The value of bikes & bike lanes over cars & roads

Objective statistics
over
subjective opinions

Showing the value of active travel using data.
Statistics refer to the UK unless mentioned otherwise.

Money & the economy

Public sector spending on roads in the United Kingdom has been over 12 billion British pounds each year since 2021.
sources: Statista and Office for National Statistics

In 2019 it was estimated that ‘‘It costs around £50 million per kilometre to build the average road.’’
source: https://www.sustrans.org.uk/our-blog/news/common-myths-about-investment-in-walking-and-cycling-busted-by-research-report/

Some costs today are even higher.
https://www.sabre-roads.org.uk/forum/viewtopic.php?t=43131

For an elevated road the cost is generally many times higher.
https://www.bbc.co.uk/news/magazine-13924687

In 2017 the average cost of a two-way physically segregated cycle-superhighway ranged from £1.45 million per kilometre to around £740,000 per kilometre.
https://assets.publishing.service.gov.uk/media/5ba4c09ded915d2e2ea46815/typical-costings-for-ambitious-cycling-schemes.pdf

The cost of upkeep for bike lanes is far lower than for roads.
https://www.bwbconsulting.com/insights/the-truth-about-cycle-lanes-investment-impact-and-public-perception/

This is because the vehicles using them are far lighter.
https://www.reddit.com/r/AskEngineers/comments/1auz38x/what_makes_walking_multiuse_paths_bike_paths_less/?rdt=60455

Driving cars costs society money, while cycling costs society far less and even saves society money when health is an included factor.

> *Examples shown below:*
> The Department for Transport (DfT) has found that for every £1 invested in cycling and walking, the economy benefits by up to £6. This is due to multiple factors, including reduced congestion, improved public health, and increased spending on local businesses. https://www.gov.uk/government/publications/economic-case-for-active-travel-the-health-benefits
>
> Spending on walking, wheeling and cycling infrastructure can have a maximum return of up to £19 per £1 spent. The health benefits associated with increased physical activity are a large contributor to these returns. Investments in the strategic road network have an average return of £2.50.
> https://publications.parliament.uk/pa/cm5803/cmselect/cmtrans/1921/report.html
>
> The best-case return can be up to £5.
> (https://www.sustrans.org.uk/media/5224/commonmisconceptions-of-active-travel-investment.pdf)

Some road building projects offer no return on investment at all.
https://ippr-org.files.svdcdn.com/production/Downloads/Stride_and_ride_Feb24_2024-02-05-162030_godi.pdf

Cycle infrastructure has a strong return on investment, with an average of £5.62 for every £1 spent. This means that a £2 billion investment would deliver £11 billion in public benefit on average, although this could be as high as £38 billion.
https://assets.publishing.service.gov.uk/media/5a7dd183ed915d2acb6ee528/claiming_the_health_dividend.pdf

According to a European study looking at a range of societal impacts, such as land use and cost pollution, as well as individual impacts, such as health benefits and travel time, driving a car was found to have a cost to society of €0.11 per kilometre (or 9 pence per mile). By contrast, cycling generated a €0.18 net benefit to society for every kilometre cycled (or 15 pence per mile), primarily due to the health benefits of physical activity and walking was found to generate the greatest net benefit to society.
https://doi.org/10.1016/j.ecolecon.2018.12.016

Another earlier study by two of the same authors (Stefan Gössling and Andy Choi) calculated that one kilometre by car costs €0.15 (13 pence), whereas society earns €0.16 (14 pence) on every kilometre cycled.
https://doi.org/10.1016/j.ecolecon.2015.03.006

Building more roads and car lanes to improve traffic flow only works temporarily, in the long term it usually increases car traffic.
https://doi.org/10.7922/G22805Z9

Likewise building more high-quality bike lanes increases the number of cyclists
https://www.sustrans.org.uk/our-blog/research/common-misconceptions-about-active-travel-investment/

A three-metre wide lane can move 700 to 1,100 people per hour in cars, but if used by people cycling or walking, that increases to 2,000 to 6,500.
https://www.sustrans.org.uk/our-blog/research/common-misconceptions-about-active-travel-investment/

Over time, giving more road space to bicycles and pedestrians does not make car traffic worse. In fact it often improves it.
https://www.sustrans.org.uk/our-blog/research/common-misconceptions-about-active-travel-investment/

Shopkeepers are often concerned about loss of business if bike lanes are built by their shops, but most research shows that business generally increases substantially.
https://www.cyclinguk.org/article/six-reasons-build-cycle-lanes

Sutton Coldfield, a large town north of Birmingham, has a population of nearly 100,000 and yet has no segregated cycle lanes. The local government installed one at a cost of £75,000, but following an outcry by local ‘motorists’ and Conservatives it was removed before it even had the chance to open. The removal meant even more expense. Many locals, likely some of the same people who complained, then said what a waste of money it was to build a bike lane and then never use it!
https://suttoncoldfieldtowncouncil.gov.uk/wp-content/uploads/2020/10/email-response.pdf

Health

By reducing car traffic, the health and longevity of the people who live and work in the area increases owing to increased active travel[1] and reduced pollution[2]

[1]https://drive.google.com/file/d/1BqGRWsN17qZNbvuqrMARql1QYu3_M7Rd/view?pli=1

[2]https://www.walthamforest.gov.uk/sites/default/files/2021-10/Waltham%20Forest%20Kings%20Report.pdf

Pollution claims far more lives each year than traffic accidents.

https://assets.publishing.service.gov.uk/media/6570a68b7469300012488948/HECC-report-2023-chapter-4-outdoor-air-quality.pdf?utm_source=chatgpt.com

Just in Birmingham it claims up to 900 each year.

https://www.birmingham.gov.uk/info/20076/pollution/1278/air_pollution_affecting_me_and_my_family

Every minute, an idling car produces enough exhaust to fill up to 150 balloons with harmful chemicals, including cyanide, nitrogen oxides (NOx) and tiny particulates called PM2. 5. An idling engine produces 20 times more pollution than a car travelling at 32mph.

https://www.solihull.gov.uk/health-and-wellbeing/vehicle-idling#:~:text=Idling%20facts,a%20car%20travelling%20at%2032mph.

The total NHS and social care cost due to PM2.5 and NO2 combined in 2017 was estimated to be between £42.88 million and £157 million.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/708855/Estimation_of_costs_to_the_NHS_and_social_care_due_to_the_health_impacts_of_air_pollution_-_summary_report.pdf

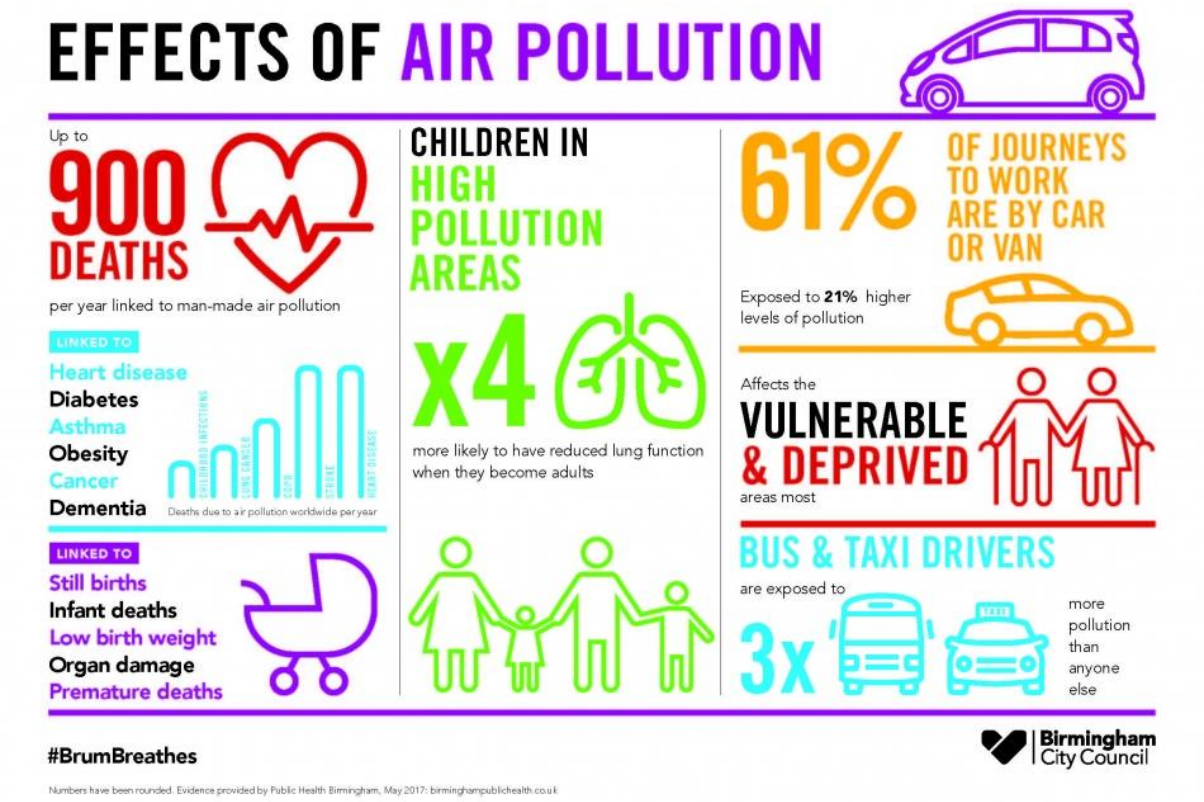
A team from the Netherlands' Utrecht University surveyed 50,000 Dutch people, examining their

mobility patterns. They found that one hour of cycling adds one hour to your life on average.
https://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2015.302724

According to research, on average every year, walking and cycling in Birmingham, UK results in about:

- 1,438 serious long-term health conditions prevented:
- £454.5 million in economic benefit for individuals and the region:
- 37,000 tonnes of greenhouse gas emissions saved:
- Up to 220,000 cars taken off the road every day.

https://www.sustrans.org.uk/the-walking-and-cycling-index/birmingham-walking-and-cycling-index/



Lots more information here:

https://www.sustrans.org.uk/media/10493/west-midlands-walking-and-cycling-index-2021.pdf
https://www.sustrans.org.uk/media/13263/birmingham-walking-and-cycling-index-2023.pdf

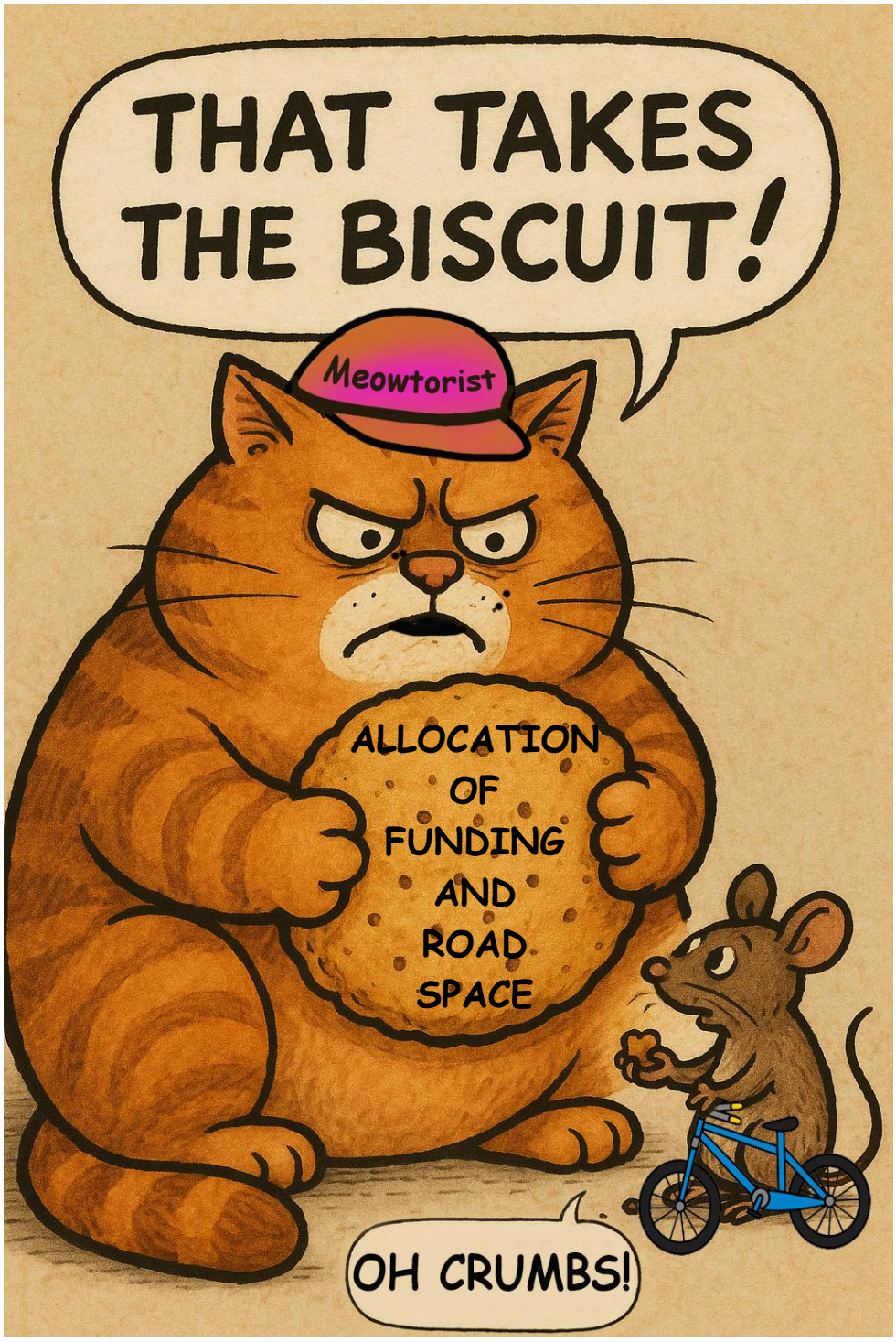
Author's conclusion: The evidence clearly shows that well designed projects in the right places that allow for more cycling and active travel can benefit physical, mental, environmental and financial wellbeing. Stopping such projects claiming that they are a waste of tax payers' money and so on, is untrue and highly unhelpful. Our obsession with cars is fuelling the problem.

Do you agree?

Look at the quotes and pictures below.
What are they trying to say and how do you feel?

"Either you're part of the problem or you're part of the solution."
(a saying based on an original quote by Harry Emerson Fosdick)

Original quote attributed to Peter Drew



Picture made using chat GPT & then added to by author

Quiz!

True or false style

https://create.kahoot.it/details/1cd50c5e-f145-48f1-a1c3-854c31d0cd55

https://quizlet.com/gb/1035555628/the-value-of-bikes-bike-lanes-over-cars-roads-true-or-false-quiz-flash-cards/?i=5v19u&x=1jqt