



## Transport Focus Your Bus Journey

# Methodological overview – 2023 wave (full year)

July 2024

### **Table of Contents**

1	Background	3
2	Survey Overview	4
21	The Primary Sampling Units surveyed in 2023 – by type	5
2.1	The Primary Sampling Units surveyed in 2023 – by area category	6
2.2		0
3	Sampling	7
3.1	Sample design – on bus sampling	7
3.1.	1 Sample universe	7
3.1.	2 Sampling process	9
3.1.	3 Sample review	12
3.1	Sample design – at stop sampling	13
3.1.	1 Sample universe	13
4	Fieldwork	
4.1	Data collection	17
4.2	Authorisation to work on buses	20
4.3	Monitoring fieldwork	20
	-	
5	Questionnaire	22
6	Response rates, and validation of returns	
6.1	Response rates achieved	22
6.2	Validation of completed surveys	26
6.3	Data preparation and analysis	26
7	Weighting	
7.1	Weighting by age, gender and day-part	29
7.2	Weighting to proportion Primary Sampling Units within total survey dataset	42
7.3	Weighting total	44
7.4	Survey accuracy	44
8	Methodology differences	
8.1	Online survey completion	47 47
8.2	Shift type: On bus versus at stop	48
Арр	endix 1: Questionnaire used in YBJ 2023	50
Арр	endix 2: PV2 models	58

## 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 experiences within its remit area (England outside of London). The survey couldn't take place during the Covid pandemic, which gave Transport Focus an opportunity to completely review the way the survey was conducted. With the review complete and pilots and trial surveys conducted, the updated survey was re-launched as Your Bus Journey (YBJ), with the same broad objectives as its predecessor – to measure passengers' experiences of using bus services and provide evidence that will enable the survey to influence decision makers, leading to improvements in the day to day running of services and better outcomes for passengers. The survey content included the bus stop environment, punctuality, 'on bus' comfort, and the standards of the bus driver, together with overall journey satisfaction and value for money ratings.

For Your Bus Journey 2023, half of shifts took place 'on bus' (following a similar approach to the old BPS), while the other half took place 'at stop'. For these at stop shifts, interviewers were given a map and postcodes of a cluster of bus stops within a busy area (likely to be a town centre or bus station) and instructed to roam around these stops, concentrating on recruiting bus passengers from the busier stops.

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

BVA BDRC was appointed by Transport Focus to provide the market research agency services needed to carry out the survey in 2023. BVA BDRC conducts research in accordance with the Market Research Society (MRS) Code of Conduct; it is also accredited with the ISO 20252 Quality Assurance and ISO 27001 IT and Data Security Standards. BVA BDRC is also an MRS Company Partner Scheme member.

This document describes the methodology in general and specifics as they relate to the 2023 YBJ survey. If there are any further questions about the methodology deployed in the survey, please contact Transport Focus by email at <u>yourbusjourney@transportfocus.org.uk</u> or by phone on 0300 123 0835.

## 2 Survey Overview

YBJ was designed to provide results that are statistically representative of bus passenger journeys made within a Primary Sampling Unit (PSU); a passenger journey is defined as an individual trip made on a local bus service. PSUs are typically local transport authority areas or the divisions of a bus operator. The survey measured individual journey experience. It was designed to provide results that can be used at the local area level, and in certain circumstances at the broader country level.

Recruitment took place both at bus stop clusters and on board buses. For operator samples, all recruitment took place on board buses as it would be too logistically difficult to recruit those just boarding one operator's buses at stops. For local transport authority areas, the number of fieldwork shifts were typically split evenly between on board buses and at bus stops.

Fieldworkers discussed the survey briefly with individual passengers on board buses or while they were waiting for a bus or just departed from a bus, and invited them to take part in the survey. Those wishing to take part fill in a self-completion questionnaire after their journey (details of the questionnaire and data collection method are given in sections 4 and 5). The survey is open to passengers aged 16 and over due to Market Research Society guidelines preventing the interviewing of people aged under 16 without parental consent. Weighting was applied to correct for differential response rates by age, gender and the day and time of day when travelling and by whether the passenger was recruited at a bus stop or on board a bus, at an area level. Weighting was also applied to proportionate the individual PSU relative to all the others included in the survey.

The following two tables show the areas split by two different forms of classification; area type (based upon local authority government structure, or bus operator network) and area rural/urban category (based on the 2011 Local Authority Rural Urban Classification). Table 2.1 shows area type – this is split into PTE (Passenger Transport Executives), Unitary Authorities, Two Tier Authorities, Operators and Scottish Regional Transport Partnerships. This classification is used for the Passenger Volumes model discussed later at the sampling stage. Table 2.2 shows area rural/urban category, split into Urban Metropolitan, Urban Other, Semi-rural, Rural and Scotland. This is based on the general make-up of the area and is used in the reports, for areas to compare themselves to other similar areas.

## 2.1 The Primary Sampling Units surveyed in 2023 – by area type

PTE Authorities	Unitary authorities	Two tier authorities	Operators not aligned to any authority areas	Scottish Regional Transport Partnerships
Greater Manchester	Bournemouth, Christchurch & Poole	Derbyshire	Reading Buses	HITRANS
Liverpool City Region	Brighton & Hove	East Sussex		Nestrans
South Yorkshire	Cheshire East	Lancashire & Blackburn with Darwen		SEStran
Tyne & Wear	Cheshire West & Chester	Norfolk		SPT
West Midlands	City of York	Nottinghamshire		Swestrans
West Yorkshire	Cornwall	Oxfordshire		Tactran
	Durham	Suffolk		
	East Riding of Yorkshire	Surrey		
	Greater Nottingham	West Sussex		
	Leicester City			
	Luton			
	Northumberland			
	North East Lincolnshire			
	Portsmouth			
	Stoke on Trent			
	Tees Valley			
	Thurrock			
	West of England CA and North Somerset			
	Warrington			

Urban Metropolitan	Urban Other	Semi-Rural	Rural	Scotland
Greater Manchester	Bournemouth, Christchurch & Poole	Cheshire East	Cornwall	HITRANS
Liverpool City Region	Brighton and Hove	Cheshire West & Chester	East Riding of Yorkshire	Nestrans
Tyne & Wear	City of York	Derbyshire	Norfolk	SEStran
South Yorkshire	Lancashire & Blackburn with Darwen	East Sussex	Durham	SPT
West Midlands	Leicester City	Nottinghamshir e	Northumberland	Swestrans
West Yorkshire	Luton		Oxfordshire	Tactran
	North East Lincolnshire		Suffolk	HITRANS
	Greater Nottingham			
	Portsmouth			
	Reading Buses Network			
	Stoke-on-Trent			
	Surrey			
	Tees Valley			
	Thurrock			
	Warrington			
	West of England and North Somerset			
	West Sussex			

#### 2.2 The Primary Sampling Units surveyed in 2023 – by rural/urban category

## 3 Sampling

The sampling process was designed to ensure representative results were achieved for each Primary Sampling Unit (PSU) surveyed.

Sampling was conducted assuming an average of 10 surveys completed per shift. The number of shifts was split evenly between on bus and at stop, and a different approach was taken to sampling each of these shift types.

#### 3.1 Sample design – on bus sampling

#### 3.1.1 Sample universe

A sample of bus routes was designed for each PSU. When running the sample in late 2022, the sample universe was sourced from the Department for Transport's (DfT's) Bus Open Data. To ensure the research encompassed the totality of routes, the starting point was to use the information from the Bus Open Data to make a list of every bus service and every timetabled occurrence of each service that runs within each PSU. Bus journeys that started outside the hours of 06.00 and 21.59 were excluded, as these were outside the fieldwork hours.

This data source had some additional key fields, including: the local transport authority through which the route runs, whether or not it crossed a local transport authority boundary, the journey length in minutes, the start/finish bus stops. Some minor points are acknowledged regarding the use of these files as a sample source.

- In very isolated cases, some routes or operators have been found to have been omitted. This has not affected a noticeable proportion of journeys and has only occurred occasionally in the databases for one or two local authority areas. It has been the result of data being provided to Bus Open Data at a slightly different time for some regions or local authorities
- A small proportion of journeys sampled in advance of the fieldwork have been withdrawn or changed (i.e. timetable changes) by the time of fieldwork itself. The effect of this has been relatively minor and has usually been due to local changes made in the period between sampling and fieldwork.
- There are also some instances of journeys being added or amended in some areas e.g. due to journeys being switched to different operators.

Steps have been taken to mitigate the effect of these: local authorities and operators were sent a list of routes being included in the survey and were asked to inform the agency about any routes or operators which were likely to change significantly (e.g. be withdrawn or see major timetable changes) within the next few months, or any major routes or operators who were missing from the files. Additionally, at the mid point of the survey, a further file was drawn from Bus Open Data, and compared to the current selected sample to identify withdrawn routes, timetable changes and new operators or routes not included in the original file.

This resulted in some small changes to the route selection, where local authorities provided information about:

- Services which had been selected, but which were due to change significantly by the time of or during the fieldwork (e.g. be withdrawn or reduced in frequency, or see a major route change)
- Services which covered certain areas which were missing from the original selection
- High-patronage routes which were missing from the selection.

#### 3.1.2 Sampling process

The sampling process is described below:

- 1. The journey duration of every timetabled occurrence of every bus service was calculated using the stated start and end times provided by Bus Open Data. Journeys reaching beyond the Area boundary used the proportion of the journey within the Area boundary (unless this was less than 30% of its total route time, and the portion of the journey within the area was under 15 minutes; such journeys were removed from this initial list). The PSU list (of every timetabled occurrence of every bus route) was then sorted in descending journey lengths.
- 2. A "Passenger Value" (PV) was then applied to each individual bus journey (this was based on additional research and modelling work which took place during the Autumn 2019 wave of the Bus Passenger Survey):
  - The total number of passengers boarding during a single one-way bus journey was counted on a sample of all the bus journeys surveyed during the Autumn 2019 wave of the Bus Passenger Survey.
  - This data was used to generate models to predict the number of people travelling on each bus service depending on:
    - Area (or type of area<sup>1</sup>) if:
      - That PSU was not surveyed in 2019 and did not therefore have its own counts and model;
      - Or in some cases if that PSU was surveyed in 2019 but with a small sample size, meaning the number of counts was too small to produce a reliable model. Only PSUs with ten or more counts in 2019 had their own model for use in patronage estimates for 2023.)
    - Duration
    - Time of day and day of week when travelling
    - Operator (one of the "big five<sup>2</sup>", another major operator in certain areas, or "other" operators)

<sup>&</sup>lt;sup>1</sup> Types of areas were: PTEs, Unitary Authorities, Two-tier Authorities and Scottish RTP areas.

<sup>&</sup>lt;sup>2</sup> The "big five" were: Arriva, First, Go-Ahead, National Express and Stagecoach. Other major operators given their own co-efficient in the modelling work were: Reading Buses in their operator sample, Nottingham City Transport and Trent Barton in Nottinghamshire.

- Passenger values determined in this way have been found to correlate well with published journey volume statistics when aggregated at total Local Authority level (but are superior to the published figures because they are applicable at the level of individual bus journeys).
- The models used for sampling are provided in Appendix 2, along with an example of the passenger value (PV2) applied to bus services in one of the areas covered in this survey. These models have been updated again in advance of the 2024 survey, based on new passenger counts undertaken during the 2023 fieldwork.
- This passenger value, known as "PV2", thus gave a good estimation of how busy each individual bus service was relative to all others. It is understood that as a result of the pandemic, these figures are likely to have changed significantly, however it is assumed that the passenger volumes will still be in similar proportions to those seen in 2019.
- This knowledge was used in the next stage (3) to enable systematic selection of a representative sample of vehicle journeys on which to recruit respondents.
- 3. Next, the database was sorted by route, day-part<sup>3</sup>, journey start time and day of week. In practice, each row of the database (i.e. each journey) showed a cumulative passenger value (PV2). Probability proportional to size was then used to sample the required number of journeys; i.e. probability proportional to PV2. A sampling interval for the PSU was calculated which was the total Passenger Value divided by the number of fieldwork shifts required. For example, a PSU with a total of 30,000 Passenger Value units and 30 shifts required, would have a sampling interval every 1000<sup>th</sup> fraction of the total value. In practice, to allow for some journeys being infeasible to cover (e.g. non-returning market day services), or if a need was to arise during fieldwork to add supplementary shifts through low return rates, a sample 'overage' was built into calculating the sampling interval. For the first year of Your Bus Journey, this overage was 75% of the required number of shifts. So, in the example for the PSU requiring 30 shifts, in practice 53 journeys would be sampled, and the sampling interval would be 566.
- 4. The actual sample was 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, if the random start point was say 326 with 53 shifts required and a sampling interval of 566, the selected services would be taken from the rows which contained cumulative passenger values of 892, 1458, 2024, etc.
- 5. The result of step 4 was a list of bus vehicle journeys, which would form the basis of fieldwork shifts (during which fieldworkers board the bus and make outward and return

<sup>&</sup>lt;sup>3</sup> Day-parts are weekday morning peak (07:00-09:29), weekday off-peak (before 07:00, 09:30-15:29, or after 18:30), weekday evening peak (15:30-18:30) and weekends.

journeys within a three hour period). To allow for the fact that, for example, passenger journeys happening at 6am could only ever be picked up by fieldwork shifts arranged to start at 6am, whereas journeys starting at 8am could be picked up by shifts starting at 6am, 7am and 8am, and anywhere in between, the sampling database has a programme to find the <u>same</u> journey as the one selected, but starting 1.5 hours earlier, for all bus vehicle journeys selected. That is, a journey with the same start and end point, the same operator, the same overall duration, and on the same day of the week. Inevitably, bus timetables do not run with journeys exactly 1.5 hours apart, and so the identical journey which was <u>nearest</u> to 1.5 hours earlier was identified (and in some cases this was actually the same journey, if the original selection was the first of the day or the first for some hours). This newly 'adjusted' journey then became the start point for the fieldworker's shift, meaning that, in practice, the originally selected start time became the mid-point of the shift. This means that the overall profile of fieldwork shifts matched the PV2 profile for each PSU, for different times of the day.

6. Finally, any journey which had a start time at or later than 19.30 was removed and manually replaced by the instance of that journey which started closest to, but before, 19.00. For example, if a journey was selected which started at 19.56, and there was another instance of the same journey at 18:56, it was replaced with the 18.56. This was to ensure that a three-hour shift could be worked, while still finishing at a reasonable time for the fieldworker (no later than 10:30pm). Similarly, any journey which now had a start time before 6am (as a result of the adjustment in step 5) was replaced by the instance of that journey starting at or closest to, but not before, 6am.

NB. At the data cleaning stage, respondents who stated they had travelled after 10:30pm were verified against the time of the shift, and in most cases, it was found that it was more likely they had mistakenly coded PM rather than AM, and so their journey time was amended. In isolated circumstances, respondents were kept in the data who reported later journey times. These were usually when a fieldwork shift had been scheduled for late in the evening and there had also been some kind of delay on the buses covered during that shift meaning the fieldworker finished a little later than normal. Additionally, in some instances we are aware than passengers chose to talk about a different bus journey than the one recruited.

A programme 'Loadit' was used, which automated this part of the sampling process (steps 5 and 6).

#### 3.1.3 Sample review

Following the systematic selection of the routes, a further process was undertaken which checked the suitability of each route for a three-hour shift. The guideline was that a shift was feasible where two hours or more of a three-hour shift could be spent on board a bus (rather than waiting at a stop, which is non-productive time). All obvious school-bus-only routes were excluded during this process and replaced with a randomly selected alternative journey from the sampling 'overage' already provided.

In practice, the timing of bus services meant that some fieldworker shifts were a little shorter or longer than three hours. The general principle used 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 PSU 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 within the LA boundary.

The Loadit software was used to create journeys based on the criteria listed above.

At this point, a pool of possible journeys was available, including some overage, as the basis for fieldworker shifts, and from this pool the final selection was made. This was done by listing the possible journeys in a randomised order (Loadit completed this process automatically), and selecting the top n, where n was the number of shifts required.

The profile of the selected shifts was then compared to the universe profile of all bus passenger journeys (using the number of journeys previously estimated in the PV2 process). Their profile was observed in terms of operator mix, day-part and day of week. For operator-only PSUs, the profile of routes within these relevant operators was also observed. Where the profile of the fieldwork shifts was not close enough to that of the journey universe (specifically, where the profile differed by more than 5% on one or more of the parameters), different journeys (from the overage) were swapped in to achieve a better profile. Once the profile of fieldwork shifts was acceptably close, the selection of routes was also shared with contacts at the PSU for final review. As described earlier, this resulted in a small number of further amendments to the selection before being deemed final, and then booking the fieldwork.

In some cases, if the whole pool of "possible" journeys could not yield a set of journeys and therefore fieldwork shifts with a reasonable profile, slight amendments would need to be made to other, previously not "possible" journeys, in order to make them feasible for fieldworker shifts. For instance, cases were included 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
- A bus journey could be included in the survey if the shift it yielded was allowed to run a little over four hours
- A route was able to be included if it was paired with another run by the same operator; for example where the fieldworker might make the outward journey on route number 1A, but return on the 1B if in practice both had the same or a very similar route.

Once the pool of possible journeys for use as the basis of fieldwork shifts had been reviewed and refined into a workable fieldwork plan, the result was a set of 1,836 shifts which were planned at the outset of the project.

Half way through the year, a review of the routes was undertaken, by pulling a new file from the Bus Open Data website, and comparing this to the original file created, to identify

- Any routes which were new and so were not included in the original sample selection process
- Any routes which had now been removed
- Any routes where the timetable had changed by more than 5 minutes, so the times for interviewers would need to be adjusted.

This ensured that interviewers were not attempting to complete shifts where buses were no longer running, or running to a different timetable, as well as ensuring any new major routes were included in the survey.

#### 3.2 Sample design – at stop sampling

#### 3.2.1 Sample universe

For at stop sampling, the sample universe was defined as all bus stops within an area, as detailed from DfT Bus Open Data.

All the stops within an area were then grouped into clusters, with clusters all defined as being within a 100 metre radius of a central point.

In the absence of nationally available bus stop usage figures, bus visit figures (i.e. the number of buses due to stop at each bus stop) were used as a best estimate proxy for how busy each bus stop could be. The number of bus visits to each of these clusters was then counted. The top 9 clusters with the most frequent bus journeys, and top 3 clusters in terms of number of bus stops within each area (12 clusters in total) were selected and placed on maps to be shared with local authority contacts at each of the PSUs. Transport Focus made recommendations and suggestions as to which six clusters to use, the starting point for which was the top 6 clusters with most bus journeys. Adjustments to this 'default' position were made in some situations such as; where several clusters were very close together (and

often covering the same bus routes); or the geographical coverage was heavily focussed on one or two areas, leaving other parts of the PSU with no sample points. For the larger metropolitan areas, the top 24 clusters were selected with 12 of these being selected to be used for surveying, in 2023 these areas were:

- West Yorkshire
- Greater Manchester
- Tyne & Wear
- Liverpool
- West Midlands
- South Yorkshire

Additionally, in smaller areas, the number of clusters was reduced to 3 - in 2023 it was only Thurrock where it was necessary to reduce the number of clusters.

Transport Focus, local authorities/local transport authorities, Transport Scotland and BVA BDRC worked together to agree on the clusters to use – in most cases these were agreed upon using the original 12 or 24 clusters found (ensuring a good spread across the region where possible). However, in some instances, the local contacts had specific requests about including bus stops in specific areas. These were accommodated where possible, but with the understanding that these would be reviewed after a few shifts and if footfall was deemed to be too low to allow for interviewers to recruit enough respondents then they would have to be amended.

Once the final clusters were agreed upon, these were randomly assigned to day parts and days of the week, with a view to having around 20% of shifts during the weekend, and an even proportion of shifts at different parts of the day.

Shifts were then checked to ensure there were a suitable number of buses stopping during the three-hour shift time (for example, a cluster of bus stops may have many buses stopping during peak times, but it may have only a few buses stopping on a Sunday afternoon, so would not be suitable for conducting fieldwork at this time). In most areas, the threshold was 72 buses within the three-hour shift, but in some areas this was reduced.

- Cheshire West & Chester (cluster 6 Ellesmere Port Bus Station reduced to 48)
- County Durham (Cluster 6 Ferryhill reduced to 45)
- East Riding of Yorkshire (all clusters reduced to 48)
- Stoke on Trent (Cluster 6 Longton reduced to 48)
- SWESTRANS (Clusters 4,5 and 6 Dumfries Lochside Rd, Lockerbie and Annan reduced to 36)
- Thurrock (Cluster 3, Stanford-le-Hope, reduced to 36)
- Luton (cluster 4, Luton Airport, reduced to 60)
- West Sussex (cluster 7, Bogner Regis High St, reduced to 58)

In some areas it was also necessary to bring forward the 'evening' shift time as all cluster stops in this area were too quiet in the 7-10pm evening slot. Where shifts did not have sufficient buses stopping during a three-hour shift, they were moved to a suitable day part (or in the case of Sunday shifts, may have been moved to a Saturday if there were no suitable Sunday time slots).

Once suitable shifts were established, these were passed on to the fieldwork team and booked out.

Final clusters were confirmed with areas before fieldwork was due to start, and any instructions for interviewers to follow when working at particular locations, such as bus stations (for example, reporting to a member of staff on arrival), were confirmed.

Clusters were reviewed as fieldwork took place, and in some instances were replaced if they were very quiet across different days and times of day. These were then passed on to the fieldwork team as a set of 1,695 shifts which were planned at the outset of the project.

## 4 Fieldwork

Fieldwork started during the week commencing 30<sup>th</sup> January for the majority of areas, with other areas following during the week commencing 13<sup>th</sup> February and two final areas starting during the week commencing 6<sup>th</sup> March. Fieldwork was scheduled so that a quarter of shifts would be completed by the end of March – in part to compensate for the fact fieldwork did not start at the beginning of January, and in part to ensure sufficient interviews were completed during the time period when many areas were participating in the £2 single fare price cap scheme so that all areas would benefit equally from any impact that this had upon passenger satisfaction.

Areas starting during each time period are listed below: 30<sup>th</sup> January:

- Chester West & Chester
- Cornwall
- Derbyshire
- Durham
- East Riding of Yorkshire
- Greater Manchester
- Greater Nottingham
- Lancashire & Blackburn with Darwen
- Leicester City
- Liverpool City
- Norfolk
- North East Lincolnshire
- Northumberland
- Nottinghamshire
- Oxfordshire
- Reading Buses
- South Yorkshire
- Suffolk
- Surrey
- Tees Valley
- Tyne & Wear
- West Midlands
- West of England CA and North Somerset
- West Yorkshire
- York
- 13<sup>th</sup> February
  - Bournemouth, Christchurch & Poole
  - Brighton & Hove
  - Cheshire East
  - East Sussex
  - Portsmouth
  - Stoke-on-Trent
  - Thurrock

- Warrington
- HITRANS
- Nestrans
- SEStrans
- SPT
- SWESTRANS
- Tactrans

6<sup>th</sup> March

- Luton
- West Sussex

Fieldwork was structured with the aim of having one on bus and one at stop shift each week in areas taking part with the standard survey sample size of 1000 respondents (although with this increased in the first few weeks up until end of March, with the aim of ensuring 25% of fieldwork was completed by end of March).

Fieldwork was completed in most areas by the 17<sup>th</sup> December, however due to interviewer illness or adding additional shifts to boost the sample size, fieldwork overran in a few areas, with the last shifts in these areas happening on the following dates:

- Oxfordshire: 18<sup>th</sup> December
- Northumberland: 19<sup>th</sup> December
- East Riding of Yorkshire: 19th December
- Norfolk: 20th December
- Blackburn with Darwen & Lancashire: 21<sup>st</sup> December
- South Yorkshire: 21<sup>st</sup> December
- Warrington: 21<sup>st</sup> December
- SESTRANS: 21<sup>st</sup> December
- Greater Manchester: 22<sup>nd</sup> December
- York: 22<sup>nd</sup> December
- Luton: 23<sup>rd</sup> December
- Stoke on Trent: 24<sup>th</sup> December
- Bournemouth, Christchurch & Poole: 28<sup>th</sup> December

#### 4.1 Data collection

#### **Distribution of surveys**

Before working their first shift on the project all fieldworkers received a detailed briefing from BVA BDRC and Transport Focus via Teams. This was recorded so it could be shared with any fieldworkers joining the team part way through fieldwork or who were unavailable when the briefing took place. On bus, fieldworkers joined the bus routes selected from the sampling process on the specified day and start time. They travelled to the final destination of the route and made the first return trip possible on that route, returning to their start point. They repeated this process to make as many trips as possible within their three-hour shift. During this time fieldworkers were required to approach all passengers who boarded the bus and give them the opportunity to participate in the research. At stop, fieldworkers arrived at the bus stop cluster at the beginning of their shift, and moved around the cluster to find passengers waiting to board buses. Where bus stops were quiet, fieldworkers would move on to find a busier bus stop.

Passengers were first offered the option to complete the survey online, and only offered a paper questionnaire (with a pre paid return envelope) if the online survey was refused. If taking part online, passengers were offered the option of completing the survey via an online link sent via text or email (with telephone number or email address collected and a survey invitation sent to them instantly where signal was available, or as soon after the shift as possible) or via QR code which could be scanned from the screen. Interviewers also had some paper leaflets with QR codes on them which could be handed out e.g. if the passenger's bus had arrived so they did not have time to scan the QR code on screen. All those recruited were asked to complete their questionnaire after they had finished their journey.

Fieldworkers were issued with 12 paper questionnaires and 10 paper QR codes for each shift, driven in part by estimates from the YBJ refinement work carried out in March 2022. For the final few shifts in December 2023, areas in Scotland as well as Luton and Liverpool had 17 paper questionnaires per shift, as feedback from interviewers were that this would boost response rates, due to reluctance to take part online in these areas. This did not appear to have an impact on the number of completes for those shifts, but for 2024 the number of questionnaires has been increased to 15 in Scotland, so we will be able to monitor the impact of this.

	QR	Emails	Phone	Paper	Actual	Total	Number	Average
	codes	collected	numbers	QRs	paper		of shifts	per shift
	scanned		collected		qnres			
On	20,747	16,039	5,083	4,615	15,598	62,068	2251	28
bus								
At	19,144	14,807	5,363	4,762	11,955	56,031	1,869	30
stop								
Total	39,891	30,846	10,446	9,377	27,539	118,099	4,115	29

During 2023, the following numbers of recruits were achieved in total:

#### Reminders

For those who received a link via email or text message to complete the survey, reminders were sent 2 hours later to encourage participation – or two hours after the survey was started, if it was started but not completed.

#### Travelling on buses in practice

If the PSU was a Local Transport Authority, where a route crossed the boundary of that Authority area, the fieldworker treated the route as truncated to the portion within the PSU, i.e. only passengers boarding within the PSU would be approached. To achieve this, fieldworkers themselves would only travel within the boundaries of the Authority area, alighting at the border and boarding the next bus back in the opposite direction from that point. The last stop before the Authority border was identified within the bus timetable information supplied within the Bus Open Data.

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

- if the timetable had been altered, the fieldworker may have needed to start the journey at a different point or at a slightly different time, or
- if a service had been withdrawn it would be replaced with another from the 'overage' in the initial sample.

For shifts taking place at bus stop clusters, if the bus stop cluster was at a manned bus station, fieldworkers would introduce themselves on site to staff before working and would move around the different stops within the cluster (as defined on maps provided for each shift) throughout their shift, depending on how busy the stops were.

#### Further tasks performed during fieldwork

As described in the later section on weighting, fieldworkers also recorded the observed age and gender details of all passengers who were on the bus, or at the stops, at a given point in time. For on bus shifts, this observation was conducted twice within a fieldworker shift: at the mid-point of the first outbound journey, and again at the mid-point of the last inbound journey. These details allowed the creation of a representative passenger demographic profile to be used for weighting purposes. This is because we are aware that buses travelling in one direction (e.g. into town centres in the morning) are likely to be busier than those going the opposite direction at different times of day. For at stop shifts, observation counts were only conducted once during the shift, at a random interval during the three-hour period. In addition, a second fieldworker accompanied the first on a sample of 10% of all shifts in each PSU, to count the total number of passengers boarding during one whole outbound and one whole inbound journey. This data will be used to update the models used to estimate passenger values for all bus journeys, for use in sampling for the 2024 survey. This only took place during on bus shifts, as it is not cost effective to pay for a second fieldworker for the duration of a three-hour 'at stop' shift and it is considered that the observation counts will be sufficient to understand the numbers of passengers.

#### 4.2 Authorisation to work on buses

Regarding permission to conduct interviewing on the bus, Transport Focus provided a letter which the fieldworkers were able to show drivers to vouch for the bona fides of the survey, and Transport Focus communicated to operators, via the local authorities, that the survey might take place on their services during the intended period. In 2023 a relatively small number of shifts were disrupted by bus drivers refusing to allow fieldworkers to work on their bus.

Fieldworkers also wore high-visibility jackets with Transport Focus' logo and "Passenger survey" printed on them.

#### 4.3 Monitoring fieldwork

Throughout fieldwork, fieldworkers reported the number of questionnaires they had handed out, and how many email addresses, telephone numbers, QR codes scanned and paper QR leaflets they had handed out. This was also collected from the recruitment screener on their tablets. These metrics were monitored by the team at BVA BDRC.

As paper questionnaires were returned to BVA BDRC's head office, they were manually input into the online survey script. Shift numbers were used to link up completed questionnaires (both online and paper) to a shift, identifying the PSU and date of journey, as well as route number and operator number for on bus shifts. The numbers of completed and validated questionnaires were matched with the reported recruitment figures, to allow the project team to monitor the overall productivity of the fieldwork. Several actions had potential to be triggered by this information, including for example:

- If the sample sizes in certain areas appeared likely to fall below the target, additional 'top up' shifts could be scheduled using the sample overage
- If it was found that all of the available questionnaires were routinely given out in certain areas or on certain routes, this was recorded and more questionnaires may be printed where relevant in future waves

• Steps could be taken to address lower productivity in certain fieldworkers if this was found to be the case.

BVA BDRC carried 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 YBJ shifts were subject to unannounced spot-checks by BVA BDRC supervisors and other project team staff. Most shifts to be spot-checked were selected at random, but some were 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 were also made by Transport Focus staff.

## 5 Questionnaire

The paper questionnaire was an 8-page self-completion booklet that was handed out along with a reply-paid envelope to all passengers on the bus who were willing to take part, but didn't want to complete an online survey. The online questionnaire was the same in terms of question content and had small modifications in order to work appropriately depending on the type of device (desktop, smartphone, etc.) being used by the respondent.

The questionnaire had 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.

Some PSUs chose to add their own bespoke questions into the survey (a maximum of five was allowed and an additional charge was applied). These were accommodated, but were only included in the online survey script, not in the paper questionnaire.

In order to boost response rate, the main survey measures were included at the start of the questionnaire, so a survey could be counted as complete if a respondent answered the first 12 questions, at a minimum. Out of the total of 38,097 completed surveys, 3,826 (10%) qualified on this basis.

## 6 Response rates, and validation of returns

#### 6.1 Response rates achieved

The core fieldwork outcome metric (number of responses per shift) was the product of recruitment rates achieved and response rates achieved. The tables below show the metrics achieved from fieldwork across the Primary Sampling Units in this wave.

It should be noted that actual recruitment rates for paper questionnaires may not be accurate, as these rely on the interviewer recording the paper questionnaires they have handed out, and in some instances we are aware that interviewers did not record any paper questionnaires being handed out for a shift, but some were returned – in these instances we amended the hand out figure to match the number of returns.

#### 6a. Fieldwork metrics

	No. shifts	Recrui ts: paper	Respon- ses: paper	Respo nse rate: paper	Recruits text (sms)	Respons es text (sms)	Respo nse rate phone	Recruits QR (paper/ scanned )	Respons e QR	Respons e rate QR	Recruits: email	Respo n-ses: email	Respo nse rate: email	Recruits: total	Respon- ses: total*	Respo nse rate: total	Average respon- ses per shift (total)
Bournemouth, Christchurch & Poole	98	619	229	37%	292	114	39%	735	242	33%	1882	625	33%	3528	1210	34%	12.35
Brighton & Hove	115	286	152	53%	134	51	38%	2176	722	33%	546	148	27%	3142	1073	34%	9.33
Cheshire East	112	776	254	33%	365	157	43%	526	152	29%	1240	400	32%	2907	963	33%	8.60
Cheshire West & Chester	124	985	322	33%	190	70	37%	858	248	29%	720	181	25%	2753	821	30%	6.62
Cornwall	98	723	287	40%	578	261	45%	1180	382	32%	1241	490	39%	3722	1420	38%	14.49
Derbyshire	99	697	330	47%	295	137	46%	738	350	47%	517	164	32%	2247	981	44%	9.91
Durham	75	604	158	26%	325	135	42%	1111	362	33%	686	213	31%	2726	868	32%	11.57
East Riding of Yorkshire	114	762	274	36%	256	135	53%	681	237	35%	563	230	41%	2262	876	39%	7.68
East Sussex	131	768	271	35%	190	91	48%	972	333	34%	514	214	42%	2444	909	37%	6.94
Greater Manchester	112	483	158	33%	277	87	31%	1168	410	35%	910	225	25%	2838	880	31%	7.86
Greater Nottingham	109	605	209	35%	275	89	32%	1576	347	22%	667	131	20%	3123	776	25%	7.12
Lancashire & Blackburn with Darwen	109	824	272	33%	168	64	38%	891	336	38%	855	263	31%	2738	935	34%	8.58
Leicester City	166	1031	298	29%	144	38	26%	2271	507	22%	1224	215	18%	4670	1058	23%	6.37

	No. shifts	Recrui ts: paper	Respon- ses: paper	Respo nse rate: paper	Recruits text (sms)	Respons es text (sms)	Respo nse rate phone	Recruits QR (paper/ scanned )	Respons e QR	Respons e rate QR	Recruits: email	Respo n-ses: email	Respo nse rate: email	Recruits: total	Respon- ses: total*	Respo nse rate: total	Average respon- ses per shift (total)
Liverpool	127	1027	249	24%	174	60	34%	1093	381	35%	834	171	21%	3128	861	28%	6.78
Luton	142	649	155	24%	316	96	30%	1544	290	19%	383	85	22%	2892	626	22%	4.41
Norfolk	98	568	264	46%	301	125	42%	1243	398	32%	1074	405	38%	3186	1192	37%	12.16
North East Lincolnshire	90	649	183	28%	417	176	42%	742	286	39%	486	148	30%	2294	793	35%	8.81
Northumberland	81	752	268	36%	320	151	47%	482	207	43%	172	62	36%	1726	688	40%	8.49
Nottinghamshire	61	421	163	39%	223	97	43%	774	372	48%	363	109	30%	1781	741	42%	12.15
Oxfordshire	117	1020	283	28%	27	13	48%	1560	388	25%	1466	430	29%	4073	1114	27%	9.52
Portsmouth	98	741	235	32%	561	256	46%	809	342	42%	1380	457	33%	3491	1290	37%	13.16
Reading Buses	100	746	217	29%	128	51	40%	1388	492	35%	1341	413	31%	3603	1173	33%	11.73
South Yorkshire	98	643	171	27%	191	62	32%	1173	419	36%	834	290	35%	2841	942	33%	9.61
Stoke on Trent	103	824	394	48%	179	77	43%	1343	696	52%	556	152	27%	2902	1319	45%	12.81
Suffolk	119	516	215	42%	356	173	49%	858	286	33%	704	316	45%	2434	990	41%	8.32
Surrey	99	598	260	43%	303	114	38%	1319	503	38%	915	291	32%	3135	1168	37%	11.80
Tees Valley	51	476	127	27%	155	68	44%	1230	373	30%	339	109	32%	2200	677	31%	13.27
Thurrock	49	241	73	30%	160	64	40%	727	205	28%	459	133	29%	1587	475	30%	9.69

	No. shifts	Recrui ts: paper	Respon- ses: paper	Respo nse rate: paper	Recruits text (sms)	Respons es text (sms)	Respo nse rate phone	Recruits QR (paper/ scanned )	Respons e QR	Respons e rate QR	Recruits: email	Respo n-ses: email	Respo nse rate: email	Recruits: total	Respon- ses: total*	Respo nse rate: total	Average respon- ses per shift (total)
Tyne & Wear	139	1413	304	22%	696	291	42%	2722	1062	39%	857	279	33%	5688	1936	34%	13.93
Warrington	142	1076	262	24%	293	106	36%	863	270	31%	792	184	23%	3024	822	27%	5.79
West Midlands	98	381	150	39%	497	170	34%	1527	447	29%	1171	277	24%	3576	1044	29%	10.65
West of England CA and North Somerset	98	642	239	37%	485	189	39%	1960	716	37%	1323	390	29%	4410	1534	35%	15.65
West Sussex	98	499	178	36%	362	138	38%	1183	411	35%	906	291	32%	2950	1018	35%	10.39
West Yorkshire	129	1405	268	19%	178	54	30%	2691	515	19%	288	85	30%	4562	922	20%	7.15
York	92	866	295	34%	133	66	50%	1494	434	29%	483	154	32%	2976	949	32%	10.32
Total England	3691	2531 6	8167	32%	9944	4026	40%	43608	14121	32%	28691	8730	30%	10755 9	35044	33%	9.49
HITRANS	86	261	224	86%	64	18	28%	974	177	18%	549	172	31%	1848	591	32%	6.87
NESTRANS	66	501	201	40%	87	30	34%	818	246	30%	387	120	31%	1793	597	33%	9.05
SESTRANS	48	347	111	32%	159	64	40%	531	123	23%	521	159	31%	1558	457	29%	9.52
SPT	64	340	253	74%	62	19	31%	825	179	22%	178	33	19%	1405	484	34%	7.56
SWESTRANS	82	539	299	55%	58	28	48%	466	148	32%	248	71	29%	1311	546	42%	6.66
TACTRANS	78	256	150	59%	78	21	27%	2078	157	8%	289	50	17%	2701	378	14%	4.85
Total Scotland	424	2244	1238	55%	508	180	35%	5692	1030	18%	2172	605	28%	10616	3053	29%	7.20

#### 6.2 Validation of completed surveys

Completed surveys were subject to checks and validation:

- Paper questionnaires were checked to ensure that the respondent had answered the questions and not returned a blank form. If all questions up to Q12 were answered, it was treated as a completed questionnaire.
- Once checked, paper questionnaires were input using a slightly different link to the online survey. This ensured all routing was followed, but also allowed for the fact that with paper questionnaires, some questions may have been missed or not answered correctly.
- Online responses were counted as "complete" providing that they had reached and answered at least question 12. Of course, the questions up to this point would also have all been answered in the online questionnaire since, unlike the paper version, there was no possibility of a respondent accidentally missing any.
- Passengers were asked to confirm the details of their journey (route number, operator name and date of travel) in the survey. These details were checked electronically against sample information to ensure shifts took place as expected.

It was useful to carry out this stage of the validation immediately (rather than later alongside other Data Processing checks), because it enabled more accurate monitoring of the real number of 'useable' responses which had been collected in each PSU, throughout the fieldwork.

#### 6.3 Data preparation and analysis

Data was reported every 4 weeks on an online dashboard, with passenger comments released every week. Data was 'cut off' two weeks after the end of a wave to allow time for completes to be posted back and punched into the online script, and then was subject to checks before uploading.

The dashboard contained results on a 'year to date' and 'wave by wave' (every 4 weeks) basis, showing results for:

- Overall satisfaction
- Value for money
- Influence on value for money
- Key measures satisfaction with bus stop, length of wait, punctuality, bus driver and length of journey
- Passenger comments

Users from Transport Focus were also able to see information on time of day, journey purpose, and passenger demographics.

The dashboard was launched on 16th May 2023, with each area being set up with its own login, meaning areas could only see their own data. For operators within areas, logins were set up so they would only see results for their own routes. Transport Focus set up an 'all England areas' report, which was available to download from the dashboard, for each wave of research, so areas in England could compare to the total. Results for samples of under 30 were hidden, as they may be misleading due to the low base size.

Passenger comments were uploaded weekly and received the following checks:

- Verbatim comments were used to further validate survey answers e.g. if respondent said in the verbatim that the bus had been cancelled so they had got a taxi instead, their responses would be removed.
- Verbatim comments were cleaned, removing any offensive language, any identifying information, or any information that was not relevant to the journey e.g. mentions of the interviewer or being asked to take part in a survey.

These were reported weekly, along with area, date of journey, bus number and operator. These were reviewed by BVA BDRC, and then Transport Focus, before being published on the dashboard, so any potentially inflammatory comments could be sent directly to the relevant area or operator ahead of publishing.

Before data was uploaded every 4 weeks, checks were completed on the data to ensure it was all accurate. This included the following checks:

- Where operator had not been specified, but it was clear from the route number and area what the operator should be, this was added in
- Checking that operators actually operated within the area specified and with the route number specified (and, for example, reallocating the response to the correct area if required)
- Date of interview was checked against shift number and when shift should have taken placein some cases it was clear the passenger had answered the survey about a different journey
- Shift numbers were also checked for accuracy

Data on the dashboard was not weighted, and included some records which were later deleted, as detailed below. The data was also amended when the next wave was uploaded, as some completes came in after the cut off for loading the data (2 weeks after the end of the wave). These were processed e.g. if they were being loaded with wave 4 and were from wave 3, but any completes at that stage from wave 2 were removed – in practice this was generally less than 10 each wave, and it was considered that as they had been returned so long after the bus journey, the person filling out the survey may have not recalled the journey with accuracy when completing the survey.

At the mid year and year end reporting stages, additional checks and amends were made to the data before creating an SPSS file which the area reports were created from:

- Time of day was validated to ensure it was correct in some instances it was clear that the respondent had put 'am' when in fact it should have been 'pm' based on time of shift or e.g. a time of 3:30am when buses would not have been running.
- Some journeys were removed which were completed on services outside of the scope of the survey, for example Megabus or National Express coach services. These completes are not included in the figures in the table above.
- Verbatim comments were coded based on whether they were discussing the current bus journey, or another bus journey, topic of discussion, and whether the comment was positive, negative or neutral.

After the data was validated, coded and edited, an SPSS data file was provided to Transport Focus to their specification. Transport Focus also ran comprehensive checks on this file before it was ruled off as final, and this was then used to create the mid-year and year end reports.

## 7 Weighting

#### 7.1 Weighting by age, gender and day-part

The survey weighting was designed to offset the effects of both non-response bias and non-participation bias based on age, gender and day-part.<sup>4</sup> Weighting took place at the mid year stage of fieldwork, and then was completed again from scratch at the year end stage, so the two halves of the year were not weighted in isolation.

#### Age and gender weights

No known source of information exists to detail the demographic of journeys by age and gender consistently for each PSU; therefore this information was collected through the fieldwork. During the survey, fieldworkers broke from recruiting passengers temporarily at points through their shift, to record the age (within 3 bands: 16-25, 26-59 and 60+) and gender of every passenger of the bus or waiting at the bus stop with intention to board a bus (from observation). As described earlier, on board the bus this age and gender record was made at the mid-point of the first outbound journey, and again at the mid-point of the last inbound journey. At bus stops, the observation was conducted once at a random point during the shift. The passenger age and gender profiles were aggregated at the PSU level and compared to the profile given by the declared age and gender in the completed surveys for that PSU. Rim weights were then applied for each PSU for age and gender (which were not interlocked), based on the observed profiles made during fieldworkers' shifts. In practice, a small proportion of respondents did not declare their age and / or gender in the questionnaire itself and the observed profiles were adjusted proportionately to allow for this. (The alternative would be to have excluded these respondents because they could not be given a weight, but this would have meant a reduction in the overall sample size and the loss of passenger feedback which was otherwise entirely valid).

#### Day-part weights

The proportion of all journeys by day-part within each PSU had been estimated via Passenger Value models, during the sampling process. These proportions formed a further set of rim weights applied to each PSU.

The following tables show the observed age and gender profile of passengers from the fieldworker observation (adjusted for non-response to age and gender questions in the questionnaire itself), and the estimated day-part profiles generated by the PV2 models. These were therefore the target rim weights applied to each PSU for the interim reporting stage.

#### Shift type weights

<sup>&</sup>lt;sup>4</sup> Day-parts are weekday morning peak (07:00-09:29), weekday off-peak (before 07:00, 09:30-15:29, or after 18:30), weekday evening peak (15:30-18:30) and weekends.

Additionally, it was noted that there were some minor differences in survey question responses based on the type of shift (on bus or at stop) e.g. relating to ratings of the journey or driver. As the aim was to complete half of all shifts (and therefore half of responses) on bus and half at stop for all areas (with the exception of Reading Buses), weights were applied to all areas except Reading Buses to correct for any differences in the number of completes to 50% on board /50% at stop.

### Target rim weights

#### 7a. Target rim weights applied

	Male	Female	No res- ponse	16-25	26-59	60+	No res-ponse	AM peak	Off-peak	PM peak	Weekend	No response
Bournemouth, Christchurch & Poole	42.83%	53.29%	3.88%	33.44%	36.40%	28.26%	1.90%	14.31%	49.54%	17.33%	17.51%	1.32%
Brighton & Hove	41.65%	54.16%	4.19%	35.60%	39.95%	23.14%	1.30%	13.29%	47.66%	16.48%	21.65%	0.93%
Cheshire East	43.65%	50.53%	5.82%	17.94%	42.96%	35.88%	3.22%	15.70%	48.83%	17.94%	15.45%	2.08%
Cheshire West & Chester	42.00%	51.79%	6.21%	19.19%	42.37%	35.03%	3.41%	14.51%	48.15%	17.54%	18.84%	0.97%
Cornwall	39.11%	55.68%	5.21%	30.00%	33.97%	33.34%	2.68%	18.05%	49.62%	19.96%	11.09%	1.27%
Derbyshire	46.86%	49.67%	3.47%	22.52%	34.07%	41.88%	1.53%	14.40%	47.57%	17.15%	18.73%	2.14%
Durham	41.78%	53.15%	5.07%	28.68%	37.71%	31.42%	2.19%	14.43%	49.20%	16.90%	17.63%	1.84%
East Riding of Yorkshire	40.77%	54.55%	4.68%	18.34%	28.84%	49.85%	2.97%	13.29%	51.43%	16.34%	18.03%	0.91%
East Sussex	39.84%	56.64%	3.52%	22.64%	29.33%	46.17%	1.86%	15.17%	47.96%	17.70%	17.52%	1.65%
Greater Manchester	46.86%	49.84%	3.30%	37.33%	40.71%	21.15%	0.80%	14.46%	48.24%	16.58%	18.79%	1.93%
Greater Nottingham	48.54%	46.82%	4.64%	32.89%	38.27%	26.78%	2.06%	13.17%	48.13%	18.07%	18.96%	1.68%

	Male	Female	No res- ponse	16-25	26-59	60+	No res-ponse	AM peak	Off-peak	PM peak	Weekend	
Lancashire and Blackburn with Darwin	45.94%	50.10%	3.96%	30.71%	36.40%	30.75%	2.14%	16.04%	47.37%	16.91%	17.98%	1.71%
Leicester City	46.24%	49.03%	4.73%	31.83%	36.85%	29.15%	2.17%	14.53%	48.60%	18.52%	16.92%	1.42%
Liverpool	43.66%	50.53%	5.81%	16.74%	47.67%	32.57%	3.02%	14.15%	47.34%	16.82%	20.17%	1.51%
Luton	41.65%	52.28%	6.07%	27.19%	48.42%	22.31%	2.08%	13.47%	48.65%	17.43%	18.37%	2.08%
Norfolk	41.74%	53.48%	4.78%	36.27%	33.76%	27.69%	2.27%	15.94%	46.75%	17.30%	18.58%	1.43%
North East Lincolnshire	43.05%	53.55%	3.40%	23.33%	36.60%	38.05%	2.02%	12.82%	47.17%	17.37%	19.74%	2.90%
Northumberland	42.36%	51.83%	5.81%	17.66%	35.54%	43.30%	3.49%	13.51%	48.74%	16.82%	18.90%	2.03%
Nottinghamshire	45.52%	50.70%	3.78%	29.91%	35.74%	32.73%	1.62%	14.08%	47.90%	17.96%	18.97%	1.08%
Oxfordshire	40.39%	53.51%	6.10%	25.46%	53.10%	17.76%	3.68%	13.31%	49.78%	16.96%	18.51%	1.44%
Portsmouth	42.32%	53.57%	4.11%	20.02%	43.70%	34.04%	2.25%	13.77%	47.40%	16.95%	20.18%	1.71%
Reading Buses	41.87%	53.53%	4.60%	25.57%	48.33%	24.15%	1.96%	13.40%	48.93%	17.26%	18.88%	1.53%
South Yorkshire	47.57%	48.40%	4.03%	27.13%	47.15%	24.02%	1.70%	13.65%	47.47%	16.00%	21.17%	1.70%
Stoke on Trent	39.94%	56.19%	3.87%	33.19%	33.08%	31.76%	1.97%	14.27%	50.98%	17.48%	15.87%	1.36%

	Male	Female	No res- ponse	16-25	26-59	60+	No res-ponse	AM peak	Off-peak	PM peak	Weekend	
Suffolk	39.21%	57.05%	3.74%	32.09%	36.49%	30.11%	1.31%	15.11%	48.06%	18.64%	17.38%	0.81%
Surrey	41.87%	54.11%	4.02%	26.74%	35.40%	35.89%	1.97%	15.09%	49.61%	17.20%	17.18%	0.94%
Tees Valley	45.75%	50.11%	4.14%	26.23%	39.35%	31.32%	3.10%	14.48%	48.09%	16.53%	18.69%	2.22%
Thurrock	39.83%	54.70%	5.47%	36.53%	40.08%	21.07%	2.32%	15.42%	47.26%	20.08%	16.40%	0.84%
Tyne & Wear	43.04%	52.78%	4.18%	20.81%	43.98%	33.77%	1.45%	14.45%	48.12%	16.42%	20.03%	0.98%
Warrington	42.84%	53.63%	3.53%	26.76%	36.07%	35.10%	2.07%	20.09%	42.49%	23.02%	13.07%	1.34%
West Midlands	48.51%	46.80%	4.69%	32.78%	40.90%	24.02%	2.30%	14.07%	47.95%	16.90%	19.63%	1.44%
West of England CA and North Somerset	43.29%	52.99%	3.72%	40.46%	35.55%	21.84%	2.15%	13.94%	48.56%	17.03%	19.49%	0.98%
West Sussex	42.91%	52.96%	4.13%	23.38%	44.71%	30.14%	1.77%	14.81%	48.77%	16.73%	19.10%	0.59%
West Yorkshire	41.99%	53.24%	4.77%	35.23%	25.21%	37.06%	2.49%	13.86%	47.92%	16.11%	20.05%	2.06%
York	38.05%	56.47%	5.48%	28.32%	34.10%	34.84%	2.74%	13.11%	48.11%	17.30%	20.11%	1.37%
HITRANS	44.12%	51.31%	4.57%	33.52%	33.71%	30.74%	2.03%	19.26%	46.97%	20.45%	12.30%	1.02%
NESTRANS	45.03%	49.11%	5.86%	29.26%	47.94%	19.44%	3.35%	13.72%	49.35%	17.67%	18.60%	0.67%

	Male	Female	No res- ponse	16-25	26-59	60+	No res-ponse	AM peak	Off-peak	PM peak	Weekend	
	10.150/	50.070/	0.000		40.070/	00.400/	4 750/	45.040/	40.50%	40.070/		4.040/
SESTRANS	43.45%	53.27%	3.28%	25.09%	46.97%	26.19%	1.75%	15.04%	46.56%	16.87%	20.22%	1.31%
SPT	42.58%	54.94%	2.48%	22.26%	37.86%	38.85%	1.03%	13.88%	48.59%	17.77%	18.53%	1.24%
SWESTRANS	41.04%	54.01%	4.95%	24.68%	33.27%	39.85%	2.20%	16.47%	48.55%	20.86%	12.84%	1.28%
TACTRANS	44.66%	47.93%	7.41%	31.08%	31.26%	33.16%	4.50%	14.86%	46.73%	17.12%	18.64%	2.65%

The average weights applied to respondents in each PSU, within each of the weight cells, are given in the tables below. Before settling on these final weights as shown (i.e. the degree to which the final weighted profile matched the target profiles in the tables above), average weights for each of these cells were observed. None of the weights at this stage were over 4, so no collapsing of cells was required.

### Actual weights applied

#### 7b Actual (average) rim weights applied

	Male	Female	No res- ponse	16-25	26-59	60+	No res- ponse	AM peak	Off- peak	PM peak	Weekend	No res- ponse
Bournemouth, Christchurch												
& Poole	1.7	0.9	0.8	1.0	0.8	1.5	1.0	1.2	1.0	0.9	0.9	1.0
Brighton and Hove	1.4	0.7	1.2	1.0	0.8	1.4	1.0	1.0	1.0	0.9	1.3	1.0
Cheshire East	1.1	1.3	0.8	1.0	0.9	1.2	1.0	1.8	0.9	0.9	1.0	1.0
Cheshire West & Chester	1.1	1.1	0.9	1.0	0.9	1.3	1.0	0.6	1.1	1.5	1.1	1.0
City of York	1.4	0.9	0.9	1.0	0.9	1.2	1.0	2.5	0.8	1.1	1.5	1.0
Cornwall	1.4	0.9	0.9	1.0	0.9	1.2	1.0	1.1	1.0	1.0	0.8	1.0
Derbyshire	1.1	0.8	1.1	1.0	0.8	1.4	1.0	1.1	0.9	1.0	1.5	1.0
Durham	1.0	0.9	1.2	1.0	0.8	1.3	1.0	0.9	1.0	1.3	0.9	1.0
East Riding of Yorkshire	1.2	1.0	1.0	1.0	0.8	1.6	1.0	1.6	0.9	0.9	1.5	1.0
East Sussex	1.3	0.8	1.1	0.7	0.9	1.3	1.0	1.4	1.0	1.3	0.7	1.0
Greater Manchester	1.1	0.9	1.2	1.0	0.8	1.4	1.0	0.6	1.0	1.0	1.5	1.0
Greater Nottingham	1.1	0.9	1.1	1.0	0.7	1.6	1.0	0.9	1.0	1.5	0.8	1.0
Lancashire and Blackburn with Darwen	1.3	1.1	0.8	1.0	0.8	1.4	1.0	1.3	0.9	1.1	1.2	1.0

	Male	Female	No res- ponse	16-25	26-59	60+	No res- ponse	AM peak	Off- peak	PM peak	Weekend	No res- ponse
Leicester City	1.2	0.9	0.9	1.0	0.8	1.4	1.0	1.0	1.0	1.1	1.0	1.0
Liverpool City Region	0.9	1.0	1.1	1.0	0.9	1.2	1.0	0.7	0.9	1.9	1.3	1.0
Luton	1.1	1.0	1.0	1.0	0.9	1.1	1.0	1.2	1.0	1.1	0.9	1.0
Norfolk	1.7	0.8	0.8	1.0	0.9	1.2	1.0	1.0	0.9	1.1	1.0	1.0
North East Lincolnshire	1.0	0.8	1.3	1.0	0.8	1.5	1.0	1.4	0.8	1.0	1.7	1.0
Northumberland	1.0	1.0	1.0	1.0	0.8	1.3	1.0	0.7	1.1	1.2	1.1	1.0
Nottinghamshire	1.0	0.8	1.2	1.0	0.8	1.4	1.0	1.4	1.0	0.9	0.9	1.0
Oxfordshire	1.4	1.1	0.6	1.0	0.9	1.2	1.0	1.0	1.1	0.8	1.0	1.0
Portsmouth	1.2	1.0	0.9	1.0	0.8	1.4	1.0	1.2	1.0	1.1	0.9	1.0
Reading Buses Network	1.2	1.0	0.8	1.0	0.9	1.2	1.0	1.1	0.9	1.0	1.1	1.0
South Yorkshire	1.1	0.9	1.0	1.0	0.8	1.4	1.0	0.9	0.9	0.8	2.0	1.0
Stoke-on-Trent	0.9	0.9	1.2	1.0	1.0	1.1	1.0	0.7	0.8	1.4	2.4	1.0
Suffolk	1.6	0.9	0.8	1.0	0.9	1.3	1.0	1.5	0.8	0.9	2.1	1.0
Surrey	1.1	0.9	1.0	1.0	0.9	1.2	1.0	0.8	0.9	1.4	1.1	1.0
Tees Valley	0.9	0.9	1.2	1.0	0.7	1.6	1.0	3.7	1.0	0.4	3.7	1.0
Thurrock	1.4	0.8	1.0	1.0	0.8	1.4	1.0	1.3	0.9	0.8	1.4	1.0

	Male	Female	No res- ponse	16-25	26-59	60+	No res- ponse	AM peak	Off- peak	PM peak	Weekend	No res- ponse
Tyne & Wear	0.8	0.9	1.3	1.0	0.9	1.3	1.0	0.9	1.0	0.8	1.2	1.0
Warrington	1.1	1.0	0.9	1.0	0.9	1.2	1.0	1.0	1.0	1.1	0.9	1.0
West Midlands	1.2	0.8	1.2	1.0	0.7	1.5	1.0	1.3	0.9	1.4	0.8	1.0
West of England and North Somerset	1.5	0.8	0.8	1.0	0.9	1.2	1.0	1.1	0.8	1.1	2.0	1.0
West Sussex	0.9	1.1	0.9	1.0	0.8	1.3	1.0	1.3	1.0	0.8	1.0	1.0
West Yorkshire	1.3	0.6	1.2	1.0	0.9	1.2	1.0	1.3	1.0	1.0	0.9	1.0
HITRANS	1.8	0.8	0.9	1.0	0.9	1.2	1.0	1.0	0.9	1.2	1.0	1.0
Nestrans	1.4	1.2	0.5	1.0	0.9	1.2	1.0	0.8	0.9	2.0	1.1	1.0
SEStran	1.4	1.0	0.8	1.0	0.9	1.2	1.0	1.5	0.9	0.9	1.1	1.0
SPT	0.8	0.8	1.6	1.0	0.9	1.2	1.0	0.9	1.0	0.9	1.2	1.0
Swestrans	1.1	0.8	1.2	1.0	0.9	1.2	1.0	1.4	0.9	1.2	0.9	1.0
Tactran	1.2	0.9	1.0	1.0	0.8	1.4	1.0	2.4	0.9	0.8	1.0	1.0

### 7c Actual (average) rim weights applied - on board vs at stop

	On board	At stop
Bournemouth, Christchurch & Poole	1.0	1.1
Brighton and Hove	0.8	1.4
Cheshire East	0.8	1.3
Cheshire West & Chester	1.0	1.0
City of York	0.8	1.3
Cornwall	1.1	0.9
Derbyshire	0.9	1.2
Durham	1.0	1.0
East Riding of Yorkshire	0.8	1.4
East Sussex	0.9	1.1
Greater Manchester	0.8	1.3
Greater Nottingham	0.8	1.3
Lancashire and Blackburn with Darwen	0.8	1.3
Leicester City	0.9	1.2
Liverpool City Region	0.9	1.1

	On board	At stop
Luton	0.8	1.4
Norfolk	1.0	1.0
North East Lincolnshire	0.6	2.5
Northumberland	1.0	1.0
Nottinghamshire	0.9	1.2
Oxfordshire	0.8	1.4
Portsmouth	0.9	1.1
South Yorkshire	1.0	1.0
Stoke-on-Trent	0.8	1.2
Suffolk	0.8	1.3
Surrey	0.8	1.3
Tees Valley	1.1	0.9
Thurrock	1.1	0.9
Tyne & Wear	1.1	0.9
Warrington	0.7	2.2
West Midlands	1.0	1.0

	On board	At stop
West of England and North Somerset	0.9	1.2
West Sussex	0.9	1.1
West Yorkshire	1.1	0.9
HITRANS	0.9	1.1
Nestrans	0.7	2.0
SEStran	0.9	1.1
SPT	0.8	1.4
Swestrans	1.2	0.9
Tactran	1.2	0.9

The final Rim Weighting Efficiency was 81.9%, with Maximum Respondent Rim Weight: 7.981217 and Minimum Respondent Rim Weight: 0.211696.

#### 7.2 Weighting to proportion Primary Sampling Units within total survey dataset

Weighting was also used to proportion each PSU to the number of passenger journeys it represented within the total set of areas surveyed. Journey numbers for each local authority were sourced from DfT Bus Statistics, published in November 2023 and the unweighted sample size for each PSU was 'grossed up' to this number. This meant that, with any analysis where results were aggregated, e.g. for 'All England (outside London)', the component PSUs within that aggregate made the appropriate contribution relative to each other.

Journey numbers for local authority areas in England were available from the DfT. For Reading Buses, as we did not have information on what proportion of journeys in Reading these represented, the decision was made to use Reading Council figures as a proxy and weight the Reading Buses results to this.

The following tables show the journey volume weightings applied to the PSUs selected within this wave's survey. Journey volumes are shown in thousands. The tables show only the weights which were informed by the DfT's published statistics, and / or derived using the methods outlined above. For Scotland, weights were informed by Transport Scotland, and this information has been redacted in the tables below since it is potentially commercially sensitive. More information can be provided on request following discussion with Transport Focus about how it will be used.

	Journeys ('000)*	Sample size (valid responses used in reported results)	Journey volume weight
Bournemouth, Christchurch & Poole	20,595	1210	21.3
Brighton & Hove	38,779	1073	47.1
Cheshire East	2,781	963	3.4
Cheshire West & Chester	6,418	821	8.9
Cornwall	10,208	1420	7.8
Derbyshire	16,773	981	20.1
Durham	16,973	868	21.1
East Riding of Yorkshire	4,174	876	6.2
East Sussex	14,903	909	18.9

#### 7c. Journey volumes and weights

Greater Manchester	146,566	880	207.2
Greater Nottingham	37,593	776	61.7
Lancashire and Blackburn with Darwin	38,858	935	49.0
Leicester City	20,531	1058	21.6
Liverpool	85,091	861	113.9
Luton	8,849	626	15.7
Norfolk	21,900	1192	21.3
North East Lincolnshire	5,379	793	12.5
Northumberland	6,383	688	10.0
Nottinghamshire	21,172	741	33.6
Oxfordshire	33,601	1114	40.5
Portsmouth	9,400	1290	8.0
Reading Buses	17,506	1173	
South Yorkshire	6,716	942	72.8
Stoke on Trent	6,716	1319	6.0
Suffolk	12,249	990	16.0
Surrey	22,297	1168	21.1
Tees Valley	21,830	677	39.2
Thurrock	5,019	475	12.3
Tyne & Wear	83,221	1936	46.8
Warrington	4,336	822	8.0
West Midlands	212,395	1044	269.2
West of England CA and North Somerset	50,155	1534	37.7
West Sussex	19,537	1018	21.0
West Yorkshire	108,280	922	164.8
York	13,221	949	16.6
HITRANS		591	
Nestrans		597	
SEStran		457	
SPT		484	
Swestrans		546	
Tactran		378	

#### 7.3 Weighting total

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

#### Final weight = demographic weight x journey volumes weight.

#### 7.4 Survey accuracy

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

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 tables 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%).

	Typical error variance on a result of around 80%
Bournemouth, Christchurch & Poole	2.19%
Brighton & Hove	2.36%
Cheshire East	2.04%
Cheshire West & Chester	2.56%
Cornwall	1.93%
Derbyshire	2.43%
Durham	2.59%
East Riding of Yorkshire	2.35%
East Sussex	2.52%
Greater Manchester	2.63%

#### 7l. Typical error variances in 2023 survey results

Greater Nottingham	2.79%
Lancashire and Blackburn with Darwin	2.53%
Leicester City	2.35%
Liverpool	2.66%
Luton	3.02%
Norfolk	2.21%
North East Lincolnshire	2.57%
Northumberland	2.82%
Nottinghamshire	2.83%
Oxfordshire	2.31%
Portsmouth	2.03%
Reading Buses	2.21%
South Yorkshire	2.37%
Stoke on Trent	1.94%
Suffolk	2.39%
Surrey	2.23%
Tees Valley	2.97%
Thurrock	3.42%
Tyne & Wear	1.76%
Warrington	2.46%
West Midlands	2.42%
West of England CA and North Somerset	1.97%
West Sussex	2.39%
West Yorkshire	2.57%

York	2.45%
SCOTLAND	
HITRANS	3.08%
Nestrans	3.14%
SEStran	3.66%
SPT	3.55%
Swestrans	3.11%
Tactran	3.99%

## 8 Methodology differences

#### 8.1 Online survey completion

We have reviewed the level of drop out from the online survey beyond question 12, and the places where people typically drop out, to see if there are potential hotspots within the survey itself that could affect overall response. Graph 8a below shows those who completed key questions as a proportion of those who began the online survey, effectively showing where drop-out was most prevalent. Some level of drop out is to be expected in all online questionnaires.

(See the questionnaire in Appendix 1 to view full question wording<sup>5</sup>.)

8a. % of online starters who are still in the survey at key points in the questionnaire:



#### % of those who complete up to Q12 who are still in the survey at key points

The fact that the level of drop out is low is a positive given that the majority of respondents completing online did so on a smartphone (shown in table 8b below). It is known that people completing surveys (across all market research) on smartphones are more likely to drop out than those completing on larger or at-home/work devices.

<sup>&</sup>lt;sup>5</sup> The questionnaire shown in the Appendix is an example of the paper version. This does not include a question on the date of the passenger's journey, because this information can be confirmed by the fieldworker at the point of recruitment (they write the date in the top right hand corner of the questionnaire). The question about the date of the journey is included on the online questionnaire only.

8b: proportion of online respondents starting the survey on...

Device	%
Smartphone	86%
Tablet	2%
Desktop	12%

#### 8.2 Shift type: On bus versus at stop

Completion of the survey on bus and at bus stop has led to some small differences in results between the two shift types. We have accounted for these differences by ensuring that all areas are weighted so that the proportion of on bus versus at stop shifts are 50/50 in all areas, however, it is useful to understand how results differ so that these differences can be considered when evaluating the data.

9a:	Difference	in	results	across	on	bus	or	at st	top	shifts	(weig	hted	data	)
			-								-			-

	On bus	At bus stop
Q8 How satisfied were you with each of the following during the journ	ney? (Total sa	atisfied)
The bus stop where you caught the bus	79%	75%
The length of time you had to wait for the bus	76%	63%
The punctuality of the bus at the stop where you caught the bus (arriving on time)	76%	68%
The driver of the bus	88%	82%
The length of time your journey on the bus took	84%	78%
Q9. Overall, taking everything into account from the start to the end, how satisfied were you with your bus journey?	85%	77%
B5 Thinking about the bus stop itself, how would you rate the following	ng? (Total s	atisfied)
Its general condition/standard of maintenance	67%	69%
Its freedom from litter	71%	71%
The information provided	72%	72%
Your personal safety whilst at the bus stop	74%	72%
B6A How long did you wait for your bus? (% 0-9 minutes)	70%	51%
B6B Was this wait time(% longer than expected)	26%	36%
B16 Thinking about the driver, how would you rate the following? (	Total good)	I

How near to the kerb/stop the bus stopped	87%	84%
The helpfulness and attitude of the driver	85%	80%
The time the driver gave you to get to your seat	84%	81%
The smoothness of the ride (no jolting) during the journey	80%	76%

From this, we can see that those who were recruited on bus give generally higher ratings across the majority of attributes, and also report a lower wait for the bus that is more in line with expectations. This may be a factor of already being on their journey when the interviewer approaches them, whereas for those at stop they are still waiting when approached, and so are more likely to remember the wait for completing the survey. It may also be an impact of those whose bus is delayed, or who are waiting for a longer time, are more available to be approached by interviewers at bus stops.

However, there is not such a difference in terms of bus stop ratings between those recruited on bus or at stop – perhaps as these factors are things that stay in the mind more as either being present or absent (e.g. litter or a timetable), rather than more subjective measures of the wait.

# Appendix 1: Questionnaire used in YBJ 2023

Core version shown as example

Tell us about your bus journey
Thank you for taking part in our survey and adding your voice to those of thousands of bus passengers who do so each year.
When giving your feedback, please just think about the bus journey you were making when given this questionnaire.
All the information you give will be treated in the strictest confidence. Your answers are anonymous and will only be used for this survey.
Give us your views today to make sure your voice is heard.
Transport Focus is the official, independent consumer watchdog that promotes the interests of transport users.
<ul> <li>How to complete the questionnaire</li> <li>Please fill in the questionnaire after you complete your journey (that's when you have arrived at your destination bus stop). If you were given it as you got off the bus, then you can fill it in now.</li> <li>Please tick only one box per question, unless there is an instruction that says 'tick all that apply'.</li> <li>Then return it to us in the reply paid envelope provided.</li> </ul>
1 About your journey
<ul> <li>First, can we just check where you spoke to our interviewer about this survey?</li> <li>On board a bus</li> <li>At the bus stop where you caught the bus</li> <li>At the bus stop where you got off the bus</li> </ul>
2 What time did you board the bus for this journey?
Fill in the time to got on the bus in the bases below and tick the bay for am (morning) or nm (afternoon or evening)
Hours: Minutes: AM
3 What was the route number, letter, or name of the bus you boarded for your bus journey? If you used more than one bus, please write in the one you were using, or had just used, when our interviewer saw you.
4 And which bus company runs this route? Please tick the box below if you don't know.
Don't know
Office use:DATE (DD/MM/YY)     §64000101¬     Your opinion Counts!       Transportfocus
This survey is being undertaken for Transport Focus by BVA BDRC, an independent market research agency, which adheres to the Market Research Society's code of conduct. You were handed this questionnaire by an interviewer working for Perspective Research Services, a part of BVA BDRC.

Т	hank	s. Please answer the rema	ining qu	estions for	the	bus jo	o <mark>urney you hav</mark>	e just des	cribed.		
5	Wh	at was the main purpose o	t this bu	s journey?							
		Going to or from work					A shopping trip				
		Going to or from education	(e.g. col	lege, schoo	I)		Visiting friends or relatives				
		Going to or from a medical	or other	appointmen	nt		A leisure trip (e	.g. a day	out)		
		Travelling for business (ex	cluding c	ommuting)			Something else	e i			
_											
6	Wh	at type of ticket or pass die	d you us	e for this b	us jo	urney	<i>[</i> ?				
		A free pass or free journey				A ticket or pass you paid for					
		Something else					Don't know		_		
		Please write in:									
									-		
2	Y	our overall opinions of	the jou	rney							
7	Plea	ase tell us in your own wor	rds what	was good	or ba	ad ab	out this journey	/. We're ir	nterested		
	III a	nyuning unat stood out abo	out uns jo	ourney.							
	1 /60	se write in.									
8	Hov	v satistical wore you with a	ach of th	e tollowing	a du	ring f	he journey?				
·		v sausnea were you mare	ach or a	ie ionowing	Neit	ther	ine journey.		Don't		
			Very	Fairly s	atistie	ed no	r Fairly	Very	know/no		
-			satisfied	satisfied d	lissat	istied	dissatisfied of	lissatisfied	d opinion		
	the	is stop where you caught bus	Ц	Ц	L	1		Ц	Ц		
Т	he le wait	ngth of time you had to for the bus				ב					
Т	he pu	inctuality of the bus at the									
	stop (arri	where you caught the bus									
т	he bi	is driver			Г	-	_				
Ť	he le	nath of time your journey	-	ä	2	-		-	H		
	ont	he bus took	•	-		-		-	-		
9	Ove with	erall, taking everything into n your bus journey?	accoun	t from the s	start	to the	e end, how sati	sfied were	e you		
		Verv satisfied				Fair	v dissatisfied				
		Fairly satisfied				Ven	/ dissatisfied				
	н	Neither satisfied nor dissat	isfied		H.	Don	't know/no opinie	on			
	-				_						
10	Hov	v satisfied were you with t	he value	for money	of yo	our jo	urney?				
		Very satisfied				Fair	ly dissatisfied				
		Fairly satisfied				Ven	/ dissatisfied				
		Neither satisfied nor dissat	isfied			Don	't know/ no opini	on			
	_				_						

10B \	What had the biggest influence on your rating of the value for money?
	The cost for the distance travelled
	The cost per journey for the number of journeys made with your ticket or pass
	The cost of the bus compared to other modes of transport
	The cost of bus fares here compared to those in other places
	The cost of bus fares now compared to what they were 12 months ago
	The fare compared to the cost of everyday items
	The quality of the service for the fare paid
	A reason not mentioned above
	Please write in:
To help gathering	us understand how different types of passengers' experiences vary, and to make sure we are g the opinions of a wide range of passengers, we would like to ask a few questions about you.

Any information you give us will be used for research purposes only and not to identify any individual. You are free to decide whether you want to give us this information or not.

11	1 How would you describe yourself?							
		Female		Male				
		Prefer to self-describe		Prefer not to say				
		Please write in if you would like to						
12	Whi	ch age group are you in?						
		Under 16		60 – 64 years				
		16 – 18 years 🔲 35 – 44 years		65 – 69 years				
		19 – 21 years 🔲 45 – 54 years		70 – 79 years				
		22 – 25 years 🔲 55 – 59 years		80+ years				
				Prefer not to say				
3	Y	our detailed feedback about the jour	ney					
	Thanks for sharing your overall impressions about the journey and for telling us a bit about yourself. Now we would like to hear more about your journey experience to build up a full picture. At the end of the survey, you can tell us how you rate local bus services more generally.							
	What was the main reason you chose to take the bus for that journey?							
13	Wha	at was the <u>main</u> reason you chose to take t	he bu	is for that journey?				
13	Wha	at was the <u>main</u> reason you chose to take t Cheaper than the car	he bu	is for that journey? More convenient than other transport				
13	Wha	at was the <u>main</u> reason you chose to take t Cheaper than the car More convenient than the car (e.g. parking)	he bu	is for that journey? More convenient than other transport Cheaper than other transport				
13	What D D D	at was the <u>main</u> reason you chose to take t Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car	he bu	is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling				
13	What D D D D	at was the <u>main</u> reason you chose to take t Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other	he bu D D D	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by				
13	What I have been set of the set o	at was the <u>main</u> reason you chose to take the Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another second	he bu D D D	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by another means				
13	What D D D	at was the <u>main</u> reason you chose to take the Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason Please write in	he bu	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by another means				
13	What D D D	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason Pleace write in	he bu	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by another means				
13	What I are a constrained with a	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason Please write in	he bu	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by another means				
13	What U U Wer Please	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason Please write in the you travelling with ase tick all that apply	he bu	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by another means				
13	What U U Wer Pleat	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason Please write in the you travelling with ase tick all that apply Heavy/bulky luggage	he bu	Is for that journey? More convenient than other transport Cheaper than other transport Preferred bus to walking/wheeling/cycling I didn't have the option of travelling by another means A folding bicycle or scooter				
13	What U U Wer Pleat	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason <i>Pleace write in</i> <b>re you travelling with</b> ase tick all that apply Heavy/bulky luggage Shopping bags		A folding bicycle or scooter A dog				
13	What I are a constrained with a	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason <i>Please write in</i> <b>te you travelling with</b> ase tick all that apply Heavy/bulky luggage Shopping bags A shopping trolley		A folding bicycle or scooter A dog A helper				
13	What U U U Ver Pleas U U U U U U U U U U U U U	at was the <u>main</u> reason you chose to take to Cheaper than the car More convenient than the car (e.g. parking) Better for the environment than the car Better for the environment than other transport Another reason <i>Please write in</i> <b>re you travelling with</b> ase tick all that apply Heavy/bulky luggage Shopping bags A shopping trolley A pushchair, buggy or pram		A folding bicycle or scooter A dog A mobility scooter or wheelchair				

15	Wha	at type of area was the stop yo	u caught t	he bus in	1?			
		City or town centre			Village			
	H	City or town suburb			Countryside			
15B	lf vo	ou know the name of the bus s	top vou ca	uaht the	bus from.	olease wri	ite it in	
		Please write in:		5				
		I don't know the name of the bu	us stop					
16	And	which of these did the bus st	op where y	ou caug	ht the bus I	nave?		
	Plea	A shelter			Informatio	on on fares		
		Seating		Ē	Informatio	on on types	, s of tickets	available
		Electronic display showing bus	arrival time	es 🗖	A route m	ap		
		A timetable			Lighting None of t	he above		
17	Thi	nking about the bus stop itself	, how wou	ld you ra	te the follow	wing?		
			Verv	Fairly	Neither	Fairly	Verv	Don't
			good	good	nor poor	poor	poor	opinion
	Its g	jeneral condition/standard of maintenance						
	Beir	ng clear of litter						
	The	information provided	R	R	R	R	R	
	b	us stop	-	-	-	-	-	
18A	Hov	v long did you wait for your bu	is?	_	201 20			
	H	Less than 5 minutes 5 to 9 minutes		님	30 to 39 r 40 to 49 r	ninutes		
	H	10 to 14 minutes		H	50 to 59 r	ninutes		
		15 to 19 minutes			60 minute	s or longe	r	
		20 to 29 minutes			l can't ren	nember		
18B	Was	s this wait time Much longer than you expected	4		A little les	s than you	expected	
	H	A little longer than you expected	d	H	Much less	s than you	expected	
		About the length of time you ex	pected				-	
19	Thi	nking about when the bus arriv	ved, how w	ould you	rate the fo	llowing	?	Don't
			Very	Fairly	good	Fairly	Very	know/no
	The	asso of gotting onto the bus	good	good	nor poor	poor	poor	opinion
	The	length of time it took to board	H		H	H	Ë	
20	Thi	nking about when you were on	the bus, h	now woul	d you rate t	the follow	ing?	
			Verv	Fairly	Neither aood	Fairly	Verv	Don't know/no
			good	good	nor poor	poor	poor	opinion
	The #	cleanliness and condition of the bus						
	The	availability of seating or space						
	The	comfort of the seats						
	The	temperature inside the bus						
	You	r personal security	H	H	H	H	H	

- 21 How busy was the bus during most of your journey?
  - Almost empty
  - Several passengers, but plenty of seats
  - All or most seats occupied, but passengers were able to sit if they wanted to
  - Full, and some passengers had no choice about standing

#### 22 Did you get a seat on the bus?

- Yes for all of the journey
- Yes for part of the journey
- No there were seats available, but I chose to stand
- No there were no seats available, but I was happy to stand
- No there were no seats available and I would have liked a seat

#### 23 If you had a seat, did anyone sit next to you?

- Yes someone I knew sat next to me
- Yes someone I didn't know sat next to me
- No I was sat alone for the journey
- 24 Did other passengers' behaviour make you feel worried or uncomfortable during your journey at the bus stop or on the bus?

	At the bus stop	On the bus
Yes		
No		

If other passengers' behaviour made you feel worried or uncomfortable, which of the following were the reason(s) for this?							
Please tick all that apply	At the bus stop	On the bus					
Passengers drinking/ under the influence of alcohol							
Passengers taking/ under the influence of drugs							
Abusive or threatening behaviour							
Rowdy behaviour							
Feet on seats							
Music being played loudly							
Smoking/vaping							
Graffiti or vandalism							
Saw an act of vandalism/ violence taking place							
Other							

26	Was Plea	s your journey delayed by? ase tick all that apply	
		Congestion/traffic jams	Poor weather conditions
		Road works	The bus waiting too long at stops
		The bus driver driving too slowly	A driver shift change
		The time it took passengers to board/pay for tickets	No – none of these

27	How would you rate the following	facilitie	s on the b	ous?				
A	udio announcements e.g. saying the	Very good	N Fairly good no	leither good or poor	Fairly poor	Very poor	Not present on this bus	Don't know/ didn't use
A	next bus stop in electronic display e.g. showing the port bus stop							
D	etails of how to contact the bus company, for example, to provide							
F	ree Wi-Fi ISB charging points							
28	I hinking about the driver and the	driving,	how wou	ild you	rate th	e tollow	/ing?	
				Nei	ither			Don't
		Very	Fairly	go	boor	Fairly	Very	know/no
н	low near to the kerb/stop the bus	9000	9000					
	stopped	-			-			-
Т	he helpfulness and attitude of the drive	er 🗖		Г				
Т	he time the driver gave you to get to	Ē	<u> </u>	ī	5	Ē	ē	ē
	your seat						_	
Т	he smoothness of the ride (no jolting)							
	during the journey							
29	<ul> <li>Could you tell us a bit more about includes contactless, tickets on m</li> <li>Paid for journey</li> <li>A single</li> <li>A return</li> <li>A ticket from a multi-ticket bund</li> <li>A day pass or daily capped fare</li> <li>A pass, season ticket or capped longer period (e.g. weekly or</li> <li>I don't know</li> <li>Something else</li> </ul>	the pas obile ph lle or car d fare for monthly	ra	ir <u>eepas</u> <u>ireepas</u> An Ay Ad	ised for it ss or fre older p oung p lisabled	r the journe erson's erson's I person	imey? (Thi ⊉y pass pass 's pass	s
30	Who could you use your pass or ti	cket wit	th?					
	One bus company only			Bus	ses and	d other ty	pes of trans	sport
	Several bus companies			ldo	on't kno	w		
31	On boarding the bus, did you?							
	Use cash to buy a ticket or pass	s						
	<ul> <li>Use a contactless payment met buy a ticket or pass</li> </ul>	hod (e.g	g. credit or	debit c	ard, Ap	ple Pay	or Android F	<sup>o</sup> ay) to
	Show the driver a paper ticket of	or pass t	hat you al	ready ha	ad			
	Place your smartcard onto the f	are mac	hine	~				
	Show the driver or scan a ticket	display	ed on you	r smart	phone			
	Do something else							
	Please write in							Τ

#### 32 If you bought your ticket or pass before getting on the bus, how did you do this?

- From a bus driver before that day or earlier in the day
- Direct from the bus company using their app
- Direct from the bus company via website, or some other way
- From another website or app
- From a travel centre/bus station/booking office
- From a local shop or post office
- Using an arrangement through work/college

Another way

Please write in

## 4 Your opinion of bus services in the local area

33	Thinking more generally about the bus services where you were making this journey not just about this particular journey) how would you rate them for the following?	(so
	Nother	Don't

E	ase o	f getting to local amenities	Very good	Fairly good □	good nor poor	Fairly poor □	Very poor	know/no opinion
С	(e.g. shops, hospitals) Connections with other forms of public transport (e.g. trains)							
Taking me to the places that I want to go The frequency of services The reliability of services The range of different bus tickets and passes available								
T T	he co he inf serv	st of bus fares ormation provided about bus ices						
34	How	often do you typically travel by 5 or more days a week 3 or 4 days a week Once or twice a week Once a fortnight is this more often, the same, o More often The same	y bus? or less of	       ten than 1    	Once a m At least o Less freq This is the 2 months a Less ofter I can't ren	ionth nce every uently e first time igo? n nember	3 months	
5	At	oout you						
36	In the ethn will be decired with the will be a for each of the weak of the wea	is final section we ask for some n icity (which are considered to be be used for research purposes on de whether you want to give us th ask these questions so that we ca example, what do disabled passer would like to ask your ethnic ba processing this information play White Mixed/multiple ethnic groups Asian or Asian British	nore infor sensitive lly and no nis informa an unders ngers thin ackgrour ease leav	mation ab informatio t to identify ation or no stand how k compare nd. If you ve this que	out you, incl n). Any infor y any individ t. different pas do not cons estion blan Chinese Arab Other eth	uding your mation you lual. You a ssengers' ( sabled pas sent to us k. nic group	r health an u give us h re free to experience sengers. collecting	d here es vary, so, g, storing
		Black, African/Caribbean or Black	ck British		Prefer not	t to say		

37	37 We would like to ask if you have any disability. This is to help us better understand the needs you might have. If you do not consent to us collecting, storing and processing this information please leave this question blank.						
	Are you affected by any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?						
	Plea	ase 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 distant	nces	or difficulty climbing stairs)			
		Yes: Dexterity (e.g. difficulty lifting or carrying of	object	s or using a keyboard)			
		Yes: Difficulty with learning or understanding o	r cono	centrating			
		Yes: Memory					
	Η.	Yes: Mental health					
	Ξ.	Yes: Stamina or breathing or fatigue					
		Yes: Socially or behaviourally (e.g. associated	with a	autism, attention deficit disorder			
	-	or Asperger s)					
	Ц	Please write in:					
		Prefer not to say					
38	In te	erms of having a car to drive, which of the fol	lowir	ng applies?			
		I have a car available and don't mind driving		I don't have a car available			
		I have a car available but prefer not to drive		I don't drive			
39	Hov	v often are vou able to ask someone else to d	lrive v	vou for local iournevs?			
		All or most of the time		I don't have anybody I can ask			
	H	Some of the time	Ē.	Not relevant to me			
	_						
40	40 And finally, to help us get a better picture of bus services at a local level, it would be helpful if you could provide us with your home postcode. You do not have to provide this, but if you do, please provide at least the first half of your postcode. If you provide it, this will be used to help understand bus usage and make improvements locally.						
	You	r postcode will not be used to identify you persor	nally a	and will only be used for research purposes.			
	Plea	ase write your home postcode here:					
How You purp inter gove the o We proc	v the r resp oses est ir emme data v requi esse es be	information you have provided will be used ( bonses to the questions in this survey will always of the research. We may share your responses in the survey data, such as, but not limited to, loc: ent departments, bus operating companies and a will also be subject to the same restrictions and o re your consent for the sensitive information we d as described above, so please confirm whethe low:	Gene be ha with c al tran acade obliga ask fo er or n	eral Data Protection Regulations) andled confidentially and used solely for the other organisations that have a legitimate isport authorities, local authorities, mic institutions. Any organisations receiving tions under GDPR. or in the 'about you' section to be stored and ot you consent to this by ticking one of the			
	<u>ц</u>	res, i consent		No, I do not consent			
You infor (http For	also matio s://w any q	have the right to access, withdraw your consent on. For turther information please see the Privac ww.bva-bdrc.com/bva-bdrc-privacy-notices). jueries about this survey please contact Sally Mil	to us cy Not mnag	e, and object to processing of your sensitive tice on our website h at BVA BDRC on 07759526577.			
THANK YOU FOR COMPLETING THIS SURVEY AND SHARING YOUR OPINIONS WITH US SO YOUR VOICE IS HEARD							

## Appendix 2: PV2 models

The following models were used to estimate the number of unique passengers on board each bus service, from one end of its route to another for the 'on bus' shifts route selection.

Models were found to provide a better fit if the specific local authority area (or operator area) was used, than if the area type (PTE, Unitary, Two Tier, or Scottish RTP) was used. Therefore where the specific local authority (or operator) area was surveyed in the 2019 Bus Passenger Survey and thus had its own (robust) data, the specific PSU model was used. Where the PSU was not surveyed previously and there was no specific model available, the relevant area type model was used. The area type model was also used in cases where the specific PSU was surveyed but on a relatively small scale, i.e. in those cases where the number of on-board patronage counts was fewer than 10.

Similarly, if one of the "big five" operators was present in the area, a better model fit was found when the operator was factored into the model; therefore, models were generated with and without this factor in order to provide the best estimates possible. Some other large or dominant operators in certain areas (other than the "big five") were also factored in to create a better model fit for those PSUs.

As such there were six possible models.

The model for an area that had been surveyed before (on the 2019 Bus Passenger Survey) included a constant specific to that area, and then coefficients covering the time of day, duration of journey and operator. For an area that had not been surveyed before, the model was of the same structure but with coefficients depending upon the type of area (PTE, unitary, Two Tier, Scottish RTP).

	model number	1	2	3	4	5	6
	Basis	Area	Area Type	Area	Area Type	Area	Area Type
	big 5	Yes	Yes	No	No	No	No
	big5 or other dominant local	No	No	No	No	Yes	Yes
	Constant	26.81	26.20	26.23	26.23	26.23	26.23
	30 minutes or less	-6.52	-7.80	-6.46	-8.43	-6.35	-6.96
Duration	30 and up to 45 mins	-0.58	-1.81	-1.07	-1.43	-0.49	-1.39
Duration	45 mins and up to one hour	2.23	-1.25	2.40	-0.95	2.27	-0.87
	over 1 hour	3.17	7.02	3.51	6.87	2.95	5.93
	Evening peak	0.95	1.61	1.05	0.76	0.73	1.19
Day part	Morning peak	-0.11	-2.09	-0.44	-0.87	-0.12	-2.34
Day-part	Offpeak	0.41	0.20	0.34	0.07	0.38	0.20
	Weekend	-2.43	-1.21	-2.06	4     5       Area Type     Area Area No       No     No       No     Ye       3     26.23       26     -8.43       -6.3     -6.3       7     -1.43       0     -0.95       2.2     6.87       5     0.76       0.76     0.7       4     -0.87       -0.49     -2.	-2.14	-0.80
	Arriva	-7.22	-4.10				
	First	5.43	0.40				
Operator	Go-Ahead	-1.27	3.95				
("big 5")	National Express	12.86	10.82				
	Other	-6.46	-6.07				
	Stagecoach	3.83	1.92				
	big5plusArriva					-7.92	-4.57

Large	big5plusFirst					5.70	1.32
operators	big5plusGo-Ahead					-1.41	3.55
(including	big5plusLothian Buses					19.19	12.29
"big 5" in	big5plusNational Express					11.89	10.34
areas	big5plusOther					-7.65	-9.10
where another of these other named large operators is also							
present)	big5plusStagecoach					3.92	1.89
/	PTE		4.45		5.53		5.19
	Scottish RTP		-2.80		-3.64		-4.95
	Two Tier		-3.91		-3.75		-3.07
	Unitary		2.52		1.99		2.19
	Bournemouth, Christchurch &						
	Poole	7.15		4.61		8.26	
	Cheshire West and Chester	4.71		1.46		5.69	
	Cornwall	-13.13		-8.37		-12.77	
	East Sussex CC 'Main'	3.49		4.68		4.18	
	Greater Manchester	-0.43		1.84		0.40	
	HITRANS	-6.93		-10.23		-5.61	
Aroa tupo	Liverpool	4.83		0.31		6.09	
Alea type	Northumberland	16.33		10.26		17.55	
	Oxfordshire	-6.86		-5.93		-6.27	
	Reading Buses	8.88		3.08		-0.86	
	SESTRANS	0.44		0.78		-3.92	
	South Yorkshire	13.38		19.12		13.91	
	SWESTRANS	-15.66		-15.07		-14.69	
	TACTRAN	-9.94		2.39		-8.71	
	Tees Valley	7.21		0.36		8.74	
	Tyne & Wear	14.60		15.59		15.33	
	West Midlands/Centro	1.30		12.21		2.86	
	West of England Combined						
	Authority plus North Somerset	-4.93		-11.08		-2.91	

#### Example, based on local authority area West Midlands:

 This specific area was covered in the 2019 Bus Passenger Survey and therefore the specific area was able to be modelled. Some services in this area were run by "big five" operators (National Express). Therefore, the West Midlands used model number 1.

For the example below, we will assume that this bus was a National Express bus in the West Midlands, on a 20 minute journey during the morning peak

- In this case we started with the base assumption that all buses had 26.81 people on board (this was the constant)
- Then this figure was increased by 1.30 for all individual bus services for the fact that they were all in the West Midlands local authority area
- It was then increased or decreased depending on the other attributes of each bus; for instance:
  - If one whole journey for that bus service was less than 30 minutes in duration, it would be decreased by 6.52
  - If the bus service was also travelling in the morning peak it would be decreased by 0.11
  - If it was run by National Express it would be increased by 12.86
- In this case then, the 'passenger value' (PV2) for this bus service (i.e. the estimated total number of unique passengers on board throughout its journey) would be 34.34. That is [constant 26.81] + [West Midlands 1.30] [<30mins 6.52] [morning peak 0.11] + [National Express 12.86].</li>

A hypothetical, similar journey (less than 30 minutes long, in the morning peak, run by National Express) but in a PTE area not surveyed in the 2019 Bus Passenger Survey would have had a PV2 of 37.89. This is because it would have used model 2 (where the local authority area does not have its own specific data but the area type is known), and the values would be: [constant 26.81] + [PTE 4.45] – [<30mins 6.52] - [morning peak 0.11] + [National Express 12.86].

However, as noted earlier, we are aware that passenger volumes have fallen significantly since 2019, and so these estimates were used just to adjust proportion of shifts taking part on different operators and at different times of days, rather than to estimate potential survey completes based on passenger volumes.