# Bristol Quality of Life survey 2022/23



# Quality of Life Survey 2022/23 Priority Indicators: Briefing Report (Jan 2023)

### 1. Introduction to Quality of Life 2022/23

<u>Quality of Life</u> is an extensive annual resident's survey for Bristol that has been running, in different formats, since 2001. It provides key indicators including measures of inequality, and is a core source of performance metrics for the <u>Bristol City Council (BCC) Business Plan</u> as well as the <u>One City Plan</u>, <u>Bristol Joint Strategic Needs Assessment</u> and other <u>BCC intelligence and statistics products</u>.

The Bristol Quality of Life survey is a robust, randomised sample of the population. In 2022 (as since 2019) the survey was mailed to 33,000 Bristol households chosen at random, including a follow up mailing with a paper survey option, and a targeted third phase to boost numbers from low responding groups (see Methodology appendix). There were 4,420 total responses, with 3,905 final "useable" responses meeting the required criteria (similar response to last year). Most (61%) of the final useable responses were submitted online (well above 52% last year). The survey was open Sept-Oct 2022 to residents aged 16 and over in the selected households.

The 2022 survey had 75 questions that will produce around 190 indicators, on topics including health, lifestyles, community, local services and living in Bristol. Most questions have been kept unchanged, with some revisions reflecting new or changed priorities. The full range of 2022/23 indicators will be published in March 2023. The size of the survey enables us to compare results for wards, areas of deprivation and equalities groups, identifying issues to inform priorities and service provision.

# 2. Priority Indicators briefing

This briefing covers 50 Priority Indicators highlighting headline issues across key Themes. There are two pages of data results, each highlighting different aspects.

The first page is the **City-wide Summary**, which looks at the results for Bristol overall from the 2022 survey, and how these changed compared to last year and since 2019.

The second page is the **Deprivation Summary**. In line with the BCC Corporate Strategy focus on inclusion and tackling inequality, the report captures the sentiment of people who live in the 10% most deprived areas of the city in order to highlight issues of inequalities. This page focuses on how results for people in the most deprived areas differ from the city average, and how they have changed compared to last year.

The colour-coding shows how responses have changed over time, or where people living in the 10% most deprived areas differ from Bristol overall. Where these changes are **significantly different** (using a statistical t-test) this is also highlighted. Due to different response patterns, the threshold for significance may vary between indicators.

# Quality of Life 2022/23 Priority indicators: City-wide Summary

- a) \* = a new indicator in the 2022 survey (or change to existing question)
- b) Blue text denotes BCC Corporate Business Plan 2022-23 performance indicators Green text denotes other PIs (on BCC Performance Management system)
- c) Cells are greyed out where comparisons are not possible due to question not being included in previous surveys.
- d) Please note that gap figures are based on rounded data with whole percentages.

KEY

Statistically Significantly Worse

Increased %

Worse

No change

Better

◆ Decreased %

Statistically Significantly Better

Community and Living	2019	2021	2022	3 year trend	Change last year
% satisfied with their local area	79%	74%	75%	Ψ ·	+1
% who feel they belong to their neighbourhood	62%	63%	65%	<b>1</b>	+2
% who agree people from different backgrounds get on well together in their neighbourhood	71%	70%	74%	<u>+</u>	+4
% who volunteer or help out in their community at least 3 times a year	48%	46%	47%	+	+1
% who lack the information to get involved in their community	28%	31%	27%	¥	-4
% who have access to the internet at home	95%	96%	96%	<b>^</b>	0
Health and Wellbeing				•	
% satisfied with life	75%	68%	62%	Ψ	-6
% below average mental wellbeing	15%	20%	21%	<b>1</b>	+1
% who see friends and family as much as they want to	82%	77%	78%	$\dot{\Psi}$	+1
% who do enough regular exercise each week	71%	67%	64%	Ψ	-3
% who play sport at least once a week	46%	55%	54%	<b>^</b>	-1
% who bought less "healthier" food in the past year*			10%		
% households with a smoker	17%	16%	16%	<b>+</b>	0
% at a higher risk of alcohol related health problems	16%	15%	16%	•	+1
% households which have experienced moderate to severe food insecurity	5%	5%	8%	<b>^</b>	+3
% households that used a 'food bank' during the last 12 months	1%	2%	2%	<b>1</b>	0
Crime and Safety					
% whose fear of crime affects their day-to-day lives	16%	19%	17%	<b>^</b>	-2
% who feel police and public services successfully tackle crime and anti-social behaviour locally	28%	25%	22%	Ψ	-3
% victim of racial discrimination or harassment in last year	6%	5%	5%	¥	0
% who think domestic abuse is a private matter	7%	6%	6%	<b>+</b>	0
% who feel unsafe from sexual harassment using public transport in Bristol*			8%		
Education and Skills					
% who know where to get information, advice and guidance about employment and training	61%	65%	65%	<b>1</b>	0
% who have taken part in learning or training in the last year		53%	52%	_	-1
Sustainability and Environment					
% satisfied with the quality of parks and green spaces	72%	75%	73%	<b>^</b>	-2
% who visit Bristol's parks and green spaces at least once a week	53%	59%	56%	<b>^</b>	-3
% who think street litter is a problem locally	81%	82%	82%	<b>^</b>	0
% satisfied with the recycling service	68%	68%	73%	<b>^</b>	+5
% satisfied with the general household waste service	71%	71%	74%	<b>^</b>	+3
% who think air quality and traffic pollution is a problem locally	77%	75%	70%	¥	-5
% concerned about climate change	88%	87%	87%	Ψ	0
% who have reduced their household waste due to climate change concerns	69%	64%	55%	¥	-9
% concerned about the loss of wildlife in Bristol		87%	85%		-2
% who have created space for nature		53%	53%		0
Culture and Leisure					
% satisfied with the range and quality of outdoor events	74%	52%	53%	Ψ	+1
% who participate in cultural activities at least once a month	43%	32%	32%	Ψ	0
% satisfied with the range and quality of entertainment and hospitality venues and events at night		64%	64%		0
% satisfied with leisure facilities/services	46%	38%	40%	Ψ	+2
% satisfied with activities for children/young people	37%	34%	38%	<b>^</b>	+4
Transport					•
% who think traffic congestion is a problem locally	77%	74%	74%	¥	0
% who walk or cycle to work (active travel)	38%	39%	32%	Ψ	-7
% who ride a bicycle at least once a week	28%	27%	25%	Ψ	-2
% satisfied with the local bus service	48%	49%	38%	Ψ	-11
Housing					
% satisfied overall with their current accommodation	88%	82%	84%	Ψ	+2
% satisfied with the cost of their rent or mortgage payments	59%	53%	49%	Ψ	-4
% extremely or moderately worried about keeping their home warm this winter*			48%		
Economy					
% who find it difficult to manage financially	9%	9%	10%	<b>↑</b>	+1
% who shop in their local shopping street at least once a week		46%	49%		+3
Council and Democracy					
		39%	39%	Ψ	0
% satisfied with the way Bristol City Council runs things	43%	00 /0	05 /0		
% satisfied with the way Bristol City Council runs things % who feel Bristol City Council provides value for money	43% 28%	26%	26%	¥	0

# Quality of Life 2022/23 Priority indicators: Deprivation Summary

- a) \* = a new indicator in the 2022 survey (or change to existing question)
- b) "2022 Deprived" shows results from households in the 10% most deprived areas within Bristol (based on the 2019 Index of Multiple Deprivation)
- c) "2022 Gap" is the difference between the "10% Most Deprived" and 2022 city average.
  d) Blue text denotes BCC Corporate Business Plan 2022-23 performance indicators
  Green text denotes other PIs (on BCC Performance Management system)
- e) Please note that gap figures are based on rounded data with whole percentages.



Statistically Significantly Better

Community and Living	2021 Deprived	2022 Citywide	2022 Deprived	2022 Gap	Change in Deprived
% satisfied with their local area	51%	75%	48%	-27	-3
% who feel they belong to their neighbourhood	47%	65%	50%	-15	+3
% who agree people from different backgrounds get on well together in their neighbourhood	57%	74%	61%	-13	+4
% who volunteer or help out in their community at least 3 times a year	36%	47%	38%	-9	+2
% who lack the information to get involved in their community	28%	27%	31%	+4	+3
% who have access to the internet at home	91%	96%	93%	-3	+2
Health and Wellbeing					
% satisfied with life	55%	62%	46%	-16	-9
% below average mental wellbeing	32%	21%	34%	+13	+2
% who see friends and family as much as they want to	68%	78%	67%	-11	-1
% who do enough regular exercise each week	61%	64%	52%	-12	-9
% who play sport at least once a week	36%	54%	39%	-15	+3
% who bought less "healthier" food in the past year*		10%	25%	+15	
% households with a smoker	29%	16%	26%	+10	-3
% at a higher risk of alcohol related health problems	17%	16%	9%	-7	-8
% households which have experienced moderate to severe food insecurity	11%	8%	16%	+8	+5
% households that used a 'food bank' during the last 12 months	5%	2%	4%	+2	-1
Crime and Safety					
% whose fear of crime affects their day-to-day lives	36%	17%	32%	+15	-4
% who feel police and public services successfully tackle crime and anti-social behaviour locally	23%	22%	22%	0	-1
% victim of racial discrimination or harassment in last year	9%	5%	8%	+3	-1
% who think domestic abuse is a private matter	10%	6%	10%	+4	0
% who feel unsafe from sexual harassment using public transport in Bristol*	1070	8%	12%	+4	
Education and Skills		070	.= 70		
% who know where to get information, advice and guidance about employment and training	67%	65%	62%	-3	-5
% who have taken part in learning or training in the last year	46%	52%	47%	-5	+1
Sustainability and Environment	4070	0Z 70	41 /0		
% satisfied with the quality of parks and green spaces	52%	73%	46%	-27	-6
% who visit Bristol's parks and green spaces at least once a week	42%	56%	40%	-16	-2
% who think street litter is a problem locally	96%	82%	93%	+11	-3
% satisfied with the recycling service	62%	73%	59%	-14	-3
% satisfied with the general household waste service	61%	74%	58%	-16	-3
% who think air quality and traffic pollution is a problem locally	67%	70%	63%	-7	-4
% concerned about climate change	74%	87%	80%	-7	+6
% who have reduced their household waste due to climate change concerns	53%	55%	43%	-12	-10
% concerned about the loss of wildlife in Bristol	82%	85%	85%	0	+3
% who have created space for nature	50%	53%	49%	-4	-1
Culture and Leisure	3070	33 70	<del>43</del> /0	-7	-1
% satisfied with the range and quality of outdoor events	40%	53%	35%	-18	-5
% who participate in cultural activities at least once a month	22%	32%	24%	-10	+2
% satisfied with the range and quality of entertainment and hospitality venues and events at night	46%	64%	45%	-19	-1
% satisfied with leisure facilities/services	28%	40%	28%	-13	0
% satisfied with activities for children/young people	26%	38%	17%	-21	-9
	2070	30 /0	17 70	-21	-9
Transport % who think traffic congestion is a problem locally	62%	740/	63%	-11	+1
% who trimk traffic congestion is a problem locally % who walk or cycle to work (active travel)	28%	74% 32%	23%		-5
% who ride a bicycle at least once a week	18%	25%	17%	-9 -8	-5 -1
% satisfied with the local bus service	49%	38%	34%	-4	-15
Housing	740/	0.40/	770/	_	
% satisfied overall with their current accommodation	71%	84%	77%	-7	+6
% satisfied with the cost of their rent or mortgage payments	51%	49%	44%	-5	-7
% extremely or moderately worried about keeping their home warm this winter*		48%	62%	+14	
Economy	1001	400.	4001		
% who find it difficult to manage financially	19%	10%	18%	+8	-1
% who shop in their local shopping street at least once a week	41%	49%	44%	-5	+3
Council and Democracy		1	1		
% satisfied with the way Bristol City Council runs things	34%	39%	31%	-8	-3
% who feel Bristol City Council provides value for money	22%	26%	23%	-3	+1
% satisfied with the way BCC asks for their views before it makes changes that affect them	29%	30%	30%	0	+1

#### 3. Key Findings 2022/23

Overall, results from the 2022/23 survey show a mixed picture. Of the 50 headline Priority Indicators shown, 15 are improved on 2021/22 results (8 by a statistically significant amount), 14 are unchanged, and 18 indicators are worse than last year (10 by a statistically significant amount); 3 are new measures this year.

In the 10% most deprived areas, all but 6 results for our most deprived communities are worse than those expressed by the average Bristol resident (and statistically significantly worse in 32 of the 50), 21 indicators do show results at least slightly better than the previous year with improvements especially in the Community & Living and Economy Themes. However, 24 show a worsening picture in the most deprived areas (especially in the Sustainability & Environment, Culture & Leisure and Transport Themes); 2 are unchanged and 3 are new.

#### Community and Living

Results in this section are better than last year overall, and several have also improved slightly in the most deprived areas. However, most have a significant "deprivation gap".

Satisfaction with "your local area" remains around 75% (1% point up city-wide) but fell slightly to 48% in the most deprived areas; it has a "Deprivation gap" (27% points) that is one of the starkest of all QoL indicators, wider than the gap (23% points) last year.

74% feel "people from different backgrounds get on well together" in their neighbourhood, a significant increase on last year, and also rose slightly in the most deprived areas (61%). 65% feel they "belong to their neighbourhood", a slight increase both city-wide and in the most deprived areas (50%).

Close to half of people (47%) regularly volunteer or help out in their community, similar to last year, and only 27% report they "lack the information to get involved in the community", significantly less than last year, though this rose in deprived areas (31%)

96% of people have access to the internet at home, same as last year, and this figure improved slightly in the most deprived areas (93%).

#### · Health and Wellbeing

This section has generally worse results compared to last year, and most are significantly worse than 2019 before the Covid-19 pandemic. Most also have large "deprivation gaps", with results significantly worse in the most deprived areas.

People reporting being satisfied with life (62%) continued to fall significantly overall (from 68% last year and 75% pre-pandemic) and also fell 9% in the most deprived areas (46%). People reporting below average mental wellbeing (via a detailed suite of questions) remains high at 21% (significantly worse than 15% pre-pandemic) and remains higher (34%) in the most deprived areas (slightly worse than last year).

8% of households experience "moderate or worse food insecurity" (via a detailed suite of questions), significantly worse than last year and pre-pandemic (both 5%), doubling to 16% in the most deprived areas. A new question on people buying less "healthier" food options in the last year (10%) is also much worse in most deprived areas (25%).

A positive result is people at higher risk of alcohol-related health problems in the most deprived areas (9%) has fallen significantly, and is now one of the few results better in the most deprived areas than city-wide (16%). No change in the proportion of people living in a house where someone smokes (16%), which has also improved slightly in the most deprived areas (26%).

Slightly more people (78%) were able to see friends & family as much as they want, but still less than pre-pandemic results. People doing enough weekly exercise is also continuing to fall (64%), and also fell 9% in the most deprived areas (52%). People playing sport each week (54%) is similar to last year, and up on 2019 results (46%).

#### Crime and Safety

17% of people in Bristol feel "fear of crime affects their day-to-day life", and this is significantly worse (32%) in the most deprived areas (although is slightly better than last year in both figures). Only 22% of people feel police and public services are "successfully dealing with issues of crime & anti-social behaviour", significantly worse than recent years.

The proportion of people who report being a victim of racial discrimination or harassment in the last year remained static at 5% (8% in the most deprived areas). People who think "Domestic abuse is a private matter" (6%) also stayed the same.

A new indicator on people who "feel unsafe from sexual harassment using public transport in Bristol" shows 8% overall report feeling unsafe (71% feel safe), and 12% of people who live in the most deprived areas feel unsafe. Further analysis of this indicator highlights that 12% of women feel unsafe (65% feel safe), but this doubles to 25% of young women aged 16-24 feeling unsafe (58% feel safe).

#### Education and Skills

65% of people know where to get information or advice about employment and training, same as last year, but this fell to 62% in the most deprived areas. A recent indicator on training participation shows that over half of people (52%) have "taken part in any learning or training in the last year" (47% in the most deprived areas).

#### • Sustainability and Environment

Results in this section show a mixed picture compared to last year, but generally are better than 2019, pre Covid-19 pandemic. Satisfaction with Bristol parks and green spaces (73%) is broadly similar to recent years citywide, but with less than half (46%) satisfied in the most deprived areas this continues to have a "Deprivation gap" (27% points) that is one of the worst of all QoL indicators. Also, people visiting parks or green spaces at least once a week (56%) fell significantly in the last year.

On a positive note, satisfaction with Bristol's household waste (74%) and recycling services (73%) both rose significantly last year and are above pre-pandemic levels. The proportion of residents who think street litter is a problem remains unchanged (82%) but is slightly improved (93%) in the most deprived areas.

Those who think "air quality and traffic pollution is a problem locally" has fallen significantly to 70%, much improved on pre-pandemic levels, and also improved in the most deprived areas (63%).

87% of people are concerned about the impact of climate change, same as last year, though only 55% report reducing their household waste due to this, significantly fewer than previous years, and especially so in the most deprived areas. Indicators linked to the Ecological Emergency show that 85% of people are concerned about the loss of wildlife (or biodiversity) in Bristol and 53% "create space for nature"; both are the same or similar as last year, with little or no "Deprivation gap".

#### Culture and Leisure

Overall, this section is slightly better than last year, but significantly worse than pre-

pandemic figures. All indicators here have a significant "Deprivation gap".

The proportion of people satisfied with outdoor events (53%) and with leisure services (40%) both rose slightly last year, and those who "take part in cultural activities once a month" remained low (32%), though did rise slightly in the most deprived areas (24%). Satisfaction with activities for children/young people (38%) rose significantly citywide but fell in the most deprived areas (17%).

The night-time economy indicator remained the same, with 64% of people in Bristol satisfied with "the range and quality of entertainment venues at night" (45% in the most deprived areas).

#### Transport

Overall, results in this section are worse than last year, and worse than results prepandemic. Satisfaction with the local bus service continued to fall significantly (38% from 49%) and fell even further in the most deprived areas (34% from 49%). Those taking "active travel" (walk or cycle) to get to work also fell significantly (32%), and fell in the most deprived areas (23%). Only 1 in 4 (25%) now cycle at least once a week.

However, 74% of people think "traffic congestion is a problem locally", same as last year but significantly better than pre-pandemic; this is 63% in the most deprived areas.

#### Housing

The percentage of people satisfied with their current accommodation has risen (84% citywide and 77% in the most deprived areas), but satisfaction with the cost of rent or mortgage has fallen significantly (49%), a 10% points drop compared to 2019. A new indicator on those "worried about keeping their home warm this winter" shows almost half (48%) are extremely or moderately worried, rising to 62% in deprived areas.

#### Economy

1 in 10 people (10%) report they "find it difficult to manage financially", broadly similar to last year, but almost 1 in 5 (18%) in the most deprived areas.

Almost half of people (49%) in Bristol shop locally at least once a week (an indicator on local "High Streets") which is significantly better than last year, and has also risen in the most deprived areas (44%).

#### Council and Democracy

Overall satisfaction with the Council is the same as last year city-wide, and broadly similar in the most deprived areas; however, it is below pre-pandemic levels.

Satisfaction with "the way the Council runs things" remains at 39% (significantly below the 43% in 2019); it fell slightly in the most deprived areas (31%) and the "deprivation gap" is now 8% points, higher than 5% last year but better than the 18% points gap previously. For reference, 35% of people overall are dissatisfied with the Council, and 26% don't feel strongly one way or the other.

26% of people feel the Council provides Value for Money, same as last year (41% feel the Council does not, and 33% have no opinion).

The question on how "BCC asks for your views before it makes changes that affect you" shows 30% of people feel that the Council does enough, significantly fewer than last year (33%). However, this rose slightly in the most deprived areas (30%) so there is no disparity between the city average and the most deprived areas for this indicator.

#### 4. Actions to improve quality of life in Bristol

In addition to the many indicators, an open text question was asked: "What action or change do you feel would most improve your overall quality of life in Bristol?". Almost 3,400 responses were given, same as last year, many of which raise multiple issues.

This section highlights that actions related to **transport** remain the top priority for the citizens of Bristol, particularly better **public transport** and more reliable **buses** - these issues are always the top concern, but the focus on them has intensified. Other transport-related issues include less **traffic** & congestion, more **parking**, **cycling**, and keeping **pavements** clear (no scooters or car parking) – an increased focus this year.

In addition, other changes that feature highly include **cleaner streets** and less **litter**, more **affordable housing** (and public transport), and less **air pollution**. The introduction of the Clean Air Zone also features, but opinion is split.

Also more local services, better-maintained green spaces and less Council tax.

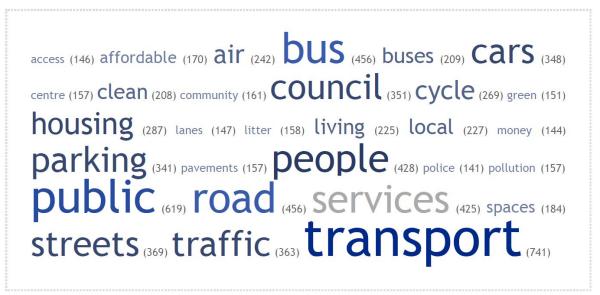


Fig 1: Word cloud of the Top 30 individual terms that people noted (2022)

Further analysis is due to be included in the final report to be published in March / April 2023.

# 5. Respondents

There were 4,423 responses in total, of which 4,246 had Bristol post-codes and **3,905 final "useable" responses** met the required sample criteria. NB the primary focus of the survey is on responses to the random sample, with a targeted third phase to improve responses from under-represented areas and Equality groups; this means that responses from the third phase are only included where needed (further details in Methodology appendix).

The headline results are adjusted using population weights based on age and sex to help account for ward differences in response and population size.

3,905 responses was similar (slightly more) to last year, but still below the previous 2 years (final "useable" responses were 3,870 in 2021 but 4,400 in 2020 & 4,100 in 2019). Online responses (61%) were well above last year (52%), and previous years (55% in 2020 & 47% in 2019).

This year, all wards bar one achieved the target of 100 responses<sup>1</sup>. The range in response by ward is from 97 in Bishopsworth (& 101 in Frome Vale) to 138 in Cotham (137 in Easton and 135 in Avonmouth & Lawrence Weston). As in the previous 3 years, this gives a relatively even distribution across the city, including from areas with historically low response rates. This is the result of the additional resources put in to boost the sample to help improve the representativeness of the survey. See ward map and chart in Fig 2 for details.

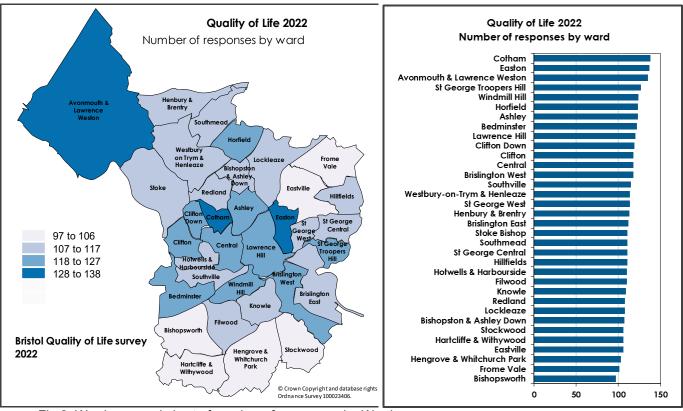


Fig 2: Ward map and chart of number of responses by Ward

Final responses from Black, Asian and Minority Ethnic groups represent 7.6% of respondents in the 2022 survey, above responses in previous years (6.5% in 2021, 7.4% in 2020 and 6.7% in 2019) but still well below the city average (13.4% of residents over 16 are from Black, Asian and Minority Ethnic groups; Census 2011).

Further analysis, including on respondents to the Quality of Life survey by Equality Groups, will be included in the final report to be published in March / April 2023.

#### 6. Further Information and contact details

The full range of Quality of Life 2022/23 indicators will be published in March 2023, including data at Ward level data and by Equality / Demographic groups and Deprivation deciles, via: <a href="https://www.bristol.gov.uk/qualityoflife">www.bristol.gov.uk/qualityoflife</a>

Results are weighted on ward, sex and age. For further information, on the data releases or the background and methodology, please contact <a href="mailto:research@bristol.gov.uk">research@bristol.gov.uk</a>.

8 I Page

<sup>&</sup>lt;sup>1</sup>Bishopsworth ended just short of target with 97 responses. Responses for 3 other Wards were boosted by the "third phase" in order to meet target (Hartcliffe & Withywood, Hengrove & Whitchurch Park and Stockwood)

#### Quality of Life survey – Methodology appendix

The <u>Quality of Life (QoL) survey</u> is a cross-sectional study that collects data annually in September / October. The target population are people, aged 16 years and over, resident within Bristol City Council boundaries. The survey also produces estimates for specific sub-populations such as electoral wards, deprivation deciles, sexes, older people, younger people and ethnic groups.

#### Random sample process

Individuals are selected at random, from all residential properties listed on the Land and Property Gazetteer (LPG). Student accommodation such as halls of residence are excluded. The survey uses a probability sample to make inferences about the Bristol population, and results are analysed using the "Stata" statistical software package.

The survey is a single stage design with the LPG stratified by Lower Super Output Area (LSOA). This means that the residential properties in the LPG are grouped into LSOAs and then separate random samples are taken from each LSOA. The same number people are selected from every LSOA in a specific ward unless the LSOA crosses a ward boundary. The response target is to obtain at least 100 responses from each ward. The predicted response rate for each LSOA is the weighted moving average of the previous 3 years response rates for that particular LSOA.

#### **Invitation process**

Phase 1: Initially the selected households are mailed an invitation letter asking them to participate, with a link to the online survey. Respondents are asked to enter a unique reference number, so that they can be removed from the reminder mailing to non-responders.

Phase 2: After approx. 2 weeks, those that have already completed the survey in Phase 1 and any that ask to be excluded (or are returned to sender) are removed from the mailing list. A second mailing is then sent out, with an invitation letter (and online link) plus a paper copy of the survey.

Phase 3: After 1-2 weeks (to allow the peak of responses to the second mailing), targeted promotion of the survey (via social media and local groups) is done to low-responding wards (those at risk of not getting 100 responses); NB this is to *all residents* of those wards, not just the households from the random sample. From previous experience it is known that younger people aged 16 to 24 years and black and minority ethnic groups are also routinely under-represented in the survey, so targeted promotion of the survey to *all members* of these groups is carried out at the same time.

[Note – if additional Phase 3 responses are received from people living in wards that are not under-represented in the final analysis, they are not included in the results; this is to retain focus on results from the random sample as much as possible].

#### **Result weighting**

An adjustment, called the finite population correction, is applied to reduce sampling variability due to sampling without replacement. Poststratification is used to adjust sampling weights to sum to the poststratum sizes in the population and so reduce bias due to non-response. The poststrata are ward, age (16-49 years, 50+ years) and sex. The poststratum sizes are the ONS mid-year estimates.

Variance estimates, and thus the standard errors are calculated using a "bootstrap replication" method. The bootstrap is more robust than linearization methods to non-response.

Occasionally missing data can leave only a single sampling unit (individual) in a stratum (LSOA). In these cases the LSOA is merged with a neighbouring LSOA within the same ward.