

## Where does the data in the Bike Life reports come from?

The seven Bike Life reports were produced by Sustrans with the support and co-operation of the authorities named on the report front covers. The seven cities are Belfast, Birmingham, Bristol, Cardiff, Edinburgh, Greater Manchester and Newcastle.

The data contained in the reports is drawn from a set of common data agreed by Sustrans and the seven authorities and collected for every one of the cities. There are four categories of data:

- **Settings data:** these are “supply-side measures” of what is available to someone riding a bike in the city, and the inputs being made. This includes cycle route lengths, 20mph limits, cycle parking and investment in cycling.
- **Behaviour data:** these are demand-side measures of the types of people owning and riding bikes, how often, how far and to which types of destination.
- **Perception data:** people’s awareness of facilities for cycling, their perception of how good those facilities are locally, their views on safety for all ways of getting around the city, the potential for them to ride a bike more, whether they think use of bikes helps make a better place, and how much they think should be invested in cycling. Perceptions, whether accurate or not, substantially determine whether people may ride a bike. For this reason the perceptions of those who don’t ride are as important as those that do.
- **Impacts data:** some health, economic and environmental measures of cycle use, including improvements to life expectancy and reductions in pollutants where bikes are used instead of cars.

The settings data and some of the behavioural data were supplied by partner authorities. The perception data and the rest of the behavioural data was obtained from an independent survey of a sample of respondents, representative of adults in each city, conducted by ICM Unlimited. The impacts data was calculated by Sustrans’ Research and Monitoring Unit from a combination of the behavioural data and the best available evidence.

For the perception survey by ICM Unlimited, representative samples of 1,100 respondents (over 4,000 in Greater Manchester) were interviewed with quotas set by gender, age, work status, ward and ethnicity to reflect the profile of each city. In addition, booster interviews were conducted to ensure a minimum of 300 interviews with regular bike riders in each city (defined as those who have cycled in the last four weeks), to ensure a more statistically robust measure of experienced bike riders’ views about facilities.<sup>1</sup>

All interviews were conducted by telephone using random digit dialling combined with quotas to ensure robust data. Fieldwork was carried out between 8<sup>th</sup> May and 28<sup>th</sup> June 2015, and the sample included an 85% landline - 15% mobile split. The average interview length was 15 minutes.

At the analysis stage, the data were weighted by age, gender, working status and ethnicity using mid-year population estimates based on 2011 Census data. In addition, in five of the seven cities<sup>2</sup>, data are weighted by ward, while Greater Manchester data are weighted by unitary/metropolitan council area.

Levels of cycling in most of the Bike Life reports are estimated principally from data generated by this survey of residents of each city. This may differ from other methodologies, but ensures a baseline for comparison between the Bike Life cities, and levels of change to be reported in 2017.

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<sup>1</sup> No cycle boosters were required in Bristol since this fell out naturally in the main sample. Greater Manchester decided against a cycle booster in light of overall booster across the Combined Authority

<sup>2</sup> Data for Belfast are weighted by age, gender, working status and ethnicity only.

**Data for each section of the report came from the sources listed below**

|               |  |  |
|---------------|--|--|
| Page 3        | Number of bike trips in the city   | See derived statistics below   |
|               | Change in trips by bike between 2013 and 2014                                      | Change in the total levels of cycling recorded on automatic counters at various points across the city. Data supplied by the partner authority.  |
|               | People usually riding a bike once a month or more                                  | ICM survey   |
|               | Proportion of people wanting better safety for riding bikes                        | ICM survey   |
|               | Proportion of people wanting more money spent on cycling in the city               | ICM survey   |
|               | Benefit to the health of the city over one year                                    | See derived statistics below   |
|               | Reduction in CO <sub>2</sub> emissions   | See derived statistics below   |
|               | Economic saving for every mile biked instead of driven                             | See derived statistics below   |
| Page 4        | Bike and car ownership   | ICM survey. On the chart, “cars” refers to cars or vans as in the question.  |
| Page 5        | How often people ride a bike   | ICM survey   |
|               | Perceptions of bikes   | ICM survey   |
|               | Safety concerns  | ICM survey   |
|               | Deaths or serious injuries per mile cycled   | See derived statistics below   |
|               | Average amount people want spent on cycling in the UK                              | ICM survey   |
| Pages 6 and 7 | Pictures and quotes  | Local photographic events for Bike Life held in summer 2015  |
| Page 8        | What’s available for people riding bikes: route lengths, 20 mph limits and parking | All information supplied by the relevant authority (as shown on the front cover), where that information is available.   |
|               | Route lengths  | For Newcastle this includes all designated cycle routes, including a few sections signposted along roads; for the others it refers to cycle lanes on roads, cycle tracks or shared use paths, excluding sections of cycle route that are merely signposted along roads without any special facility for cycling.<br>The figure for traffic-free routes in Birmingham, Bristol, Edinburgh and Newcastle includes shared use pavements as well as paths away from roads. |
|               | Proportion of people or households within 125m of routes                           | Calculated by the authority or Sustrans from data provided by the authority. Note that: <ul style="list-style-type: none"> <li>• For Cardiff this is households within 125m; for the others it is people.</li> <li>• For Newcastle it is within 125m of a designated cycle route, including a few sections signposted along roads; for the others it is within 125m of a cycle lane, track or</li> </ul>   |

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|   |  | shared use path, excluding sections of cycle route that are merely signposted along roads without any special facility for cycling.  |
|   | Awareness of facilities  | ICM survey. 'Residents' refers to the sample of 1,100 residents, including some that cycle. 'Regular bike riders' refers to the sample of 300 people that rode a bike within the 4 weeks before the survey.<br>In Greater Manchester, 'Residents' refers to the sample of 4,000 and 'Regular bike riders' refers to all people within that sample that said they had ridden a bike in the past four weeks. |
| Page 9  | Ratings of cycle routes  |  |
|   | Safety comparisons of different modes of transport                                 |  |
| Page 10   | All data – how people see themselves, types of route and views on local investment | ICM survey   |
| Page 11   | Increase in number of trips by bike  | See derived statistics below   |
|   | Number of miles pedalled each year   | See derived statistics below   |
|   | Number of bike trips by purpose  | See derived statistics below   |
|   | Age, gender and ethnicity breakdowns   | ICM survey   |
| Pages 12 and 13 (Greater Manchester report only)              | Comparisons between the ten districts within Greater Manchester                    | ICM survey   |
| Pages 12 and 13 (Pages 14 to 17 in Greater Manchester report) | How Bike Life is being developed   | All information supplied by the relevant authority, as shown on the front cover  |
| Page 14 (Page 18 in Greater Manchester report)                | Expectations of a city fit for bikes   | ICM survey   |
|   | How people see themselves in relation to cycling                                   | ICM survey   |

## Derived statistics

Explanation of the methodology used to calculate data that does not come directly from the perception survey or from partner authority direct measures.

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### Number of bike trips in each city every year

In general, this is derived from responses to the ICM survey questions asking respondents the usual frequency, distance and duration of trips they cycle to work, to school, to college/university, for other trips like shopping, and simply for enjoyment/fitness. School data for Belfast was derived from the Method of Travel to/from School by Pupils in NI, 2013/2014.

### The benefit to health in the city over a one year period from the current level of people riding bikes

This is calculated using the widely-recognised World Health Organisation's Health Economic Assessment Tool for cycling.

### The equivalent CO<sub>2</sub> saved by people riding bikes instead of driving, is calculated in terms of the number of cars removed with average annual mileage

The total distance cycled was calculated from responses to the ICM survey questions asking respondents the usual frequency, distance and duration of trips they cycle to work, to school, to college/university, for other trips like shopping, and simply for enjoyment/fitness. For Edinburgh, average cycling trip distance was taken from the Scottish Household Survey.

The proportion of this distance that could have been driven was estimated on the basis of all utility cycle journeys done by respondents who said they had a car in their household. This gives a total annual distance that could have been driven instead. This is then divided by the average annual mileage of a car to calculate the number of cars removed from people choosing to cycle rather than drive, and the equivalent CO<sub>2</sub> saving.

#### The saving to individuals and to the local economy, for every mile biked instead of driven (67p)

This is the difference between the total cost per mile of driving a car and the total cost per mile of riding a bike. The costs of both include costs to the individual and to the economy as a whole. They include figures for the operating costs of bike and car, travel time of both, traffic congestion and health benefits (the main factors), and also accidents and greenhouse gases (lesser factors). The figure for each factor is based on best available evidence in the UK and accords with the figures used by the Government's standard Transport Analysis Guidance (WebTAG) evaluation tool.

This methodology is based upon that used for the Copenhagen Bicycle Account, which has been established for 20 years and was one of the main inspirations for Bike Life.

What this amounts to in each city is calculated by multiplying the per mile figure by the total distance pedalled last year, calculated as below.

Note that this figure sometimes amounts to slightly less than the figure for health benefit of cycling on page 3, principally because the health benefit figure covers all cycling, including leisure cycling journeys that would never have been driven.

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#### Average number of miles cycled for each death or serious injury

The number of miles cycled in the city was estimated from the responses to the ICM survey questions asking respondents the usual frequency, distance and duration of trips they cycle to work, to school, to college/university, for other trips like shopping, and simply for enjoyment/fitness. For Edinburgh, average cycling trip distance was taken from the Scottish Household Survey.

This was then divided by the number of people on bikes reported as killed or seriously injured in the city for the latest available year of data. Northern Ireland use a different methodology to collect casualty data from that used by the rest of the UK, so the Belfast figure is not directly comparable to the others.

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#### Increase in the number of trips made by bike over the past year

This was calculated using the most recent data from automatic cycle counters and manual cycle counts conducted by traffic enumerators. This data was not available for Belfast.

#### Total distance pedalled every year

Derived from responses to the ICM survey questions asking respondents the usual frequency, distance and duration of trips they cycle to work, to school, to college/university, for other trips like shopping, and simply for enjoyment/fitness. In some cases, cities have provided us with local data to use alongside the ICM survey data. For example, in Edinburgh, average cycling trip distance was taken from the Scottish Household Survey.

#### Number of bike trips by purpose

Mostly derived from responses to the ICM survey questions asking respondents the usual frequency, distance and duration of trips they cycle to work, to school, to college/university, for other trips like shopping, and simply for enjoyment/fitness. In Belfast, the number of trips to school was derived from the 'Method of Travel to/from School by Pupils in NI, 2013/2014'.