transportfocus

Transport Focus Bus Passenger Survey

Methodological overview – autumn 2014 wave

March 2015

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1   Background

Transport Focus first established the Bus Passenger Survey (BPS) in April 2009 to generate a robust and comprehensive measure of bus passengers' journey experience within our remit area (England outside of London). The survey is an objective measure of bus passengers' experience on individual journeys and it covers: the bus stop environment, punctuality, 'on bus' comfort, the standards of the bus driver, together with overall journey satisfaction and value for money ratings. The Bus Passenger Survey has a well-established methodology, achieved over many waves of this survey.

Transport Focus allows local transport authorities and bus service operators (operators) to 'buy into' the survey to achieve boosted response numbers in their territories of interest.

BDRC Continental was appointed by Transport Focus to provide the market research agency services needed to carry out the autumn 2014 wave of the survey.   BDRC Continental is an independent market research agency and conducts research in accordance with the Market Research Society (MRS) Code of Conduct and all work is conducted in accordance with the ISO 20252 Quality Assurance Standard.   BDRC Continental is also an MRS Company Partner Scheme member.

This document describes the methodology in general and specifics as they relate to the autumn 2014 BPS wave. If there are any further questions about the methodology deployed in the survey, please call Murray Leader on 0300 123 0843.

2   Survey Overview

The BPS is designed to provide results that are statistically representative of bus passenger journeys made within a Sampling Area (SA). Sampling Areas are typically local transport authority areas or the divisions of a bus operator. A passenger journey is defined as an individual trip made on a local bus service. The survey is a measure of individual journey experience. It is designed to provide results that have utility at the Sampling Area level, and in certain circumstances at remit wide level.

The sampling process generates a list of bus routes representative of journeys made in each Sampling Area selected. Fieldworkers board buses on a representative sample of bus routes; they discuss the survey with individual passengers on these buses and invite them to take part in the survey; those wishing to take part are handed a self-completion paper questionnaire, asked to complete it after their journey and return it using the pre-paid envelope provided.   The survey is restricted to passengers aged 16 and over. Weighting is applied to correct for differential response rates by age and gender. Weighting was also applied to proportionate the individual Sampling Areas.

2.1   The Sampling Areas surveyed in the autumn 2014 wave

PTE authorities: West Midlands; Coventry VMA routes within West Midlands; Merseytravel; quality partnership routes within Merseytravel; West Yorkshire Combined Authority; Tyne & Wear; and Go-North East within Tyne and Wear; South Yorkshire; and Greater Manchester.

Unitary authorities: Blackpool; Medway; Milton Keynes; Northumberland County Council; Tees Valley Group*; Thurrock; West England Partnership**; and City of York.

Two tier authorities: Devon; Essex; Gloucestershire; Kent; Norfolk; Nottinghamshire; Oxfordshire; Staffordshire; and Suffolk.

Operators not aligned to authority areas: Abellio routes (in Surrey); First Potteries; First in Hampshire; Reading Buses; Brighton & Hove Bus; Plymouth City Bus; Metrobus; Thames Travel; Oxford Buses Park & Ride; Konectbus; Anglian Buses; Hedingham & Chambers; Bluestar; Wilts & Dorset; and Southern Vectis.

Areas in Scotland: North East Scotland; South East Scotland; Strathclyde; and Tayside & Central; Lothian Buses; and First in Glasgow.

*Comprised of Redcar & Cleveland, Middlesbrough, Stockton on Tees, Hartlepool, Darlington council areas
**Bath and North East Somerset, Bristol City Council, North Somerset, South Gloucestershire council areas

3 Sampling

The sampling process is designed to ensure representative results are achieved for each Sampling Area surveyed.

Sometimes in some Sampling Areas, sample design also accommodates requests to boost specific routes or Operators, so that substantive response numbers can be achieved for these groups; where this occurs, they are suitably weighted back when producing the final Sampling Area results. In this wave, the following were sampled as sub-Sampling Areas within their respective areas:

- Routes covered by the Coventry Voluntary Multilateral Agreement (VMA) within the West Midlands PTE area

- Routes covered by the Quality Partnership (QP) within the Merseyside PTE area

- Go North East routes within the Tyne & Wear PTE area

- Lothian Buses within South East Scotland

- First in Glasgow within the Strathclyde area of Scotland.

3.1 Sample design

A sample is designed for each Sampling Area. The sample is sourced from ITO World Ltd (which collects and makes available the bus journey data shown by Traveline). To ensure the research encompasses the totality of routes, the starting point is to use the information from ITO World Ltd to make a list of every bus service and every timetabled occurrence of each service that runs within each Sampling Area. Bus journeys that start outside 06.00 to 21.59 are excluded (as these are outside the fieldwork hours).

This data source has some additional key fields including: the local transport authority through which the route runs, if it crosses a Local Transport Authority boundary, the journey length in minutes, the start/finish bus stops. Experience to date has not suggested that this sample source omits any noticeable proportion of journeys. (A small proportion of journeys sampled in advance of the fieldwork are found to have been withdrawn or changed (e.g. timetable changes) by the time of fieldwork itself. However the effect of this is relatively minor and is usually due to local changes made in the short period between sampling and fieldwork, rather than due to inaccuracies in the sample source.)

The sampling process is described below:

1. The journey duration of every timetabled occurrence of every bus service is calculated using the stated start and end times provided by ITO World Ltd. Journeys which go beyond the Area boundary use the proportion of the journey within the Area

boundary (unless this is less than 30% of its total route time, and the portion of the journey within the area is under 15 minutes; these journeys are removed from this initial list). The SA list (of every timetabled occurrence of every bus route) is now sorted in descending journey lengths.

2. The SA list is now divided into quintiles. A ratio is determined, termed R, between the lowest value of the highest quintile (quintile 1 - longest journey lengths) and the highest value of the lowest quintile (quintile 5 – shortest journey lengths) within the SA. If R exceeds 2.0 then in the next step R is set to 2.0; this limits the accommodation made for the journey length adjustment, i.e. limits the effect of atypical journey lengths (both short and long).

3. A metric called Passenger Value (PV) is applied to each timetabled occurrence of each service based on the quintile in which the journey occurs and is calculated as follows:

Quintile 1:

$$PV = 2 \times \frac{R}{R+1}$$

Quintile 2:

$$PV = \frac{(3 \times R) + 1}{2 \times (R + 1)}$$

Quintile 3:

$$PV = 1$$

Quintile 4:

$$PV = \frac{R + 3}{2 \times (R + 1)}$$

Quintile 5:

$$PV = \frac{2}{R + 1}$$

4. The database is now sorted by bus route, day of week and bus service start time. Each row of the database (i.e. each journey) also shows the current cumulative PV together with the total PV for that SA. Probability proportional to size is now used to sample the required number of journeys; i.e. probability proportional to Passenger Value (PV). A sampling interval for the SA is calculated which is the total Passenger Value divided by the number of shifts required. For example a SA with total of 30,000 Passenger Value units and 30 shifts required, would have a sampling interval every 1000th fraction of the total passenger value. In practice to allow for some journeys being infeasible to cover

(e.g. non returning market day services), or if a need arises to add supplementary shifts through low return rates, a sample 'overage' is built into calculating the sampling interval. In autumn 2014, this overage was 75% of the required number of shifts. So in the example for the SA requiring 30 shifts, in practice 53 journeys will be sought from sampling.

5. The actual sample is struck by choosing a random start point between 0 and the row with the cumulative Passenger Value of the required sampling interval, and then selecting the service corresponding to every sampling interval gap down the list. So from the example in the previous paragraph, the random start may be 326 with 30 shifts required and a sampling interval of 1000, the selected services would be taken from the rows which contain cumulative passenger values of 1326, 2326, 3326, etc.

6. Finally, any journey which has a start time at or later than 19.30 is removed and manually replaced by the instance of that journey which starts closest to 19.00. For example if a journey is selected which starts at 19.56, and there is another instance of the same journey at 18:56, it will be replaced with the 18.56. This is in order to ensure that a three hour shift may be worked, while still finishing at a reasonable time for the fieldworker (no later than 10:30pm).

3.2   Sample review

Following the selection of the routes, a further process is undertaken which checks the suitability of each route for a three-hour shift. The guideline is that shift is feasible where two hours or more of a three hour shift can be spent on board a bus. Some Park-and-Ride services and all school-bus routes are excluded during this process and replaced with an alternative journey randomly selected from the 'overage' already provided during sampling.

In practice, the timing of bus services means that some fieldworker shifts may be a little shorter or longer than three hours. The general principle used in autumn 2014 was that a bus journey could be selected and covered by a fieldworker shift if:

a) It would yield a shift of no less than two and a half hours total duration
b) It would yield a shift of no more than four hours total duration (although there were a small number of 4+_hour shifts, where this was necessary to ensure that a reasonable proportion of all routes in a SA had opportunity to be covered)
c) At least around two hours could be spent on board a bus rather than waiting at a stop
d) At least one full outward and one full return trip could be made on the selected route.

In autumn 2014, of the 3,861 bus services reviewed for suitability in a fieldworker shift, 2,912 were accepted as shifts at the outset of fieldwork, and 949 were 'rejected'. Bus services were 'rejected' for the following reasons:

a) No return journey available (385)

b) Too small proportion of shift to be spent on board a bus (241)

c) Journey and available returns cannot fill a 3-hour (or even a 2.5-hour) shift (199)

d) Journey would be too long for a 3-hour (or even a four-hour) shift (93)

e) Shift would finish too late (after 10.30pm), and no suitable alternative journey start time available, as described in point 6 above (7)

f) Other (24).

For a Sampling Area where a large number of journeys would be 'rejected' for these reasons, which would result in a low percentage of all journeys being judged suitable to be surveyed, some slight amendments were made to the bus journeys in order to make them feasible within a shift to improve the overall representation of journeys. For instance, there were some cases where, if a fieldworker stayed on a bus to the end of its journey, there would be no suitable return service to catch; but if they disembarked two or three stops early they would be able to catch a return service. In such cases the journey would be included in the survey and the fieldworker would be instructed to disembark a little before the end of the journey. (This was the reason for including a small number of shifts lasting 4+ hours).

Overall, following review and further amendments as mentioned above, across the survey 75% of journeys proposed from the sampling process went through to be feasible fieldwork shifts.

In addition to the 2,912 shifts scheduled at the outset of the project, a further 177 were scheduled later on, to 'top up' the fieldwork if response was looking lower than needed to generate the required sample sizes. 'Top up' shifts were randomly selected from within the 'overage' provided at initial sample selection stage.

4 Fieldwork

Fieldwork took place between 10th September and 30th November except during the school half-term holidays. In most areas this was between 23rd October and 4th November, although there were some variations if school half term holidays were at a different time (as in Scotland for example).

4.1 Distribution of questionnaires

Before working their first shift on the project all fieldworkers receive a detailed briefing from BDRC via regional supervisors. In autumn 2014 wave fieldworkers were issued with between 50 and 70 questionnaires for each shift depending upon factors such as the type of area.

Fieldworkers are required to approach all passengers on the bus and give them the opportunity to participate in the research, until their supply of questionnaires is exhausted. Those willing to take part are asked to take a questionnaire, complete it after their journey, and return it via free post to BDRC.

Fieldworkers join the bus routes selected from the sampling process on the appointed day of the week and specified start time. They travel to the final destination of the route and make the first return trip possible on that route, returning to their start point. They repeat this process to make as many trips as possible within their three-hour shift.

When fieldworkers were at their original start-point but the three-hour shift was not complete, nor was there sufficient time to make a further complete return journey, they were instructed to make a partial return trip in the remaining time.

Where a route crossed a Local Transport Authority boundary (if the SA was a Local Transport Authority) the fieldworker treated the route as if truncated to the portion within the SA LTA, i.e. they only approached passengers boarding within that SA.

In advance of each shift, fieldworkers are instructed to double check the journey details they have been given (since, as described above, changes can be made to bus services between the sampling and fieldwork stages). This can sometimes result in changes to a shift; either:

- If the timetable has been altered the fieldworker may need to start the journey at a different point or at a slightly different time, or
- If a service has been withdrawn it would be replaced with another taken randomly from the 'overage' in the initial sample.

As described in the section on weighting (section 7.1) fieldworkers are issued with an "Observation Record Form" on which they record the observed age and gender details of all passengers who are on the bus at a given point in time. For autumn 2014, this observation was conducted up to four times within a fieldworker shift: at the mid-point of the first outbound journey, at the mid-point of the first inbound journey, and again at the mid-point of the last outbound journey and the last inbound journey. For shifts where only one full round trip was made, the observation was made twice: once on the outbound and once on the inbound journey. These details allow the creation of a representative passenger profile to be used for weighting purposes. Fieldworkers are also issued with a "Respondent Record Form" on which they record gender and estimated age of everyone who accepts a questionnaire. This is used to enable standard quality control back-checks, as well as other validation measures on returned questionnaires.

4.2 Authorisation to work on buses

Regarding permission to conduct interviewing on the bus, Transport Focus provides a letter which the fieldworker can show the driver to vouch for the bona fides of the survey, and Transport Focus communicates to operators that the survey can take place during the intended period. In autumn 2014 a small number of shifts were disrupted by bus drivers refusing to allow fieldworkers to work.

4.3 Monitoring fieldwork

Throughout fieldwork, fieldworkers report the number of questionnaires they have handed out by the day following that shift; these are monitored by the team at BDRC.

As questionnaires are returned to BDRC's head office, their barcodes are scanned to provide immediate extra confirmation that a fieldwork shift took place, and a number of data fields from the questionnaire are recorded manually to enable a first stage of validation checks to take place (see section 6.2). The numbers of returned and validated questionnaires are matched with the reported hand-out figures, to allow the project team to monitor the overall productivity of the fieldwork. Several actions may be triggered by this information, including for example:

- If the sample sizes in certain areas are likely to fall below the target, additional 'top up' shifts can be scheduled using the sample overage

- If it is found that all of the questionnaires are routinely given out in certain areas or on certain routes, this can be recorded and more questionnaires may be printed where relevant in future waves

- Steps may be taken to address lower productivity in certain fieldworkers if this is found to be the case.

BDRC carries out all fieldwork in accordance with the MRS Code of Conduct, the IQCS (Interviewer Quality Control Scheme) and ISO 20252. Exceeding normal industry standards, at least 10% of all BPS shifts are subject to unannounced spot-checks by BDRC supervisors and other project team staff.

The majority of shifts to be spot-checked are selected at random, but some are chosen specifically, to monitor new or less productive fieldworkers or areas more closely, and indeed to observe more productive fieldworkers in order to study and pass on best practise techniques. Random unannounced spot-checks are also made by Transport Focus staff.

5   Questionnaire

The questionnaire is an 8-page self-completion booklet that is handed out along with a reply-paid envelope to all passengers on the bus who are willing to take part. The questionnaire has a core set of questions to provide consistent measurement of the components of journey experience.

A copy of the standard version of the questionnaire is shown in Appendix 1. Transport Focus allocates a space on the questionnaire (section 6) where participating local transport authorities or bus operators can replace the core questions in this section with questions of their choosing.

6 Response rates, and validation of returns

6.1 Response rates achieved

The metric of fieldwork outcome is the product of hand out rates achieved and response rate achieved. The tables below show the metrics achieved from fieldwork across the Sampling Areas in this wave.

PTE areas	Shifts	Q'aires handed out	Average hand-out per shift	Response rates	Average responses per shift	No. responses
Centro	215	11,382	53	27%	14.5	3,122
Cov VMA	62	3,406	55	34%	18.7	1,157
Go North East (boost)	24	1,340	58	27%	15.0	359
Mersey Main	100	4,602	48	28%	12.9	1,285
Mersey QP	42	2,213	52	22%	11.4	478
South Yorks	129	5,434	41	31%	13.3	1,710
TfGM	176	9,228	52	24%	12.7	2,238
Tyne & Wear	130	7,401	57	25%	14.2	1,843
West Yorks	117	6,209	54	27%	14.6	1,705
PTE total	*995*	*51,215*	*51*	*27%*	*14.0*	*13,897*

Unitary authorities	Shifts	Q'aires handed out	Average hand-out per shift	Response rates	Average responses per shift	No. responses
Blackpool	36	1,829	53	32%	16.1	579
Medway	72	3,903	55	26%	14.1	1,017
Milton Keynes	32	1,322	41	39%	16.0	512
Northumberland	59	2,836	46	35%	16.9	998
Tess Valley	147	6,919	48	25%	11.8	1,738
Thurrock	34	1,722	53	33%	16.9	575
WEP	75	3,345	46	46%	20.5	1,540
York	44	2,433	55	34%	18.6	817
Unitary total	*499*	*24,309*	*49*	*32%*	*15.6*	*7,776*

Two tier authorities	Shifts	Q'aires handed out	Average hand-out per shift	Response rates	Average responses per shift	No. responses
Devon	41	1,699	43	50%	20.7	849
Essex	53	2,221	40	39%	16.2	857
Gloucestershire	72	3,291	47	38%	17.2	1,235
Kent	82	4,036	52	25%	12.5	1,026
Norfolk	84	3,147	37	35%	13.2	1,112
Nottinghamshire	50	2,331	48	36%	16.6	831
Oxfordshire	86	4,430	52	32%	16.4	1,409
Staffordshire	59	2,532	46	32%	13.7	811
Suffolk	53	1,889	34	34%	12.2	649
Two-tier total	*580*	*25,576*	*44*	*34%*	*15.1*	*8,779*

Operators	Shifts	Q'aires handed out	Average hand-out per shift	Response rates	Average responses per shift	No. responses
Abellio Surrey	45	1,363	34	40%	12.2	551
First Potteries	64	2,710	50	31%	13.3	850
First South Coast	57	2,989	52	29%	15.2	865
Anglian Buses	24	761	31	40%	12.8	308
Bluestar	29	1,431	49	29%	14.1	409
Brighton & Hove	43	2,495	60	29%	16.9	728
Go North East	24	1,340	58	27%	15.0	359
Hedingham & Chambers	19	639	38	44%	14.7	279
Konectbus	21	744	32	47%	16.6	348
Metrobus	40	2,046	50	25%	12.7	507
Oxford P&R	13	695	53	43%	22.9	298
Plymouth Citybus	25	1,222	48	45%	21.9	548
Southern Vectis	21	835	40	35%	13.9	292
Thames Travel	18	679	38	43%	16.2	292
Wilts & Dorset	34	1,854	57	31%	16.7	568
Reading Buses	58	3,318	58	30%	17.0	987
Operator total	*535*	*25,121*	*47*	*33%*	*15.3*	*8,189*

Scottish areas	Shifts	Q'aires handed out	Average hand-out per shift	Response rates	Average responses per shift	No. responses
First in Glasgow	106	5,477	58	57%	29.3	3,102
Lothian Buses	60	2,798	58	50%	23.3	1,400
North East	73	3,827	54	43%	22.4	1,637
South East	73	2,538	44	47%	16.4	1,199
Strathclyde	77	3,341	53	38%	16.5	1,273
Tayside and Central	91	3,274	56	42%	15.2	1,381
Scottish areas total	*480*	*21,255*	*44*	*47%*	*20.8*	*9,992*

6.2   Validation of completed surveys

Completed and returned questionnaires are subject to two stages of checks and validation; once before they are scanned electronically to pick up the tick-box responses, and once afterwards.

The first stage takes place immediately after completed questionnaires are received. Each questionnaire has a unique ID number which is scanned from a barcode on the front page. The answers to certain questions are then entered manually into a database – these are the date (top right on the questionnaire), the route number of the bus (Q1, see questionnaire example in the Appendix) and the time they boarded the bus (Q2). These are checked against the original details of the fieldwork shift, to check that the passenger filled in the questionnaire about a verified journey (this also serves as a check that fieldwork has been carried out as intended). Questionnaires which do not tally with the expected journey details are investigated and may be rejected if they cannot be verified as corresponding to the correct fieldworker shift.

It is useful to carry out this stage of the validation immediately (rather than later on alongside other DP checks), because it enables more accurate monitoring of the real number of 'useable' responses which have been collected in each SA.

At this stage, the answers to numeric questions are also recorded manually. These are all about times (Q15, Q17, Q25 and Q26), and are recorded manually because sometimes respondents' handwriting is difficult to pick up via the electronic scanning data capture, or passengers incorrectly record route numbers or times which use the 24-hour clock. (Checks are built into the manual data entry system to avoid human error, such as a flag to alert the person if they have entered abnormally long time for waiting for the bus, etc. Also note that the answers to these questions are still scanned electronically, and a sample compared to the manually entered data, as a further check against human error at the data entry stage).

Validated questionnaires are then scanned electronically to record which answer boxes on the form have been ticked by respondents. (At this stage, the data capture itself is 100% validated, meaning that a person will check, for example, that the electronic process has picked up genuine ticks, rather than instances where a respondent may have ticked one response and then crossed it out in favour of another, or where a mark may have been made accidentally in a box).

Once all of the responses to the questionnaire are recorded in a database, other data cleaning can take place. This will include, for example, checks for multi-coded answers where a single-code was required, and responses to questions which the respondent should have routed around.

6.3 Data preparation and analysis

After the data is validated, coded and edited, an SPSS data file is provided to Transport Focus. Transport Focus also runs some checks on this file before it is ruled off as final.

6.4 Key driver analysis

The 'Key Driver Analysis' looks at the relationship between overall journey satisfaction, and the 30 individual satisfaction measures which are covered in the survey (7 at the bus stop, waiting & punctuality; 4 on the bus's arrival; 8 whilst on bus; 7 bus driver; and value for money). This analysis was conducted on fare payers only so value for money could be included.

The analysis used for BPS uses Multiple Linear Regression and is performed in two stages. First, the drivers of satisfaction are identified. Passengers are defined as either 'satisfied' (those very or fairly satisfied overall with their journey) or 'not satisfied' (those saying neither/nor or fairly dissatisfied or very dissatisfied overall with their journey). The regression takes into account all five points of the satisfaction scale, and is run using scalar driver variables (sometimes called independent variables) – this means that moving any one point up the 5 point scale is assumed to have the same impact.

Once the drivers of satisfaction have been determined, the non-satisfied (dissatisfied and 'neither/nor respondents) were removed, and a new regression analysis run to determine which factors drive passengers to be very satisfied (rather than fairly satisfied), again using scalar driver variables.

The two parts of the analysis therefore indicate, firstly, which service aspects should be improved in order to provide an adequate overall journey experience (i.e. one which is at least satisfactory) and secondly, which service aspects should be improved in order to provide a genuinely good experience.

For autumn 2014, the key driver analysis typically explains around two fifths of the variance in overall journey satisfaction, with a small amount of variation for individual SAs. (The R² value is, on average, 0.40 for the drivers of satisfaction and 0.37 on average for the drivers of very satisfied).

6.5   Survey accuracy

This research was designed to ensure robust sample sizes for analysis, at SA level and in some cases among specific passenger groups within SAs (e.g. commuters versus leisure travellers). As the survey is conducted with a sample of bus users in each SA (as opposed to all of them), there could be some differences in results compared to a census of the whole population.

We can be 95% certain that the actual figure (in the universe of all bus journeys) falls within a certain range of the survey figure. The percentages within the table below represent the typical error variance, for a result of around 80% (results nearer to 0% or 100% are statistically more accurate than results nearer to 50%). This level of accuracy is for analysis run on the autumn 2014 wave only; where possible, combining waves together for analysis will increase robustness and therefore accuracy.

Area	Typical error variance on a result of around 80%
PTE authorities	2.2
Unitary authorities (except WEP and Tees Valley)	3.3
Unitary authority partnerships (WEP and Tees Valley)	2.1
Two tier authorities	2.8
Scottish SAs	1.8

This table provides an indication of typical error variances; this will vary by individual SA within the types of SAs above. Error variances for individual SAs, and for different results, can be provided on request.

7 Weighting

7.1 Weighting by age and gender

The survey is designed to offset the effects of both non-response bias and non-participation bias based by age and gender. No known source of information exists to detail the demographic of journeys by age-gender consistently within each SA; therefore this information is collected through the fieldwork. In the autumn 2014 wave, fieldworkers broke from distributing questionnaires temporarily at points through their shift, to record the age (within 4 bands 16-24, 25-44, 45-59 and 60+) and gender of every passenger of the bus (from observation). As described earlier, this age and gender report was made at the mid-point of the first outbound journey, at the mid-point of the first inbound journey, and (where more than one round trip was made during a shift) again at the mid-point of the last outbound journey and the last inbound journey.

The passenger profile is aggregated at the SA level and compared to the profile given by the declared age/gender on the questionnaires returned for that SA. As the data is available on all 8 age/gender cells, the weighting process uses interlocking weighting to weight back to passenger profile (as opposed to rim weighting). Where a cell has less than 30 returned questionnaires it is amalgamated with its gender opposite to create a cell of sufficient size and an aggregated weight calculated.

The following tables show the observed profile of passengers from the observation, the profiles achieved in the returned questionnaires, and the resulting weighting used for age and gender bands within each SA. Where weights were blended these are highlighted in pale red shading.

Age/gender weights applied in PTE Areas

		Male 1625	Female 1625	Male 2644	Female 2644	Male 4569	Female 4569	Male 60plus	Female 60plus	Response not given
West Mids (exc. Cov VMA routes)	Passenger observation	14%	16%	13%	13%	10%	11%	10%	13%	0.0%
	Passenger observation - adjusted*	13.3%	15.4%	12.6%	12.4%	9.6%	10.8%	9.1%	12.2%	4.6%
	Unweighted response	8.78%	13.65%	7.15%	13.54%	6.19%	14.65%	11.70%	19.77%	4.59%
	Weight factor	1.52	1.13	1.76	0.91	1.56	0.74	0.78	0.62	1.00
Cov VMA routes	Passenger observation	13%	14%	11%	13%	7%	11%	12%	18%	0.0%
	Passenger observation - adjusted*	11.9%	13.1%	10.3%	11.9%	6.7%	10.4%	11.4%	17.0%	7.2%
	Unweighted response	7.5%	13.3%	5.5%	11.7%	5.3%	11.8%	13.7%	24.1%	7.2%
	Weight factor	1.60	0.98	1.88	1.02	1.28	0.88	0.84	0.70	1.00
Merseytravel (exc. QP routes)	Passenger observation	9%	14%	12%	11%	9%	11%	15%	19%	0.0%
	Passenger observation - adjusted*	8.9%	13.1%	11.1%	10.5%	8.7%	10.4%	14.4%	17.7%	5.1%
	Unweighted response	3.66%	6.57%	4.85%	9.48%	6.68%	12.18%	16.70%	34.81%	5.06%
	Weight factor	2.43	1.99	2.29	1.11	1.30	0.86	0.86	0.51	1.00
Merseytravel QP routes	Passenger observation	12%	16%	12%	15%	10%	12%	10%	13%	0.0%
	Passenger observation - adjusted*	11.3%	15.0%	11.7%	13.8%	9.4%	11.5%	9.8%	12.4%	5.2%
	Unweighted response	5.84%	9.85%	6.08%	12.41%	8.27%	12.90%	15.45%	23.97%	5.23%
	Weight factor	1.93	1.52	1.92	1.11	1.13	0.89	0.64	0.52	1.00
TfGM	Passenger observation	16%	19%	14%	15%	8%	9%	8%	11%	0.0%
	Passenger observation - adjusted*	15.5%	17.9%	12.9%	14.2%	7.6%	8.2%	7.9%	10.6%	5.3%
	Unweighted response	6.35%	12.57%	8.50%	12.25%	5.94%	11.33%	13.48%	24.31%	5.26%
	Weight factor	2.44	1.42	1.52	1.16	1.28	0.72	0.59	0.44	1.00
South Yorks	Passenger observation	14%	16%	11%	12%	7%	10%	13%	17%	0.0%
	Passenger observation - adjusted*	13.9%	15.8%	10.2%	11.5%	6.7%	9.2%	12.6%	16.8%	3.1%
	Unweighted response	4.62%	10.07%	6.34%	10.07%	6.10%	13.74%	16.53%	29.38%	3.14%
	Weight factor	3.00	1.57	1.62	1.14	1.11	0.67	0.77	0.57	1.00
Tyne & Wear (exc. GNE routes)	Passenger observation	10%	14%	10%	13%	7%	12%	14%	21%	0.0%
	Passenger observation - adjusted*	9.3%	13.3%	9.5%	12.0%	6.9%	11.1%	13.4%	19.6%	5.0%
	Unweighted response	2.90%	5.27%	5.91%	8.71%	6.45%	15.16%	19.68%	30.97%	4.95%
	Weight factor	2.76	2.76	1.60	1.37	1.07	0.73	0.68	0.63	1.00
GA - Go North East	Passenger observation	10%	14%	9%	12%	9%	10%	15%	20%	0.0%
	Passenger observation - adjusted*	10.1%	13.5%	9.1%	12.0%	8.3%	10.1%	14.1%	19.7%	3.0%
	Unweighted response	3.89%	6.33%	5.76%	7.62%	7.22%	12.33%	19.46%	34.39%	3.00%
	Weight factor	2.60	2.13	1.59	1.58	1.15	0.82	0.73	0.57	1.00
West Yorks	Passenger observation	15%	16%	12%	12%	10%	11%	10%	14%	0.0%
	Passenger observation - adjusted*	14.3%	15.3%	11.5%	11.3%	9.3%	10.5%	9.7%	13.5%	4.6%
	Unweighted response	5.11%	9.56%	7.48%	10.75%	6.77%	12.89%	15.02%	27.85%	4.57%
	Weight factor	2.80	1.60	1.53	1.05	1.38	0.81	0.65	0.48	1.00

Age/gender weights applied in Unitary Authority Areas

		Male 1625	Female 1625	Male 2644	Female 2644	Male 4569	Female 4569	Male 60plus	Female 60plus	Response not given
Blackpool	Passenger observation	14%	15%	7%	10%	8%	10%	16%	21%	0.0%
	Passenger observation - adjusted*	13.0%	14.3%	6.7%	9.5%	7.6%	9.8%	15.0%	20.1%	3.9%
	Unweighted response	6.88%	10.05%	4.59%	10.05%	4.94%	10.76%	17.46%	31.39%	3.88%
	Weight factor	1.89	1.43	1.11	1.11	1.11	1.11	0.86	0.64	1.00
Milton Keynes	Passenger observation	12%	17%	13%	16%	10%	12%	8%	12%	0.0%
	Passenger observation - adjusted*	11.6%	15.8%	12.4%	15.2%	9.0%	11.1%	7.8%	10.9%	6.1%
	Unweighted response	6.55%	16.87%	10.91%	10.52%	5.75%	11.51%	11.71%	20.04%	6.15%
	Weight factor	1.77	0.94	1.14	1.45	1.17	1.17	0.67	0.54	1.00
Northumberland	Passenger observation	12%	14%	8%	9%	9%	11%	14%	23%	0.0%
	Passenger observation - adjusted*	11.9%	13.3%	7.4%	8.8%	8.3%	10.6%	13.0%	22.4%	4.2%
	Unweighted response	7.51%	9.47%	5.76%	10.19%	6.28%	9.36%	15.02%	32.20%	4.22%
	Weight factor	1.59	1.41	1.28	0.86	1.33	1.13	0.86	0.70	1.00
Tees Valley	Passenger observation	9%	15%	8%	12%	7%	12%	14%	23%	0.0%
	Passenger observation - adjusted*	8.7%	13.9%	8.0%	11.2%	6.8%	11.1%	13.0%	22.1%	5.2%
	Unweighted response	4.34%	7.75%	3.88%	7.52%	4.22%	13.31%	18.69%	35.07%	5.21%
	Weight factor	1.99	1.79	2.06	1.49	1.62	0.84	0.69	0.63	1.00
Thurrock	Passenger observation	16%	21%	7%	12%	5%	8%	11%	20%	0.0%
	Passenger observation - adjusted*	15.1%	20.3%	6.7%	11.3%	4.9%	7.5%	10.9%	19.1%	4.1%
	Unweighted response	4.77%	17.31%	4.77%	10.95%	3.18%	7.95%	11.48%	35.51%	4.06%
	Weight factor	1.60	1.60	1.15	1.15	1.11	1.11	0.95	0.54	1.00
WEP	Passenger observation	15%	20%	10%	12%	8%	9%	11%	15%	0.0%
	Passenger observation - adjusted*	14.0%	19.2%	9.7%	11.2%	7.6%	8.6%	10.2%	13.9%	5.6%
	Unweighted response	9.89%	14.73%	9.30%	12.18%	5.37%	8.51%	11.33%	23.12%	5.57%
	Weight factor	1.42	1.30	1.05	0.92	1.41	1.01	0.90	0.60	1.00
York	Passenger observation	12%	16%	7%	10%	7%	13%	13%	23%	0.0%
	Passenger observation - adjusted*	11.2%	15.7%	6.9%	9.2%	6.8%	12.2%	12.8%	21.9%	3.3%
	Unweighted response	2.89%	8.40%	3.67%	7.22%	4.59%	11.81%	17.45%	40.68%	3.28%
	Weight factor	2.38	2.38	1.48	1.48	1.48	1.04	0.73	0.54	1.00
Medway	Passenger observation	12%	14%	7%	13%	6%	11%	15%	23%	0.0%
	Passenger observation - adjusted*	11.3%	13.0%	6.2%	12.7%	6.1%	10.3%	14.3%	22.0%	4.0%
	Unweighted response	3.43%	7.57%	3.33%	8.38%	5.25%	9.89%	19.48%	38.65%	4.04%
	Weight factor	3.31	1.72	1.87	1.51	1.17	1.04	0.73	0.57	1.00

Age/gender weights applied in Two Tier Authority Areas

		Male 1625	Female 1625	Male 2644	Female 2644	Male 4569	Female 4569	Male 60plus	Female 60plus	Response not given
Devon	Passenger observation	11%	13%	9%	12%	8%	10%	16%	21%	0.0%
	Passenger observation - adjusted*	10.9%	12.3%	8.5%	11.1%	7.6%	9.8%	15.7%	20.3%	3.7%
	Unweighted response	4.45%	7.21%	3.85%	9.62%	4.09%	11.06%	18.51%	37.50%	3.73%
	Weight factor	2.46	1.71	2.21	1.16	1.86	0.88	0.85	0.54	1.00
Essex	Passenger observation	14%	16%	10%	12%	7%	8%	13%	21%	0.0%
	Passenger observation - adjusted*	12.8%	15.0%	9.4%	10.8%	6.7%	7.3%	12.0%	19.7%	6.3%
	Unweighted response	7.60%	10.88%	5.26%	7.25%	5.73%	10.06%	14.85%	32.05%	6.32%
	Weight factor	1.68	1.38	1.78	1.49	1.17	0.73	0.81	0.61	1.00
Kent	Passenger observation	15%	17%	7%	11%	5%	11%	13%	21%	0.0%
	Passenger observation - adjusted*	14.1%	16.0%	7.1%	10.7%	5.2%	10.3%	12.9%	20.2%	3.5%
	Unweighted response	5.19%	6.23%	3.84%	6.23%	5.19%	10.70%	18.38%	40.71%	3.53%
	Weight factor	2.71	2.57	1.85	1.73	1.00	0.96	0.70	0.50	1.00
Norfolk	Passenger observation	13%	18%	6%	9%	5%	7%	15%	27%	0.0%
	Passenger observation - adjusted*	12.3%	17.1%	5.4%	9.0%	4.7%	6.9%	14.7%	26.2%	3.6%
	Unweighted response	3.89%	7.69%	4.07%	7.78%	3.17%	8.69%	18.64%	42.44%	3.62%
	Weight factor	3.17	2.22	1.33	1.15	1.49	0.79	0.79	0.62	1.00
Suffolk	Passenger observation	11%	16%	9%	13%	5%	11%	14%	22%	0.0%
	Passenger observation - adjusted*	10.7%	15.6%	8.5%	12.4%	4.7%	10.4%	13.6%	21.5%	2.6%
	Unweighted response	2.32%	5.26%	4.49%	10.06%	5.88%	11.15%	17.80%	40.40%	2.63%
	Weight factor	3.46	3.46	1.44	1.44	0.80	0.93	0.76	0.53	1.00
Staffordshire	Passenger observation	15%	14%	6%	8%	6%	9%	15%	27%	0.0%
	Passenger observation - adjusted*	14.0%	13.9%	6.2%	7.4%	6.0%	8.5%	14.1%	26.1%	3.8%
	Unweighted response	7.17%	9.15%	4.57%	6.80%	4.94%	8.65%	19.04%	35.85%	3.83%
	Weight factor	1.96	1.52	1.36	1.08	1.21	0.98	0.74	0.73	1.00
Gloucestershire	Passenger observation	13%	18%	8%	9%	6%	12%	13%	21%	0.0%
	Passenger observation - adjusted*	12.4%	16.9%	7.4%	9.1%	5.8%	11.5%	12.4%	20.1%	4.4%
	Unweighted response	6.03%	11.89%	5.54%	9.28%	3.50%	10.42%	13.84%	35.10%	4.40%
	Weight factor	2.06	1.42	1.34	0.98	1.65	1.10	0.90	0.57	1.00
Nottinghamshire	Passenger observation	11%	13%	9%	13%	6%	10%	14%	24%	0.0%
	Passenger observation - adjusted*	10.5%	12.5%	8.4%	12.0%	6.2%	9.9%	13.4%	22.6%	4.5%
	Unweighted response	5.11%	10.46%	4.11%	11.58%	4.73%	10.96%	17.56%	31.01%	4.48%
	Weight factor	2.05	1.20	2.05	1.04	1.31	0.90	0.76	0.73	1.00
Oxfordshire	Passenger observation	13%	17%	13%	18%	7%	11%	9%	11%	0.0%
	Passenger observation - adjusted*	12.1%	15.8%	12.8%	17.4%	6.9%	10.6%	9.0%	10.8%	4.5%
	Unweighted response	5.57%	11.00%	8.64%	17.07%	6.07%	13.07%	12.29%	21.79%	4.50%
	Weight factor	2.17	1.44	1.48	1.02	1.14	0.81	0.73	0.50	1.00

Age/gender weights applied to Scottish SAs

		Male 1625	Female 1625	Male 2644	Female 2644	Male 4569	Female 4569	Male 60plus	Female 60plus	Response not given
SESTRAN (exc. Lothian Buses)	Passenger observation	11%	13%	10%	11%	9%	11%	15%	20%	0.0%
	Passenger observation - adjusted*	9.9%	12.3%	9.8%	10.6%	8.6%	10.1%	13.7%	18.6%	6.4%
	Unweighted response	10.12%	12.50%	7.99%	10.63%	6.21%	8.76%	13.10%	24.32%	6.38%
	Weight factor	0.98	0.98	1.23	1.00	1.39	1.16	1.05	0.76	1.00
Lothian Buses	Passenger observation	12%	15%	13%	14%	11%	12%	9%	13%	0.0%
	Passenger observation - adjusted*	11.0%	13.3%	12.0%	12.8%	9.9%	10.9%	8.5%	12.0%	9.6%
	Unweighted response	9.78%	12.96%	12.39%	14.83%	7.91%	10.11%	8.39%	14.02%	9.62%
	Weight factor	1.12	1.03	0.97	0.86	1.25	1.08	1.01	0.86	1.00
SPT (exc. First in Glasgow)	Passenger observation	7%	10%	10%	12%	10%	13%	14%	24%	0.0%
	Passenger observation - adjusted*	6.1%	9.0%	9.0%	11.1%	9.4%	12.1%	13.2%	22.3%	7.8%
	Unweighted response	7.23%	11.50%	7.72%	12.30%	7.23%	11.82%	11.58%	22.83%	7.80%
	Weight factor	0.84	0.78	1.17	0.91	1.30	1.02	1.14	0.98	1.00
First in Glasgow	Passenger observation	10%	13%	13%	14%	10%	12%	12%	16%	0.0%
	Passenger observation - adjusted*	8.5%	11.9%	11.7%	12.8%	8.5%	10.5%	10.3%	14.5%	11.4%
	Unweighted response	8.53%	12.29%	11.25%	14.04%	8.49%	12.09%	7.84%	14.07%	11.41%
	Weight factor	1.00	0.97	1.04	0.91	1.00	0.87	1.31	1.03	1.00
TACTRAN	Passenger observation	11%	12%	12%	12%	11%	12%	13%	17%	0.0%
	Passenger observation - adjusted*	10.7%	11.7%	11.2%	11.4%	10.0%	11.5%	12.4%	15.9%	5.2%
	Unweighted response	9.88%	15.33%	8.58%	11.19%	5.81%	10.90%	10.90%	22.24%	5.16%
	Weight factor	1.08	0.76	1.31	1.02	1.72	1.06	1.14	0.72	1.00
NESTRAN	Passenger observation	15%	20%	11%	11%	8%	9%	11%	16%	0.0%
	Passenger observation - adjusted*	14.2%	18.4%	9.9%	10.1%	7.6%	8.5%	10.5%	14.5%	6.3%
	Unweighted response	9.22%	16.71%	8.85%	13.43%	6.62%	10.27%	9.22%	19.43%	6.25%
	Weight factor	1.55	1.10	1.12	0.76	1.15	0.82	1.14	0.75	1.00

Age/gender weights applied to other Operator SAs

		Male 1625	Female 1625	Male 2644	Female 2644	Male 4569	Female 4569	Male 60plus	Female 60plus	Response not given
GA - Anglian Buses	Passenger observation	5%	13%	4%	5%	6%	6%	20%	40%	0.0%
	Passenger observation - adjusted*	5.2%	12.2%	4.3%	5.0%	5.7%	5.6%	18.7%	38.5%	4.9%
	Unweighted response	1.95%	4.55%	3.57%	4.55%	5.52%	8.44%	27.60%	38.96%	4.87%
	Weight factor	1.82	1.82	1.82	1.82	0.81	0.81	0.68	0.99	1.00
GA - Headingham & Chambers	Passenger observation	11%	9%	4%	7%	4%	8%	24%	35%	0.0%
	Passenger observation - adjusted*	10.1%	8.7%	3.4%	6.9%	3.5%	7.2%	22.8%	33.4%	4.0%
	Unweighted response	4.35%	9.06%	1.45%	5.07%	1.09%	8.33%	22.10%	44.57%	3.99%
	Weight factor	1.40	1.40	1.32	1.32	1.32	1.32	1.03	0.75	1.00
GA - Konectbus	Passenger observation	9%	8%	7%	10%	9%	13%	15%	30%	0.0%
	Passenger observation - adjusted*	8.3%	7.4%	6.7%	9.8%	9.0%	13.0%	14.2%	28.7%	2.9%
	Unweighted response	3.24%	6.19%	4.42%	7.67%	4.13%	14.45%	14.16%	42.77%	2.95%
	Weight factor	1.66	1.66	1.36	1.36	1.19	1.19	1.00	0.67	1.00
GA - Wilts & Dorset	Passenger observation	18%	19%	8%	10%	7%	7%	14%	18%	0.0%
	Passenger observation - adjusted*	17.5%	18.5%	7.6%	9.2%	6.4%	6.3%	13.8%	17.6%	3.0%
	Unweighted response	2.50%	7.49%	2.50%	4.99%	4.46%	7.66%	23.35%	44.03%	3.03%
	Weight factor	3.61	3.61	2.24	2.24	1.06	1.06	0.59	0.40	1.00
GA - Bluestar	Passenger observation	14%	22%	11%	17%	4%	8%	9%	14%	0.0%
	Passenger observation - adjusted*	13.9%	20.9%	11.0%	16.2%	4.3%	7.7%	9.2%	13.9%	3.0%
	Unweighted response	4.27%	12.06%	6.28%	10.55%	4.02%	7.04%	17.09%	35.68%	3.02%
	Weight factor	2.13	2.13	1.62	1.62	1.08	1.08	0.54	0.39	1.00
GA - Southern Vectis	Passenger observation	12%	15%	6%	7%	10%	8%	17%	25%	0.0%
	Passenger observation - adjusted*	11.7%	14.5%	6.1%	6.6%	9.3%	7.5%	17.0%	24.8%	2.5%
	Unweighted response	0.70%	5.26%	3.16%	7.02%	6.67%	10.88%	18.25%	45.61%	2.46%
	Weight factor	2.41	2.41	2.41	2.41	0.96	0.96	0.93	0.54	1.00
GA - Thames Travel	Passenger observation	13%	15%	13%	15%	6%	8%	10%	20%	0.0%
	Passenger observation - adjusted*	12.4%	14.1%	12.5%	14.2%	6.2%	7.7%	9.9%	19.8%	3.2%
	Unweighted response	6.55%	9.09%	13.45%	15.27%	6.55%	10.55%	10.55%	24.73%	3.27%
	Weight factor	1.69	1.69	0.93	0.93	0.81	0.81	0.84	0.84	1.00
GA - Oxford P&R	Passenger observation	6%	9%	10%	20%	12%	17%	12%	13%	0.0%
	Passenger observation - adjusted*	5.5%	9.2%	10.0%	19.6%	12.0%	16.2%	11.6%	12.5%	3.4%
	Unweighted response	2.70%	8.45%	8.78%	14.86%	9.46%	18.24%	13.85%	20.27%	3.38%
	Weight factor	1.32	1.32	1.25	1.25	1.02	1.02	0.84	0.62	1.00
GA - Brighton & Hove	Passenger observation	18%	25%	9%	11%	8%	8%	9%	11%	0.0%
	Passenger observation - adjusted*	17.1%	23.7%	8.9%	10.9%	7.6%	8.1%	9.1%	11.0%	3.6%
	Unweighted response	5.69%	12.21%	8.46%	12.07%	7.07%	10.68%	14.29%	25.94%	3.61%
	Weight factor	3.01	1.94	1.06	0.90	1.07	0.76	0.63	0.43	1.00
GA - Plymouth Citybus	Passenger observation	14%	14%	10%	13%	5%	11%	15%	20%	0.0%
	Passenger observation - adjusted*	13.1%	13.3%	9.7%	12.3%	4.4%	10.3%	14.4%	19.3%	3.3%
	Unweighted response	7.72%	14.89%	5.88%	10.11%	4.96%	11.03%	13.79%	28.31%	3.31%
	Weight factor	1.70	0.89	1.64	1.21	0.92	0.92	1.04	0.68	1.00
GA - Metrobus	Passenger observation	14%	14%	14%	15%	11%	10%	10%	12%	0.0%
	Passenger observation - adjusted*	13.5%	13.7%	13.4%	14.6%	10.1%	9.2%	9.7%	11.4%	4.6%
	Unweighted response	2.98%	6.96%	9.34%	11.53%	7.55%	8.15%	15.51%	33.40%	4.57%
	Weight factor	2.73	2.73	1.44	1.26	1.33	1.13	0.62	0.34	1.00

		Male 1625	Female 1625	Male 2644	Female 2644	Male 4569	Female 4569	Male 60plus	Female 60plus	Response not given
First South Coast	Passenger observation	10%	16%	9%	14%	7%	11%	15%	19%	0.0%
	Passenger observation - adjusted*	9.5%	15.5%	8.6%	14.0%	6.7%	10.3%	14.2%	18.1%	3.2%
	Unweighted response	3.04%	7.48%	4.91%	10.40%	5.49%	11.45%	18.34%	35.75%	3.15%
	Weight factor	2.38	2.38	1.75	1.34	1.21	0.90	0.77	0.51	1.00
First Potteries	Passenger observation	15%	18%	10%	10%	9%	8%	12%	18%	0.0%
	Passenger observation - adjusted*	14.4%	17.6%	9.1%	9.6%	8.5%	7.8%	11.6%	17.2%	4.3%
	Unweighted response	9.69%	14.07%	7.92%	11.47%	6.26%	9.81%	10.28%	26.24%	4.26%
	Weight factor	1.49	1.25	1.15	0.83	1.36	0.79	1.13	0.66	1.00
Abellio Surrey	Passenger observation	11%	12%	9%	14%	6%	7%	17%	24%	0.0%
	Passenger observation - adjusted*	10.9%	11.7%	8.6%	13.4%	5.7%	6.7%	15.8%	22.4%	4.8%
	Unweighted response	5.48%	9.14%	4.94%	10.42%	4.57%	6.58%	16.45%	37.66%	4.75%
	Weight factor	1.98	1.28	1.43	1.43	1.11	1.11	0.96	0.60	1.00
Reading Buses	Passenger observation	9%	14%	14%	21%	6%	11%	9%	15%	0.0%
	Passenger observation - adjusted*	8.6%	13.3%	13.3%	19.4%	6.0%	10.5%	8.7%	14.6%	5.7%
	Unweighted response	5.91%	8.56%	8.36%	13.46%	5.50%	12.74%	15.29%	24.46%	5.71%
	Weight factor	1.45	1.55	1.59	1.44	1.08	0.82	0.57	0.60	1.00

*Profile established by passenger observation is adjusted to allow for respondents in survey data who do not state their age and/or their gender. These respondents are given a demographic weight of unity.

7.2 Weighting to proportionate Sampling Areas within total survey dataset

Weighting is also used to ensure each SA counts within the survey as a whole, relative to its annual number of passenger journeys (made within it). This is achieved by generating a 'journey volume weight (jmils)' – stated as value of 1000's of journeys worth for each response record. Due to the types of SAs covered the journey volume weight was derived in the following order of preference.

a) For SAs which are English local authority areas the number of journeys in the SA is sourced from DfT Bus Statistics BUS0109a table. and the un-weighted sample size for each SA is 'grossed up' to this number using a journey volume weight – a value of 1000's of journeys for each response.

b) Where an SA is not a local authority which is the case for most operator/special territories. In these cases, taking Brighton & Hove Bus as an example, the proportion Brighton & Hove Bus's service journey minutes are of each of the local authority areas in which services run is calculated (i.e. Brighton & Hove Council, East Sussex CC, West Sussex CC) and then each of those proportion multiplied by the journey millions in the respective authority area; the estimated total patronage comes from the sum of three local area 'proportion x area millions' values. The same approach was used where a boost area was within a larger known area i.e. the QP routes in the Merseytravel area and the Coventry VMA routes in West Midlands.

c) For the areas in Scotland the near equivalent to BUS0109a table is data from Transport Scotland for journeys in Scottish territories. Strathclyde was estimated by deducting a proportion for Dumfries and Galloway from South West using the proportion free pass holders across D&G and Strathclyde outwith D&G.

d) Used published figure from Lothian Buses.

The following table shows the journey volume weightings (as per 1000) applied to the SAs and for each which one of the four methods used to calculate the journey millions.

PTE areas	Journey millions & method of estimation	Response number	Journey volume weight per record (1000 per)
West Midlands total	280.8 [a]		
Centro (excluding. Cov VMA)	251.3 [b]	2,813	89.3
Cov VMA	29.5 [b]	1,404	21.0
Merseytravel total	124.8 [a]		
Merseytravel (exc. QP routes)	99.5 [b]	928	107.2
Merseytravel QP	25.3 [b]	822	30.8
West Yorks	161.7 [a]	1,684	96.0
Tyne and Wear total	121.8 [a]		
Tyne & Wear (exc. Go North East)	64.6 [b]	921	70.1
Go North East in Tyne and Wear	57.2 [b]	1,242	46.1
South Yorks	108.1 [a]	1,688	64.0

TfGM	217.4 [a]	2,188	99.4

Unitary authorities	Journey millions & method of estimation	Response number	Journey volume weight per record (1000 per)
Blackpool	11.1 [a]	567	19.6
Medway	8.9 [a]	991	9.0
Milton Keynes	9.8 [a]	504	19.4
Northumberland CC	10.0 [a]	972	10.3
Tees Valley Group	33.3 [a]	1,728	19.3
Thurrock	4.4 [a]	566	7.8
West England Partnership	53.7 [a]	1,527	35.2
York	15.6 [a]	762	20.5

Two tier authorities	Journey millions & method of estimation	Response number	Journey volume weight per record (1000 per)
Devon	28.5 [a]	832	34.3
Essex	45.7 [a]	855	53.5
Gloucestershire	21.6 [a]	1228	17.6
Kent	62.1 [a]	963	64.5
Norfolk	29.4 [a]	1,105	26.6
Nottinghamshire	33.0 [a]	803	41.1
Oxfordshire	43.3 [a]	1,400	30.9
Staffordshire	20.2 [a]	809	25.0
Suffolk	17.4 [a]	646	26.9

Scottish SAs	Journey millions & method of estimation	Response number	Journey volume weight per record (1000 per)
North East	23.26 [c]	1,616	14.4
South East	163.1 [c]		
Not Lothian Buses	*51.9 [b]*	*2,813*	*89.3*
Lothian Buses	*111.3 [d]*	*1,404*	*21.0*
Strathclyde	169 [c]		
Not First Glasgow	*85.8 [b]*	*2,813*	*89.3*
First Glasgow	*83.2 [b]*	*1,404*	*21.0*
Tayside and Central	38.74 [c]	1,376	28.1

Other Operator SAs	Journey millions &	Response number	Journey volume weight

	method of estimation		per record (1000 per)
Anglian Buses	3.9 [b]	308	12.5
Hedingham & Chambers	3.0 [b]	276	10.8
Konectbus	3.9 [b]	339	11.4
Wilts & Dorset	17.5 [b]	561	31.2
Bluestar	10.5 [b]	398	26.3
Southern Vectis	7.9 [b]	285	27.8
Thames Travel	5.2 [b]	275	19.0
Oxford P&R	2.2 [b]	296	7.5
Brighton & Hove	47.7 [b]	721	66.1
Plymouth Citybus	15.7 [b]	544	28.9
Metrobus	14.3 [b]	503	28.4
Reading Buses	19.1 [b]	981	19.5
Abellio routes (Surrey outwith TfL)	2.1 [b]	547	3.8
First in Potteries	15.3 [b]	846	18.1
First in Hampshire	28.6 [b]	856	33.4

7.3 Weighting total

The final weight is the multiplication of the two component weights as shown below:

Final weight = demographic weight x journey volume weight.

Appendix: Core questionnaire used in BPS autumn 2014

Passengerfocus
putting passengers first

1 4
DATE (DD/MM/YY)
Sep-Nov 2014

Bus Passenger Survey

Passenger Focus is the official, independent consumer watchdog for bus passengers across England (except London). To help us represent the views of passengers in your local area we we would appreciate a little of your time to complete this questionnaire. It asks about the journey you made when given this questionnaire.

Bus companies, local authorities and Government pay close attention to the survey's results and the survey provides the evidence for us to seek improvements on your behalf. To find out more about the Bus Passenger Survey or our work visit our website or follow us on Twitter.

Web: www.passengerfocus.org.uk
Twitter: @passengerfocus

Completing the questionnaire

Please fill in the questionnaire after completing your journey.

Please tick only one box per question, unless directed otherwise.

Return it to us in the reply paid envelope provided.

WHEN ANSWERING:
CONSIDER ONLY THE JOURNEY YOU MADE WHEN GIVEN THIS QUESTIONNAIRE

1	About your journey

Q1   Please enter the route number of the bus you boarded:

Q2   Please fill in the time that you boarded the bus:
Use the 24 hr. clock e.g. 5.25pm is 17:25

Q3   What type of ticket did you use for that journey?

A free pass or free journey
Elderly person's pass………………………☐
Disabled person's pass……………………☐
Complimentary/free ticket…………………☐

A day pass - valid for
That bus company only………………………☐
Across bus companies………………………☐
Buses and other modes of transport………☐

Single/return/multi tickets
Standard single ticket………………………☐
Standard return ticket………………………☐
A deduction from a multi-ticket/carnet……☐
Reduced single/return ticket………………☐

A pass/season ticket for a longer period (e.g. weekly, monthly) - valid for
That bus company only………………………☐
Across bus companies………………………☐
Buses and other modes of transport………☐

Other…………………………………………………………………………………………☐

1

Q4 On boarding the bus, did you?

Use cash to buy a ticket or pass………………………………………☐
Use a contactless credit or debit card to buy a ticket or pass…………☐
Show the driver a paper ticket or pass………………………………☐
Place your smartcard onto the fare machine……………………………☐
Show the driver a ticket displayed on your smart phone…………………☐

Q5 If you bought your ticket or pass <u>before</u> getting on the bus, how did you do this?

From the driver before that day………………………………………☐
Direct from the bus company (including web, mobile app, phone)………☐
From a travel centre/bus stn/booking office……………………………☐
From a local shop or post office………………………………………☐
Arrangement through work/college……………………………………☐
Other……………………………………………………………………☐

Did not buy your ticket before boarding the bus…………………………☐

Q6 What was the main purpose of your bus journey?

Travelling to/from work………………………………………………☐
Travelling to/from education (e.g. college, school)……………………☐
Shopping trip……………………………………………………………☐
Visiting friends or relatives……………………………………………☐
Leisure trip (e.g. day out)………………………………………………☐
Other……………………………………………………………………☐

Q7 What was the main reason you chose to take the bus for that journey?

Cheaper than the car…………………☐   More convenient than other transport………☐
More convenient than car (e.g. parking)….☐   Preferred bus to walking/cycling…………☐
Cheaper than other transport……………☐   Other reason…………………………………☐

Didn't have the option of travelling by another means…………………………………☐

Q8 Did you use any other form of transport as part of your journey?
(Please do not count walking as a form of transport)

Yes………………………………………☐
No…………………………………………☐

Q9 What was the weather like when you made your journey, was it?

Dry…………………………………☐   Heavy rain……………………………………☐
Light rain……………………………☐   Snow……………………………………………☐

Q10 Please tell us whether your bus journey was …

On a single-decker bus………………☐
Downstairs on a double-decker bus………☐
Upstairs on a double-decker bus…………☐

Q11 Were you travelling with …
(Please tick all that apply)

Children in a buggy or pushchair…………☐   Lots of bags or luggage……………………☐
Children who were walking………………☐   A wheelchair…………………………………☐

2

2   About the bus stop where you boarded the bus

Q12 Which of the following were provided at the stop where you caught the bus?
(Please tick all that apply)

A shelter…………………………………………☐   Information on types of tickets available….☐
Seating……………………………………………☐   A route map…………………………………☐
Electronic display showing bus arrival times.☐   Lighting………………………………………☐
A timetable………………………………………☐   A mobile text code for bus arrival times…..☐
Information on fares……………………………☐

Q13 Thinking about the bus stop itself, how satisfied were you with the following?

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/no opinion
Its distance from your journey start e.g. home/shops.	☐	☐	☐	☐	☐	☐
The convenience/accessibility of its location within that road/street……………	☐	☐	☐	☐	☐	☐
Its general condition/standard of maintenance………	☐	☐	☐	☐	☐	☐
Its freedom from graffiti/vandalism……………………	☐	☐	☐	☐	☐	☐
Its freedom from litter…………………………………	☐	☐	☐	☐	☐	☐
The information provided at the bus stop……………	☐	☐	☐	☐	☐	☐
Your personal safety whilst at the bus stop…………	☐	☐	☐	☐	☐	☐

Q14 Overall, how satisfied were you with the bus stop?

Very satisfied…………………………………☐
Fairly satisfied…………………………………☐
Neither satisfied nor dissatisfied……………☐
Fairly dissatisfied……………………………☐
Very dissatisfied………………………………☐

Don't know/no opinion…………………………☐

3   Waiting for the bus

Q15 How long did you wait for your bus?
(Please write the time in minutes)

Q16 Did you check any of the following to find out when the bus was meant to arrive?
(Please tick all that apply)

	Before you left for the bus stop	At the bus stop
Paper timetable………………………………………………………	☐	☐
Online timetable………………………………………………………	☐	☐
Live bus locator/timings (e.g. via mobile app/web)…………	☐	☐
Disruption updates (e.g. on Twitter/Facebook)……………	☐	☐
Electronic display at the bus stop…………………………		☐
Other…………………………………………………………………	☐	☐

If you did not check before leaving, or at the bus stop, why was this?

Knew service was frequent…………………☐   Didn't have time……………………………☐
Already knew arrival times…………………☐   Other…………………………………………☐
Could not find the information………………☐

3

Q17 How long did you expect to wait for your bus?
(Please write the time in minutes)

Q18 Thinking about the time you waited for the bus, was it …?

Much longer than you expected…………..☐
A little longer than you expected…………..☐
About the length of time you expected……☐
A little less than you expected……………☐
Much less than you expected……………☐

Q19 Were you able to board the first bus you wanted to travel on?

Yes...☐
No...☐

Q20 How satisfied were you with each of the following?

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/no opinion
The length of time you had to wait for the bus…………	☐	☐	☐	☐	☐	☐
The punctuality of the bus………………………………	☐	☐	☐	☐	☐	☐

4   On the bus

Q21 Thinking about when the bus arrived, please indicate how satisfied you were with the following?

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/no opinion
Route/destination information on the outside of the bus	☐	☐	☐	☐	☐	☐
The cleanliness & condition of the outside of the bus……	☐	☐	☐	☐	☐	☐
The ease of getting onto and off of the bus………………	☐	☐	☐	☐	☐	☐
The length of time it took to board the bus………………	☐	☐	☐	☐	☐	☐

Q22 Thinking about whilst you were on the bus, please indicate how satisfied you were with the following?

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/no opinion
The cleanliness and condition of the inside of the bus…	☐	☐	☐	☐	☐	☐
The information provided inside the bus………………	☐	☐	☐	☐	☐	☐
The availability of seating or space to stand……………	☐	☐	☐	☐	☐	☐
The comfort of the seats………………………………	☐	☐	☐	☐	☐	☐
The amount of personal space you had around you……	☐	☐	☐	☐	☐	☐
Provision of grab rails to stand/move within the bus……	☐	☐	☐	☐	☐	☐
The temperature inside the bus………………………	☐	☐	☐	☐	☐	☐
Your personal security whilst on the bus………………	☐	☐	☐	☐	☐	☐

4

Q23 Did you get a seat on the bus?

Yes - for all of the journey.......................☐   No - but you were happy to stand..............☐

Yes - for part of the journey.....................☐   No - but you would have liked a seat.........☐

Q24 Did other passengers' behaviour give you cause to worry or make you feel uncomfortable during your journey?

Yes................☐   No...................☐

If yes: **Which of the following were the reason(s) for this?** *(Please tick all that apply)*

Passengers drinking/under influence of alcohol….☐   Music being played loudly..................☐

Passengers taking/under influence of drugs………☐   Smoking..☐

Abusive or threatening behaviour.........................☐   Graffiti or vandalism..........................☐

Rowdy behaviour..☐   Other...☐

Feet on seats...☐

Q25 How long was your journey on the bus?
(Please write the time in minutes)

Q26 How long did you expect your journey on the bus to take?
(Please write the time in minutes)

Q27 How satisfied were you with the length of time your journey on the bus took?

Very satisfied..☐

Fairly satisfied......................................☐

Neither satisfied nor dissatisfied..............☐

Fairly dissatisfied...................................☐

Very dissatisfied....................................☐

Don't know/no opinion............................☐

Q28 Thinking about your time you spent on the bus, which one of the following statements do you most agree with?

I made very worthwhile use of my time…………..☐

I made some use of my time………………………☐

My time spent on the bus was wasted time………☐

Q29 Was the length of time your journey took affected by any of the following?
(Please tick all that apply)

Congestion/traffic jams...................☐   Poor weather conditions.....................................☐

Road works....................................☐   The bus waiting too long at stops.........................☐

Bus driver driving too slowly.............☐   Time it took passengers to board/pay for tickets….☐

Q30 Were any of these items of information present on the bus?

	Yes	No	Don't know
A map of the bus route/journey times..	☐	☐	☐
Audio announcements e.g. saying the next bus stop...................................	☐	☐	☐
An electronic display e.g. showing the next bus stop..................................	☐	☐	☐
Information about tickets/fares...	☐	☐	☐
A timetable...	☐	☐	☐
Details of how to make a complaint, if you had one...................................	☐	☐	☐

5

Q31 Thinking about the driver, please indicate how satisfied you were with the following?

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/no opinion
How near to the kerb/stop the bus stopped	☐	☐	☐	☐	☐	☐
The driver's appearance	☐	☐	☐	☐	☐	☐
The greeting/welcome you got from the driver	☐	☐	☐	☐	☐	☐
The helpfulness and attitude of the driver	☐	☐	☐	☐	☐	☐
The time the driver gave you to get to you seat	☐	☐	☐	☐	☐	☐
Smoothness/freedom from jolting during the journey	☐	☐	☐	☐	☐	☐
The safety of the driving (i.e. appropriateness of speed, driver concentrating)	☐	☐	☐	☐	☐	☐

5   Your overall opinion of the journey you made when given this questionnaire

Q32 Overall, taking everything into account from start to end of the bus journey, how satisfied were you with your bus journey?

Very satisfied ☐
Fairly satisfied ☐
Neither satisfied nor dissatisfied ☐
Fairly dissatisfied ☐
Very dissatisfied ☐

Don't know/no opinion ☐

Q33 If something could have been improved on your journey, what would it have been?

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Q34 How satisfied were you with the value for money of your journey?

Very satisfied ☐
Fairly satisfied ☐
Neither satisfied nor dissatisfied ☐
Fairly dissatisfied ☐
Very dissatisfied ☐

Don't know/no opinion ☐

Q35 What had the biggest influence on the 'value for money' rating you gave in the previous question?

The cost for the distance travelled ☐
The cost of the bus versus other modes of transport ☐
The fare in comparison to the cost of everyday items ☐
Comfort/journey quality for the fare paid ☐
A reason not mentioned above ☐

6

6   Your opinion of bus travel in your local area

WHEN ANSWERING THIS SECTION PLEASE CONSIDER BUS SERVICES GENERALLY (NOT JUST THE JOURNEY YOU MADE WHEN GIVEN THIS QUESTIONNAIRE)

Q36 How would you rate your local bus services for the following:

	Very good	Fairly good	Neither good nor poor	Fairly poor	Very poor
Ease of getting to local amenities (e.g. shops, hospitals).....	☐	☐	☐	☐	☐
Connections with other forms of public transport (e.g. trains).	☐	☐	☐	☐	☐
The frequency of services in your area…………………………	☐	☐	☐	☐	☐
The reliability of services in your area…………………………	☐	☐	☐	☐	☐

7   About you

QA   Are you?

Male...☐
Female...☐

QB   In which age group are you?

16 to 18.……………………………………☐   55 to 59.……………………………………☐
19 to 25.……………………………………☐   60 to 64.……………………………………☐
26 to 34.……………………………………☐   65 to 69.……………………………………☐
35 to 44.……………………………………☐   70 to 79.……………………………………☐
45 to 54.……………………………………☐   80+.……………………………………☐

QC   Are you?

Working full time (30+ hours)...................☐   Retired..☐
Working part-time (under 30 hours)..........☐   Full time student......................................☐
Not working - seeking work.......................☐   Other..☐

QD   Which of the following best describes your ethnic background?

White..☐   Chinese..☐
Mixed..☐   Asian or Asian British..............................☐
Black or Black British.............................☐   Other ethnic group....................................☐

QE   In terms of having a car to drive, which of the following applies?

You have a car available and don't mind driving...................................☐
You have a car available but prefer not to drive....................................☐
You don't have a car available...☐

QF   How often are you able to ask someone else to drive you for local journeys?

All or most of the time.............................☐
Some of the time....................................☐
You don't have anybody you can ask........☐

Not applicable...☐

QG Are you affected by any physical or mental health conditions or illnesses lasting or expected to last 12 months or more? *(Please tick all that apply)*

No: None………………………………………………………………………………………☐

Yes: Vision (e.g. blindness or partial sight)………………………………………………☐
Yes: Hearing (e.g. deafness or partial hearing)………………………………………………☐
Yes: Mobility (e.g. only able to walk short distances or difficulty climbing stairs)……………☐
Yes: Dexterity (e.g. difficulty lifting and carrying objects or using a keyboard)………………☐
Yes: Learning or understanding or concentrating………………………………………………☐
Yes: Memory………………………………………………………………………………………☐
Yes: Mental health………………………………………………………………………………☐
Yes: Stamina or breathing or fatigue………………………………………………………………☐
Yes: Socially or behaviourally (for example associated with autism, attention deficit
       disorder or Asperger's syndrome)……………………………………………………………☐
A reason not mentioned above...☐

**Does your condition/illness have an adverse affect
on your ability to make journeys by bus?**

Yes, a lot…………………☐   Yes, a little……………☐   Not at all……………………☐

Thank you for completing this questionnaire.

If you would like to be emailed a copy of the survey report please visit the Bus Passenger Survey section of www.passengerfocus.org.uk – a link to it is located in the top left corner of the home page.

Please return it in the envelope provided or use the following Freepost address:

Bus Passenger Survey
Perspective Research Services Ltd
FREEPOST (RSKU-SKUZ-TSYG)
Kingsbourne House
229-231 High Holborn
LONDON WC1V 7DA

bdrc continental

Passengerfocus
putting passengers first

This survey is being undertaken for Passenger Focus by BDRC Continental, an independent market research agency who adhere to the Market Research Society's code of conduct. You were handed this questionnaire by an interviewer working for Perspective Research Services, who are part of the BDRC Group.

If you have any questions about this survey, please feel free to contact Nick Grigg at BDRC Continental on 020 7490 9166. If you have any concerns about the bona fides of the survey itself, you can contact the Market Research Society on 0500 396999 who will verify our status as a legitimate market research organisation.