one-day survey of users was conducted on 19 October 2006, six months after opening. The survey attracted 507 respondents:

- 19% would have made their journey before Fastrack by car; and
- 26% had the use of a car but chose Fastrack.

There is no publicly available information on the demographic profile of these respondents or the reasons why they changed mode[1].

On conventional bus service upgrades, the bus industry's 'Ten Percent Club' publication 'Routes to Revenue Growth' (2006) studied ten high profile projects to upgrade bus services, but only one included an assessment of mode shift, and that was in a corridor parallel to a railway line where a high quality bus service offer was designed to attract mode shift from a crowded and unattractive rail service as much as from car. This was on the Harrogate - Leeds corridor where a 24% increase in patronage was reported as a result of improvements in vehicle quality: of this increase, just over a fifth was attributed to shift from car (driver); about 15% shift from car (passenger); and just over a fifth to transfer from rail.

Section 4 of the AECOM report for DfT 'The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England' (October 2009)[2] reports the impact of certain quality partnership upgrade schemes on bus patronage and mode shift. Out of 21 schemes, 7 report mode shift (all in the period 2001 – 2002). Of these schemes, the percentage of riders shifted from car is in the range of 10% - 33% (with one scheme at 3%), against medium term increase in patronage where reported of 20% to 75% for the same schemes. It also summarises research by Faber Maunsell for the then Greater Manchester Passenger Transport Executive (2004) on Quality Bus Corridors – but the results on mode shift include significant shift from rail and tram services.

Improving Public Transport Research – Monitoring Kickstart Schemes (UG589), February 2007 (Transport Studies Group, Loughborough University STAR Independent Consultants Ltd Open University) reported on four conventional bus service upgrade schemes on which mode shift had been assessed:

- Culm Valley Connect (Devon County Council, 2006): frequency doubled - 36% of users ex-car; 51% ex bus or coach; 9% hadn't made journey previously;
- Thanet Loop (Kent County Council, 2005): bus service upgrade in a relatively deprived area - 6.2% of users ex-car. 27.6% had car available;
- Abingdon – Witney Link (Oxford Brookes University, 2005): new bus link - 1 in 3 who previously made journey did so as car passenger and 1 in 10 as car driver; and
- St Helens – Liverpool John Lennon Airport (Merseytravel): 8% mode shift to bus.

[1] http://www.go-fastrack.co.uk/downloads.html

[2] http://www.dft.gov.uk/publications/role-of-soft-factors-in-the-bus-market-in-england reports

2.2. Transport Assessment for Cambridgeshire Guided Busway

Atkins' Transport Assessment of 2004[3] can be seen as the conclusion of the project appraisal process which began with the Cambridge and Huntingdon Multi-Modal Study (CHUMMS) of 2001. This studied various options for the disused railway corridor between Cambridge and St Ives, and recommended Guided Bus as its preferred option. It commented that it would:

"…provide a high quality alternative to the car for the large number of people who travel between Cambridge, Huntingdon and the intervening towns and villages for work, shopping and leisure."

Subsequently the Department for Transport awarded the Busway funding at the end of 2003 subject to a satisfactory conclusion of the Transport and Works Act process necessary to authorise construction.

The Transport Assessment (TA) stated that the delivery objectives of the Cambridgeshire Guided Busway (CGB) scheme were to:

- Extend choice of transport modes for all, in particular private car drivers to encourage a shift to public transport;
- Promote sustainable development by providing high quality public transport links;
- Improve access to public transport in areas that currently have poor provision;
- Improve integration of the public transport network;
- Promote social inclusion by improving access to employment, retail, community, leisure and educational opportunities; and
- Improve safety along the corridor by providing a high quality public transport alternative to the private car.

The TA stated that the Busway project and associated Busway services (opening year then assumed to be 2006) would contribute to all of the delivery objectives and provide a range of benefits:

- Provide a step change in the quality and quantity of public transport, creating enhanced travel choice and offering a real alternative to the car;
- Attract over 20,000 trips per day onto CGB services by the system's 10th anniversary (2016), bringing about modal shift away from the A14 in a corridor where the car currently dominates;
- Provide congestion relief on the road network in the overall A14 corridor with a forecast reduction in traffic demand of up to 8% in the 2016 AM peak hour;
- Support sustainable new development, including that at Northstowe and in the Cambridge Northern Fringe, the city centre, the railway station area and to the south of the city at Clay Farm and Addenbrooke's;
- Provide a new public transport service in the Huntingdon to Cambridge corridor, introducing a five minute frequency service along core sections of the route during the peak period by 2016;
- Provide new opportunities for interchange between CGB services, the existing public transport network, and, through the introduction of new Park and Ride/Kiss and Ride facilities, the private car;
- Maximise flexibility and thus exploit the full opportunities in the Sub-Region by enhancing access to employment, retail, leisure and education opportunities;
- Provide a vital part of the sub-regional transport infrastructure which is essential to ensure that other elements of the Cambridgeshire LTP can be delivered e.g. the proposed new railway station at Chesterton Sidings; and
- Reduce accidents in the corridor by encouraging a shift away from the private car.

The TA forecast significant modal transfer for journeys in the Cambridge-Huntingdon corridor. Whilst some patronage would transfer from existing bus services, it forecast that the Busway and CGB services would deliver a significant increase in overall bus usage in the corridor, with increases of 46% in 2006 and 37% in 2016, resulting in a reduction in car traffic of 8% in 2006 and 7% in 2016.

[3] http://www.cambridgeshire.gov.uk/transport/around/usingbusway/history/inquiry/ta.htm

It forecast a level of bus service provision in the morning peak hour by 2016 of at least:

- 4 buses / hour between Huntingdon and St. Ives;
- 6 buses / hour between St. Ives and Longstanton;
- 18 buses / hour between Longstanton and central Cambridge; and
- 6 buses per hour between central Cambridge and Trumpington.

These figures may be compared to scheduled frequency (June, 2012) of:

- 4 buses / hour between Huntingdon and St. Ives;
- 9 buses / hour between St. Ives and Longstanton;
- 9 buses / hour between Longstanton and central Cambridge; and
- 3 buses per hour between central Cambridge and Trumpington.

Frequency delivered in 2012 is (with the exception of Trumpington) either as forecast for 2016 or greater. The frequency south of Longstanton reflects the fact that proposed developments in this area that will deliver further demand to the Busway are in the early stages of delivery.

The TA forecast daily passenger volumes of around 11,400 in 2006, rising to 20,300 in 2016. The percentage using Park and Ride was forecast at around 26% in 2006, falling to around 14% in 2016, partly as a result of the increase in demand generated by developments at Northstowe and Longstanton.

The TA forecast that in 2006, 22% of trips (2,514) would originate in St Ives, with 8% (918) in Huntingdon, 12% (1,368) at Longstanton, and 20% (2,334) in the Cambridge Northern Fringe.

It forecast that 40% would have a destination in central Cambridge, with 18% in the Cambridge Northern Fringe, and 10% at the Railway Station. 7% would have destinations in St Ives and 11% in Huntingdon.

2.3. Cambridgeshire Traffic Monitoring Report 2011

This gives the results of the initial impact of the Busway[4]. Passenger volumes using the Busway are reported as:

- Aug-11 - 179,197
- Sep-11 - 209,424
- Oct 11 – 222,009
- Nov 11 – 220,871
- Dec 11 – 207,393

The figures indicate a plateau which may be influenced by system capacity: the slight reduction in December is consistent with seasonal trends in bus travel. These trends are exhibited in these updated figures:

- Jan 12 – 199,689
- Feb 12 – 195,782
- Mar 12 – 221,141
- Apr 12 – 199,418 (Easter weekend)
- May 12 – 215,226
- Jun 12 – 207,707 (Diamond Jubilee weekend)

So as at the end of June 2012, the Busway had carried 2,277,853 passenger journeys, which means that it should comfortably exceed 2.5 million trips for the first year of operation. The report also shows Park and Ride occupancy at 2pm each day at St Ives (range typically 200 – 300 cars) and Longstanton (typically around 100 cars). A reduction of 1,700 vehicles (1.9%) is reported for the A14 between Dry Drayton and Cambridge, though this is outweighed by larger changes west of Huntingdon.

[4] http://www.cambridgeshire.gov.uk/transport/monitoring/Traffic+Monitoring+Report.htm

Separately, Atkins has examined Cambridge City Park and Ride volumes and has observed no trend in ridership that could be attributed to transferred trips to the Busway.

2.4. South Cambridgeshire and Huntingdonshire Census

Approximately 3% of the population in South Cambridgeshire and Huntingdonshire travel by bus to work, compared to 4% in the East of England (2001 Census), Table 1. Driving was slightly higher (64%) in South Cambridgeshire and Huntingdonshire than in East of England (59%).

Table 1. Mode of Travel to Work

Mode of Travel to Work	East of England		S. Cambridgeshire and Huntingdonshire	
People who work mainly at or from home	243,521	9.4%	15,745	10.4%
Underground, Metro, Light Rail or Tram	21,527	0.8%	138	0.1%
Train	155,979	6.0%	4,148	2.7%
Bus, Mini Bus or Coach	102,829	4.0%	5,016	3.3%
Motorcycle, Scooter or Moped	28,666	1.1%	1,713	1.1%
Driving a Car or Van	1,518,612	58.9%	96,620	63.8%
Passenger in a Car or Van	150,627	5.8%	8,434	5.6%
Taxi or Minicab	11,691	0.5%	392	0.3%
Cycling	100,244	3.9%	8,321	5.5%
Walking	233,782	9.1%	10,426	6.9%
Other	11,685	0.5%	579	0.4%
All people aged 16-74 in employment	**2,579,163**		**151,532**	

Table 2 shows the number of public transport users (Census 2001), and whether they are from a household with, or without, a car or van. In the East of England, 85% of public transport users are from a household with a car or van; and in South Cambridgeshire and Huntingdonshire this rises to 90%. This reflects the high level of car availability in the two districts served by the Busway – although it needs to be borne in mind that this is for journeys to work and excludes other journey purposes.

Table 2. Public transport use in households with/without a car

Public transport users in households:	East of England		S. Cambridgeshire and Huntingdonshire	
With car or van	238,498	85.5%	8,318	90.3%
Without car or van	40,598	14.5%	890	9.7%

3. Approach

3.1. Introduction

To provide a better understanding of what impact the introduction of the Busway had on generating patronage and mode shift within Cambridgeshire, a thorough methodology was developed which included two areas of research:

- Consultation with bus users at bus stops / halts across the Busway route; and
- Socio-demographic analysis of the population within Cambridgeshire.

The approach used for each of these tasks is outlined in the following sub chapters.

3.2. Consultation with bus users

The main focus of this research was obtaining primary data from bus users. A consultation exercise was developed to gather information on usage levels, experiences when using the Busway, and the impact the introduction of the service has had on travel habits.

Questionnaire

The questionnaire developed and used within the research was developed to gather the maximum amount of information whilst not placing excessive burdens on the respondents.

A questionnaire was developed and piloted with 10 respondents to ensure that the language, response options, and routeing in the questionnaire were clearly understandable. The pilot also provided the opportunity to ensure the questionnaires provided the information required to undertake the research. Pilot responses are not included within the analysis detailed in this report.

Following the pilot, a number of minor alterations were made to the questionnaire. The final questionnaire gathered information on the following:

- Journey origin and destination;
- Journey purpose;
- Journey frequency;
- Car availability;
- Impact of the Busway on travel habits;
- Impact of the Busway on mode or location change;
- Satisfaction with a range of Busway characteristics;
- Demographic information (age, gender, disabilities, ethnicity, household income); and
- General comments on the Busway and suggestions for improvements.

A copy of the questionnaire can be found in Appendix A.

Sample Size

The consultation aimed to achieve a total of 800 completed surveys with bus users, split equally between Busway halts and general bus stops. This sample size was developed to ensure suitable confidence levels were maintained (i.e. below +/-5%) when analysing the data as a whole or by stop type.

It was appreciated at the time of identifying the sample size that the achieved sample would be dependent on the level of patronage on the survey days, weather conditions, and seasonality. The approach used for the consultation was therefore developed to ensure optimum conditions for undertaking the research.

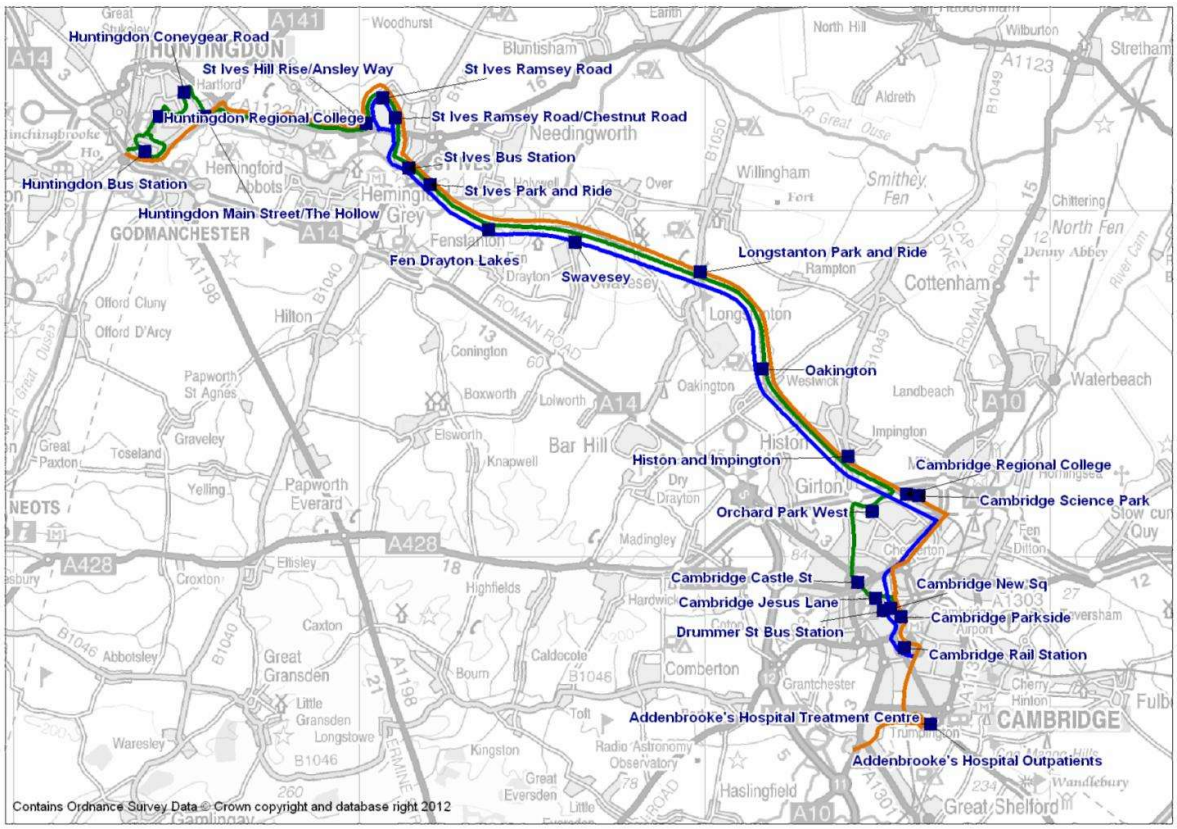
Survey Locations

The survey locations were identified to ensure a good coverage across the Busway routes in Cambridge, Huntingdon and St Ives. The bus stops / halts were identified based on:

- The desire to yield responses for originating journeys in the morning periods; and destination journeys in the afternoon periods;
- To ensure as wide a selection of stops and Busway halts as possible, while ensuring that those stops chosen would yield a high response rates; and
- To ensure that all major destinations were surveyed, including the regional colleges at Huntingdon and Cambridge, the town and city centres, Addenbrooke's Hospital, Cambridge Science Park and Cambridge rail station.

A total of 25 sample points were identified for use in the research, see Figure 2.

Figure 2. Survey locations



Surveyors were instructed only to interview passengers using Busway services (routes A, B, C and D).

Survey Dates

Interviews were undertaken at the selected sample points on 30th April 2012 and 1st May 2012.

Four core time periods were used on each day to ensure that a range of users would have the opportunity to participate in the research. These time periods were – 07:30–09:30, 10:00-11:30, 13:00-14:00, and 15:00-19:00. Interviews were however conducted outside of these hours where necessary to obtain responses at each sample point.

Enumerator Counts

In addition to undertaking primary research with bus users, enumerators were present at all survey locations during the core interview time periods to provide counts of the number of people boarding and alighting at the stops, and observe the volume of passengers on the bus.

The intention of the enumerator counts was to:

- Provide a control against the survey responses; and
- Provide quantitative data at selected stops to provide Cambridgeshire County Council with better information on passenger volumes than is available from on-bus or at-stop ticket machines.

3.3. Demographic Analysis of BRT Catchment

In order to understand the make-up of the population within the catchment area of the Busway, detailed socio demographic analysis has been undertaken. This has used all available data sources (including Census 2001 and relevant claimant data) and particularly focuses on the typology characteristics of bus users (including children, older people, and no car households).

A summary of this has been presented in Chapter 2. However the overall statistics for the area are compared to the demographic profile of survey respondents to identify user typologies and investigate propensity to change.

3.4. Service reliability

The scheduled journey time via the Busway between the centre of Cambridge and St Ives is similar to the journey time previously scheduled via the A14. We would therefore expect that a major effect of the Busway on both patronage and perception of bus services has been to have provided improved punctuality.

4. Achieved Sample

4.1. Introduction

This chapter provides some background on the sample achieved from the consultation with bus users. It provides a summary of:

- The number of interviews achieved, by sample point, compared to counts at each site;
- The catchment area of the Busway and respondents participating in the research; and
- The characteristics of respondents participating in the research (age, gender, ethnicity etc.)

4.2. Achieved Sample

A total of 855 interviews were completed across the 25 sample points. Table 3 provides a breakdown of the number of interviews completed at each sample point. In total, 36% (307) were undertaken at Busway halts and 64% (548) were undertaken at bus stops.

The number of interviews completed varies significantly across the sample points. As may be expected due to higher levels of footfall, a large number of interviews were completed at locations such as Cambridge bus station (Drummer Street), St Ives bus station and Cambridge Science Park. In other locations, footfall was considerably smaller and therefore fewer interviews were completed. At Busway halts many passengers tended to judge their arrival at the stop quite finely – giving insufficient time to administer a questionnaire – perhaps in itself an indicator of passenger confidence in service punctuality. Only 1 interview was undertaken at Cambridge Parkside, due to very low footfall, and the interviewer was moved from this location to Cambridge Drummer Street Bus Station.

Table 3. Achieved sample by location

Location	Number of Surveys	Percentage of total
Addenbrooke's Hospital Outpatients	43	5.0%
Addenbrooke's Hospital Treatment Centre	26	3.0%
Cambridge Castle Street	49	5.7%
Cambridge Drummer Street Bus Station	79	9.2%
Cambridge Jesus Lane	22	2.6%
Cambridge New Square	43	5.0%
Cambridge Parkside	1	0.1%
Cambridge Rail Station	45	5.3%
Cambridge Regional College	60	7.0%
Cambridge Science Park	69	8.1%
Fen Drayton Lakes	10	1.2%
Histon and Impington	21	2.5%
Huntingdon Bus Station	59	6.9%
Huntingdon Coneygear Road	4	0.5%
Huntingdon Main Street/The Hollow	5	0.6%
Huntingdon Regional College	11	1.3%
Longstanton Park and Ride	31	3.6%
Oakington	17	2.0%
Orchard Park West	36	4.2%
St Ives Bus Station	105	12.3%
St Ives Hill Rise/Ansley Way	17	2.0%

St Ives Park and Ride	40	4.7%
St Ives Ramsey Road	18	2.1%
St Ives Ramsey Road/Chestnut Road	30	3.5%
Swavesey	14	1.6%
Grand Total	**855**	**100.0%**

4.3. Statistical reliability

The achieved sample in this research will be used to draw conclusions on the effect of the Busway on the travel behaviour and patterns of the general population in Cambridgeshire. It is therefore important to understand the reliability of the sample in relation to the overall population and identify any inherent limitations in interpreting the data collected.

Confidence intervals have been used here to demonstrate the faith we can hold in conclusions drawn from the sample data. These confidence intervals allow us to identify the true value of the population that will hold that same opinion as our achieved sample.

Overall, a sample of 855 respondents has a maximum confidence interval[5] of +/-3.4% at the 95% confidence level. This means that if 50% of our sample states they are satisfied with the Busway services, we would be confident (at the 95% confidence level) that the true value of the population with that opinion laid between 46.6% and 53.4%.

Our sampling methodology aimed to ensure that the overall confidence interval associated with the achieved sample was under (+/-) 5%, and therefore this has been successfully achieved in the research. For completeness, below are a series of confidence intervals for key sub groups of the achieved sample used within the analysis outlined in this report. These confidence intervals have been calculated using the 95% confidence level, and in each case the maximum confidence interval has been calculated:

- Analysis by stop user type:
  - Busway halt user (total 511 respondents) = +/- 4.3%
  - Bus stop user (344) = +/- 5.3%
- Analysis of home origin trips by mode and distance to bus stop (Section 5.4):
  - Busway halt user (153) = +/- 7.9%
  - Bus top user (198) = +/- 6.9%
  - Park and Ride user (110) = +/- 9.4%
- Analysis undertaken by time period:
  - AM (313) = +/- 5.5%
  - PM (434) = +/- 4.7%
- Analysis undertaken by respondents providing information on household income (total of 428 respondents provided information on household income) = +/- 4.7%

It is therefore important to highlight that whilst there are not considerably large confidence intervals associated with sub-sections of the data, in some cases, splitting the dataset into sub-groups does result in larger confidence intervals (i.e. up to +/- 10%) than perhaps ideally desired (i.e. <+/-5%). Whilst this is not cause for concern, it should be considered when drawing any wider conclusions on the data.

4.4. Respondent home location

Figure 3 shows the home locations of respondents, where postcodes were provided[6]. The size of the points in the map indicates the number of respondents at that location. Note that some people only provided the first 4 digits of their home postcode and so these are mapped at the centre of the postcode district (e.g. CB24).

[5] The confidence interval calculations demonstrate the validity of the **majority** response. The maximum confidence is therefore calculated on 50% or more of respondents.
[6] 760 respondents provided a home postcode.

As may be expected, there are clusters of bus users around Cambridge, Huntingdon and in particular St Ives. The Busway catchment area does however appear to be much larger than the populations of these three towns, as there are users from areas much further afield within the sample, including Royston, Bedford and St Neots. More significant is the number of users from villages some distance from the Busway including Godmanchester, Somersham, Willingham and Cottenham. Not shown on the map are the peak Busway journeys from Somersham, Bluntisham and Needingworth.

Figures 4 and 5 show the home locations of respondents using Busway halts (at the start or end of their Busway journey) and the home locations of those using only general stops:

- 480 (63%) respondents stated their home postcode as within 1km of the Busway route;
- 565 (74%) respondents stated their home postcode as within 2km of the Busway route;
- 607 (80%) respondents stated their home postcode as within 3km of the Busway route;
- 622 (82%) respondents stated their home postcode as within 4km of the Busway route;
- 625 (82%) respondents stated their home postcode as within 5km of the Busway route; and
- 672 (88%) respondents stated their home postcode as within 10km of the Busway route.

Figure 3. Home location of respondents

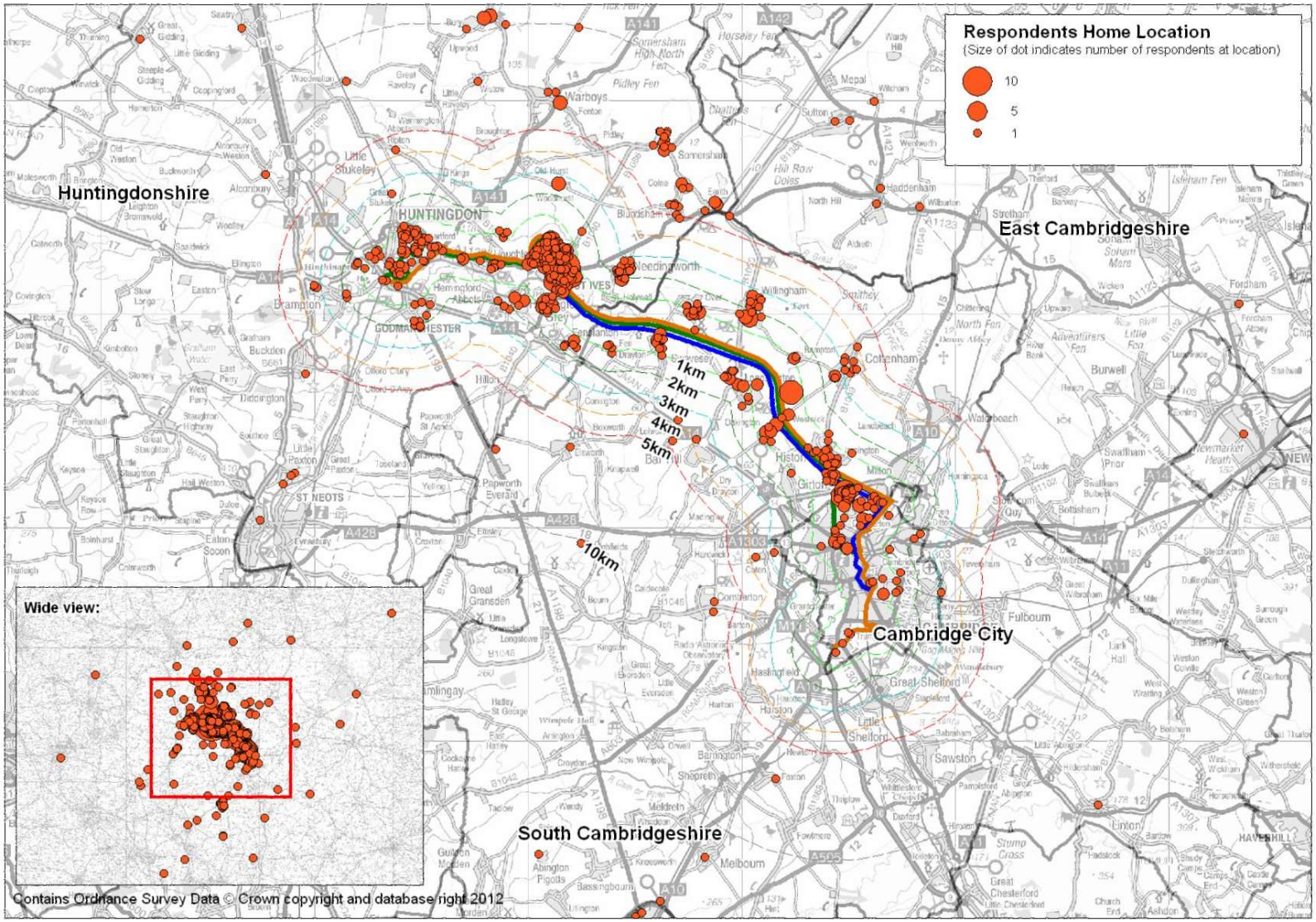


Figure 4. Home location of Busway halt users

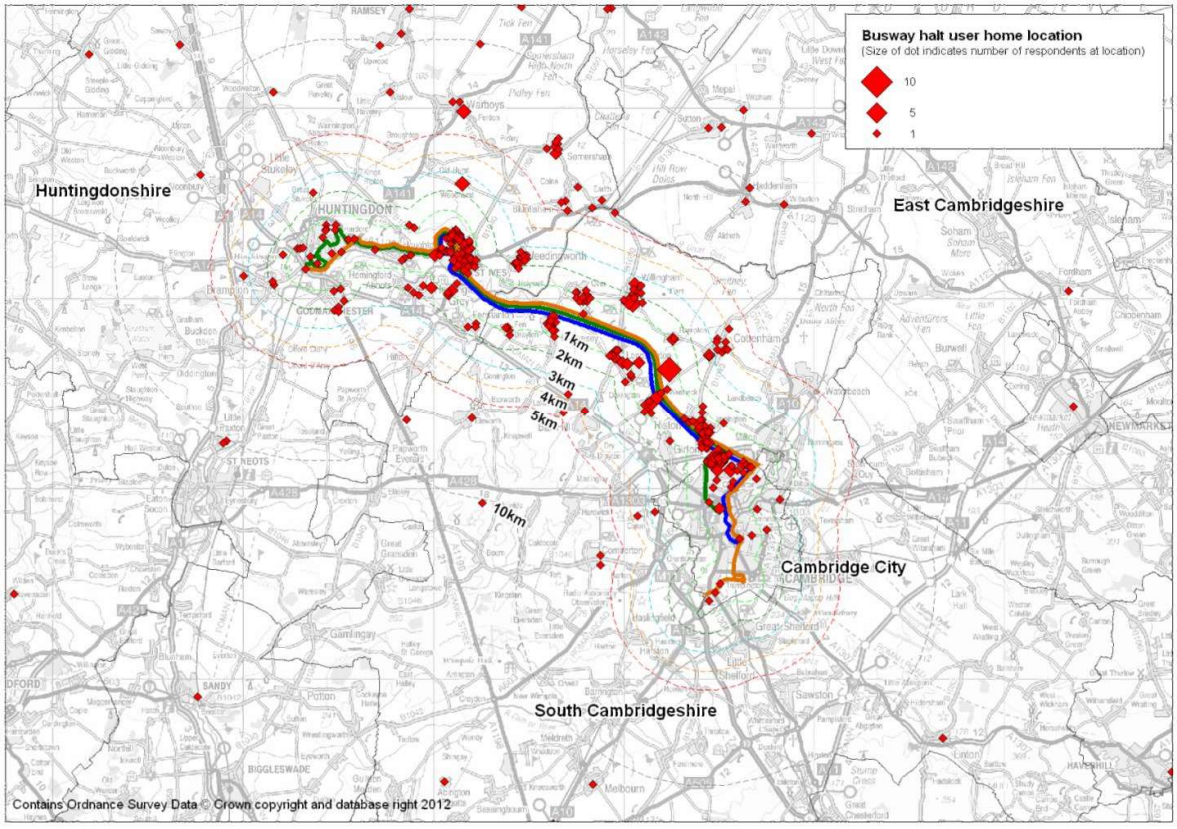
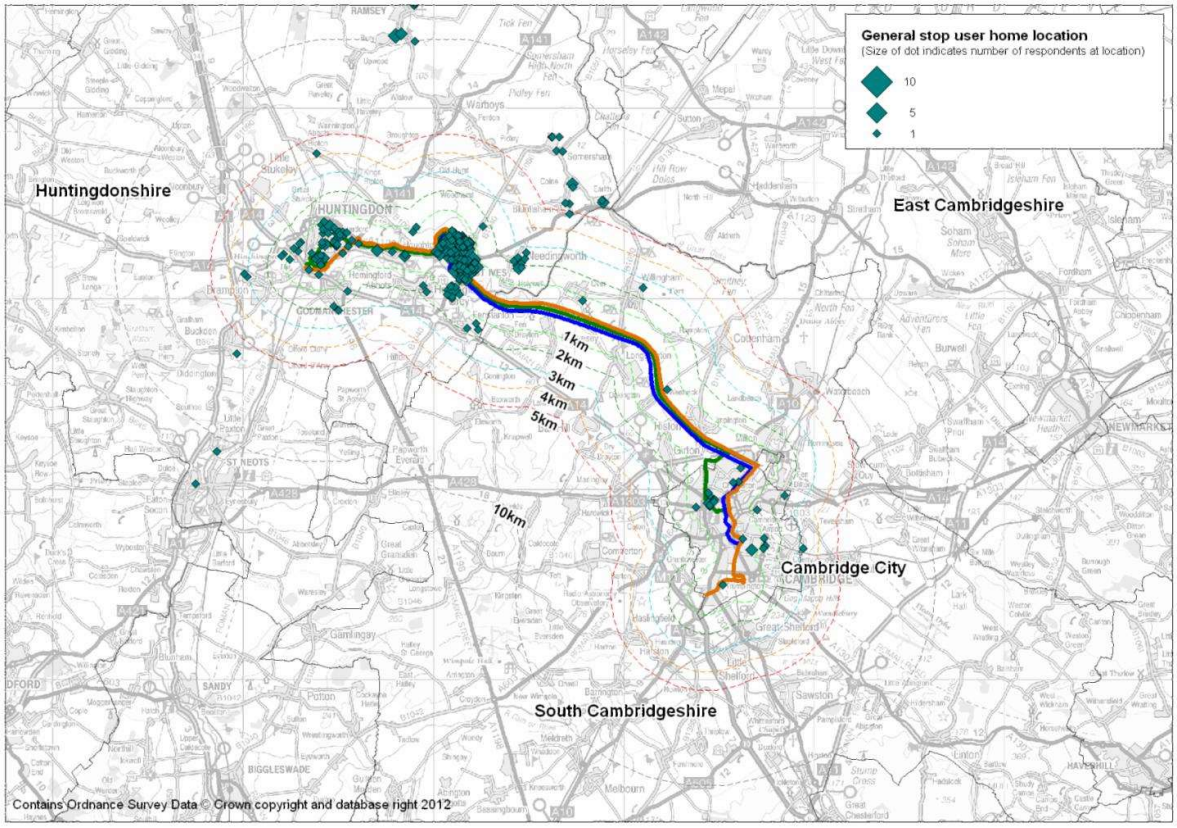


Figure 5. Home location of bus stop users



4.5. Respondent Characteristics

The following sections discuss the 'About You' responses in Section C of the questionnaire to understand the demographic breakdown of respondents within the achieved sample. Where appropriate, respondent characteristics have been compared to Census data for South Cambridgeshire to identify the profile of bus users compared to the overall population in the area.

4.5.1. Age and gender profile

The gender and age breakdown of the achieved sample is shown in Table 4 with a comparison of the population in the area of South Cambridgeshire and Huntingdonshire, which it can be seen from Figure 3 represent the majority of Busway users. This shows that the age and gender profile of bus users is different from that of the population within South Cambridgeshire and Huntingdonshire.

This shows that just over 58% of the achieved sample was female, slightly higher than the average within the area (51%). Whilst this may initially suggest that there are generally a higher proportion of female bus users using the service, it may actually reflect that more females were willing to participate in the research.

The majority of respondents interviewed (over 83%) were of working age (16-64), which may be expected due to the Busway routes passing several large employment locations and due to the surveys being completed on weekdays.

Over 31% of those interviewed were aged 16-25, considerably higher than the proportion for South Cambridgeshire and Huntingdonshire (10%). This may be due to a number of reasons including the Busway serving Cambridge and Huntingdon Regional Colleges (71 interviews were conducted here), or may reflect that many people in this age group are more reliant on public transport due to limited incomes in the start of their working career and hence do not own private vehicles. The profile of all other age groups was broadly in line with that of South Cambridgeshire.

Only 1 interview was conducted with a passenger aged under 16. Although within South Cambridgeshire and Huntingdonshire 21% of the population are aged under 16, interviewers were only permitted to approach children for the research with the approval of their parents and therefore this is likely to limit the participation from this group, particularly if they are travelling on their own (i.e. to/from school).

Table 4. Gender and age breakdown

Group		Number of respondents	Percentage of respondents	S. Cambridgeshire and Huntingdonshire
Gender	Male	356	41.6%	49.6%
	Female	499	58.4%	50.4%
Age	Under 16	1	0.1%	21.0%
	16-25	265	31.0%	10.4%
	26-49	290	33.9%	36.1%
	50-64	158	18.5%	18.9%
	Over 65	140	16.4%	13.7%
	Refused	1	0.1%	
Total		**855**	**100.0%**	**100.0%**

4.5.2. Ethnicity

Respondents were asked to provide information on their ethnic background, and results have been compared to the ethnic breakdown of South Cambridgeshire. Around 8% of the achieved sample were from black and minority ethnic (BME) backgrounds. This is considerably higher than the proportion for South Cambridgeshire which stands at just 3%.

This suggests that BME groups may be more reliant on public transport for their journeys. This is further supported by the finding from this Research that 32% of respondents from BME backgrounds do not have a car available for their journeys, compared to only 19% of white respondents[7].

A full breakdown of the ethnicity of respondents compared to South Cambridgeshire can be seen in Appendix B, Section B.1.

4.5.3. Car Availability

Respondents were asked to provide information on the number of cars available within their household. The findings are displayed in Table 5. This shows that around 20% of respondents do not have any cars within their household and will therefore be more reliant on public transport for their journeys. This is highlighted by the higher proportion of respondents without a car in their household compared to that of the local population.

Encouragingly, 80% of respondents had one or more cars available in their household (against 87% for the area as a whole), and yet they were still using the Busway for their travel.

Table 5. Household car availability

Number of cars in household	Number of respondents	Percentage of respondents	S. Cambridgeshire and Huntingdonshire
0	171	20.0%	13.2%
1	411	48.1%	41.5%
2+	270	31.6%	45.4%
Refused	3	0.3%	-
Total	855	100.0%	100.0%

4.5.4. Occupation and income

Respondents were asked to provide information on their occupation and household income to investigate the typology of bus users.

Nearly 40% of respondents were unemployed, students, retired, disabled or had a limiting long term sickness and were therefore considered to be on limited incomes. Nearly a quarter of respondents were in higher paid positions (professional / higher technical and manager / senior administrator).

Of those respondents who provided information on household income[8], around 28% were from households with a gross annual household income of under £20,000. Just over half (51%) were from households with incomes of £20,000-50,000 and around 20% were from household incomes over £50,000. This suggests a quite different trend for Busway users compared to that observed for all people in the National Travel Survey. In contrast to the National Travel Survey (see below), the trip rate for the Busway increases with household income. The graph below has been generated by making assumptions about the number of annual journeys implied by the responses in Table 6.

The National Travel Survey (2010) shows a decrease in walking and bus as the main mode for trips as income increases, and an increase in car and rail trips (Table 6). The results from the surveyed population (Table 6) indicate daily bus use is highest within the £30,000-49,000 and £50,000-79,999 income range and lower for incomes below this figure. However, the lowest income groups were more likely to state they used the bus 2-3 times a week, weekly or monthly – and this proportion decreased as income increased.

[7] Based on a total of 850 people providing ethnicity and car ownership data – of which 8% are from BME backgrounds.

[8] 428 respondents provided information on their household income.

Table 6. Household income and frequency of Busway use

	Daily		2-3 times a week		Weekly		Monthly		Less often		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Under £15,000	22	31.9%	17	24.6%	16	23.2%	9	13.0%	5	7.2%	69	100%
£15,000-29,999	48	43.6%	21	19.1%	23	20.9%	8	7.3%	10	9.1%	110	100%
£30,000-49,999	88	56.1%	27	17.2%	17	10.8%	11	7.0%	14	8.9%	157	100%
£50,000-79,999	42	58.3%	13	18.1%	6	8.3%	5	6.9%	6	8.3%	72	100%
£100,000+	6	60.0%	2	20.0%	2	20.0%	0	0.0%	0	0.0%	10	100%

Figure 6 estimates the annual number of passenger journeys associated with each response in Table 6. It indicates that frequency of use increases with an annual household income of more than £40,000. Note from Table 6 that there is a smaller number of Busway users in the survey population in the income bracket of £50,000 and more, and very few in the income bracket of £100,000 or more.

Figure 6. Estimated frequency of annual trips of Cambridgeshire Busway users

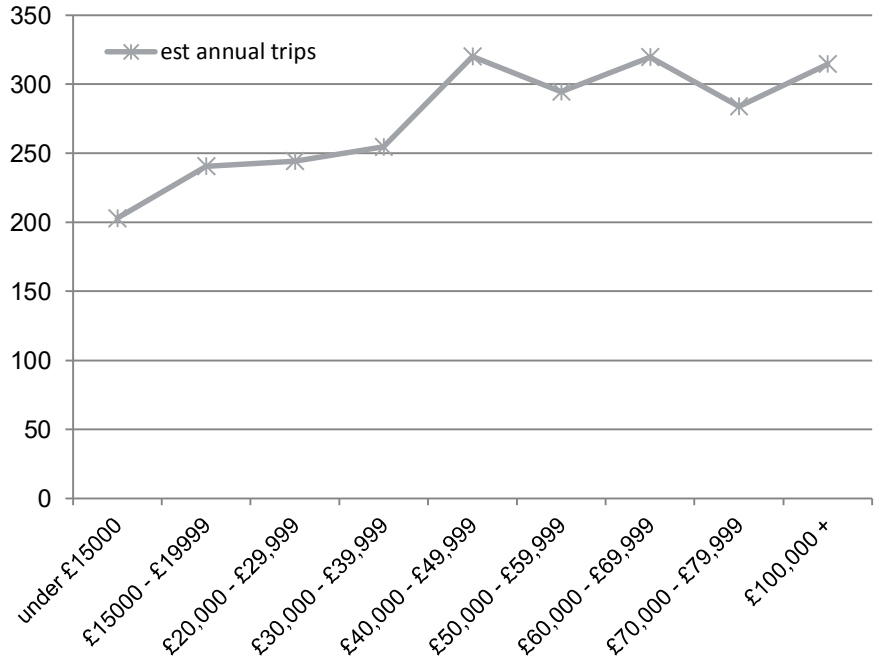


Table 7. Main mode of trips per person by income level: National Travel Survey 2010

Trips per person per year by main mode	Lowest real income level	Second level	Third level	Fourth level	Highest real income level	All income levels
Walk	267	205	195	199	185	210
Bicycle	10	14	16	18	15	15
Car/van driver	223	321	426	491	550	405
Car/van passenger	178	211	232	225	217	213
Other private transport[1]	10	12	12	9	10	11
Local and non-local buses	**111**	**90**	**61**	**51**	**29**	**68**
Rail[2]	14	16	22	28	52	27
Other public transport[3]	16	13	11	11	10	12
All modes	829	883	975	1,033	1,069	960

It does need to be borne in mind that Figure 6 and Table 6 report results for Busway users, whereas Table 7 is for all respondents to the National Transport Survey, and reflects the likelihood that many on higher incomes never use a bus at all. However, the results of Table 6 do indicate that a number of people of higher incomes are making frequent and regular use of the Busway.

4.5.5. Summary

Examination of the socio-demographic profile of bus users compared to that in South Cambridgeshire has presented some interesting findings. It highlights that the profile of Busway users does not match that of the local population, which in some cases is likely to be due to the reliance of some social groups on public transport for their journeys. On the other hand it has indicated that household car availability is often not a factor in the use of the Busway as 80% of respondents have at least one car within their household. This is different from the findings of the NTS 2010, where those with access to a car are considerably less likely to use public transport than those that do have car access. Similarly, use of the Busway does not conform to the traditional model of bus use, where usage is seen to fall with rising household income. Instead, ridership increases with household income of Busway users, and so displays a profile more usually associated with rail than bus users.

Note that the data presented in the remainder of this report aims to report the responses of bus users as surveyed and therefore no data weighting has been applied to match the demographics of the sample to the local population.

5. The respondents' journeys

5.1. Frequency analysis: Numbers interviewed at each stop compared to counts

The tables below display the number of surveys and enumerator counts within each survey time period.

Table 8. Number of interviews, and passenger boarding and alighting counts: AM (over both days)

Sample point	Number of Interviews		Alighting Count		Boarding Count	
	07:30-09:30	10:00-11:30	07:30-09:30	10:00-11:30	07:30-09:30	10:00-11:30
Addenbrooke's Hospital Outpatients	1	no surveys	0	no counts	0	no counts
Cambridge Castle St	no surveys	1	no counts	0	no counts	0
Cambridge Regional College	9	3	136	14	21	19
Fen Drayton Lakes	8	2	5	0	7	1
Histon and Impington	11	7	62	17	65	16
Huntingdon Bus Station	11	10	20	8	32	43
Huntingdon Coneygear Road	3	1	3	5	7	1
Longstanton Park and Ride	20	7	5	7	237	83
Oakington	10	7	8	7	54	14
Orchard Park West	16	12	10	6	91	34
St Ives Bus Station	43	22	47	58	86	97
St Ives Hill Rise/Ansley Way	10	4	6	3	9	3
St Ives Park and Ride	16	19	30	52	274	208
St Ives Ramsey Road	9	7	1	7	34	37
St Ives Ramsey Road/Chestnut Road	21	9	3	5	45	16
Swavesey	14	no surveys	8	no counts	84	no counts
Total	**202**	**111**	**344**	**189**	**1046**	**572**

Table 9. Number of interviews, and passenger boarding and alighting counts: PM (over both days)

Sample point	Count of Interview Location		Enumerator Alighting Count		Enumerator Boarding Count	
	13:00-14:00	15:00-19:00	13:00-14:00	15:00-19:00	13:00-14:00	15:00-19:00
Addenbrooke's Hospital Outpatients	10	24	41	103	28	487
Addenbrooke's Hospital Treatment Centre	1	22	0	2	8	108
Cambridge Castle St	16	26	3	19	9	101
Cambridge Jesus Lane	3	16	0	0	9	84
Cambridge New Sq	1	33	6	130	38	416
Cambridge Rail Station	11	30	29	354	35	268
Cambridge Regional College	5	40	7	66	11	335
Cambridge Science Park	no surveys	69	no counts	53	no counts	218
Cbge Drummer St Bus Station	no surveys	64	no counts	106	no counts	531
Huntingdon Bus Station	5	20	16	112	28	117
Huntingdon Regional College	3	5	1	8	2	20
St Ives Bus Station	7	23	19	174	26	148
Total	**62**	**372**	**122**	**1127**	**194**	**2833**

Table 10 shows an aggregation of all the AM boarding counts and number of surveys, along with the same for the PM data. We have then calculated the percent interview rate achieved. This then provides a means of grossing up the interview results to estimate an Origin Destination matrix for the Busway. It should be noted that because counts were not continuous this cannot be taken as a realistic 'all-day' matrix, so should be used to interpret journey patterns rather than total Busway volumes.

Table 10. Surveys and boarding counts, by stop

	AM			PM			All day
	Surveys	Boarding counts	Percent	Surveys	Boarding counts	Percent	Percent
Addenbrooke's Hospital Outpatients	1	0	**0%**	34	515	**7%**	7%
Addenbrooke's Hospital Treatment Centre	No AM data			23	116	**20%**	20%
Cambridge Castle St	1	0	**0%**	42	110	**38%**	39%
Cambridge Jesus Lane	No AM data			19	93	**20%**	20%
Cambridge New Sq	No AM data			34	454	**7%**	7%
Cambridge Regional College	12	40	**0%**	45	346	**13%**	15%
Cambridge Rail Station	No AM data			41	303	**14%**	14%
Cambridge Science Park	No AM data			69	218	**32%**	32%
Cbge Drummer St Bus Stn	No AM data			64	531	**12%**	12%
Fen Drayton Lakes	10	10	**100%**	No PM data			100%
Histon and Impington	18	81	**22%**	No PM data			22%
Huntingdon Bus Station	21	75	**28%**	25	145	**17%**	21%
Huntingdon Coneygear Road	4	8	**50%**	No PM data			50%
Huntingdon Regional College	No AM data			8	22	**36%**	36%
Longstanton Park and Ride	27	320	**8%**	No PM data			8%
Oakington	17	68	**25%**	No PM data			25%
Orchard Park West	28	125	**22%**	No PM data			22%
St Ives Bus Station	65	183	**36%**	30	174	**17%**	27%
St Ives Hill Rise/Ansley Way	14	14	**100%**	No PM data			100%
St Ives Park and Ride	35	482	**7%**	No PM data			7%
St Ives Ramsey Road	16	71	**23%**	No PM data			23%
St Ives Ramsey Road/Chestnut Road	30	61	**49%**	No PM data			49%
Swavesey	14	84	**17%**	No PM data			7%
	313	**1618**	**19%**	**434**	**3027**	**14%**	**16%**

Table 11 shows the breakdown of the surveys and the percentage sample rate achieved, over both days, for AM and PM and each bus stop type.

Table 11. Survey numbers and boarding counts (two-day survey period), by bus stop type

	AM			PM		
	Surveys	Boarding counts	Percent	Surveys	Boarding counts	Percent
Bus stop	162	1208	13%	171	1195	14%
Busway halt	151	410	37%	263	1832	14%

5.2. Origin / destination analysis by Busway halts/general bus stops

Table 12 shows an origin-destination matrix factored by the survey:boarding count ratio observed at the stops. This provides an illustration of the trip patterns across the area, based on the Busway journeys being made at the time of the interview. It is noteworthy that:

- Demand for Addenbrooke's seems particularly to be driven by demand from Park and Sites and to a lesser extent other Busway halts;
- Demand at Busway halts is focussed primarily on Cambridge rather than St Ives or Huntingdon;
- A surprisingly high proportion of users at Cambridge Regional College access the service at St Ives Park and Ride;
- St Ives (both town and Park and Ride) accounts for a high proportion of demand to Cambridge Science Park; and
- There is a much higher proportion of non-Busway trips in Huntingdon than St Ives.

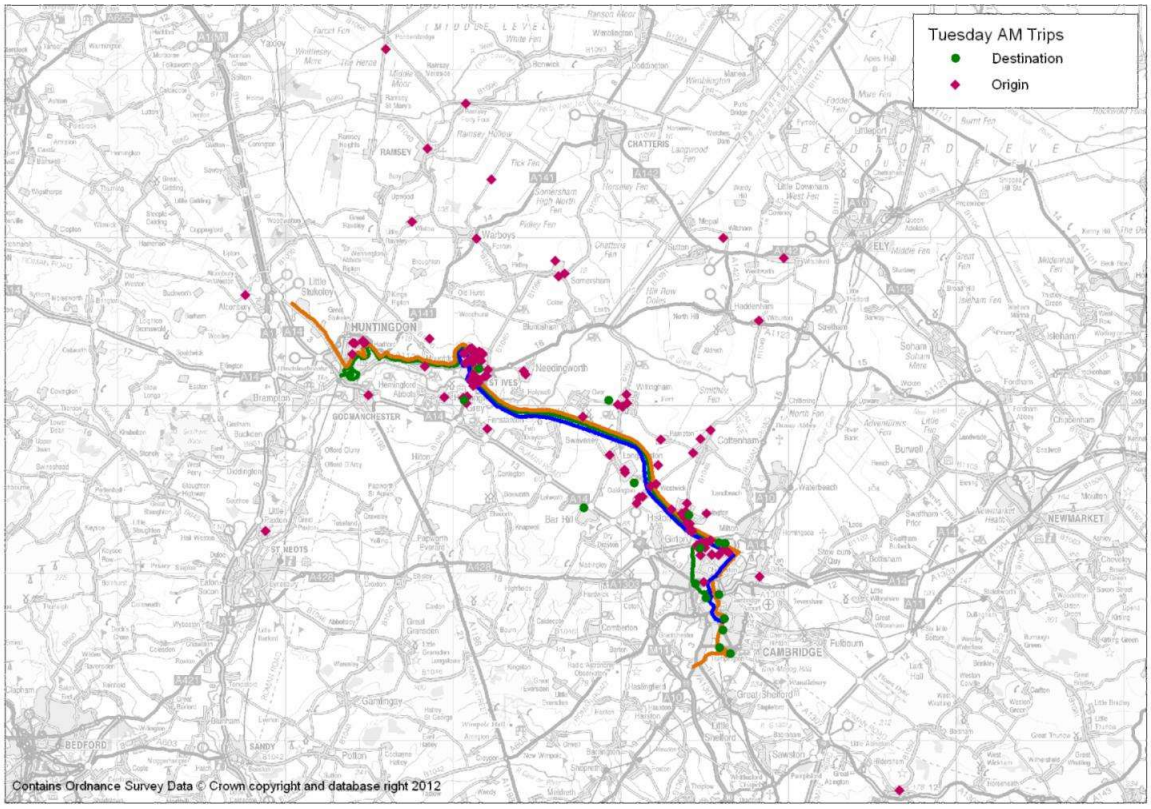
Table 12. Estimated Origin-Destination trip matrix (all day, Busway trips at time of interview)[9]

		Destination																	
Survey location		**Addenbrooke's**	**Cambridge City Centre**	**Cambridge Rail Station**	**Cambridge Regional College**	**Cambridge Science Park**	**Fen Drayton Lakes**	**Histon and Impington**	**Huntingdon**	**Longstanton Park and Ride**	**Oakington**	**Orchard Park**	**Other/refused**	**St Ives**	**St Ives Park and Ride**	**Swavesey**	**Trumpington**	**Trumpington Park and Ride**	**Grand Total**
Busway halt	Addenbrooke's	0	44	87	0	11	0	11	0	65	11	0	0	11	120	22	44	316	751
	Cambridge Science Park	0	9	6	6	0	3	19	6	13	6	0	19	63	63	3	0	0	218
	Fen Drayton Lakes	0	4	5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	10
	Histon and Impington	9	27	23	18	14	0	0	0	0	0	5	0	0	0	0	0	0	95
	Longstanton Park and Ride	25	209	49	37	25	0	12	12	0	0	0	0	0	0	0	0	0	369
	Oakington	4	13	21	26	4	0	0	0	0	0	0	0	0	0	0	0	0	68
	Orchard Park West	0	161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
	St Ives Park and Ride	96	234	55	55	14	0	28	0	14	0	14	28	14	0	0	0	0	551
	Swavesey	0	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
	Cambridge Regional College	14	42	7	0	7	0	14	7	35	14	0	7	77	168	14	0	0	407
General bus stop	Cambridge City Centre	0	45	15	45	30	0	59	193	111	7	178	52	505	156	45	0	0	1440
	Cambridge Rail Station	22	59	0	44	0	0	0	0	15	7	0	22	59	59	30	15	0	333
	Huntingdon	4	86	0	17	0	0	0	65	0	4	0	17	142	4	0	0	0	341
	St Ives	6	295	6	29	13	0	23	45	0	3	0	23	97	0	10	0	0	552

[9] Uses factors based on the number of boardings observed, and the number of surveys at that stop.

Figure 7 below shows the distribution of the trip origin and final destinations. The Tuesday morning surveys were taken as a sample day, and time period. The destinations are, in general, a lot closer to the Busway than the origins – which indicates that people are willing to travel further to reach the Busway, than they do when alighting.

Figure 7. Origins and Destinations: Tuesday AM



The Busway was considered part of a wider interchange trip where respondents had noted they had used bus or train to travel to the stop, or would use bus or train to continue their journey after alighting from the Busway. Table 13 presents the number of respondents interviewed who were travelling on the Busway as part of a wider public transport journey:

Table 13. Interchange trips

	Busway halt		General bus stop		Both stop types	
Interchange trips	57	11.2%	60	17.4%	117	13.7%
Total surveys	511	100.0%	344	100.0%	855	100.0%

In general, Busway halt users were less likely to be using the Busway as well as another bus or train journey then general bus stop users.

5.3. Bus occupancy

Enumerators took an estimate of how full the bus was and noted its destination. For key stops, representing the cordon points for Cambridge, St Ives and Huntingdon, the buses that were recorded within each occupancy band are shown in Table 14. The time period AM in the table is between 7.30am and 11.30am, 'lunch' is 1-2pm and PM is between 3-7pm.

At Orchard Park towards Cambridge, the majority of the buses in the AM were over half full, with six out of the 15 being between 75% and 100% occupied. As expected, demand from Orchard Park towards Huntingdon was low in the morning with all of the surveyed buses noted as under 25% capacity.

At Cambridge Science Park towards St Ives 32% of buses in the PM peak were noted as being between 50% and 100% full. Demand towards Trumpington was lower in the PM peak with the majority of the buses being under 50% occupied.

Travel from Cambridge Rail Station in the PM was towards St Ives (majority of buses under half occupancy levels, aside from PM peak) and Trumpington where all surveyed buses were under 50% occupied. Occupancy at St Ives Park and Ride site ranged through all occupancy levels throughout the AM survey period, but it is worth noting that 34% of buses were over 50% full despite the fact they were near the start of their journeys.

Table 14. Bus occupancy levels

Interview site	Time Period	Destination	Bus occupancy level: number of counts			
			0-25%	25-50%	50-75%	75%-100%
Orchard Park	AM	Cambridge	1	4	3	6
	AM	Huntingdon	13			
	AM	Cam Rail Stn				1
	AM	St Ives Bus	1			
Cambridge Science Park	PM	St Ives Bus	9	8	7	1
	PM	Trumpington	9	9	2	
	PM	Huntingdon	1	2		1
	Lunch	Cambridge	1			
	Lunch	Trumpington	2	1		
	Lunch	St Ives Bus	5	1		
	PM	Cambridge	1			
	PM	St Ives P&R	1		2	2
	PM	Cam Rail Stn	1			
	PM	Cam Regional College	1			
	PM	Somersham		1	1	2
Railway Station	PM	St Ives Bus	22	11	6	2
	PM	Trumpington	22	10		
	Lunch	St Ives Bus	4	1		
	Lunch	Trumpington	2	1		
	PM	Cambridge	1			
	PM	Somersham	1	3		
St Ives P&R	AM	Cambridge	9	11	7	6
	AM	Trumpington	16	6	1	8
	AM	Huntingdon	7			
	AM	St Ives Bus	4			1
St Ives Hill Rise	AM	Cambridge	14			
	AM	Huntingdon	10			
	AM	St Ives Bus	1			
	AM	Cam Rail Stn	1			

5.4. Mode of travel to the Busway

In the following sections of this report, responses have been split into three groups - those travelling to/from a Busway halt, those travelling to/from a bus stop, and all respondents. The Busway halts are as follows:

- Addenbrooke's Hospital Outpatients

- Addenbrooke's Hospital Treatment Centre
- Cambridge Science Park
- Cambridge Regional College
- Fen Drayton Lakes
- Foster Road
- Histon and Impington
- Longstanton Park and Ride
- Oakington
- Orchard Park East
- Orchard Park West
- St Ives Park and Ride
- Swavesey
- Trumpington Park and Ride

Stops at Addenbrooke's Hospital are treated as Busway stops because, whilst not directly located on the Busway, they are on a section of route (Cambridge rail station to Trumpington) almost entirely Busway.

From section 5.5 onwards those travelling to/from a Busway halt are referred to as '*Busway halt users'*, and all other users are referred to as '*bus stop users'*. In section 5.4 we have split the former group into two – 'Busway halt users' and 'Park and Ride users'.. This has been done to eliminate any bias in the analysis and findings for Busway halt users that may arise from use of car to access the Busway at these locations.

5.4.1. Respondents starting their journey at home

5.4.1.1. Mode of transport from origin to bus stop

Table 15 displays the mode of travel used by respondents to get to the bus stop for those respondents who started their journey from home (461).

Overall, 69% of respondents walked to get to the bus stop. This increased to 76% for bus stop users and 75% for Busway halt users, and decreased to 49% for Park and Ride stop users. In 10% of cases, the journey on the Busway services was as part of a larger public transport journey as these respondents used bus or rail to get to the bus stop.

As is to be expected, car journeys to Park and Ride sites was highest (33% driving and 8% dropped off), compared to Busway halt users (2% drive, 10% dropped off) and bus stop users (2% drive, 6% dropped off). Five percent of Busway and P&R users cycled, compared to less than 2% for bus stop users; though it should be noted that wet weather was experienced on the days of the survey.

Table 15. Mode of transport from home to bus stop, by stop user

	Busway halt		Bus stop		P&R		All respondents	
	N	%	N	%	N	%	N	%
Bus	11	7.2%	29	14.6%	5	4.5%	45	9.8%
Cycle	8	5.2%	3	1.5%	5	4.5%	16	3.5%
Drive and park	3	2.0%	3	1.5%	36	32.7%	42	9.1%
Dropped off	15	9.8%	11	5.6%	9	8.2%	35	7.6%
Taxi	1	0.7%	1	0.5%	1	0.9%	3	0.7%
Train	1	0.7%		0.0%		0.0%	1	0.2%
Walk*	114	74.5%	151	76.3%	54	49.1%	319	69.2%
Grand Total	153	100.0%	198	100.0%	110	100.0%	461	100.0%

*'Walk' includes two respondents using mobility scooter and wheelchair.

5.4.1.2. Mode of transport to complete journey

For those starting their journey at home, the vast majority of respondents stated that they would walk to their destination after using the Busway service (83%). This suggests that these respondents' destination is in close proximity to their alighting stop. Around 10% of people stated that they would use 'other' modes of transport which could include being picked up at the bus stop.

A full breakdown of the responses can be found in Appendix B, Section B.2

5.4.2. Respondents not starting their journey at home

5.4.2.1. Mode of transport from origin to bus stop

Examination of the mode of travel from origin to bus for those not starting their journey at home (394) found that nearly 89% of respondents walked to the bus stop. Around 5% used a car (driven or dropped off) and around 7% were using the Busway as part of a wider public transport journey.

Note that journey origins here included work, college, friends' homes, hospital, city centre and rail stations.

A full breakdown of the responses can be found in Appendix B, Section B.2

5.4.2.2. Mode to complete journey

Table 16 shows the modes used to complete the journey after leaving the busway for those respondents who had not stated 'home' as the location where the journey started.

Around 68% of respondents stated that they would walk to their final destination after leaving the Busway. Around a quarter stated they would use 'other' modes of transport which could include driving and being picked up at the bus stop – and this proportion was highest for P&R users (63%) than for Busway halt (13%) and bus stop users (7%).

Table 16. Mode of transport after leaving bus: where origin is not 'home', by stop user

	Busway halt		General bus stop		P&R		Grand Total	
	N	%	N	%	N	%	N	%
Bus	5	3.5%	5	3.4%	6	5.6%	16	4.1%
Cycle	2	1.4%	2	1.4%	3	2.8%	7	1.8%
Other	18	12.8%	10	6.8%	67	62.6%	95	24.1%
Taxi		0.0%	1	0.7%		0.0%	1	0.3%
Train	5	3.5%	1	0.7%	1	0.9%	7	1.8%
Walk	111	78.7%	126	86.3%	30	28.0%	267	67.8%
Walk then bus		0.0%	1	0.7%		0.0%	1	0.3%
Total	**141**	**100.0%**	**146**	**100.0%**	**107**	**100.0%**	**394**	**100.0%**

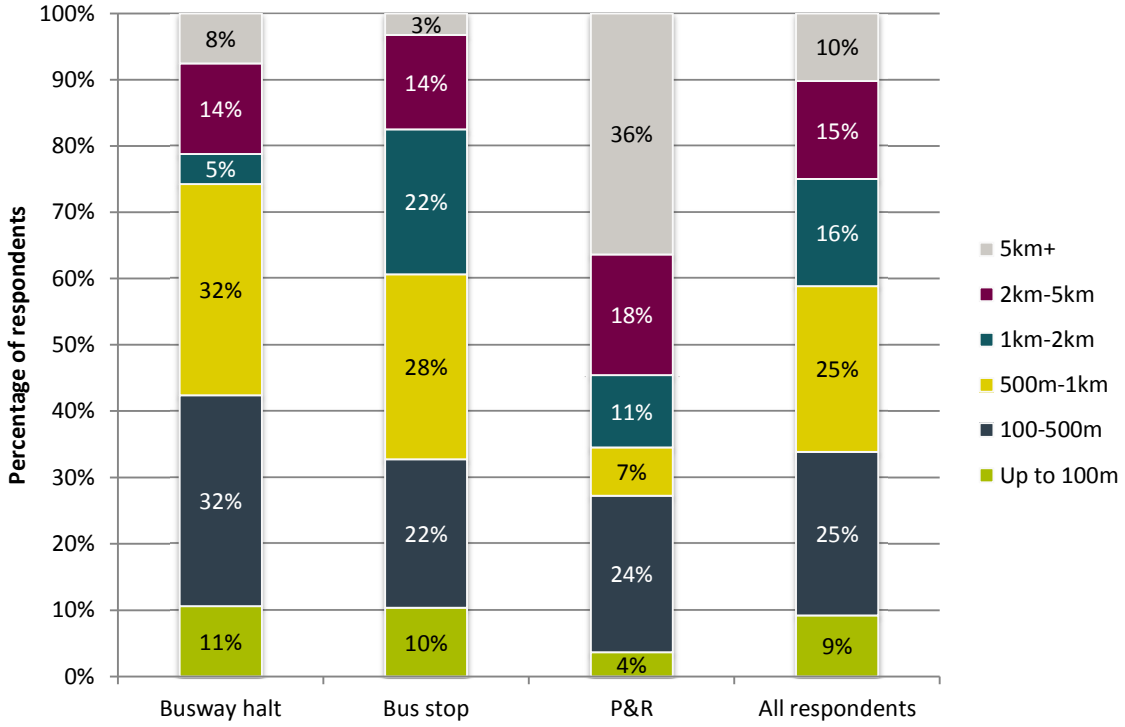
5.4.3. Distance from home to the Busway

Earlier examination of the home postcode of respondents indicated that the catchment area for use of the Busway services spread further than the three local urban areas of Cambridge, Huntington and St Ives.

A total of 304 respondents provided information on the distance from their home origin to the bus stop at which they were interviewed. Nearly 34% of these respondents lived within 500m of the bus stop, and 59% lived within 1km of the bus stop.

When examining the results by bus stop type, the distance profile changed, as 43% of Busway halt users lived within 500m of the stop, compared to 32% of bus stop users and 28% of Park and Ride. The proportion of respondents travelling a larger distance to the stop increased with P&R sites, where around 54% of Busway halt users lived over 2km from the stop they were interviewed at, compared to only 17% of bus stop and 22% Busway halt users. Figure 8 displays the findings graphically for ease of interpretation.

Figure 8. Distance to bus stop, for respondents starting their journey at home, by stop user[10]



When examining the modes used to access the stops from home, it is clear that access to P&R differs from that of other bus stops. As shown in Table 17, the proportion of bus stop and Busway halt users driving to a stop was very low, whereas 58% of P&R users travelling less than 1km drove, rising to 61% for those over 1km from the stop. Walking levels were high for bus stop and Busway halt users, even for distances over 1km. Of interest is the high percentage of Busway halt users who were dropped off (albeit a very low absolute number).

Table 17. Mode of transport used to access stops from home, by distance from stop

	Busway halt				Bus stop				P&R			
Mode	Under 1km		Over 1km		Under 1km		Over 1km		Under 1km		Over 1km	
Bus	1	2.0%	1	5.9%	14	12.6%	12	16.7%	0	0.0%	3	8.3%
Cycle	4	8.2%	0	0.0%	1	0.9%	3	4.2%	1	5.3%	3	8.3%
Drive and park	1	2.0%	0	0.0%	1	0.9%	1	1.4%	11	57.9%	22	61.1%
Dropped off	2	4.1%	4	23.5%	2	1.8%	9	12.5%	3	15.8%	5	13.9%
Taxi	-		-		-		1	1.4%	-	0	1	2.8%
Train	-		-		1	0.9%	-			0.0%		0.0%
Walk	41	83.7%	12	70.6%	92	82.9%	46	63.9%	4	21.1%	2	5.6%
Total	49	100%	17	100%	111	100%	72	100%	19	100%	36	100%

[10] Stop user type based on interview stop only

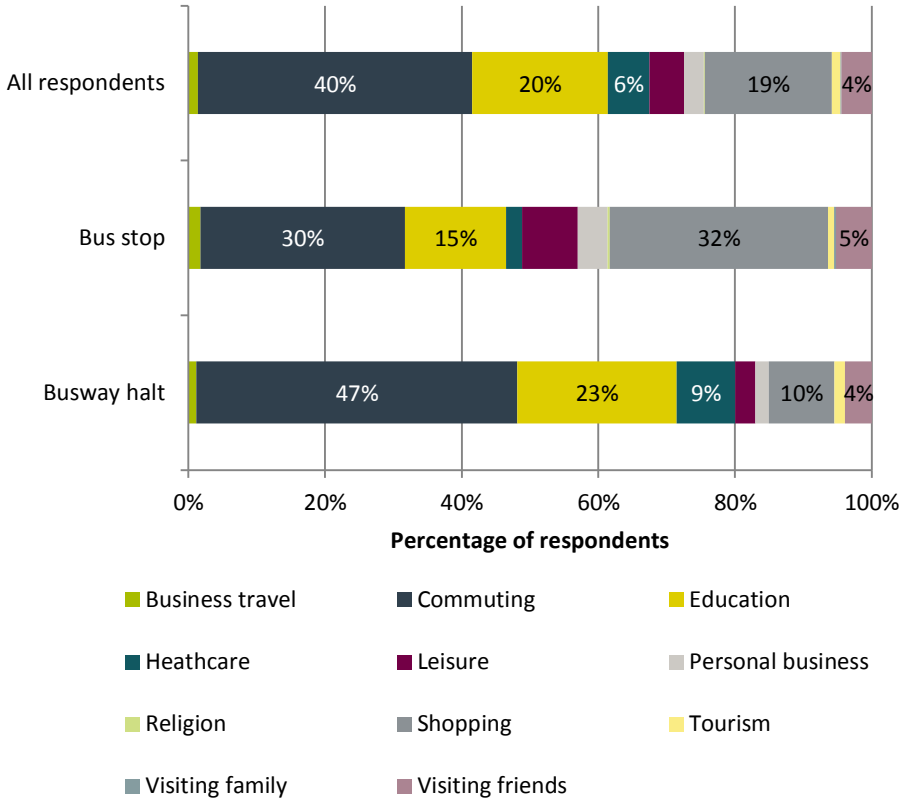
5.5. Journey purpose and frequency of travel

5.5.1. Journey Purpose

Respondents were asked to provide information on the purpose of the journey they were making on the Busway at the time of the interview. Approximately 40% were commuting, 20% were going to education and 19% were shopping.

This profile altered dependent on whether the respondent was interviewed at a Busway halt or general stop. At Busway halts a considerably higher proportion of respondents were commuting (47%) compared to 30% at bus stops. The proportion of people travelling for education and shopping trips were higher at bus stops, but healthcare trips were more frequent at Busway halts, see Figure 9.

Figure 9. Journey purpose at time of interview, by stop user



5.5.2. The frequency of Busway use

Around 44% of all respondents interviewed used the Busway daily for the journey they were making at the time of the interview. This rose to 49% for Busway halt users (who were mainly commuters), and dropped to 37% for bus stop users, Table 18. Busway halt users were more likely to be using the Busway daily or 2-3 times a week than general bus stop users.

Table 18. Frequency of Busway use, by stop user

Frequency	Busway halt		Bus stop user		All respondents	
	N	%	N	%	N	%
Daily	248	48.5%	128	37.2%	376	44.0%
2-3 times a week	128	25.0%	60	17.4%	188	22.0%
Weekly	38	7.4%	81	23.5%	119	13.9%
Less often	33	6.5%	24	7.0%	57	6.7%
Monthly	57	11.2%	40	11.6%	97	11.3%
First time user	7	1.4%	11	3.2%	18	2.1%
Total	**511**	**100.0%**	**344**	**100.0%**	**855**	**100.0%**

As to be expected, the majority of commuting and education trips were daily or 2-3 times a week, whilst healthcare and leisure trips were more infrequent, as shown in Table 19.

Table 19. Frequency of bus use, by journey purpose

	Daily		2-3 times a week		Weekly		Monthly		Less often		First time		Total
Business travel	5	42%	1	8%	3	25%	2	17%	1	8%		0%	12
Commuting	273	80%	47	14%	8	2%	4	1%	9	3%	2	1%	343
Education	80	47%	74	44%	9	5%	2	1%	5	3%		0%	170
Healthcare	3	6%	8	15%	4	8%	12	23%	25	48%		0%	52
Leisure	3	7%	9	21%	9	21%	6	14%	13	30%	3	7%	43
Personal business	1	4%	5	20%	6	24%	2	8%	9	36%	2	8%	25
Religion		0%	1	100%		0%		0%		0%		0%	1
Shopping	8	5%	37	23%	63	40%	25	16%	22	14%	4	3%	159
Tourism		0%	1	9%		0%	1	9%	3	27%	6	55%	11
Visiting family		0%	1	100%		0%		0%		0%		0%	1
Visiting friends	3	8%	4	11%	17	45%	3	8%	10	26%	1	3%	38
Grand Total	**376**	44%	**188**	22%	**119**	14%	**57**	7%	**97**	11%	**18**	2%	**855**

5.5.3. Other modes used for the same journey

Respondents were also asked whether they ever make the same journey by a different mode of transport. **Encouragingly, nearly 69% of respondents stated that they only use the Busway services for this journey.** Around 4% make the same journey by a different mode on a daily basis, and 7% make the same journey 2-3 times a week by a different mode.

Car journeys both as a driver and car sharing were the most popular form of alternative transport (77% of all alternative modes). Cycling was a popular alternative mode for those using Busway halts (10%), Table 20.

Table 20. Alternative modes of transport used, by stop user

Mode	Busway halt user		Bus stop user		All respondents	
	N	%	N	%	N	%
Cycle	19	10.3%	8	8.6%	27	9.7%
Car (driver)	74	40.2%	35	37.6%	109	39.4%
Car (car sharing/lift)	61	33.2%	40	43.0%	101	36.5%
Taxi	6	3.3%	1	1.1%	7	2.5%
Rail	5	2.7%		0.0%	5	1.8%
Walking	7	3.8%	6	6.5%	13	4.7%
Bus	11	5.9%	3	3.3%	14	5.0%
Motorcycle	1	0.5%		0.0%	1	0.4%
Grand Total	**184**	**100.0%**	**93**	**100.0%**	**277**	**100.0%**

Further examination into alternative modes of transport was undertaken for the three most popular journey purposes – commuting, education and shopping, which combined make up 79% of all journeys within the achieved sample. Around a third of commuters and those travelling for education and 31% of shoppers used an alternative mode of transport for their journeys on occasion. Table 21 displays the frequency that the alternative modes of transport are used for the three most popular journey purposes.

Table 21. Frequency of alternative transport, commuting education and shopping trips

Frequency	Commuting	Education	Shopping
Daily	15.8%	14.3%	2.0%
2-3 times a week	27.2%	33.9%	6.0%
Weekly	14.9%	19.6%	36.0%
Monthly	16.7%	19.6%	26.0%
Less often	25.4%	12.5%	30.0%
Total respondents	**114**	**56**	**50**
% of all making this journey who use an alternative mode	33.2%	32.9%	31.4%

In terms of the mode of travel, car was the predominant alternative mode (as a driver or car sharing), as 70% of commuters, 76% of those travelling for education and 89% of shoppers travelled by car if they did not use the Busway.

5.5.4. Ticket Types

The frequency of travel was compared against the stated ticket types of respondents. Of the single ticket purchasers, 32% of these were travelling daily and 24% of return ticket purchasers travelled daily. This may indicate that not all users are aware of the variety of cheaper tickets available.

Of the 855 respondents, 175 (20%) stated they were travelling on a concessionary pass, Table 22.

Table 22. Ticket type and frequency of travel

	Single		Return		Daily		Weekly		4 week+		Smartcard		Concession	
Daily	26	32.1%	25	23.8%	58	29.7%	164	85.4%	55	85.9%	23	54.8%	24	13.7%
2-3 times a week	15	18.5%	29	27.6%	60	30.8%	20	10.4%	8	12.5%	15	35.7%	41	23.4%
Weekly	15	18.5%	18	17.1%	25	12.8%	7	3.6%		0.0%	3	7.1%	51	29.1%
Monthly	4	4.9%	12	11.4%	20	10.3%	1	0.5%	1	1.6%	1	2.4%	18	10.3%
Less often	15	18.5%	16	15.2%	27	13.8%		0.0%		0.0%		0.0%	39	22.3%
First time	6	7.4%	5	4.8%	5	2.6%		0.0%		0.0%		0.0%	2	1.1%
Grand Total	**81**	100%	**105**	100%	**195**	100%	**192**	100%	**64**	100%	**42**	100%	**175**	100%

5.6. Car Availability

Encouragingly, around 48% of respondents travelling on the Busway services had a car available that they could drive for their journey. Nearly 54% of Busway halt users could have driven for their journey.

The proportion of bus stop users that could have driven for their journey stands at 38% - considerably lower than Busway halt users. This highlights a stronger reliance on public transport at bus stops, and the findings may also suggest that the Busway has encouraged car drivers to use public transport for their journeys.

Those respondents who didn't have a car available to drive themselves on their journey were asked whether there was anyone available to give them a lift by car. Of these, 120 (14%) respondents said someone was available to give them a lift for at least part of the journey. Availability of lifts was higher for Busway halt users (17%) compared to bus stop users (11%), Table 23.

Table 23. Availability of a car for journey

	Busway halt		General bus stop		All respondents	
	N	%	N	%	N	%
Yes, as driver	274	53.6%	132	38.4%	406	47.5%
Yes, lift part of way	30	5.9%	10	2.9%	40	4.7%
Yes, lift whole of way	54	10.6%	26	7.6%	80	9.4%
No	153	29.9%	176	51.2%	329	38.5%
	511	100.0%	344	100.0%	855	100.0%

6. Why are respondents using the Busway?

6.1. Length of time using the Busway

Table 24 shows the length of time that respondents had been using the Busway. Overall, 63% had been using the Busway since it opened; but this proportion was lower (54%) for Busway halt users than bus stop users (77%).

Table 24. Length of time respondent had been using the Busway, by stop user

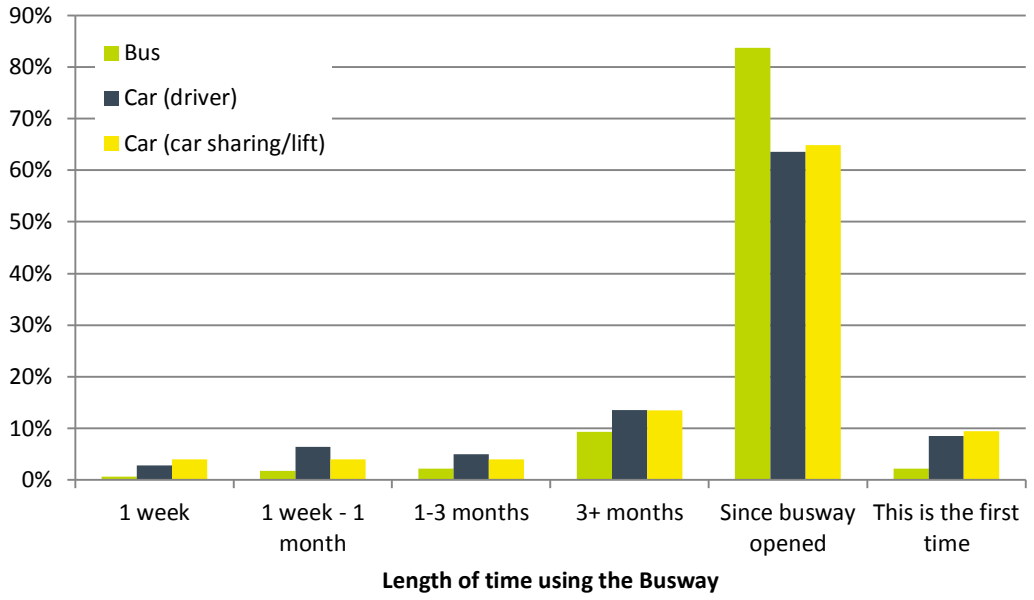
	Busway halt user		Bus stop user		All respondents	
	N	%	N	%	N	%
1 week	16	3.1%	2	0.6%	18	2.1%
1 week - 1 month	28	5.5%	7	2.0%	35	4.1%
1-3 months	42	8.2%	16	4.7%	58	6.8%
3+ months	117	22.9%	34	9.9%	151	17.7%
Since busway opened	275	53.8%	263	76.5%	538	62.9%
This is the first time	33	6.5%	22	6.4%	55	6.4%
Grand Total	**511**	**100.0%**	**344**	**100.0%**	**855**	**100.0%**

As can be seen in Table 25 and visually in Figure 10, previous bus users were the most likely to have used the Busway since it opened (84% of bus users) – compared to 64% of car users. Car users were generally more likely to be newer (less than 3 months) to the Busway than bus users.

Table 25. Length of time respondent had been using the Busway, by previous mode

	1 week		1 week - 1 month		1-3 months		3+ months		Since Busway opened		This is the first time	
Bus	3	0.7%	8	1.8%	10	2.2%	42	9.4%	375	83.7%	10	2.2%
Car (driver)	4	2.9%	9	6.4%	7	5.0%	19	13.6%	89	63.6%	12	8.6%
Car (car sharing/lift)	3	4.1%	3	4.1%	3	4.1%	10	13.5%	48	64.9%	7	9.5%
Taxi		0.0%		0.0%	1	16.7%	1	16.7%	3	50.0%	1	16.7%
Cycle		0.0%	1	6.7%	1	6.7%	1	6.7%	10	66.7%	2	13.3%
Walk		0.0%		0.0%		0.0%	1	16.7%	5	83.3%		0.0%
Rail		0.0%		0.0%		0.0%		0.0%	2	100.0%		0.0%
Other	1	33.3%		0.0%		0.0%		0.0%	2	66.7%		0.0%

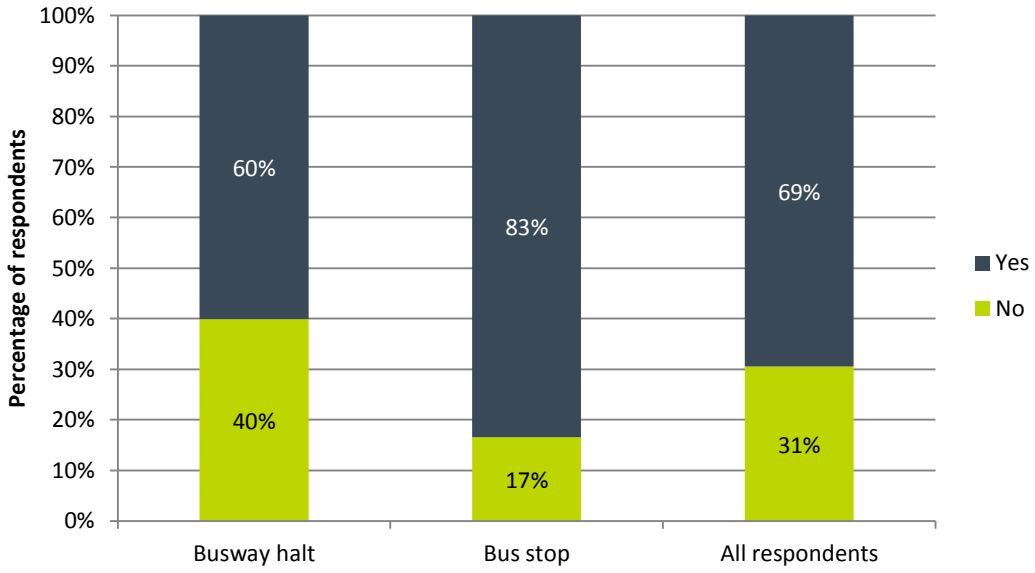
Figure 10. Length of time using the Busway by previous mode of travel



6.2. Change in travel patterns

In total, 261 respondents made different journeys before starting to use the Busway. Eighty-three percent of bus stop users were likely to have made the journey previously, whilst only 60% Busway halt users made the journey before using the Busway, Figure 11.

Figure 11. Respondents making the journey before they started using the Busway, by stop user



6.2.1. Switch to the Busway: change in destination location

Of those respondents who had not previously been making the journey, the reason that they now make the journey is shown in Table 26. The most common reasons for now making the journey are attending school/college in the destination (33% overall) and working at the destination (30%).

Busway halt respondents were more likely to now be working at the destination (34%) or attending school/college at the destination (34%) than bus stop respondents (18% and 28% respectively). Note that Busway halts account for 204 out of 261 respondents reporting a change of destination.

Table 26. Reason why respondent now makes the Busway journey, by stop user

	Busway halt user		Bus stop user		All respondents	
	N	%	N	%	N	%
Attending a job interview	-	0.0%	1	1.8%	1	0.4%
Commute through the area	1	0.5%		0.0%	1	0.4%
Have moved	7	3.4%	2	3.5%	9	3.4%
I now attend school/college at this destination	70	34.3%	16	28.1%	86	33.0%
I now shop in this destination	9	4.4%	8	14.0%	17	6.5%
I now socialise with friends at this destination	10	4.9%	9	15.8%	19	7.3%
I now use leisure facilities at this destination	1	0.5%	1	1.8%	2	0.8%
I now visit healthcare facilities at this destination	23	11.3%	3	5.3%	26	10.0%
I now work at this destination	69	33.8%	10	17.5%	79	30.3%
On holiday here	7	3.4%	4	7.0%	11	4.2%
On personal business in the area	1	0.5%	2	3.5%	3	1.1%
Use for convenience	4	2.0%	1	1.8%	5	1.9%
Visiting friends/family in hospital	2	1.0%	-	0.0%	2	0.8%
Total	204	100.0%	57	100.0%	261	100.0%

6.3. Change in location of an activity

6.3.1. Busway influence in the decision to change the location of an activity

Respondents who stated that they were making a new journey since starting to use the Busway were asked whether the availability of the Busway had influenced their decision to work/study/shop etc at a particular location. Of the 261 respondents who had changed location, 69% of these stated that they were not influenced by the Busway, Table 27.

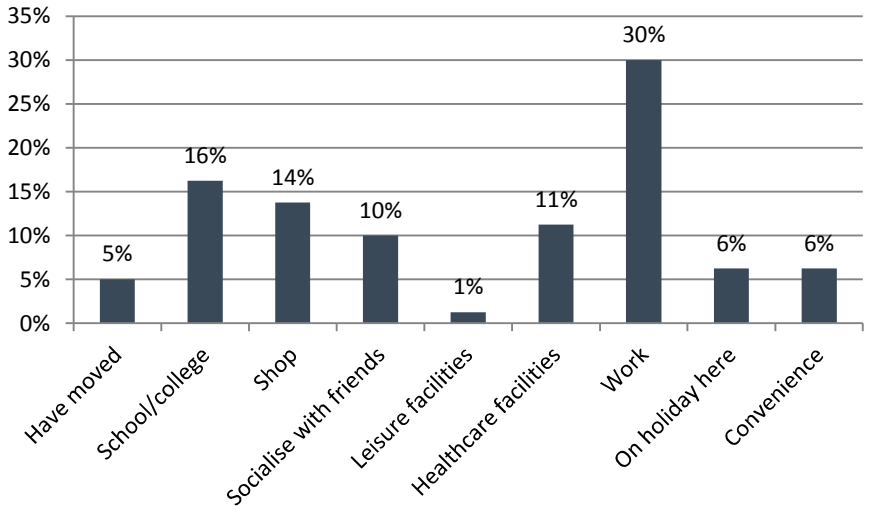
Table 27. Busway influence on the reason for now making a journey

	Don't know		No		Yes		Total	
	N	%	N	%	N	%	N	%
Attending a job interview		0.0%	1	0.4%		0.0%	1	0.4%
Commute through the area		0.0%	1	0.4%		0.0%	1	0.4%
Have moved		0.0%	5	1.9%	4	1.5%	9	3.4%
I now attend school/college at this destination	1	0.4%	72	27.6%	13	5.0%	86	33.0%
I now shop in this destination		0.0%	6	2.3%	11	4.2%	17	6.5%
I now socialise with friends at this destination		0.0%	11	4.2%	8	3.1%	19	7.3%
I now use leisure facilities at this destination		0.0%	1	0.4%	1	0.4%	2	0.8%
I now visit healthcare facilities at this destination		0.0%	17	6.5%	9	3.4%	26	10.0%
I now work at this destination		0.0%	55	21.1%	24	9.2%	79	30.3%
On holiday here		0.0%	6	2.3%	5	1.9%	11	4.2%
On personal business in the area		0.0%	3	1.1%		0.0%	3	1.1%
Use for convenience		0.0%		0.0%	5	1.9%	5	1.9%
Visiting friends/family in hospital		0.0%	2	0.8%		0.0%	2	0.8%
Total	**1**	**0.4%**	**180**	**69.0%**	**80**	**30.7%**	**261**	**100.0%**

Of those that were influenced by the Busway, the most common responses were for work, school/college or shopping (Figure 12). The high percentage of ‘no’ amongst education trips runs counter to the anecdotal evidence that the Busway influenced many students in their choice of Cambridge Regional College in preference to Huntingdon. Of the 72 students who replied ‘no’, half were interviewed at Cambridge Regional College halt.

On the other hand, 30% of work journeys did state that they were influenced by the Busway, and 65% of shopping trips (although this was a much smaller sample at 17 responses) stated they were influenced in their destination by the Busway.

Figure 12. Respondents making a new journey on the Busway: new activity



6.3.2. Change in location of an activity: car availability

Of the 261 respondents who had changed location of an activity since the Busway opened, 36% had a car available (as a driver). For those attending school/college in the new location, 64% had no lift or car available to them. But for those now working at the destination, 70% had a car or lift available to them, but chose to use the Busway, Table 28.

Table 28. Change in location of an activity: car or lift availability

	Car available		No car or lift		Lift - part way		Lift - whole way		Total	
	N	%	N	%	N	%	N	%	N	%
Attending a job interview		0.0%	0	0.0%	0	0.0%	1	100.0 %	1	100%
Commute through the area		0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
Have moved	6	66.7%	3	33.3%	0	0.0%	0	0.0%	9	100%
I now attend school/college at this destination	9	10.5%	55	64.0%	9	10.5%	13	15.1%	86	100%
I now shop in this destination	9	52.9%	5	29.4%	1	5.9%	2	11.8%	17	100%
I now socialise with friends at this destination	3	15.8%	12	63.2%	2	10.5%	2	10.5%	19	100%
I now use leisure facilities at this destination	1	50.0%	1	50.0%	0	0.0%	0	0.0%	2	100%
I now visit healthcare facilities at this destination	16	61.5%	7	26.9%	0	0.0%	3	11.5%	26	100%
I now work at this destination	42	53.2%	23	29.1%	5	6.3%	9	11.4%	79	100%
On holiday here	3	27.3%	7	63.6%	0	0.0%	1	9.1%	11	100%
On personal business in the area		0.0%	2	66.7%	0	0.0%	1	33.3%	3	100%
Use for convenience	4	80.0%	1	20.0%	0	0.0%	0	0.0%	5	100%
Visiting friends/family in hospital	1	50.0%	1	50.0%	0	0.0%	0	0.0%	2	100%
Grand Total	**94**	36.0%	**118**	45.2%	**17**	6.5%	**32**	12.3%	261	100%

6.4. Switch to the Busway: change in journey mode

When respondents were already making the same journey before the introduction of the Busway, they were asked which mode(s) they previously used. This is shown in Table 29 which highlights that *bus* was the predominant mode previously used (75%). However, this was significantly higher for bus stop users (89%) compared to Busway halt users (63%). Note that more than one mode may have been reported.

Busway halt users were over three times as likely to have driven the journey (36%) before the Busway opened than bus stop users (10%).

Table 29. Mode previously used to make journey, by bus stop type

	Busway halt user		Bus stop user		All respondents	
	N	%*	N	%*	N	%*
Bus	194	63.2%	254	88.5%	448	75.4%
Car (driver)	**111**	**36.2%**	**29**	**10.1%**	**140**	**23.6%**
Car (car sharing/lift)	**43**	**14.0%**	**31**	**10.8%**	**74**	**12.5%**
Taxi	4	1.3%	2	0.7%	6	1.0%
Cycle	14	4.6%	1	0.3%	15	2.5%
Walk	3	1.0%	3	1.0%	6	1.0%
Rail	2	0.7%		0.0%	2	0.3%
Other	2	0.7%	1	0.3%	3	0.5%
Responses	373	-	321	-	694	-
Respondents	307	100.0%	287	100.0%	594	100.0%

** multiple responses were allowed for this question. The percentage is of respondents.*

6.4.1. Previous journey mode and journey purpose

The journey purpose and the modes used pre-Busway are shown in Table 30. Note that respondents were able to select multiple responses to this question.

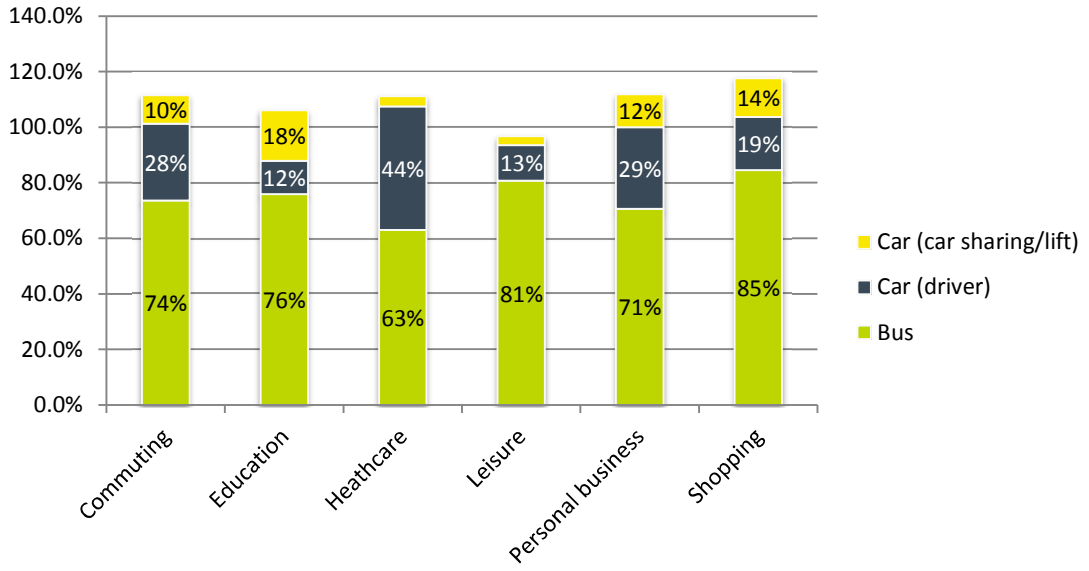
As previously discussed, *bus* was the most commonly used mode before the Busway was in operation. It is noteworthy that commuting accounts for a high proportion of former car journeys, with 72 out of 261 journeys previously being made by car (28%) compared to 19% of shopping trips.

Table 30. Previous journey mode by journey purpose

	Bus	Car (driver)	Car (car sharing/ lift)	Taxi	Cycle	Walk	Rail	Other	Responses	Respondents
Business travel	6	3	3		1	1			**14**	**11**
Commuting	192	72	27	3	5	3		2	**304**	**261**
Education	63	10	15		5	1	1	1	**96**	**83**
Healthcare	17	12	1	1	1				**32**	**27**
Leisure	25	4	1	1	1		1		**33**	**31**
Personal business	12	5	2						**19**	**17**
Religion	1		1						**2**	**1**
Shopping	115	26	19	1	1	1			**163**	**136**
Tourism	1		1						**2**	**2**
Visiting family	1								**1**	**1**
Visiting friends	15	8	4		1				**28**	**24**
Total	**448**	**140**	**74**	**6**	**15**	**6**	**2**	**3**	**694**	**594**

Figure 13 shows the proportion of the most common modes used for a variety of journey purposes. Healthcare had a lower proportion of trips previously made by bus, and a higher proportion of car trips than other journey purposes. Bus use was high for shopping and leisure trips (81% and 85% of respondents).

Figure 13. Previous mode of travel* (most common modes), by journey purpose



*Multiple responses allowed, percentages calculated on the total number of respondents therefore totals will be over 100%

6.4.2. Parking costs

Respondents who stated that they previously drove were asked if they paid for parking, with the results displayed in Table 31.

Table 31. Number of respondents previously paying for parking[11]

	Busway halt		General bus stop		Total	
No	107	73.3%	35	62.5%	142	70.3%
Yes	33	22.6%	17	30.4%	50	24.8%
Can't remember	5	3.4%	4	7.1%	9	4.5%
Don't know	1	0.7%		0.0%	1	0.5%
Total	**146**	100.0%	**56**	100.0%	**202**	100.0%

Those respondents who previously drove, or were given a lift, for their journey were asked how much they paid for parking (Table 32). The responses to this question were not consistent as responses were given by the hour, day, week or month. Weekly or monthly parking charges were assumed to be respondents parking all day for five days a week and were converted into daily rates by dividing by 5 (for weekly charges) or 20 (for monthly). Hourly was kept separate as it was not determinable how long they would be parking for.

Parking charges ranged from 50p to £2.00 an hour; and from £1.80 to £10.00 a day. Significantly, the table suggests that only 50 out of 202 respondents (25%) reported paying a parking fee, implying that up to 74% enjoyed free parking.

[11] Interviewers did not ask respondents who stated other modes other than driving whether they paid for parking – hence the lower total for the drivers than in other tables

Table 32. Parking charges paid by previously driving respondents

Cost (hourly or daily)	Hourly (respondents)	Daily (respondents)
£0.50	2	
£0.60	3	
£1.80		1
£2.00	1	4
£2.40		1
£2.50		3
£2.60		1
£3.00		3
£3.50		2
£4.00		7
£4.50		1
£5.00		8
£6.00		9
£6.25		1
£7.00		2
£10.00		1
	6	**44**

Around 55% of respondents who reported having previously paid a car parking fee did so in Cambridge, with a further 14% in St Ives.

6.5. Changes in use of Busway

6.5.1. Change frequency of use of the Busway

Table 33 details the respondents who had changed the frequency of their journey due to the Busway. Of these, 124 (15%) make the journey more frequently. This proportion was slightly higher for Busway halt respondents (16%) compared to general bus stop respondents (12%).

Table 33. Change in frequency of use of Busway, by stop user

	Busway halt user		Bus stop user		All respondents	
	N	%	N	%	N	%
Don't know	19	3.7%		0.0%	19	2.2%
No - no impact	408	79.8%	297	86.3%	705	82.5%
Yes - I make this journey less frequently	1	0.2%	6	1.7%	7	0.8%
Yes - I make this journey more frequently	83	16.2%	41	11.9%	124	14.5%
Grand Total	**511**	**100.0%**	**344**	**100.0%**	**855**	**100.0%**

6.5.2. Change in frequency of use of Busway

Reasons why the 124 respondents make the journey more frequently are displayed in Table 34. The most common reason overall for making the journey more frequently was because the *Busway provides a more preferable journey experience* followed by the *Busway provides a faster service than my alternative.*

Double the proportion of respondents at a Busway halt felt the Busway provided a more reliable service (than their alternative) than the proportion of respondents at a general bus stop.

Table 34. Reasons for making the journey more frequently, by stop user

	Busway halt user		Bus stop user		All respondents	
	N	%	N	%	N	%
Busway provides a cheaper option than my alternative	5	6.0%		0.0%	5	4.0%
Busway provides a faster service than my alternative	14	16.9%	9	22.0%	23	18.5%
Busway provides a more preferable journey experience	26	31.3%	14	34.1%	40	32.3%
Busway provides a more reliable service than my alternative	12	14.5%	3	7.3%	15	12.1%
General need	17	20.5%	9	22.0%	26	21.0%
Have got a bus pass		0.0%	1	2.4%	1	0.8%
I enjoy the journey		0.0%	1	2.4%	1	0.8%
It's convenient	2	2.4%	1	2.4%	3	2.4%
My alternative transport is no longer available	7	8.4%	3	7.3%	10	8.1%
Total	**83**	**100.0%**	**41**	**100.0%**	**124**	**100.0%**

6.6. Commentary on Mode Share

The survey did not ask those who had changed location (as opposed to mode) what their previous mode of travel was. However, we can ascertain this group's car availability for the journey being made. Table 35 shows that car availability for those who changed location is lower than for those who answered the question on their previous mode. From this it would be reasonable to infer that the mode shift for those who changed location is likely to be lower than those who reported on their previous mode.

Table 35. Car availability and change in location or mode

	Change location	Change mode
Car available for journey	36%	53%
Mode shift: previously as car driver	-	24%

Tables 36 and 37 develop this further. Table 36 shows that car availability is higher for those who stated that the Busway influenced their decision to change location – perhaps surprising since public transport routes dictate the destinations available – and demonstrates the extent to which the Busway appears to be being used as a mode of choice.

Table 36. Car availability and Busway influence on journey location

		Has the implementation of the busway influenced your decision to change location?	
		No	Yes
Do you have a car available for this journey?	No	71%	48%
	Yes	29%	53%

Forty-six percent of previous bus users had a car available for the journey; whereas respondents who previously travelled by cycling or walking had low availability of a car. Ninety-three percent of previous car users retain the use of a car.

Possible reasons for this being less than 100% include:

- Change in car allocation between members of a household as a result of a shift of one or members of that household to bus; or
- Change in household car ownership following introduction of the Busway.

Table 37. Previous modes of travel for respondents with access to a car (as driver)

		How did you previously make this journey?							
		Bus	**Car (driver)**	**Car (sharing / lift)**	**Taxi**	**Cycle**	**Walk**	**Rail**	**Other**
Do you have a car available for this journey?	No	54.0%	7.1%	56.8%	100.0%	80.0%	83.3%	100.0%	66.7%
	Yes	46.0%	92.9%	43.2%	0.0%	20.0%	16.7%	0.0%	33.3%
	Total	448	140	74	6	15	6	2	3

7. Opinion of the Busway

7.1. Overall opinion of Busway

Respondents were asked to state their level of agreement from strongly agree to strongly disagree with a number of statements about the Busway, as follows:

- The Busway is quicker than using a car;
- The arrival time at my destination is more reliable using the Busway than using a car;
- The Busway journey experience is pleasant because the bus doesn't stop very often (at stops or in traffic);
- The Busway service is comfortable;
- The Busway service frequency suits my travel needs;
- The Busway halts/stops are pleasant places to wait;
- I find the Real Time information useful;
- The ability to cycle/be dropped off at the Busway halt/bus stop is useful to me;
- The ability to drive and park my car at the Busway is useful to me;
- Car parking charges encourage me to use the Busway;
- I appreciate the ability to productively use my time on the bus;
- The availability of free WiFi on the bus is useful to me; and
- I like having the choice of Stagecoach or Whippet.

Table 38 summarises the proportion of respondents answering the question who agreed or disagreed with each statement about the Busway.

Overall there is general support amongst users for the Busway service, as over 59% of respondents answered ‘agree’ or ‘strongly agree’ to each statement about the service.

The statement most strongly agreed with (92%) was that ‘*The Busway service is comfortable’.* Strong support was also provided for the Busway frequency (90% agreed or strongly agreed that the service frequency suits their needs) and that use of the service was pleasant due it not stopping very often (85%).

Around 83% of respondents stated that real time information is useful and 81% felt that the Busway halts are pleasant places to wait.

Interestingly, three-quarters replied positively to having the choice between Stagecoach and Whippet, despite the fact that the frequency offered by Whippet is much lower than Stagecoach’s.

Table 38. Summary of agreement with Busway characteristics

	Total providing an opinion*	Strongly agree or agree	Strongly disagree or disagree
The Busway is quicker than using a car	814	73.6%	12.2%
The arrival time at my destination is more reliable using the Busway than using a car	826	78.2%	8.1%
The Busway journey experience is pleasant because the bus doesn't stop very often (at stops or in traffic)	854	85.1%	4.4%
The Busway service is comfortable	854	91.5%	2.2%
The Busway service frequency suits my travel needs	853	89.6%	4.9%
The Busway halts/stops are pleasant places to wait	852	80.5%	4.1%
I find the Real Time information useful	834	82.9%	7.3%
The ability to cycle/be dropped off at the Busway halt/bus stop is useful to me	578	63.0%	19.9%
The ability to drive and park my car at the Busway is useful to me	582	63.7%	17.5%
Car parking charges encourage me to use the Busway	586	59.2%	21.7%
I appreciate the ability to productively use my time on the bus	799	59.9%	11.0%
The availability of free WiFi on the bus is useful to me	680	60.3%	19.7%
I like having the choice of Stagecoach or Whippet	797	74.2%	6.0%

*Totals are calculated on respondents who answered *strongly agree, agree, neutral, disagree, strongly disagree* and *don't know.* Respondents who stated *'not relevant to me'* were excluded from the totals.

The sections below detail the responses to each statement, broken down by the stop user, age, gender and car availability.

Note that within charts 'Agree' relates to all respondents stating they 'agree' or 'strongly agree' with each statement, similarly 'Disagree' relates to all respondents stating they 'disagree' or 'strongly disagree'.

7.2. Opinion by stop user

Although the general pattern of response was the same between Busway halt users and bus stop users, there were varying levels of agreement and disagreement with each statement on the Busway. Figure 14 presents the findings graphically, with the key differences between the two user groups being:

- Busway halt users showed higher levels of agreement that the ability to cycle, be dropped off or park their car at the stop than bus stop users, reflecting the greater use of these access modes at Busway halts;
- Bus stop users showed higher levels of appreciation at the choice of Stagecoach or Whippet than Busway halt users;
- A considerably higher proportion of bus stop users disagreed that parking charges encourage them to use the Busway compared to Busway halt users; reflecting the lower percentage of users transferring from car; and
- The usefulness of wifi on board buses identified some difference between the two user types, with a higher proportion of bus stop users stating that wifi was not useful compared to Busway halt users. This may reflect the lower percentage of commuting, and higher share of short distance journeys, in St Ives and Huntingdon.

The level of consistency between bus stop users and Busway halt users in response to the question “The Busway halts/stops are pleasant places to wait” is perhaps surprising given the disparity in standards between Busway halts and most conventional bus stops.

7.3. Opinion by age

In general age had little influence on the opinion of Busway users. Figure 15 presents the proportion of each age group agreeing with each statement. Key differences between the age groups are:

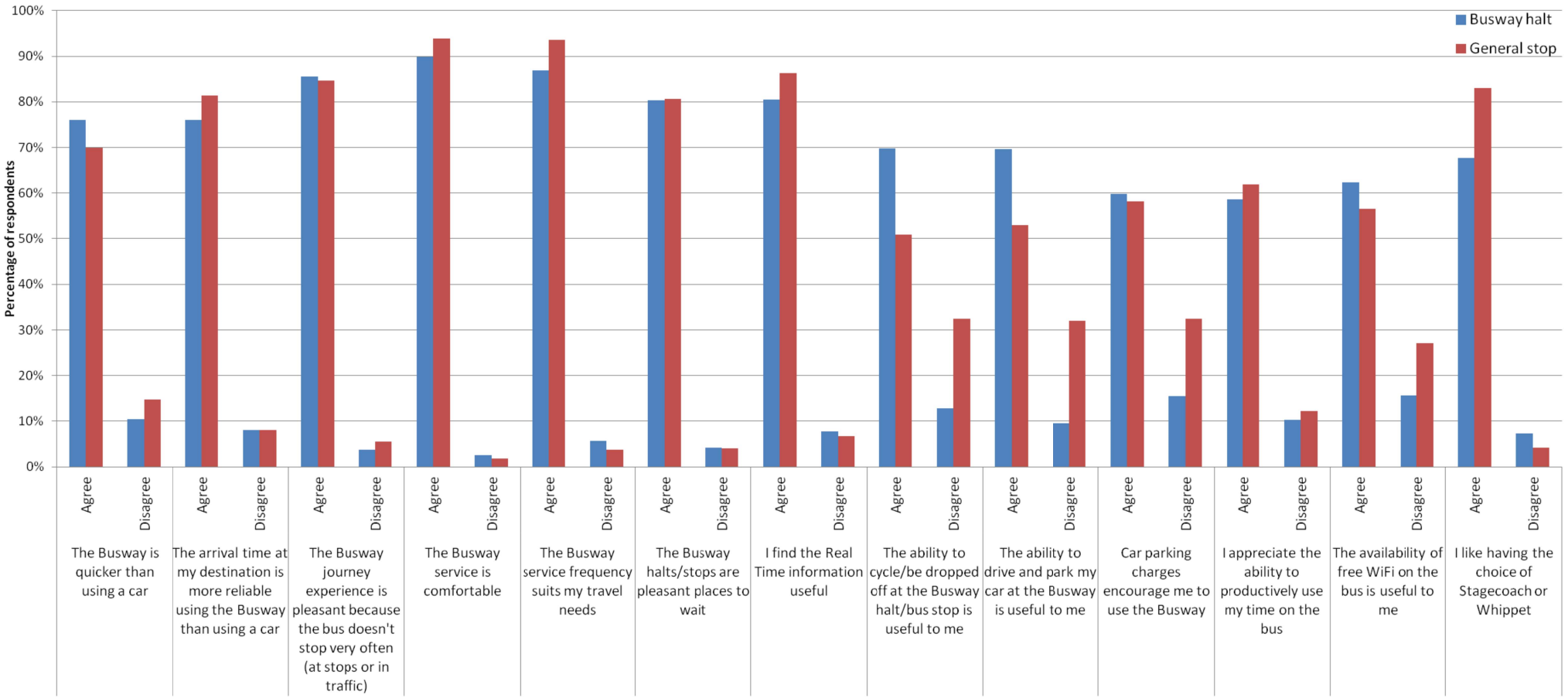
- A higher proportion of over 65’s felt that the Busway journey experience is pleasant because the bus doesn’t stop often than all other age groups;
- Over 65’s and 16-25 year olds showed the strongest agreement that the ‘*Busway service frequency suits my travel needs’* (although for all respondents the level of agreement was high);
- Younger respondents appreciated the ability to cycle and park their bicycle at the bus stop / be dropped off at the stop more than older respondents;
- Generally the abilty to park at the Busway was appreciated more by older respondents;
- The agreement with parking charges influencing Busway use increased with age; and
- The agreement that WiFi on board buses was useful decreased with age.

7.4. Opinion by gender

In general, there was little difference in opinion between genders. However, in each case female respondents showed a higher level of agreement with each statement about the Busway as shown in Figure 16.

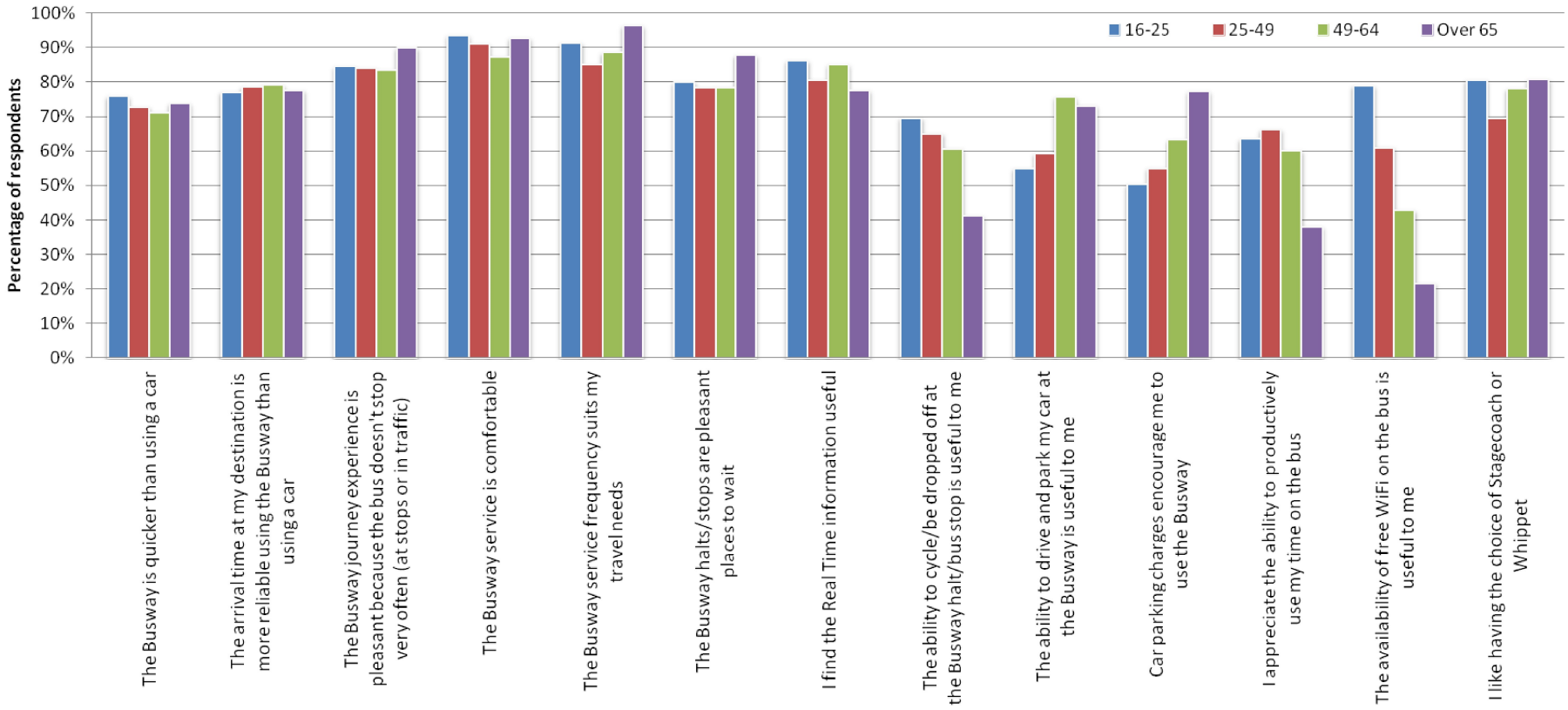
A full breakdown of the responses can be found in Appendix B.

Figure 14. Opinion of Busway, by stop type



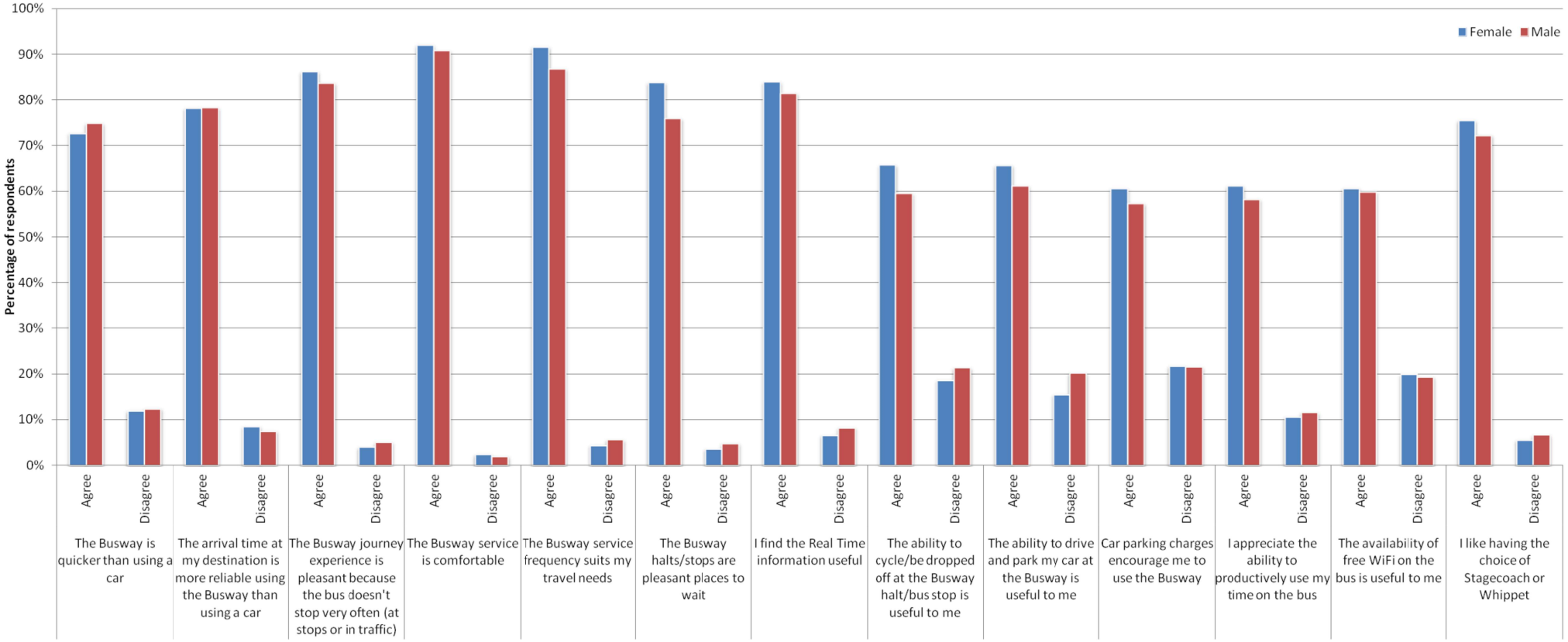
Percentages are calculated on the total number of respondents who answered *strongly agree, agree, neutral, disagree, strongly disagree* and *don't know*. Respondents who stated that '*not relevant to me*' were excluded from the totals.

Figure 15. Opinion of Busway, by age



Percentages are calculated on the total number of respondents who answered *strongly agree, agree, neutral, disagree, strongly disagree* and *don't know*. Respondents who stated that '*not relevant to me*' were excluded from the totals.

Figure 16. Opinion of Busway, by gender



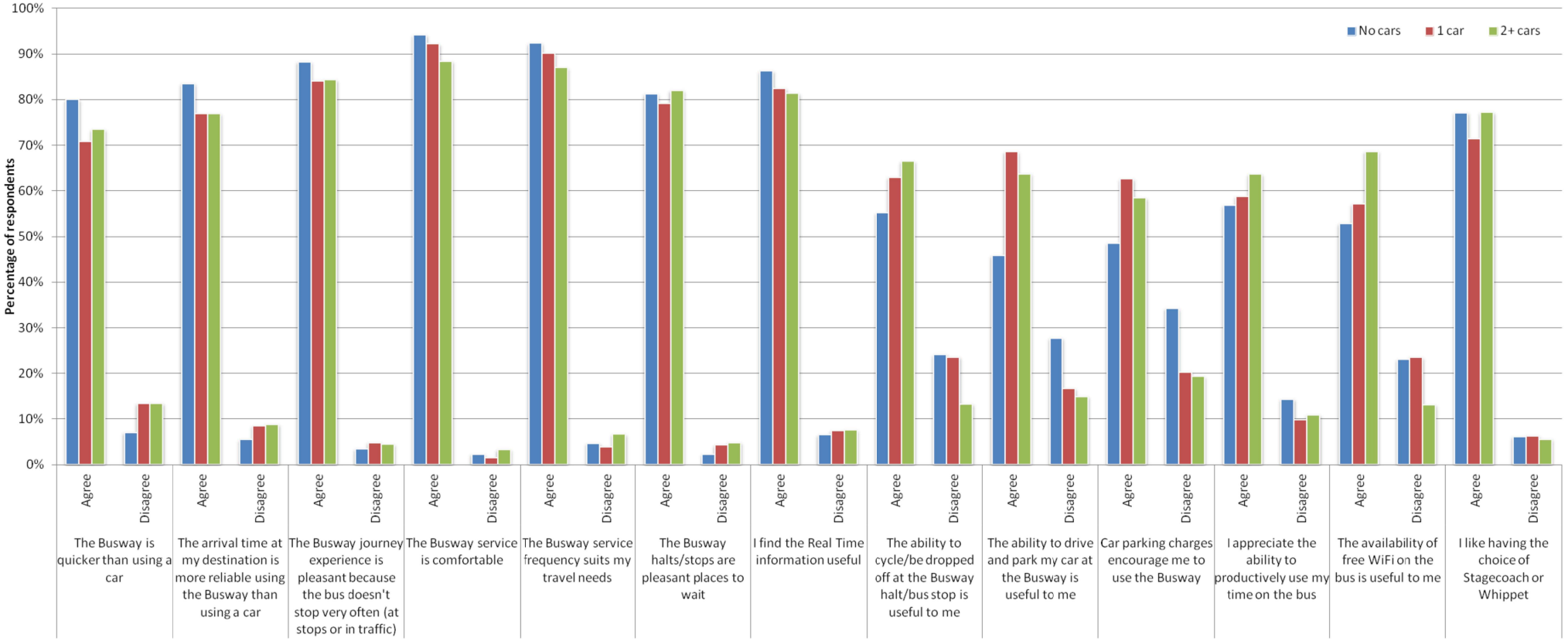
Percentages are calculated on the total number of respondents who answered *strongly agree, agree, neutral, disagree, strongly disagree* and *don't know*. Respondents who stated that '*not relevant to me*' were excluded from the totals.

7.5. Opinion by household car availability

Finally, an examination of the difference of opinion between households without cars and those with cars was undertaken. Figure 17 displays graphically the results for ease of interpretation. Key findings here are:

- Respondents who lived in households without a car showed only slightly stronger levels of agreement than those who had access to a car that the Busway is quicker than using a car, the arrival time is more reliable, and the journey experience is pleasant due to lack of stopping;
- Respondents who lived in households without a car showed only slightly higher levels of agreement than those with access to a car that the Busway service frequency suits their travel needs and the RTI is useful for the journey;
- The usefulness of being able to cycle, be dropped off, or drive and park at the Busway was appreciated more by those from households with a car;
- Those respondents with access to a car showed slightly higher levels of agreement that their time on board the bus could be used productively than those without car access;
- Similarly, the availability of wifi was appreciated more by respondents who had access to a car than those who did not;
- Agreement that time on-bus can be used productively, and that wifi is useful, increases with the number of cars available in the household; and
- Perhaps unsurprisingly, those with access to a car showed stronger agreement that car parking charges encourage them to use the Busway than those without access to a car.

Figure 17. Opinion of Busway, by household car availability



Percentages are calculated on the total number of respondents who answered *strongly agree, agree, neutral, disagree, strongly disagree* and *don't know*. Respondents who stated that '*not relevant to me*' were excluded from the totals.

7.6. Additional Comments

One third (290) of respondents had an additional comment(s) to make on the Busway. These 384 responses were coded into themes and are summarised in Table 39.

Not surprisingly, the most common comment was the need to provide higher frequency. A third of users volunteered that they were happy with the service. The three most frequent negative comments related to the reliability of Real Time Passenger Information; the cost of travel; and the lack of indication of the next stop.

Table 39. Additional Comments

	Frequency	Respondents percentage	Responses Percentage
Need more buses peak times/weekends/school holidays/later	133	45.9%	34.6%
It provides a good service that I am happy with	91	31.4%	23.7%
Journeys are too expensive, it should be cheaper	27	9.3%	7.0%
Want more accurate arrival times and information and less delays	20	6.9%	5.2%
Signs need to be more visible by day and illuminated at night	17	5.9%	4.4%
Need more frequent services throughout the day	14	4.8%	3.6%
Interchangeable/simpler tickets	13	4.5%	3.4%
Problems with the WiFi not working	12	4.1%	3.1%
Quicker service	12	4.1%	3.1%
Polite and friendly drivers	10	3.4%	2.6%
More stops	5	1.7%	1.3%
Some drivers miserable and set off too quickly	5	1.7%	1.3%
Too many delays	4	1.4%	1.0%
Route avoiding the city centre	2	0.7%	0.5%
Need more wheelchair space/better wheelchair access	2	0.7%	0.5%
Waste of money	2	0.7%	0.5%
Need more access from Huntingdon	1	0.3%	0.3%
Need more A buses through St Ives	1	0.3%	0.3%
Need later parking to be available at Oakington	1	0.3%	0.3%
The facilities at the bus stops are appalling	1	0.3%	0.3%
Other	11	3.8%	2.9%
Responses	**384**		
Respondents	**290**		

7.7. How can the Busway be improved?

Twelve percent of respondents (106) commented when asked how to improve the Busway. These responses were grouped thematically and are summarised in Table 40.

Table 40. How to improve the Busway

	Frequency	Responses	Respondents
More frequent buses/longer running service	44	36.7%	41.5%
Broken/not enough ticket machines	16	13.3%	15.1%
Improved signage/visual or voice stop indicators	12	10.0%	11.3%
Need clearer maps and ticketing info	12	10.0%	11.3%
Improve bus shelters	8	6.7%	7.5%
It is a good service	6	5.0%	5.7%
Drivers generally nice	6	5.0%	5.7%
Specific stops requested	3	2.5%	2.8%
Drivers lacking in good service	2	1.7%	1.9%
Other	11	9.2%	10.4%
Responses	**120**	**-**	**-**
Respondents	**106**	**-**	**-**

Frequency again is the key issue, followed by ticketing and mapping. Again, the lack of on-bus 'next stop' indication is indentified as an area to address.

8. Socio-Demographic Analysis

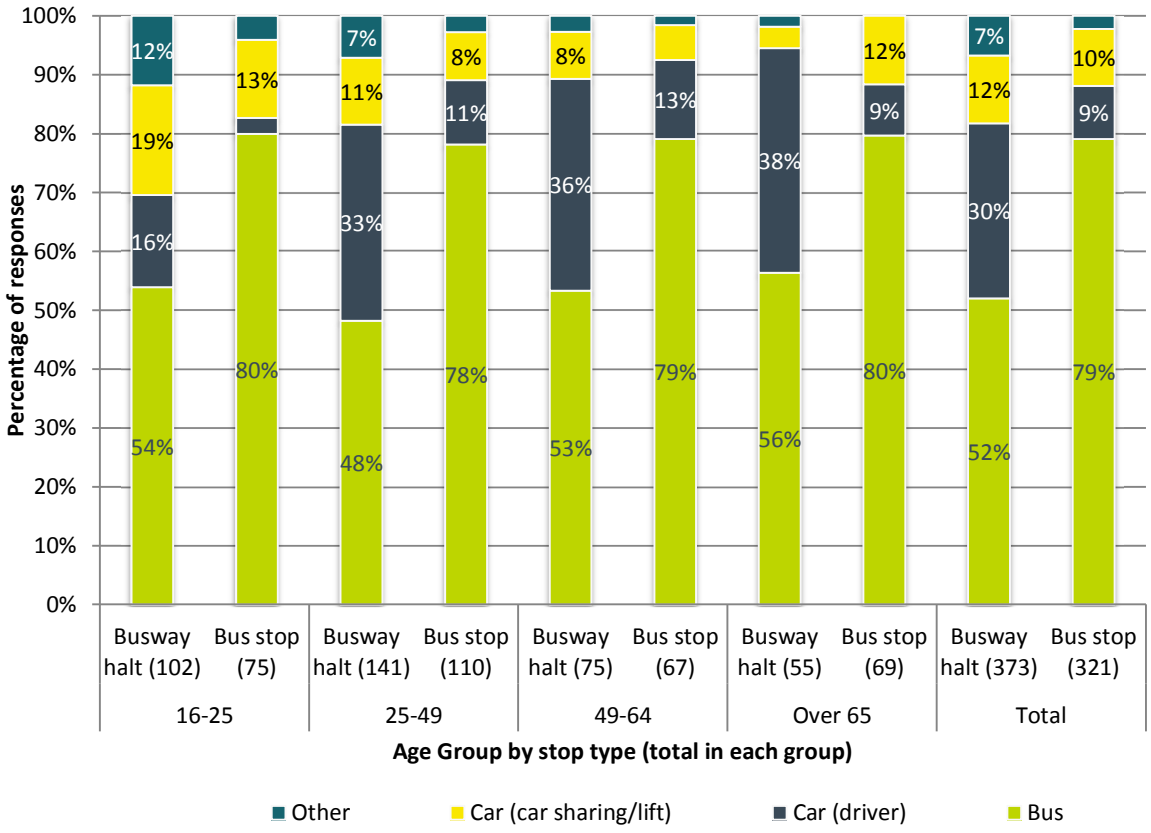
8.1. Previous mode of travel

Respondents were asked which mode of transport they used to undertake the journey before the Busway was in operation. Figure 18 breaks this response down by age. Note that the column totals relate to the total number of responses rather than respondents.

At bus stops, all age groups had similar proportions of bus use previously amongst those interviewed. For Busway halts, previous bus use was lowest for 25-49 year olds (48%) compared with the others (between 53% and 56%). This age group is traditionally associated with low levels of bus use.

Over 65 year olds had the highest proportion of previous bus use (both Busway halt and bus stop users); but this age group also had the highest proportion of respondents previously driving (lift sharing and 'other' modes of transport were low in this age group).

Figure 18. Previous mode of travel, by age (responses)



Females were in general slightly more likely to state bus as a previous mode of transport; with males reporting a higher proportion of driving. Amongst both genders, Busway halts see more evidence than bus stops of mode shift from car, Table 41.

Table 41. Previous mode of travel by gender

	Busway halt user						Bus stop user					
	Female		Male		Total		Female		Male		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Bus	116	54.7%	78	48.4%	194	52.0%	158	81.4%	96	75.6%	254	79.1%
Car (driver)	60	28.3%	51	31.7%	111	29.8%	13	6.7%	16	12.6%	29	9.0%
Car (car sharing/lift)	26	12.3%	17	10.6%	43	11.5%	20	10.3%	11	8.7%	31	9.7%
Taxi	4	1.9%		0.0%	4	1.1%	1	0.5%	1	0.8%	2	0.6%
Cycle	3	1.4%	11	6.8%	14	3.8%		0.0%	1	0.8%	1	0.3%
Walk	1	0.5%	2	1.2%	3	0.8%	2	1.0%	1	0.8%	3	0.9%
Rail	2	0.9%		0.0%	2	0.5%		0.0%		0.0%	0	0.0%
Other		0.0%	2	1.2%	2	0.5%		0.0%	1	0.8%	1	0.3%
Total	**212**	**100%**	**161**	**100%**	**373**	**100%**	**194**	**100%**	**127**	**100%**	**321**	**100%**

In terms of professional occupation, passengers using Busway halts had bus as previous mode in a range of 51% to 61%, with one exception. Respondents who stated their occupation as *higher technical/professional* at Busway halts had the lowest percentage of previous bus use, at 35%. So this occupation has generated a higher level of transfer from car, with 55% of this group at Busway halts previously using car (as driver or passenger) compared to 19% at bus stops.

Previous use of conventional buses was more consistent at bus stops, with between 51% and 61% of respondents (according to occupation) previously using bus.

Clerical and *managerial* roles were most likely to have used a bus for the journey previously. Bus use was high amongst 'other' respondents – who included retired respondents and stay-at-home parents, Figure 19.

Figure 19. Previous mode of travel, by occupation

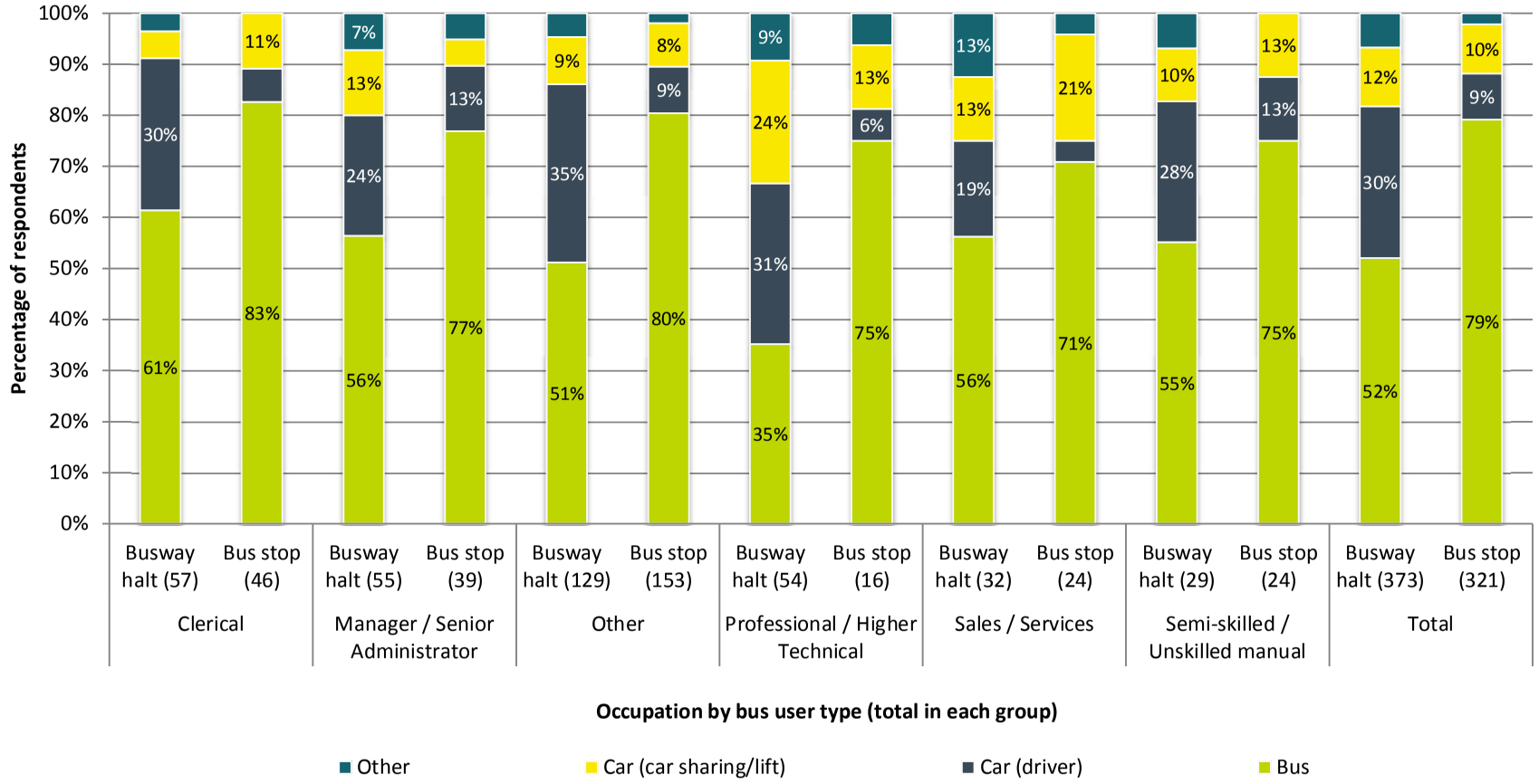
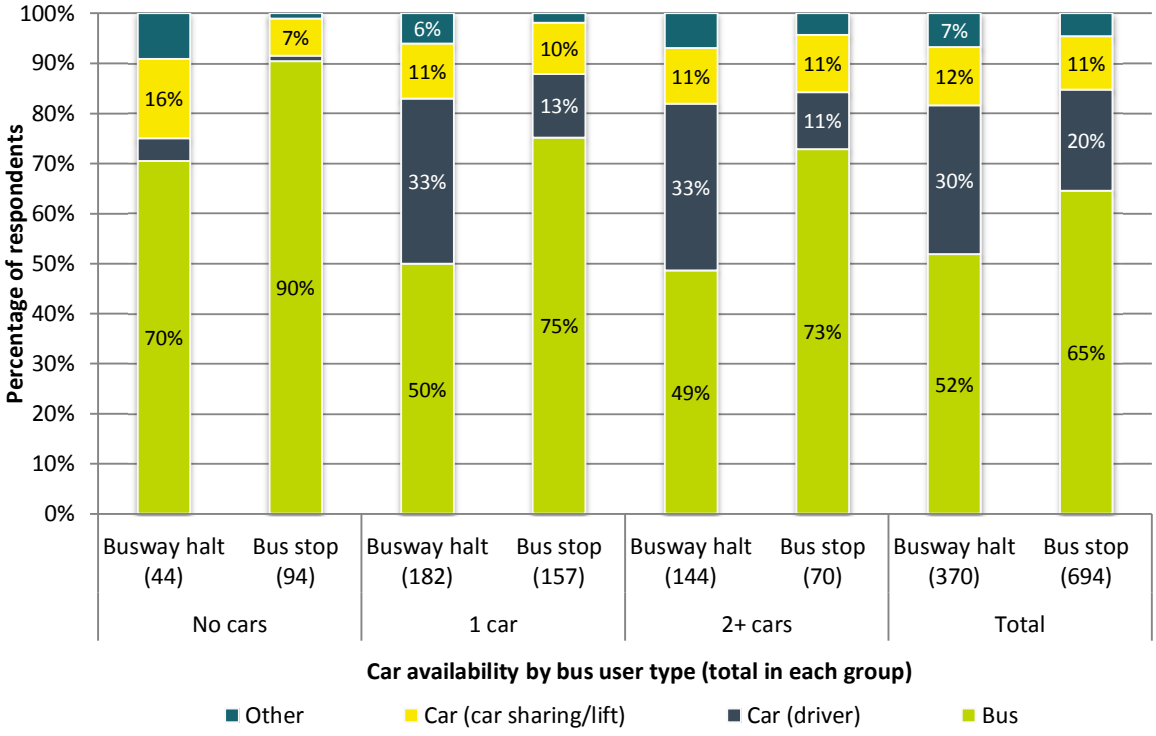


Figure 20 shows the breakdown in household car availability and previous mode used, by bus stops and Busway halts. At both bus stops and Busway halts, respondents from households with no car were most likely to have previously used the bus (70% and 90% respectively). However, the largest number of journeys previously made by means of a lift (16%) occurs amongst the group of Busway halt users. This suggests a significant change in travel behaviour by those without access to a car, with benefits for personal mobility and independence.

Bus as the previous mode used was similar for respondents with 1 car or with 2+ cars, but Busway halt users with a car were significantly less likely to have previously used the bus (50% and 49% for 1 and 2+ car households) than bus stop users (75% and 73% respectively).

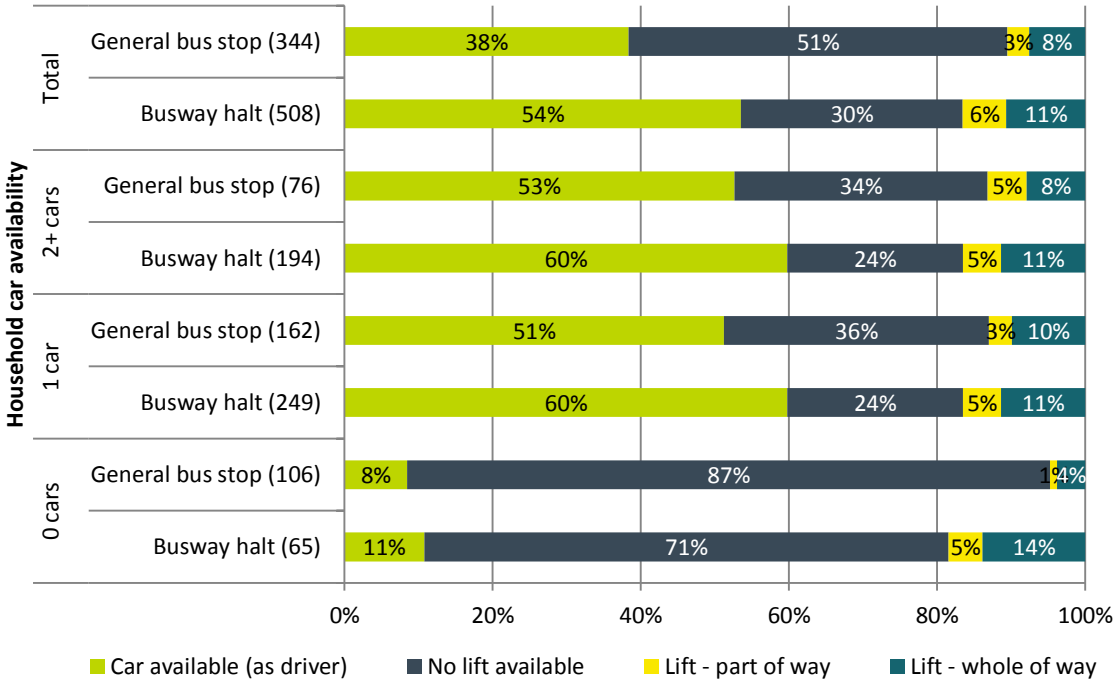
Figure 20. Previous mode of travel, by number of cars in household



8.2. Number of cars in household and car available as driver or passenger

Respondents were asked whether they had a car available (as a driver) or a lift available (all, or part of, the way) to undertake the journey, and this has been cross-referenced with the number of cars available in the household and by bus stop type. Respondents using Busway halts were more likely to have a car available to make the journey (as a driver or a passenger) than those using bus stops. Perhaps surprisingly, the percentage of those with a car available at Busway halts was the same for 1 car and 2+ car household respondents since one would expect availability for a journey to increase as household car ownership increases. This is shown in Figure 21.

Figure 21. Availability of a car or lift for the journey, by household car availability



8.3. Household income, journey purpose and change of location and mode

The majority of commuting journeys were undertaken by those with an income of £30,000 or more; whereas for other trips and bus stop users, the majority of respondents had an income of less than £30,000. Some consistency between Busway halt and bus stop users can be observed, but outside commuting purposes, bus stop use is dominated by groups with an income less than £30,000 (66%), whereas Busway halt users see more users of higher incomes outside commuting journeys.

Figure 22. Journey purpose by income

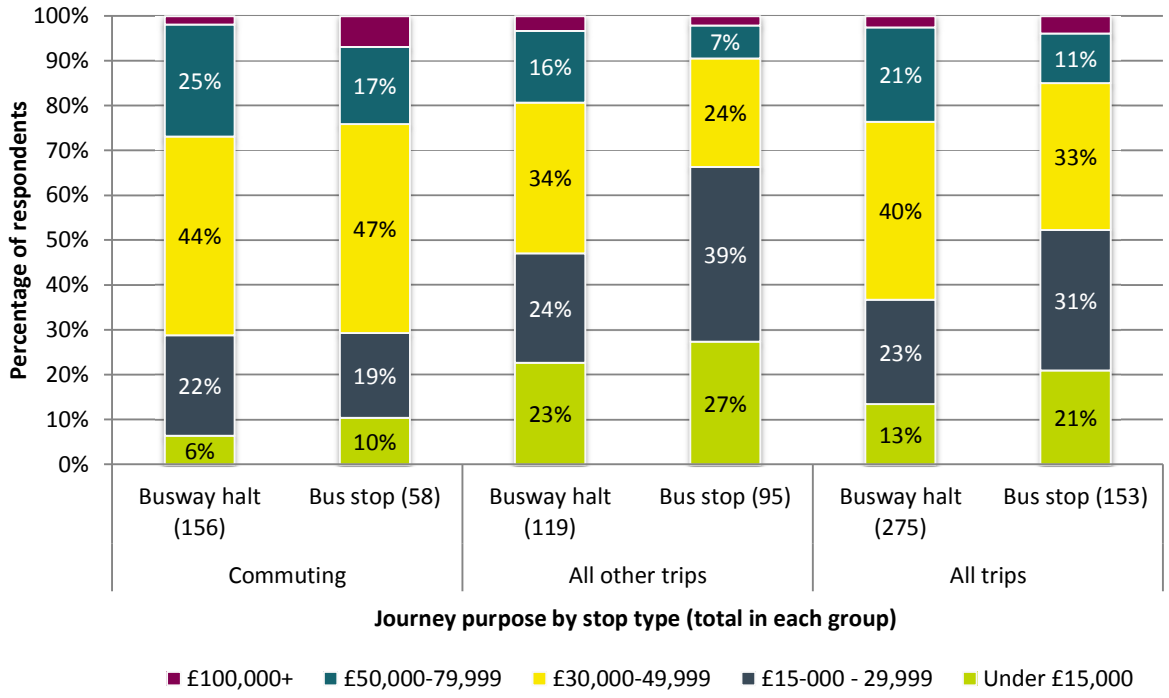
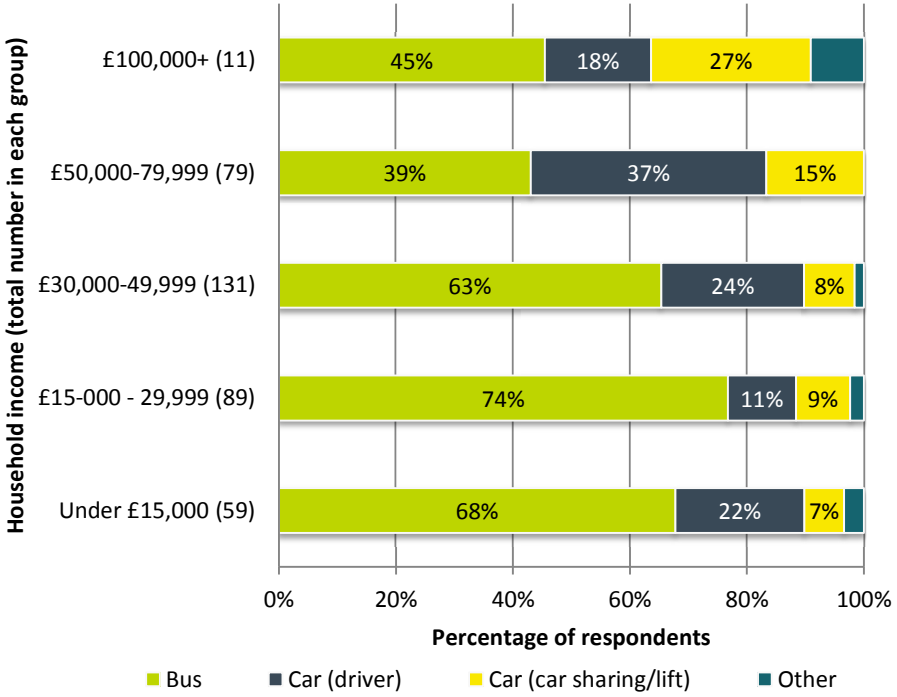


Figure 23 shows the household income and previous mode used for the journey. Bus use as a previous mode was highest for those earning between £15,000-29,000 (74%). Car driving as a previous mode was highest for those earning £50,000-79,000 (37%); when bus use as a previous mode dropped to 39% of respondents amongst this group.

Perhaps more surprising is the high percentage of passengers amongst all income levels whose previous mode was bus. Whilst this tapers away with income, the percentage of passengers whose previous mode was bus is still significant for those in the £50,000 - £79,000 bracket at 37%.

Also of note is that – contrary to expectation, the cohort of previous bus users was not (in terms of percentage) the largest for those in the lowest income bracket. It could be (though we have no evidence) that the Busway is influencing choices of car use (and ownership) amongst those for whom it represents the biggest cost burden. .

Figure 23. Household income and previous mode



9. Conclusions

This study has demonstrated a high level of car availability and mode share amongst conventional bus users in the A14 corridor. This is evidenced particularly by the level of household income amongst those who previously used bus. Nonetheless, the Busway has increased the mode share for bus particularly amongst those of higher income groups, and those with high levels of car ownership. This effect is particularly seen at Busway halts (serving mainly a hinterland of small towns and large villages) compared to bus stops (located mainly in the urban centres of St Ives and Huntingdon).

Table 42 shows the percentage of respondents using the Busway against each income band (where supplied). Those respondents who previously used a bus for the journey are shown beneath this. The proportion of Busway users with an income above £50,000 is higher at 20% than the proportion of those income bands using a bus previously (16%).

Table 42. Household income and bus use

	Under £15,000	£15,000-29,000	£30,000-49,999	£50,000-79,999	£100k+	Total
Busway use	69	110	157	72	10	418
	16.5%	26.3%	37.6%	17.2%	2.4%	100.0%
Previous mode: bus	40	66	83	31	5	225
	17.8%	29.3%	36.9%	13.8%	2.2%	100.0%

Set against this level of bus use by higher income groups, the achievement of the Busway in achieving further mode shift is all the more remarkable. Overall, 24% of all Busway users previously made all or part of their journeys by driving. This effect is seen particularly at Busway halts. Thirty percent of Busway halt users previously drove, and 9% car shared or were given lifts. In comparison, 9% of bus stop users previously drove, and 10% car shared or were given lifts. In terms of the model for Bus Rapid Transit, the Cambridgeshire Guided Busway could be seen as a hybrid. It penetrates not only town and city centres but extensive housing estates on conventional roads – where the system feels like a conventional bus and where one might expect the system to be accessed and used as a conventional bus. The Busway sections, however, represent perhaps a more familiar model of Rapid Transit, and not only provide quick and reliable journeys between areas served by the conventional highway network, but also provide access to surrounding settlements that is more akin to a rail-based system.

It might therefore be expected that users of the Busway halts would access the system in a different way from that for bus stop users, and this is borne out in this survey, with longer access distances and more journeys to the Busway halts being made by car or cycle. What is perhaps more surprising is that the response in terms of mode shift, and the user profile, does appear to be significantly different from Busway halt users than from conventional bus stops. Not only are Busway halt users more likely to be former car drivers and passengers, the evidence suggests that growth in demand is being driven by this group, which in turn implies more mode shift – both now and in the future with further improvements to service frequency. The user of a Busway halt is not only more likely to have previously driven but is also more likely to have travelled further to reach the Busway, to have accessed the Busway by car, to have a managerial or technical occupation and to have a higher household income.

Finally, we can infer that overall bus ridership in the Busway corridor has increased by around 33% since introduction of the Busway – despite introduction of the new fleet in 2009 which itself (we understand) increased bus ridership. Given the volume of movement in and between St Ives and Huntingdon, this implies a much larger increase in the St Ives – Cambridge corridor. Our survey findings (based on the previous mode of Busway halt users) suggest an increase of up to 55% - 60%.

Appendix A. Questionnaire

CAMBRIDGESHIRE GUIDED BUSWAY QUESTIONNAIRE

Interviewer: Note that consent must be obtained from parents / carers before you interview any children under 16.

Good morning/afternoon. I am conducting surveys of bus passengers on behalf of Cambridgeshire County Council to evaluate the use of the guided busway. Please could you spare a couple of minutes to answer some questions for me?

Interviewer: Show MRS Accreditation.

If no: Close interview.

If yes: Thank you. Any information you provide me will remain confidential and I will not at any point ask for your identity. We adhere to the MRS code of conduct and all data will be held in accordance with the data protection act.

Interviewer: complete below at end of interview:

Location: Stop description / BRT Halt name

Date

Time

A. YOUR JOURNEY

Firstly I'd like to ask you some questions about the journey you're about to make on the Busway.

A1. Where are you travelling from? Please can you tell me the location your journey started (e.g. home) rather than Busway stop. *Interviewer: please provide FULL postcode.*

Postcode:	
Description:	

A2. How did you get to the bus stop /halt you're waiting at now? *Select all that apply*

Walked	☐ 1	Cycled	☐ 2
Taxi	☐ 3	Drive and park	☐ 4
Dropped off	☐ 5	Bus	☐ 6
Other, please specify:			☐ 7

A3. What is your final destination today? *Select one option*

Cbge City Centre	☐ 1	Cbge Regional College	☐ 2
Hills Road VI Form College	☐ 3	Long Road VI Form College	☐ 4
Shire Hall	☐ 5	Addenbrooke's Hospital	☐ 6
Cbge Science Park	☐ 7	Central London	☐ 8
St Ives	☐ 9	Huntingdon	☐ 10
Other, please specify (postcode if known)			☐ 11

A4. Do you know the name of the bus stop you will leave this bus at? *Select one option*

St Ives Bus Station	☐ 1	St Ives Park and Ride	☐ 2
Fen Drayton Lakes	☐ 3	Swavesey	☐ 4
Longstanton Park and Ride	☐ 5	Oakington	☐ 6

Histon and Impington	☐ 7	Cbge Regional College	☐ 8
Cbge Science Park	☐ 9	Cbge New Square	☐ 10
Cbge Drummer Street Bus	☐ 11	Cbge Rail Station	☐ 12
Addenbrooke's Hospital	☐ 13	Trumpington, Foster Road	☐ 14
Trumpington, Park and Ride	☐ 15	Other please specify below:	☐ 16

A5. When you leave this bus, how will you complete the journey to your destination? *Select all that apply. Interviewer: if more than one method of transport to reach destination, please code in order of use.*

	Method 1	Method 2	Method 3
Walk	☐ 1	☐ 1	☐ 1
Bus	☐ 2	☐ 2	☐ 2
Cycle	☐ 3	☐ 3	☐ 3
Train	☐ 4	☐ 4	☐ 4
Taxi	☐ 5	☐ 5	☐ 5
Other	☐ 6	☐ 6	☐ 6
Don't know	☐ 7	☐ 7	☐ 7

A6. What is the purpose of your journey today? *Select one option*

Commuting	☐ 1	Business travel	☐ 2
Education	☐ 3	Shopping	☐ 4
Personal business	☐ 5	Visiting friends	☐ 6
Leisure	☐ 7	Tourism	☐ 8
Healthcare	☐ 9	Other, please specify below	☐ 10

A7. How often do you make this journey on the Busway? *Select one option*

Daily	☐ 1	2-3 times a week	☐ 2
Weekly	☐ 3	Monthly	☐ 4
Less often	☐ 5	Never	☐ 6

A8. How often do you make this SAME journey by a different mode? *Select one option*

Daily	☐ 1	2-3 times a week	☐ 2
Weekly	☐ 3	Monthly	☐ 4
Less often	☐ 5	Never	☐ 6

Interviewer: If A8 = 'Never' go to A10, Else A9

A9. What other method of transport do you use for this journey? *Select all that apply*

Bicycle	☐ 1	Car (as a driver)	☐ 2
Car (car sharing or a lift)	☐ 3	Taxi	☐ 4
Rail	☐ 5	Walking	☐ 6
Other, please specify:			☐ 7

A10. Do you have a car available for this journey? (either a car of your own or getting a lift) *Select one option*

Yes	☐1	No	☐2

Interviewer: If A10 = 'No', go to A11, Else go to A13.

A11. Do you have someone available to give you a lift by car? *Select one option*

Yes – for part of the journey	☐1	Yes – for the whole journey	☐2
No	☐3		

Interviewer: If A11 = No, go to A13. Else go to A12.

A12. Who is able to give you a lift by car on this journey? *Select all that apply*

Member of household	☐1	A friend	☐2
Other			☐3

A13. How far is it from *[answer to A1]* **to this stop / halt? Please provide your best estimate.**

Metres: OR Miles:

A14. What type of ticket are you using for your journey? *Please select one option.*

	Single	**Return**	**Dayrider / Dayrider Plus / Just Go (Stagecoach smart card)**	**Weekly Megarider / Megarider Plus / Just Go Weekly**	**4 weekly or longer Megarider**	**Smartcard / Carnet**
Stagecoach	☐1	☐2	☐3	☐4	☐5	
Whippet	☐1	☐2	☐3	☐4		
First bus that comes	☐1	☐2	☐3	☐4		
Multi-operator						☐1
Concessionary Bus	☐1	☐2	☐3	☐4	☐5	☐6

B. REASONS FOR USING THE BUSWAY

Now I'd like to ask you about why you are making this journey on the Busway.

Thinking about the journey you are making today from [A1] **to** [A3]**….**

B1. How long have you been making this journey by the Busway? *Select one answer*

This is the first time	☐1	1 week	☐2
1 week to 1 month	☐3	1 – 3 months	☐4
3+ months	☐5	Since the Busway opened (August 2011)	☐6

B2. Before you started using the Busway, did you make this journey from [A1] **to** [A3]**?** *Select one answer*

Yes	☐1	No	☐2

Interviewer: IF B2 = "No", go to B3. Else go to B5.

B3. Why do you now make this journey?

I now attend school / college at this destination	☐1	I now work at this destination	☐2
I now shop in this destination	☐3	I now visit healthcare facilities at this destination	☐4
I now socialise with friends at this destination	☐5	I now use leisure facilities at this destination	☐6
Other, please specify:			☐7

Interviewer: if respondent has changed school / work / shopping etc location ask B4. Else go to B7.

B4. Would you say that the Busway influenced your decision to change the location you *[answer to B3]***?** *Select one answer*

Yes	☐1	No	☐2

Interviewer: Go to B7.

B5. How did you previously make this journey? *Select all that apply*

Bus	☐1	Car (as a driver)	☐2
Car (car sharing or a lift)	☐3	Taxi	☐4
Cycle	☐5	Walk	☐6
Rail	☐7	Other	☐8

Interviewer: If B5 = 'Car' (as a driver or car sharing / lift), go to B6. Else go to B7.

B6. If car, did you pay a parking charge at your destination? *Select all that apply*

Yes, if so how much? (please specify below)	☐1	No	☐2
Parking charge:			

B7. Has the frequency you make THIS journey on the Busway changed since you first started using the service? *Select one answer*

Yes – I now make this journey more frequently	☐1
Yes – I now make this journey less frequently	☐2
No – it has had no impact	☐3
Don't know	☐4

Interviewer: if B7 = 'more frequently' go to B8. If B7 = 'less frequently' go to B9. Else go to B10.

B8. Why do you now make this journey on the Busway more frequently? *Select one answer*

General need to make this journey purpose more frequently	☐1
My alternative transport is no longer available	☐2
Busway provides a more **preferable journey experience** than my alternative	☐3
Busway provides a more **reliable** service than my alternative	☐4
Busway provides a **faster** service than my alternative	☐5
Other, please specify:	☐6

B9. Why do you now make this journey on the Busway less frequently? *Select one answer*

General reduction in making this journey	☐1
Due to overcrowding on the Busway	☐2
Due to the Busway becoming less reliable	☐3
I have since got a car	☐4
I have since been able to car share / have been given lifts to my destination	☐5
I prefer to use another method of transport (please specify):	☐6
Other, please specify:	☐7

B10. Please can you tell us how strongly you agree or disagree with the following statements about the Busway: *Please select one response per row.*

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Not relevant to me	Don't know
The Busway is quicker than using a car	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The arrival time at my destination is more reliable using the Busway than using a car	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The Busway journey experience is pleasant because the bus doesn't stop very often (at stops or in traffic)	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The Busway service is comfortable	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The Busway service frequency suits my travel needs	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The Busway halts/stops are pleasant places to wait	☐1	☐2	☐3	☐4	☐5	☐6	☐7
I find the Real Time Information useful	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The ability to cycle / be dropped off at the Busway halt / bus stop is useful to me	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The ability to drive and park my car at the Busway is useful to me	☐1	☐2	☐3	☐4	☐5	☐6	☐7
Car parking charges encourage me to use the Busway	☐1	☐2	☐3	☐4	☐5	☐6	☐7
I appreciate the ability to productively use my time on bus	☐1	☐2	☐3	☐4	☐5	☐6	☐7
The availability of free WiFi on bus is useful to me	☐1	☐2	☐3	☐4	☐5	☐6	☐7
I like having the choice of Stagecoach or Whippet	☐1	☐2	☐3	☐4	☐5	☐6	☐7

B11. Is there anything else you would like to comment on regarding the Busway?

_____

_____

C. ABOUT YOU

1. **I would now like to ask you some questions about yourself. These will only be used for classification purposes and responses will be kept confidential.**
2.
3. **C1. What is your FULL home postcode?** *Interviewer – please try to collect full postcodes. May have already taken in A1.*

Postcode: _____ Refused ☐2

C2. Which of the following age groups do you fall under? *Interviewer: select response under relevant gender. Do NOT ask gender.*

	Male	Female
Under 16	☐1	☐1
16-25	☐2	☐2
25-49	☐3	☐3
49-64	☐4	☐4
Over 65	☐5	☐5
Refused	☐6	☐6

C3. Do you have any disabilities that affect the way you travel?

No	☐1	Refused	☐2
Yes (please state_____)			☐3

C4. Which of the following ethnic backgrounds describes you? *Select one option. These are Census 2001 ethnicity groupings.*

White (White British, White Irish, or any other white background)	☐1
Mixed (White and Black Caribbean, White and Black African, White and Asian, any other mixed	☐2
Asian or Asian British (Indian, Pakistani, Bangladeshi, any other Asian background)	☐3
Black or Black British (Caribbean, African, any other black background)	☐4
Chinese or other ethnic group (Chinese, or any other ethnic group)	☐5
Refused	☐6

C5. Which of these categories best describes your job? *Select one option.*

Professional/Higher Technical	☐1
Manager/Senior Administrator	☐2
Clerical	☐3
Sales/Services	☐4
Foreman/Supervisor	☐5
Skilled Manual	☐6
Semi-Skilled/Unskilled Manual	☐7
Other (please specify)	☐8
Refused	☐9

C6. How many adults are there in your household?_____

C7. How many cars are there in your household? _____

C8. And which of the following best describes your gross annual household income? *Select one option.*

Under £15,000	☐ 1
£15,000 - £19,999	☐ 2
£20,000 - £29,999	☐ 3
£30,000 - £39,999	☐ 4
£40,000 - £49,999	☐ 5
£50,000 - £59,999	☐ 6
£60,000 - £69,999	☐ 7
£70,000 - £99,999	☐ 8
£100,000 - £149,999	☐ 9
£150,000 and over	☐ 10
Refused	☐ 11

C9. Finally, do you have any further comments or suggestions on how the Busway could be improved?

Those were all my questions, many thanks for taking the time to complete our questionnaire.

Appendix B. Supporting Data Tables

B.1. Chapter 4

Table B 1 - Ethnicity

Ethnic group	Number of respondents	Percentage of respondents	South Cambridgeshire breakdown
White (White British, White Irish or any other white background	785	91.8%	97.1%
Mixed (White and Black Caribbean, White and Black African, White and Asian, any other mixed background)	21	2.5%	0.9%
Asian or Asian British (Indian, Pakistani, Bangladeshi, any other Asian background)	28	3.3%	0.9%
Black or Black British (Caribbean, African, any other black background)	10	1.2%	0.4%
Chinese or other ethnic group	9	1.1%	0.7%
Refused	2	0.2%	na
Total	855	100.0%	100.0%

B.2. Chapter 5

Table B 2 – Mode of travel after leaving bus: where origin is 'home'

	Busway halt		General bus stop		All respondents	
	N	%	N	%	N	%
Bus	5	1.9%	6	3.0%	11	2.4%
Cycle	1	0.4%		0.0%	1	0.2%
Other	43	16.3%	4	2.0%	47	10.2%
Taxi		0.0%	1	0.5%	1	0.2%
Train	5	1.9%	3	1.5%	8	1.7%
Walk	200	76.0%	182	91.9%	382	82.9%
Combination	9	3.4%	1	5.1%	10	2.2%
Grand Total	**263**	100.0%	**198**	100.0%	**461**	100.0%

*Combination counts respondents who stated more than one mode for onwards travel, i.e. train then bus (1 respondent); train, walk, other (1); walk, bus (2); walk, cycle (1); walk, other (2); walk, taxi, bus (1).

Table B 3 – Mode of travel to bus stop: where origin is not 'home'

Row Labels	Busway halt		General bus stop		All respondents	
	N	%	N	%	N	%
Bus	8	1.6%	17	4.9%	25	2.9%
Drive and park	7	1.4%	0	0.0%	7	0.8%
Dropped off	9	1.8%	2	0.6%	11	1.3%
Train	1	0.2%	1	0.3%	2	0.2%
Walk	223	43.6%	126	36.6%	349	40.8%
Grand Total	511	100.0%	344	100.0%	855	100.0%

B.3. Chapter 7

Table B 4 The Busway is quicker than using a car

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	122	23.9%	70	20.3%	192	22.5%
Agree	249	48.7%	158	45.9%	407	47.6%
Neither agree nor disagree	45	8.8%	28	8.1%	73	8.5%
Disagree	42	8.2%	41	11.9%	83	9.7%
Strongly disagree	9	1.8%	7	2.0%	16	1.9%
Don't know	21	4.1%	22	6.4%	43	5.0%
Not relevant to me	23	4.5%	18	5.2%	41	4.8%
Total	**511**	100.0%	**344**	100.0%	**855**	100.0%

Table B 5 The arrival time at my destination is more reliable using the busway than using a car

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	110	21.5%	75	21.8%	185	21.6%
Agree	265	51.9%	196	57.0%	461	53.9%
Neither agree nor disagree	61	11.9%	20	5.8%	81	9.5%
Disagree	33	6.5%	23	6.7%	56	6.5%
Strongly disagree	7	1.4%	4	1.2%	11	1.3%
Don't know	17	3.3%	15	4.4%	32	3.7%
Not relevant to me	18	3.5%	11	3.2%	29	3.4%
Total	**511**	100.0%	**344**	100.0%	**855**	100.0%

Table B 6 The Busway journey experience is pleasant because the bus doesn't stop very often

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	116	22.7%	79	23.0%	195	22.8%
Agree	320	62.6%	212	61.6%	532	62.2%
Neither agree nor disagree	44	8.6%	26	7.6%	70	8.2%
Disagree	16	3.1%	17	4.9%	33	3.9%
Strongly disagree	3	0.6%	2	0.6%	5	0.6%
Don't know	11	2.2%	8	2.3%	19	2.2%
Not relevant to me	1	0.2%		0.0%	1	0.1%
Total	**511**	100.0%	**344**	100.0%	**855**	100.0%

Table B 7 The Busway service is comfortable

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	128	25.0%	101	29.4%	229	26.8%
Agree	330	64.6%	222	64.5%	552	64.6%
Neither agree nor disagree	29	5.7%	8	2.3%	37	4.3%
Disagree	9	1.8%	5	1.5%	14	1.6%
Strongly disagree	4	0.8%	1	0.3%	5	0.6%
Don't know	10	2.0%	7	2.0%	17	2.0%
Not relevant to me	1	0.2%		0.0%	1	0.1%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 8 The Busway service frequency suits my needs

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	140	27.4%	108	31.4%	248	29.0%
Agree	303	59.3%	213	61.9%	516	60.4%
Neither agree nor disagree	31	6.1%	6	1.7%	37	4.3%
Disagree	23	4.5%	11	3.2%	34	4.0%
Strongly disagree	6	1.2%	2	0.6%	8	0.9%
Don't know	7	1.4%	3	0.9%	10	1.2%
Not relevant to me	1	0.2%	1	0.3%	2	0.2%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 9 The Busway halts/stops are pleasant places to wait

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	86	16.8%	81	23.5%	167	19.5%
Agree	324	63.4%	195	56.7%	519	60.7%
Neither agree nor disagree	69	13.5%	49	14.2%	118	13.8%
Disagree	19	3.7%	14	4.1%	33	3.9%
Strongly disagree	2	0.4%		0.0%	2	0.2%
Don't know	10	2.0%	3	0.9%	13	1.5%
Not relevant to me	1	0.2%	2	0.6%	3	0.4%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 10 I find the RTI useful

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	104	20.4%	91	26.5%	195	22.8%
Agree	293	57.3%	203	59.0%	496	58.0%
Neither agree nor disagree	44	8.6%	16	4.7%	60	7.0%
Disagree	30	5.9%	18	5.2%	48	5.6%
Strongly disagree	8	1.6%	5	1.5%	13	1.5%
Don't know	14	2.7%	8	2.3%	22	2.6%
Not relevant to me	18	3.5%	3	0.9%	21	2.5%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 11 The ability to cycle/be dropped off is useful to me

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	60	11.7%	17	4.9%	77	9.0%
Agree	197	38.6%	90	26.2%	287	33.6%
Neither agree nor disagree	40	7.8%	24	7.0%	64	7.5%
Disagree	30	5.9%	46	13.4%	76	8.9%
Strongly disagree	17	3.3%	22	6.4%	39	4.6%
Don't know	24	4.7%	11	3.2%	35	4.1%
Not relevant to me	143	28.0%	134	39.0%	277	32.4%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 12 The ability to drive and park at Busway is useful

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	75	14.7%	18	5.2%	93	10.9%
Agree	187	36.6%	91	26.5%	278	32.5%
Neither agree nor disagree	39	7.6%	24	7.0%	63	7.4%
Disagree	21	4.1%	43	12.5%	64	7.5%
Strongly disagree	15	2.9%	23	6.7%	38	4.4%
Don't know	39	7.6%	7	2.0%	46	5.4%
Not relevant to me	135	26.4%	138	40.1%	273	31.9%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 13 Car parking charges encourage me to use the Busway

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	65	12.7%	58	16.9%	123	14.4%
Agree	158	30.9%	66	19.2%	224	26.2%
Neither agree nor disagree	53	10.4%	13	3.8%	66	7.7%
Disagree	37	7.2%	54	15.7%	91	10.6%
Strongly disagree	21	4.1%	15	4.4%	36	4.2%
Don't know	39	7.6%	7	2.0%	46	5.4%
Not relevant to me	138	27.0%	131	38.1%	269	31.5%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 14 I appreciate the ability to productively use my time on the bus

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	50	9.8%	28	8.1%	78	9.1%
Agree	231	45.2%	170	49.4%	401	46.9%
Neither agree nor disagree	110	21.5%	76	22.1%	186	21.8%
Disagree	40	7.8%	35	10.2%	75	8.8%
Strongly disagree	9	1.8%	4	1.2%	13	1.5%
Don't know	39	7.6%	7	2.0%	46	5.4%
Not relevant to me	32	6.3%	24	7.0%	56	6.5%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 15 The availability of free WiFi on bus is useful to me

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	59	11.5%	39	11.3%	98	11.5%
Agree	213	41.7%	99	28.8%	312	36.5%
Neither agree nor disagree	74	14.5%	31	9.0%	105	12.3%
Disagree	44	8.6%	48	14.0%	92	10.8%
Strongly disagree	24	4.7%	18	5.2%	42	4.9%
Don't know	22	4.3%	9	2.6%	31	3.6%
Not relevant to me	75	14.7%	100	29.1%	175	20.5%
Total	511	100.0%	344	100.0%	855	100.0%

Table B 16 I like having the choice of Stagecoach or Whippet

	Busway halt		General bus stop		Both stop types	
	Respondents	Percent	Respondents	Percent	Respondents	Percent
Strongly agree	76	14.9%	98	28.5%	174	20.4%
Agree	237	46.4%	180	52.3%	417	48.8%
Neither agree nor disagree	96	18.8%	37	10.8%	133	15.6%
Disagree	23	4.5%	13	3.8%	36	4.2%
Strongly disagree	11	2.2%	1	0.3%	12	1.4%
Don't know	19	3.7%	6	1.7%	25	2.9%
Not relevant to me	49	9.6%	9	2.6%	58	6.8%
Total	511	100.0%	344	100.0%	855	100.0%

Appendix C.

C.1. Frequency tables for all survey questions

A. YOUR JOURNEY

A1. Where are you travelling from? Please can you tell me the location your journey started (e.g. home) rather than Busway stop. *Interviewer: please provide FULL postcode.*

Journey Origin (pre-busway stop)	Frequency	Percent
Home	461	54.0%
Work	155	18.1%
College	59	6.9%
Centre	41	4.8%
Cambridge centre	28	3.3%
Treatment centre	27	3.2%
City centre	9	1.1%
City	6	0.7%
Friends house	5	0.6%
Host family	4	0.5%
Hotel	4	0.5%
Station	4	0.5%
Hills road college	3	0.4%
Addenbrooke's	2	0.2%
Cambridge city centre	2	0.2%
Fanshawe road	2	0.2%
Friends	2	0.2%
Premier inn	2	0.2%
Shire hall	2	0.2%
Shops	2	0.2%
St ives centre	2	0.2%
Buckden	1	0.1%
Business	1	0.1%
Cambridge	1	0.1%
Cambridge college	1	0.1%
Castle and gardens	1	0.1%
Cherry hinton	1	0.1%
Church hill	1	0.1%
City - college	1	0.1%
Covent garden	1	0.1%

Drummer street	1	0.1%
Emmanuel college	1	0.1%
Fathers home	1	0.1%
Grafton centre	1	0.1%
Guest house	1	0.1%
Hills road	1	0.1%
Library	1	0.1%
London	1	0.1%
Mayfield college	1	0.1%
Na	1	0.1%
Place staying	1	0.1%
Rail station	1	0.1%
Ramsey road school	1	0.1%
Relatives house	1	0.1%
Ruskin	1	0.1%
Ruskin university	1	0.1%
St andrews	1	0.1%
St andrews st	1	0.1%
Station road	1	0.1%
The county arms	1	0.1%
Town centre	1	0.1%
Trumpington	1	0.1%
Work - pembroke street	1	0.1%
Total	**854**	**100.0%**

A2. How did you get to the bus stop /halt you're waiting at now? *Select all that apply*

	Frequency	Percent
Walked	666	77.9%
Bus	70	8.2%
Drive and park	48	5.6%
Dropped off	46	5.4%
Cycled	16	1.9%
Train	3	0.4%
Taxi	3	0.4%
Wheelchair	1	0.1%
Mobility scooter	1	0.1%
Drive and park, bus	1	0.1%
Total	**855**	**100.0%**

A3. What is your final destination today? *Select one option*

Destination	Frequency	Percent
Cambridge City Centre	226	26.4%
Postcode supplied	189	22.1%
St Ives	144	16.8%
Huntingdon	56	6.5%
Cambridge Regional College	42	4.9%
Addenbrooke's Hospital	23	2.7%
Cambridge Science Park	15	1.8%
Orchard Park	15	1.8%
Shire Hall	14	1.6%
Longstanton	14	1.6%
Histon	13	1.5%
Swavesey	11	1.3%
Trumpington	11	1.3%
Hills Road 6th Form College	9	1.1%
Long Road 6th Form College	9	1.1%
Royston	8	0.9%
Central London	7	0.8%
Over	6	0.7%
Oakington	5	0.6%
Fenstanton	3	0.4%
Impington	3	0.4%
Grafton Centre	3	0.4%
Somersham	3	0.4%
Bar Hill	3	0.4%
Houghton	2	0.2%
Cottenham	2	0.2%
Bluntisham	2	0.2%
Hertfordshire (AL5, SG4)	2	0.2%
Cherry Hinton	2	0.2%
Cambridge Rail Station	2	0.2%
Refused	1	0.1%
Peterborough	1	0.1%
Girton	1	0.1%
Melbourn	1	0.1%
Saffron Walden	1	0.1%
Letchworth	1	0.1%

Buntingford	1	0.1%
Comberton	1	0.1%
Bedford (MK44)	1	0.1%
Haverhill	1	0.1%
Godmanchester	1	0.1%
Total	855	100.0%

A4. Do you know the name of the bus stop you will leave this bus at? *Select one option*

	Frequency	Percent
Cambridge, Drummer Street Bus Station	162	18.9%
St Ives Bus Station	140	16.4%
St Ives Park and Ride	85	9.9%
Huntingdon	60	7.0%
Cambridge Regional College	46	5.4%
Cambridge New Square	43	5.0%
Cambridge Rail Station	38	4.4%
Longstanton Park and Ride	34	4.0%
Swavesey	31	3.6%
Trumpington, Park and Ride	29	3.4%
Histon and Impington	27	3.2%
Orchard Park	26	3.0%
Ramsey Road	26	3.0%
Addenbrooke's Hospital	21	2.5%
Cambridge Science Park	17	2.0%
Shire Hall	13	1.5%
Oakington	10	1.2%
Hartford Road	7	0.8%
Trumpington, Foster Road	6	0.7%
Hill Rise	6	0.7%
Somersham	5	0.6%
Refused	3	0.4%
Harttford Marina	2	0.2%
Bar Hill	2	0.2%
Castle Street	2	0.2%
Don't know name but recognise my stop	2	0.2%
Long Road	2	0.2%
Cherry Hinton	2	0.2%
Fen Drayton Lakes	1	0.1%
Bluntingham	1	0.1%

Thorndown	1	0.1%
East Street	1	0.1%
Grafton Centre	1	0.1%
Haverhill	1	0.1%
St Neots	1	0.1%
London	1	0.1%
Total	**855**	**100.0%**

A5. When you leave this bus, how will you complete the journey to your destination? *Select all that apply. Interviewer: if more than one method of transport to reach destination, please code in order of use.*

	Frequency	Percent
Walk	649	75.9%
Other	142	16.6%
Bus	27	3.2%
Train	15	1.8%
Cycle	8	0.9%
Taxi	2	0.2%
Bus, Walk	3	0.4%
Walk, Bus	3	0.4%
Walk, Other	2	0.2%
Train, Walk, Other	1	0.1%
Train, Bus	1	0.1%
Walk, Cycle	1	0.1%
Walk, Taxi, Bus	1	0.1%
Total	**855**	**100.0%**

NB – order of modes corresponds to order used for completing journey

A6. What is the purpose of your journey today? *Select one option*

	Frequency	Percent
Commuting	343	40.1%
Education	170	19.9%
Shopping	159	18.6%
Healthcare	52	6.1%
Leisure	43	5.0%
Visiting friends	38	4.4%
Personal business	25	2.9%
Business Travel	12	1.4%
Tourism	11	1.3%
Visiting family	1	0.1%
Religion	1	0.1%
Total	**855**	**100.0%**

A7. How often do you make this journey on the Busway? *Select one option*

	Frequency	Percent
Daily	376	44.0%
2-3 times a week	188	22.0%
Weekly	119	13.9%
Monthly	57	6.7%
Less often	97	11.3%
Never	18	2.1%
Total	**855**	**100.0%**

A8. How often do you make this SAME journey by a different mode? *Select one option*

	Frequency	Percent
Daily	30	3.5%
2-3 times a week	57	6.7%
Weekly	51	6.0%
Monthly	53	6.2%
Less often	75	8.8%
Never	588	68.8%
It varies	1	0.1%
Total	**855**	**100.0%**

Interviewer: If A8 = 'Never' go to A10, Else A9

A9. What other method of transport do you use for this journey? *Select all that apply*

	Frequency	Percent (respondents)	Percent (responses)
Car (as a driver)	109	40.8%	39.4%
Car (car sharing or a lift)	101	37.8%	36.5%
Bicycle	27	10.1%	9.7%
Walking	13	4.9%	4.7%
Bus	12	4.5%	4.3%
Taxi	7	2.6%	2.5%
Rail	5	1.9%	1.8%
Other local bus	2	0.7%	0.7%
Motorcycle	1	0.4%	0.4%
Respondents	**267**	**-**	**-**
Responses	**277**	**-**	**100.0%**

A10. Do you have a car available for this journey?

	Frequency	Percent
Yes	406	47.5%
No	449	52.5%
Total	**855**	**100.0%**

Interviewer: If A10 coded 1 ('Yes'), go to A13. Else go to A11

A11. Do you have someone available to give you a lift by car? *Select one option*

	Frequency	Percent
No	329	73.3%
Yes - for the whole journey	80	17.8%
Yes - for part of the journey	40	8.9%
Total	**449**	**100.0%**

Interviewer: If A11 = No, go to A13. Else go to A12.

A12. Who is able to give you a lift by car on this journey? *Select all that apply*

	Frequency	Percent
Member of household	82	68.3%
A friend	35	29.2%
Other	3	2.5%
Total	**120**	**100.0%**

A13. How far is it from *[answer to A1]* **to this stop / halt? Please provide your best estimate.**

Distance to stop	Frequency	Percent
<50m	56	10.4%
51-100m	32	5.9%
101-300m	73	13.5%
301-500m	63	11.7%
501m-1km	126	23.4%
1-3km	103	19.1%
3-5km	46	8.5%
5-10km	25	4.6%
10km+	15	2.8%
Not answered	316	
Total	855	
Valid responses	**539**	**100.0%**

Percentages = removed 'not answered'

A14. What type of ticket are you using for your journey? *Please select one option.*

	Stagecoach	Whippet	First bus that arrives	Multi-operator	Concession	Respondents	
Single	77	2	2	0	69	**150**	**17.6%**
Return	90	9	6	0	39	**144**	**16.9%**
Dayrider/Dayrider Plus/Just Go (Stagecoach smart card)	189	4	1	0	8	**202**	**23.7%**
Weekly Megarider/Megarider Plus/Just Go Weekly	181	7	5	0	4	**197**	**23.1%**
Four Weekly or longer Megarider	64	0	0	0	40	**104**	**12.2%**
Smartcard/Carnet	0	0	0	42	15	**57**	**6.7%**
Respondents	**601**	**22**	**14**	**42**	**175**	**854**	**100.0%**
	70.4%	**2.6%**	**1.6%**	**4.9%**	**20.5%**	**100.0%**	

B. REASONS FOR USING THE BUSWAY

Now I'd like to ask you about why you are making this journey on the Busway.

Thinking about the journey you are making today from [A1] **to** [A3]**….**

B1. How long have you been making this journey by the Busway? *Select one answer*

	Frequency	Percent
This is the first time	55	6.4%
1 week	18	2.1%
1 week to 1 month	35	4.1%
1 to 3 months	58	6.8%
3+ months	151	17.7%
Since the Busway opened (August 2011)	538	62.9%
Total	**855**	**100.0%**

B2. Before you started using the Busway, did you make this journey from [A1] **to** [A3]**?** *Select one answer*

	Frequency	Percent
Yes	594	69.5%
No	261	30.5%
Total	**855**	**100.0%**

Interviewer: IF B2 = "No", go to B3. Else go to B5.

B3. Why do you now make this journey? (Main Reason – code one only)

	Frequency	Percent
I now attend school / college at this destination	86	33.0%
I now work at this destination	79	30.3%
I now visit healthcare facilities at this destination	26	10.0%
I now socialise with friends at this destination	19	7.3%
I now shop in this destination	17	6.5%
On holiday here	11	4.2%
Have moved here	9	3.4%
Use for convenience	5	1.9%
On personal business in the area	3	1.1%
I now use leisure facilities at this destination	2	0.8%
Visiting friend\family in hospital	2	0.8%
Going for job interview	1	0.4%
Commute through the area	1	0.4%
Total	**261**	**100.0%**

B4. Would you say that the Busway influenced your decision to *[answer to B3]* **at your destination?**

	Frequency	Percent
Yes	80	30.7%
No	180	69.0%
Don't know	1	0.4%
Total	**261**	**100.0%**

Interviewer: Go to B7.

B5. How did you previously make this journey? *Select all that apply*

	Frequency	Percentage Responses	Percentage Respondents
Bus	448	64.6%	75.4%
Car (as a driver)	140	20.2%	23.6%
Car (car sharing or a lift)	74	10.7%	12.5%
Cycle	15	2.2%	2.5%
Taxi	6	0.9%	1.0%
walk	6	0.9%	1.0%
Other	3	0.4%	0.5%
Rail	2	0.3%	0.3%
Responses	**694**	**100%**	/
Respondents	**594**	/	**116.8%**

Interviewer: If B5 = 'Car' (as a driver or car sharing / lift), go to B6a. Else go to B7.

B6.a If car, did you pay a parking charge at your destination?

	Frequency	Percent
Yes	53	26.2%
No	142	70.3%
Don't know	1	0.5%
Can't remember the amount	6	3.0%
Total	**202**	**100.0%**

Interviewer: If coded 2 ('No') to QB6a go to B7

B6.b What was the parking charge?

Cost (hourly or daily)	Hourly	Daily
£0.50	2	
£0.60	3	
£2.00	1	
£1.80		1
£2.00		4
£2.40		1
£2.50		3
£2.60		1
£3.00		3
£3.50		2
£4.00		7
£4.50		1
£5.00		8
£6.00		9
£6.25		1
£7.00		2
£10.00		1
	6	**44**

NB Weekly/Monthly parking charges were converted into daily by dividing by 5 or 20 days. Hourly was kept separate as it was not determinable how long they would be parking for.

B7. Has the frequency you make THIS journey on the Busway changed since you first started using the service? *Select one answer*

	Frequency	Percent
Yes - I now make this journey more frequently	124	14.5%
Yes - I now make this journey less frequently	7	0.8%
No - it has had no impact	705	82.5%
Don't know	19	2.2%
Total	**855**	**100.0%**

Interviewer: if B7 = 'more frequently' go to B8. If B7 = 'less frequently' go to B9. Else go to B10.

B8. Why do you now make this journey on the Busway more frequently? *Select one answer*

	Frequency	Percent
Busway provides a preferable journey experience to my alternative	40	32.3%
General need to make this journey purpose more frequently	26	21.0%
Busway provides a faster service than my alternative	23	18.5%
Busway provides a more reliable service than my alternative	15	12.1%
My alternative transport is no longer available	10	8.1%
It is a cheaper option	5	4.0%
It is convenient	3	2.4%
Enjoy the journey	1	0.8%
Have got a bus pass	1	0.8%
Total	**124**	**100.0%**

B9. Why do you now make this journey on the Busway less frequently? *Select one answer*

	Frequency
General reduction in making this journey	4
Due to the Busway becoming less reliable	1
I prefer to use another method of transport	1
Work shifts so cannot always get a bus	1
	7

NB Numbers not large enough for percentages.

B10. Please can you tell us how strongly you agree or disagree with the following statements about the Busway: *Interviewer: Please code one response per row.*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Not relevant to me	Don't know
The Busway is quicker than using a car	192	407	73	83	16	41	43
The arrival time at my destination is more reliable using the Busway than using a car	185	461	81	56	11	29	32
The Busway journey experience is pleasant because the bus doesn't stop very often (at stops or in traffic)	195	532	70	33	5	1	19
The Busway service is comfortable	229	552	37	14	5	1	17
The Busway service frequency suits my travel needs	248	516	37	34	8	2	10
The Busway halts/stops are pleasant places to wait	167	519	118	33	2	3	13
I find the Real Time information useful	195	496	60	48	13	21	22
The ability to cycle/be dropped off at the Busway halt/bus stop is useful to me	77	287	64	76	39	277	35
The ability to drive and park my car at the Busway is useful to me	93	278	63	64	38	273	46
Car parking charges encourage me to use the Busway	123	224	66	91	36	269	46
I appreciate the ability to productively use my time on the bus	78	401	186	75	13	56	46
The availability of free WiFi on the bus is useful to me	98	312	105	92	42	175	31
I like having the choice of Stagecoach or Whippet	174	417	133	36	12	58	25

	Strongly Agree or Agree		Strongly Disagree or Disagree	
The Busway is quicker than using a car	599	70.1%	99	11.6%
The arrival time at my destination is more reliable using the Busway than using a car	646	75.6%	67	7.8%
The Busway journey experience is pleasant because the bus doesn't stop very often (at stops or in traffic)	727	85.0%	38	4.4%
The Busway service is comfortable	781	91.3%	19	2.2%
The Busway service frequency suits my travel needs	764	89.4%	42	4.9%
The Busway halts/stops are pleasant places to wait	686	80.2%	35	4.1%
I find the Real Time information useful	691	80.8%	61	7.1%
The ability to cycle/be dropped off at the Busway halt/bus stop is useful to me	364	42.6%	115	13.5%
The ability to drive and park my car at the Busway is useful to me	371	43.4%	102	11.9%
Car parking charges encourage me to use the Busway	347	40.6%	127	14.9%
I appreciate the ability to productively use my time on the bus	479	56.0%	88	10.3%
The availability of free WiFi on the bus is useful to me	410	48.0%	134	15.7%
I like having the choice of Stagecoach or Whippet	591	69.1%	48	5.6%

B11. Is there anything else you would like to comment on regarding the Busway?

	Frequency	Percent
Yes	290	33.9%
No	565	66.1%
Total	855	100.0%

If yes, what?

	Frequency	Respondents percentage	Responses Percentage
Need more buses peak times/weekends/school holidays/later	133	45.9%	34.6%
It provides a good service that I am happy with	91	31.4%	23.7%
Journeys are too expensive, it should be cheaper	27	9.3%	7.0%
Want more accurate arrival times and information and less delays	20	6.9%	5.2%
Signs need to be more visible by day and illuminated at night	17	5.9%	4.4%
Need more frequent services throughout the day	14	4.8%	3.6%

Interchangeable/simpler tickets	13	4.5%	3.4%
Problems with the WiFi not working	12	4.1%	3.1%
Quicker service	12	4.1%	3.1%
Polite and friendly drivers	10	3.4%	2.6%
More stops	5	1.7%	1.3%
Some drivers miserable and set off too quickly	5	1.7%	1.3%
Too many delays	4	1.4%	1.0%
Route avoiding the city centre	2	0.7%	0.5%
Need more wheelchair space/better wheelchair access	2	0.7%	0.5%
Waste of money	2	0.7%	0.5%
Need more access from Huntingdon	1	0.3%	0.3%
Need more A buses through St Ives	1	0.3%	0.3%
Need later parking to be available at Oakington	1	0.3%	0.3%
The facilities at the bus stops are appalling	1	0.3%	0.3%
Other	11	3.8%	2.9%
Respondents	**290**		
Responses	**384**		

C. ABOUT YOU:
I would now like to ask you some questions about yourself. These will only be used for classification purposes and responses will be kept confidential.

C2.a Which of the following age groups do you fall under?

	Frequency	Percent
Under 16	1	0.1%
16-25	265	31.0%
25-49	290	33.9%
49-64	158	18.5%
Over 65	140	16.4%
Refused	1	0.1%
Total	**855**	**100.0%**

C2.b Gender (*Interviewer complete do not ask gender)*

	Frequency	Percent
Male	356	41.6%
Female	499	58.4%
Total	855	100.0%

C3.a Do you have any disabilities that affect the way you travel?

	Frequency	Percent
Yes	31	3.6%
No	823	96.3%
Refused	1	0.1%
Total	855	100.0%

C3.b Please state disability

	Frequency	Percent
Mobility problems	18	56.3%
Mental health problems - depression	2	6.3%
Hearing difficulties	4	12.5%
Had a stroke - no longer allowed to drive	2	6.3%
Learning difficulties	2	6.3%
Epilepsy	2	6.3%
Partially sighted	2	6.3%
	32	**100.0%**

C4. Which of the following ethnic backgrounds describes you? *Select one option. These are Census 2001 ethnicity groupings.*

	Frequency	Percent
White (White British, White Irish or any other white background	785	91.8%
Mixed (White and Black Caribbean, White and Black African, White and Asian, any other mixed background)	21	2.5%
Asian or Asian British (Indian, Pakistani, Bangladeshi, any other Asian background)	28	3.3%
Black or Black British (Caribbean, African, any other black background)	10	1.2%
Chinese or other ethnic group	9	1.1%
Refused	2	0.2%
Total	855	100.0%

C5. Which of these categories best describes your job? *Select one option.*

	Frequency	Percent
Professional / Higher Technical	98	11.5%
Manager / Senior Administrator	104	12.2%
Clerical	123	14.4%
Sales / Services	64	7.5%
Foreman / Supervisor	6	0.7%
Skilled Manual	40	4.7%
Semi-Skilled / Unskilled manual	54	6.3%
Refused	22	2.6%
Unemployed	15	1.8%
Retired	148	17.3%
Student	163	19.1%
Do not work - Housewife	15	1.8%
Do not work - long term sick	2	0.2%
Disabled	1	0.1%
Total	**855**	**100.0%**

C6. How many adults are there in your household?

	Frequency	Percent
1	128	15.0%
2	447	52.3%
3	192	22.5%
4	55	6.4%
5	24	2.8%
6	3	0.4%
7	1	0.1%
8	1	0.1%
10	1	0.1%
REFUSED	3	0.4%
Total	855	100.0%

C7. How many cars are there in your household?

	Frequency	Percent
0	171	20.0%
1	411	48.1%
2	230	26.9%
2 and 1 motorbike	1	0.1%
3	27	3.2%
4	6	0.7%
5	5	0.6%
6	1	0.1%
REFUSED	3	0.4%
Total	855	100.0%

C8. And which of the following best describes your gross annual household income? *Select one option.*

	Frequency	Percent	Percent Valid Responses*
Under £15,000	69	8.1%	16.1%
£15,000 - £19,999	52	6.1%	12.1%
£20,000 - £29,999	60	7.0%	14.0%
£30,000 - £39,999	78	9.1%	18.2%
£40,000 - £49,999	81	9.5%	18.9%
£50,000 - £59,999	29	3.4%	6.8%
£60,000 - £69,999	22	2.6%	5.1%
£70,000 - £99,999	24	2.8%	5.6%
£100,000 - £149,999	6	0.7%	1.4%
£150,000 and over	7	0.8%	1.6%
Refused	306	35.8%	-
Don't know	121	14.2%	-
Total	**855**	**100.0%**	**100.0%**

*428 responses when “Refused” and “Don’t know” removed

C9. Finally, do you have any further comments or suggestions on how the Busway could be improved?

	Frequency	Percent
Yes	106	12.4%
No	749	87.6%
Total	**855**	**100.0%**

All comments:

	Frequency	Responses	Respondents
Need more buses on for peak times and rush hours	20	16.7%	18.9%
Improve signage for upper deck passengers and have voiced or visual signs to tell you where you are	12	10.0%	11.3%
Need more frequent buses and buses running later in the evening	10	8.3%	9.4%
Fix the ticket machines, they don't always accept money or cards	9	7.5%	8.5%
It is a very good service	7	5.8%	6.6%
There are not enough ticket machines	7	5.8%	6.6%
Night services are unreliable and should run later	6	5.0%	5.7%
Provide more bus shelters and fix the leaking ones	5	4.2%	4.7%
Need earlier and later services at weekends for workers	5	4.2%	4.7%
Need clearer timetables and maps on display	5	4.2%	4.7%
Leave the services and routes alone, don't change them	4	3.3%	3.8%
Should make fares and tariffs clearer to help first time users	4	3.3%	3.8%
Have some very nice bus drivers	3	2.5%	2.8%
Most drivers are nice but some get annoyed if you cannot get the ticket from the machine and get on the bus with money	3	2.5%	2.8%
Need better shelters \ waiting areas with more lighting for nights and bad weather	3	2.5%	2.8%
Bus drivers need further training in how to be polite and how to give good service	2	1.7%	1.9%
Would like a toilet on the bus	2	1.7%	1.9%
Buses should run later in the evening from the station, at least until after the last train	2	1.7%	1.9%
Need more buses through Somersham on weekends and off peak times	1	0.8%	0.9%
The toilet facilities at St Ives bus station could be better	1	0.8%	0.9%
Need a stop on Hamilton Road, the bus drives past anyway	1	0.8%	0.9%
Need more stops at Orchard Park	1	0.8%	0.9%
Would like buses to stop in some of the villages even if they only run every couple of hours	1	0.8%	0.9%
Buses should be run to suit the Community and not just for profits	1	0.8%	0.9%
Should have subsidised travel for students	1	0.8%	0.9%
Make it easier to buy Smartcards	1	0.8%	0.9%
All buses should accept Dayriders	1	0.8%	0.9%
Should offer off peak discounts for some services	1	0.8%	0.9%
Put in a bus stop at Staples on Westbrooke Centre	1	0.8%	0.9%
Responses	**120**	**100.0%**	**-**
Respondents	**106**	**-**	**100.0%**