FREE PUBLIC TRANSPORT FOR LONDON

WHY & HOW: A CAMPAIGN BRIEFING

Celebration of the introduction of free public transport in Montpellier, France, December 2023

Supported by Fare Free London, the Greener Jobs Alliance, the Stop The Silvertown Tunnel Coalition and Tipping Point

Free public transport for London: why and how

A campaign briefing

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Introduction

Fare-Free London campaigns for free public transport in London. Our organisation, launched at a meeting on 10 February, brings together community groups, trade unions, environmentalists and others who see free public transport as central to our vision of the city in which we want to live. Part 1 of this Briefing is a summary of our campaign's aims, approved at that meeting. Parts 2 and 3 explain the need for free public transport, and the remaining parts cover how it could be achieved.

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Cover photo: celebration of the introduction of free public transport in Montpellier, France, December 2023. With thanks to the Mayor's office at Montpellier

Cover design: Brian Eley

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March 2024.

Part 1. Fare-Free London: our aims

These are the main aims of the Fare-Free London campaign, set up on Saturday 10 February at a meeting at the Waterloo Action Centre.

Free public transport opens the city to all. It is provided as a public service, just like health, education and public parks, and is supported by public investment. It is central to a vision of London as a city where people, their health and the lives they live, come first.

Free public transport is socially just, supporting the lowest-income households that are least likely to have a car. It is better transport, underpinned by substantial investment, with a secure, properly-rewarded workforce. It is one of the drastic, demonstrative actions needed to tackle climate change globally and air pollution locally.

Public transport is already free in many smaller cities, including Luxembourg, Tallinn (Estonia), Montpellier and Dunkerque (France) and Albuquerque and Kansas City (USA). London can be the first big global city to follow their example.

We call on the Mayor and the Greater London Authority (GLA) to provide free public transport in London. The first step is to research ways to implement it.

We call on national government to support free public transport in London, and around the country. The local government finance rules need to be changed, so that local authorities can raise money for it.

Purpose

Free public transport supports social justice. A system based on public transport and active travel (walking, cycling and so on) supports Londoners' physical and mental health.

Free public transport, introduced as part of an integrated transport policy (see "How is it done?", below), would help rapidly to cut the number of private cars, vans and HGVs on the roads – and so cut greenhouse gas emissions, and the air pollution that kills thousands of Londoners each year.

London is falling behind its own weak climate targets, and even further behind targets worked out by climate scientists. The transport sector has made the least progress in cutting fossil fuel use over the last twenty years. Free public transport would start to reverse this dangerous trend.

Free public transport cuts across the dangerous populist rhetoric that tackling climate change costs ordinary people money. It shows that the opposite is true: measures to deal with climate change and air pollution can also make life better.

How is it done?

Transport for London (TfL) already provides free transport for over-60s, under-10s and many teenagers, and other discounts. Extending these schemes, using the Oyster card, would present few practical problems.

To reduce greenhouse gas emissions and air pollution, free public transport will be most effective if implemented as part of an integrated approach that also includes:

□ Providing transport as a public service, not a commodity sold for profit, and expanding services, starting by reversing bus service cuts. Investing heavily in public transport and active travel, which will provide many thousands of new jobs.

□ Making public transport Londoners' first choice for getting around: making it enjoyable. Better transport or free transport is a false choice: we can have both. This means investing in safety and staffing; developing a plan to make all transport fully accessible to disabled people and those with prams and buggies; and making full use of the river Thames as a key to London's transport system.

□ Supporting a stable workforce with fair pay and conditions, and union organisation. This is the key to a good service. The unions, supported by transport and disability campaign groups, showed this recently, by their success in ditching plans to close rail ticket offices.

□ Reversing decades of national and local government support and subsidies for motor traffic, at the public's expense. This could include smart road charging (currently under discussion at the GLA); smart emissions-based parking charges; repurposing the Silvertown Tunnel for non-motor traffic; and expansion of school streets and other measures to reclaim street space for communities.

□ Linking free public transport to cheap or free train travel in the south east, provided by publicly owned companies.

□ Reorganising and investing in the health service and other public services to make them more accessible and reduce the need for car travel.

□ Implementing planning policies and incentives to enable people to lead healthy and fulfilling lives without having to own a car.

How would it be paid for?

Revenue from fares comprises a much higher share of income for TfL than for most big-city transport systems. TfL also receives revenue from business rates retention, other operating income e.g. the congestion charge, and central government grants.

TfL policy is to reduce the share of revenue from fares. We agree with this, but call for a much more ambitious reduction, with a target of zero.

There is a wide range of options for funding free public transport, set out in detail in our campaign briefing. These include:

□ Revenue raised by local government, including land value capture (e.g. the Community Infrastructure Levy used to fund the Elizabeth Line); and road use and parking charges.

□ Revenue raised by local government that, in the UK, would require a change in local government funding rules, e.g. a payroll tax (used to fund public transport in Paris).

□ Revenue raised by central government, e.g. increased fuel duty to restore value lost during the 13-year freeze; and a review of road projects to ensure compatibility with climate and other policies, following the Welsh government's example, with funds diverted to public transport. Wealth taxes and measures against corporate tax evasion could raise much larger sums for public services, including transport.

London and national policy

We favour free public transport nationally, based on public need. We will work together with all to achieve it. We welcome cooperation with other campaign groups.

Politicians try to divide voters by claiming that London has an outsize share of national resources. In particular, the government has used negotiations with the Mayor's office to try to force a heavier burden on passengers (with higher fares) and staff (by constraining pay increases and undermining pension conditions). We reject this divisive politics.

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Part 2. Transport, social justice and health

Free public transport is a social justice measure. It opens London up for all who live here; it favours low-income households, who have borne the brunt of the cost of living crisis and are much more likely not to have cars.

In the many cities in the world that have free public transport – including Luxembourg, Tallinn (Estonia) (for residents only), Montpellier and Dunkerque (France) and others – the social justice benefits have been evident. (See also Part 6 below.)

"It's become a synonym of freedom", wrote the editor of a local transport magazine in Dunkerque. In a largely working-class city, "people of limited means say they have rediscovered transport."[1]

Urban policy experts praise free public transport for "directly addressing the issue of social exclusion, inequality and transport poverty by increasing accessibility to public transport of lower income inhabitants", Wojciech Keblowski at the Brussels Centre for Urban Studies has written. In Tallinn,, the policy led to an increase in usage by disadvantaged social groups.[2]

Some transport specialists are cautious, Keblowski adds. He argues that:

> Rather than focus on the potentially negative operational consequences of fare abolition, [we may ask] whether a substantial increase of ridership and growth of transport market, caused by reducing fares to zero, could under any circumstances be considered a negative phenomenon.

Keblowski, who has researched examples of free public transport around the world, writes

[1] "French city of Dunkirk tests out free transport", France 24, 31 August 2019

[2] Wojciech Keblowski, "Why (not) abolish fares? Exploring the global geography of fare-free public transport", *Transportation* (2020) 47: 2807-2835

that both academics and activists conceptualise transport:

> Not as a commodity, but as a common good – similar to many other public services including healthcare, parks, roads, sidewalks, cycling paths, streetlights and lamp posts, libraries, schools and playgrounds.

In the UK, zero-fare schemes, e.g. for over-60s, have shown us glimpses of their tremendous potential.

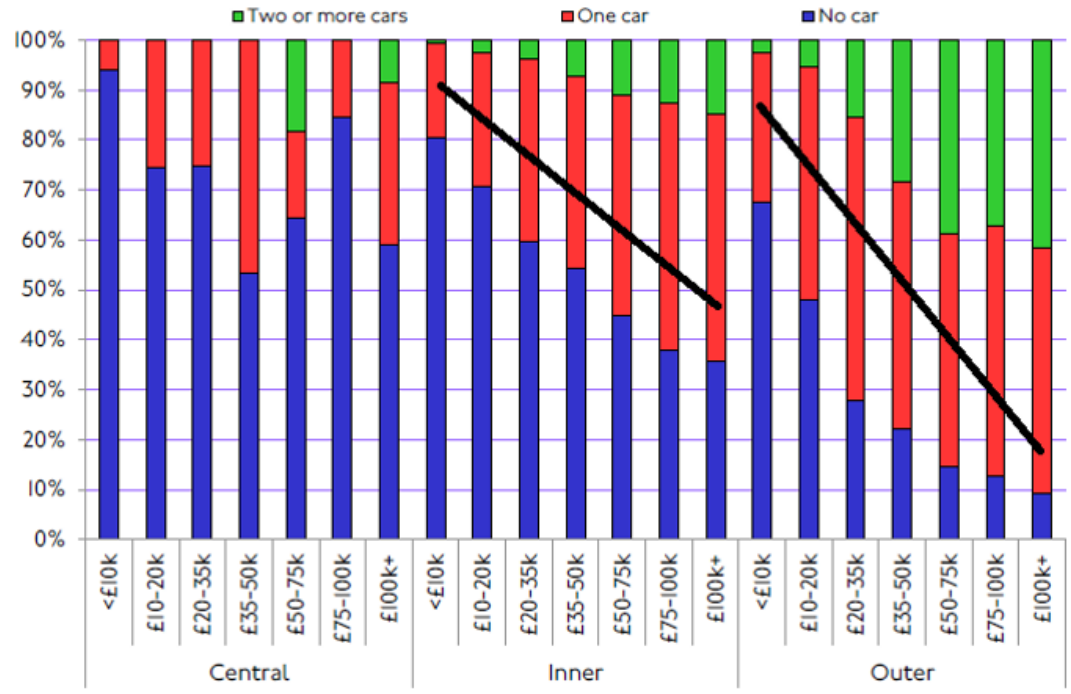
Scotland's provision of free bus travel for under-22s clocked up 50 million bus journeys in its first year of operation (year ending March 2023). It has been welcomed for creating a wealth of new opportunities for young people; campaigners say its full potential can only be realised by improving the network and reversing the deregulation of local bus services.[3]

Free public transport for all, allied with increased investment in services and a determined roll-back of subsidies to cars, vans and HGVs, will multiply the benefits.

Free public transport and social inequality

The first beneficiaries of free public transport in London, and a shift of investment from roads to public transport, would be the capital's low-income households. The graph, from a TfL report, shows that low-income households are least likely to own a car.[4] And TfL's Inequalities in Road Danger dashboard shows that people in the lowest-income areas suffer the highest casualty levels from road collisions: those in the most deprived 30% of the city are twice as likely to be seriously injured in a road incident as those in the richest 30%.[5]

Figure 4.14 Proportion of households with access to a car, by annual household income and location, LTDS 2016/17.



Source: Strategic Analysis, TfL City Planning.

Car ownership and income, in Central, Inner and Outer London, from TfL's Transport in London report no. 12, page 72. In Inner London and Outer London, the proportion of households that do not have a car falls, the more they earn: this is highlighted with black lines, added by the author. The report does not define "Central London" (left hand graph), but that usually means a very limited, a-typical, area: the City of London, most of Westminster and parts of Camden, Islington, Hackney, Tower Hamlets, Southwark, Lambeth, Kensington & Chelsea and Wandsworth.

[3] Get Glasgow Moving, "Demand better public transport"; Transport Scotland, "Over 50 million free journeys made by under 22s" (March 2023); BBC News, "Free bus schemes for under-22s clocks up 21 million journeys" (20 September 2022)

[4] TfL, *Travel in London, report 12* (2019)

[5] TfL press release, "Pioneering map of London", 10 January 2024; and TfL, "Road Safety Data"

London has the greatest income and wealth inequalities in the UK. It has a greater proportion of households in poverty, at 25%, than any other UK region except North East England. Despite London's great wealth and high average incomes, its low-income households, including 2.26 million people, are "faring worst in the cost of living crisis", largely because of the additional burden of high housing costs, a recent report by the Joseph Rowntree Foundation stated.[6]

For low-income households, the cost of travel is an additional burden they are often unable to bear. In 2023, 5.5 million UK households skipped meals because they could not afford food; 4.5 million were in arrears on bills and 1.7 million had household members who were unable to take essential journeys due to transport costs. The situation is likely to worsen during 2024. Hundreds of thousands of these households are in London.[7]

Social policy research shows that more than one-third of low-income Londoners see the rising cost of public transport as a factor impacting their living standards. For low-income Londoners, an essential minimum living standard includes an adult monthly Zone 1-6 travelcard (cost £285.70), or, for those who live more centrally, a Zone 1-4 travelcard (cost £224.70), plus £25-50 per person per month for occasional taxi use, for essential journeys when public transport is not available.[8]

Free public transport and health

There are many ways in which the shift away from car-based transport towards public transport, including zero fares, makes cities safer and healthier places to live in.[9]

Researchers have long argued that radical urban development policies should confront the climate and ecological crises together with the dangers to people's health.

A recent survey of cutting-edge research[10] called for "transformative action that can reshape our cities and living spaces by putting people first", rather than "myopic technocratic solutions" that miss opportunities for health promotion and environmental improvement.

"Urban planning and design solutions that reduce car use and provide opportunities to walk, bike and take public transportation" is a prime example of the integrated policy solutions needed, the authors argued.

Another recent survey, commissioned by the Department for Transport[11] confirmed the widespread agreement among researchers that:

> Spatial and transport planning, and urban design, should focus on lower traffic speeds and incorporating and encouraging multiple modes of transport, particularly public transport and cycling and walking, rather than focusing on cars.

The evidence that links health and well-being to concessionary passes, which provide free public transport for specific groups, is especially strong:

> These passes are an effective way of increasing mobility for older people and people with disabilities, with substantial benefits for the well-being of people in these groups.

Researchers have shown that free bus travel for older people in the UK improves their access to services and social inclusion, and is associated with reductions in depressive symptoms and loneliness, and better mental health.[12]

The success of London's Zip Pass, which provides free travel on buses and trams to 16-17 year olds, and 18-year-olds in full time education, further confirms the strong link between well-being and free public transport. In the financial year 2022/23, more than 125,000 passes were issued, indicating that the vast majority of those eligible applied.[13]

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[6] *Unable to escape persistent hardship: JRF's cost of living tracker, Summer 2023*. There is additional detail in: Joseph Rowntree Foundation, *UK Poverty 2023*; and Joseph Elliott, "London, the North of England and Scotland hit hardest by the crisis of spiralling prices", (Joseph Rowntree Foundation, October 2022)

[7] *Unable to escape*, pages 1 and 10-11

[8] Elliott, "London, the North of England" etc; Matt Padley et al, *A Minimum Income Standard for London 2022* (Centre for Research in Social Policy, Loughborough University, July 2023)

[9] A good summary is: Campaign for Better Transport, *Better Transport for Better Health campaign briefing*, June 2023

[10] A. de Nazelle et al, "Urban Climate Policy and Action through a Health Lens – an untapped opportunity", *International Journal of Environmental Research and Public Health* 18, 2021, 12516. See also: M. Negev et al, "Barriers and Enablers for Integrating Public Health Cobenefits in Urban Climate Policy", *Annual Review of Public Health* 2022, 43: 255-270

[11] Emily Cooper et al, *Transport, health and wellbeing: an evidence review for the Department for Transport* (NatCen Social Research, 2019)

[12] Roger Mackett, "Has the policy of concessionary bus travel for older people in Britain been successful?", *Case Studies on Transport Policy* 2 (2014), 81-88; and Erica Reinhard et al, "Public transport policy, social engagement and mental health in older age: a quasi-experimental evaluation of free bus passes in England", *Journal of Epidemiology and Community Health* 72:5 (May 2018). See also: S. Boniface et al, "Health implications of transport: evidence of effects of transport on social interactions", *Journal of Transport & Health* 2 (2015)

[13] TfL, Photocard Schemes: Key Statistics

In 2020, City Hall considered withdrawing the pass. A survey by Partnership for Young London recorded teenagers' responses: 97.8% said free bus travel was "important" or "very important" to them; more than half said that, without it, they could not afford to go to places they normally went to; and more than 40% believed their mental health would suffer as a result.[14]

Free public transport for all Londoners would multiply many of these benefits.

Free public transport and accessibility

Free public transport is a benefit, above all, to disabled people and those with caring responsibilities, who are often on the lowest incomes – and some but not all of whom are already entitled to the Freedom Pass.

Not everyone can walk or cycle, and access to public transport for those with impaired mobility, or with small children, is often very limited. Buses have space for only one electric wheelchair or scooter and one small buggy; manoeuvring space is very limited; and disabled people are unable to travel together. Those who need mobility aid, and those with prams and buggies, are forced into competition with each other, and the resulting tension affects bus drivers, among others.

Only a minority of tube and rail stations are accessible for those with impaired mobility or with prams or buggies, and there is little provision for those with other impairments. Signage and voice announcements about service changes are very patchy.

As a matter of principle, free public transport must mean transport that is accessible to all. Disabled people's organisations, and people caring for small children, need to be centrally involved in planning transport systems.

We recognise the key role that disabled people's organisations have played, and play, in campaigning for rail ticket offices to be kept open and for guards to be retained on trains. We look forward to their input on our proposal for free public transport.

Free public transport and air pollution

The shift away from car-centred transport to public transport will help to reduce toxic air pollution, which imposes a heavy burden on Londoners' health – and is heaviest for low-income households and communities of colour.

A report commissioned by the GLA, published in 2021,[15] found that:

> Communities which have higher levels of deprivation, or a higher proportion of people from a non-white ethnic backgrfound, were still more likely to be exposed to higher levels of air pollution.

Average concentrations of nitrogen dioxide were on average 16-27% higher in areas where non-white people were most likely to live, than in areas where white people are most likely to live. And 31-35% of areas with the highest proportion of black and mixed ethnicities are high-pollution areas, compared to just 4-5% of areas with the highest proportion of white residents.

Analysis of air pollution by Friends of the Earth showed not only that London suffers especially badly from it – with 90% of neighbourhoods in England suffering very high air pollution belonging to the capital – but also that people of colour are three times more likely to live in these neighbourhoods, and that half of those neighbourhoods are among England's most deprived.[16]

These inequalities are compounded by the fact that people living in these hardest-hit neighbourhoods are three times less likely to own a car than people living in other areas.

Every subsidy to car-based urban transport therefore compounds these injustices. Free public transport helps to overcome them.

Investment in public transport supports employment

Free public transport would go hand in hand with a bold shift from investment in road infrastructure to investment in public transport, that could provide a substantial increase in employment.

The potential scale of this increase is illustrated in a recent report published by the Trades Union Congress.[17] The TUC envisages, in England and Wales (excluding London), a shift of more than 47 billion passenger-kilometres from cars to public transport, a 120% expansion

[14] Partnership for Young London, *Understanding the impact of the suspension of free travel on under-18s* (2020). See also: Sustrans, *Fair bus fares for young people. A policy briefing* (2022)

[15] Air Pollution and Inequalities in London: 2019 Update (Logika, 2021)

[16] "People of colour likelier living in high pollution areas", Friends of the Earth, October 2022

[17] TUC/Transport for Quality of Life, *Public transport fit for the climate emergency*, April 2023

of bus and tram systems, and an 80% expansion of rail.

This would require billions of pounds of public investment: the TUC calls for £10 billion/year in capital expenditure up to 2035, and operating expenditure £8 bn/year for buses and trams and £10.9 bn/year for trains. These sums could be shifted from carbon-intensive government spending such as the strategic roads programme. This would result in 140,000 direct jobs in bus, tram and rail operation, and 730,000 jobs in bus and tram construction.

A further 1.8 million jobs, some of which are already-existing jobs, would be supported indirectly by this expansion. Such a bold investment programme would more than make up for reductions in vehicle manufacturing jobs that may result from the transition away from fossil fuels.

The RMT rail union also calls for "a massive expansion of green, properly staffed, integrated public transport coverage, connecting regions, communities and workplaces".[18] An earlier report commissioned by Sustrans and the Campaign for Better Transport[19] concluded that the sustainable transport sector would also provide a wide range of jobs from drivers, ticket agents and semi-skilled and skilled manufacturing jobs to managerial and technical engineering jobs.

We call on the Mayor and the GLA to work with trade unions and transport researchers to plan a similar expansion of public transport in London, with a corresponding expansion of well-paid, secure transport sector employment.

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Part 3. Transport, climate change and pollution

Free public transport would make a big contribution to transforming London's transport system, to help meet the worldwide threat of global heating and deal with the local hazard of toxic air pollution.

The most effective way immediately to tackle toxic air pollution, and to reduce emissions of greenhouse gas emissions from the transport sector, is to move away from a car-centred transport system, to one based on public transport, walking and other active travel modes.

The GLA's current strategy, focused primarily on substituting petrol and diesel vehicles with electric vehicles, is doomed to failure in dealing with global heating and air pollution. Projects that expand the road network, such as the Silvertown tunnel, make matters worse.

Transport and climate change

Transport accounts for one quarter of London's greenhouse gas emissions, second only to heat and energy provision for homes and businesses. Transport sector emissions fell from 9.5 million tonnes of carbon dioxide equivalent (mt CO2eq) in 2013, to 8.3mt CO2eq in 2019.[20]

London's transport system is centred on access for, and convenience for, privately-owned cars, vans and heavy goods vehicles. These are the main source of transport sector emissions.[21]

Transport sector emissions fell during the Covid-19 pandemic but have increased again since then. This is part of an alarming trend. London's greenhouse gas emissions are set to exceed the inadequate "carbon budgets" set by the GLA – and to miss science-based targets by an even wider margin. The targets are explained in Box A.

To reduce greenhouse gas emissions from the transport sector, transport policy researchers have long recognised the need for integrated policies.[22] These are sometimes summarised as avoid-shift-improve, i.e.:

(i) *Avoid* the need for journeys, e.g. by planning cities differently;

[18] RMT, *Cut carbon emissions – not public transport jobs* (Briefing, 2021)

[19] Ekogen, *Employment in Sustainable Transport. A report for pteg, Campaign for Better Transport and Sustrans* (Manchester, 2010)

[20] TfL, *Travel in London 2023: Annual Overview*, p. 33; GLA, *Next steps for reducing emissions from road transport* (2022), p. 4

[21] The most recent UK government transport statistics, for 2020, show that 91% of UK domestic transport emissions came from road vehicles, including 52% from cars and taxis, 16% from vans and 19% from HGVs. See Transport and environment statistics, 2022 Gov.UK

[22] See e.g. C. Brand et al, "Lifestyle efficiency and limits: modelling transport energy and emissions using a socio-technical approach", *Energy Efficiency* (2019) 12: 187-207; C. Brand et al, "Road to zero or road to nowhere? Disrupting transport and energy in a zero carbon world", *Energy Policy* 139 (2020) 111334; and J. Barrett et al, "Energy demand reduction options for meeting national zero-emission targets in the UK", *Nature Energy* 7 (2022), 726-735

Box A. London is not playing its part in tackling climate change

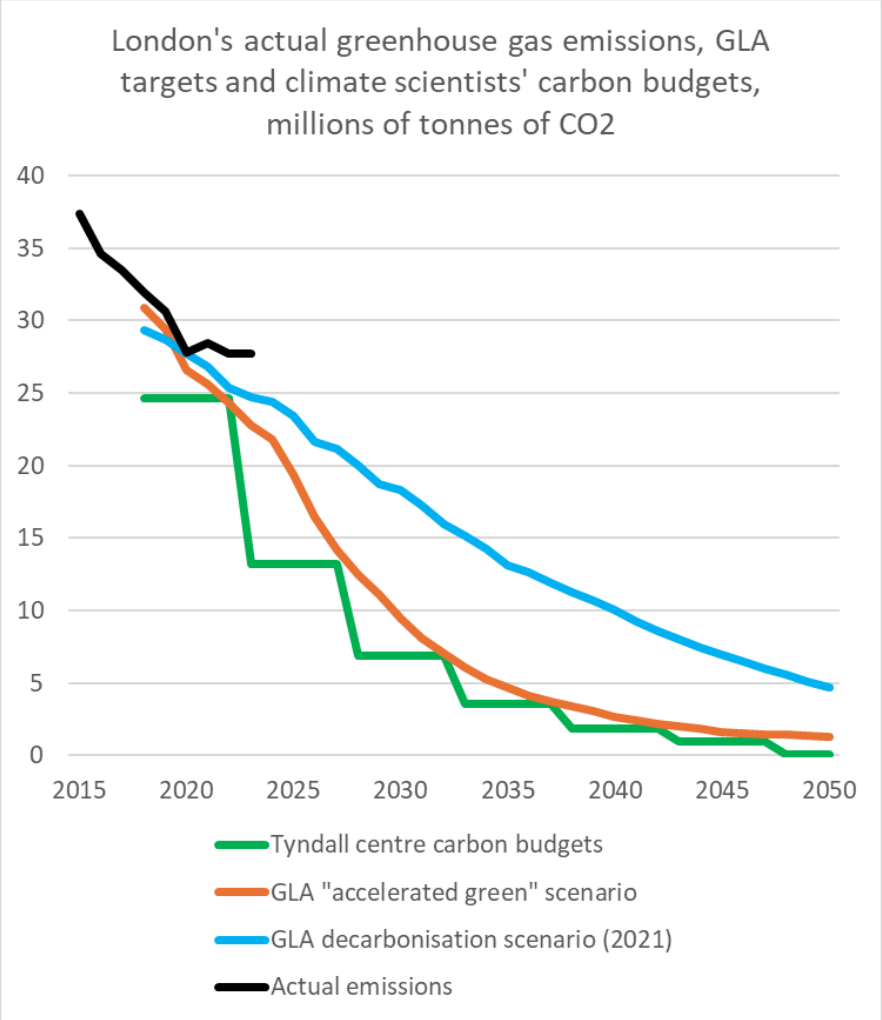
For London to play its part in preventing dangerous global heating, its climate targets would need to be more ambitious than the GLA's – and it would have to meet them. Now, London is missing even the inadequate GLA targets. Of the highest emitting sectors, transport is doing worst of all.

The international climate conference in Paris in 2015 agreed on the need to keep "well below" 2 degrees of global heating and to "pursue efforts" to keep to 1.5 degrees, in order to forestall dangerous destabilisation of the world's climate systems.

"Carbon budgets" – the amount of carbon dioxide that can be emitted by a country, city or other area, while remaining within the limits implied by the Paris decisions – were worked out by researchers at the Tyndall Centre for Climate Change Research for the UK, and each of its local authorities. The Climate Change Committee that advises the government, the government itself, and the GLA have also set out budgets.

What matters is not the annual level of emissions, but *cumulative* emissions, i.e. the total volume of greenhouse gases building up in the atmosphere over time.

Between 2018 and 2050, the total cumulative carbon budget for London is 260 million tonnes of carbon dioxide (mt CO2), according to the Tyndall Centre; 330mt according to the "accelerated green" scenario; or 511 mt under the Mayor's original "net zero" plans.



At the current rate, these budgets will be completely used up by 2026 (according to the Tyndall Centre), 2028 (under the "accelerated green" scenario) or 2034 (under the original "net zero" plan). (Calculated by the author. I have taken the current rate as 30.5 mt/year, the average of the latest five years of data available, 2017-2021.)

There are two differences between the budgets worked out by the Tyndall Centre scientists and those used by the government and the GLA. First, the scientists recognise the additional responsibilities of rich, industrialised countries including the UK – recognised in international agreements – to decarbonise more rapidly than countries of the global south. They set aside most of the global budget for developing countries, and consider how what remained could be equitably divided among rich nations.

Second, the Tyndall researchers omit the possible effect of unproven technologies for removing carbon dioxide from the atmosphere, or sequestering it from industrial processes. Given the huge uncertainties about whether these methods will work, they argue that relying on them would breach the precautionary principles on which emissions reduction policies should rest.

The graph shows carbon budgets for London. The *green line* shows the Tyndall centre's budgets. The *blue line* shows the most ambitious budgets set out in the GLA's Zero Carbon Pathways, compiled after the Mayor declared a "climate emergency" in 2018. The *orange line* shows the "accelerated green" scenario that the Mayor said in 2020 would now guide the GLA's approach. The *black line* represents London's actual greenhouse gas emissions. (For 2022-23, we have assumed that London follows national trends, since London's statistics are not yet available.)

Even if the level of emissions has stayed more or less constant since 2021, then the GLA's own targets, let alone the Tyndall Centre's, are being missed. It may well be that emissions have increased in 2022-23, in which case they are being missed by an even wider margin.

Sources for the graph. Tyndall Centre carbon budgets for London, with commentary, can be downloaded from the University of Manchester web site GLA Zero Carbon Pathways: *London's 1.5deg C Compatible Plan* "Accelerated green scenario": *Net Zero by 2030: an updated pathway* and *Analysis of a 2030 Net Zero Target for Greater London.* Actual emissions: from the London Energy and Greenhouse Gases Inventory (LEGGI). The author has adjusted the figures to exclude emissions from aviation and the (extremely small) effect of carbon drawdown from land use. This makes the figures more comparable to the Tyndall centre's. The author has assumed that London's emissions fell by 2.6% in 2022, in line with the national trend, and remained at the same level in 2023, as was suggested by some early reports.

(ii) *Shift* journeys from private cars to public transport and other modes; and

(iii) *Improve* the quality of the remaining journeys, to increase energy efficiency and reduce emissions.

Trade unions, too, have long recognised the need for such integrated approaches. The International Transport Workers Federation, which unites transport unions worldwide, began in 2010 to develop an avoid-shift-improve approach, which it saw as the key to ensuring more secure, better-paid employment in the transport sector.

The ITF continues on the same path today. Its most recent strategy document calls for publicly owned and operated public transport systems, with investment in public transport prioritised over investment that fosters private vehicle use, as the means to transport systems that are part of tackling climate change and social inequality.[23]

Transport and air pollution

The GLA recognises that:

> Toxic air pollution remains the biggest environmental risk to the health of all Londoners, particularly the most vulnerable. There remains more that can and should be done to lower exposure to poor air quality.[24]

Research commissioned by the GLA estimated that, in 2019, 3600-4100 deaths were attributable to air pollution, of which road traffic is the main cause.[25]

London's pollution problem is part of a national health crisis. Public Health England estimates that air pollution causes 28,000-36,000 deaths per year nationally, and an epidemic of conditions including respiratory and cardiovascular problems, dementia, premature birth and low birth weight.[26]

The two pollutants on London's roads that are most damaging to health are nitrogen dioxide (NO2) and PM2.5 particulate matter. NO2 causes asthma and other respiratory harm, while PM2.5 can damage every organ in the body, and causes a wide range of chronic diseases including cancer, cardiovascular disease and dementia.

Following the introduction and expansion of the Ultra Low Emission Zone (ULEZ), NO2 levels have fallen substantially. But 225,000 Londoners still live in areas that breach the World Health Organisation's recommended target levels. The situation with PM2.5 particles is worse: 88% of Londoners live in areas that breach WHO targets.[27]

Policies such as ULEZ, that discourage the use of older, more polluting vehicles, help to reduce air pollution. But there are limits to what they can do. Firstly, they currently only address NO2 levels. Secondly, they do not address pollutants from vehicles' tyres, which produce far greater quantities of PM2.5 pollution than their engines – potentially, more than 1000 times greater, according to recent research.[28] Vehicle electrification will not make any impact on pollution from tyres, and could make it worse with heavier vehicles and sharper acceleration.

Cutting London's transport sector emissions

The most effective way to cut greenhouse gas emissions and air pollution from transport is to cut the number of motor vehicles, and particularly privately-owned cars, vans and HGVs, on the road.

Reducing the number of journeys ("avoid") and shifting to public transport and active travel

[23] The approach developed in 2010 was named Reduce-Shift-Improve: "reduce" meaning less movement of goods and people, i.e. essentially the same as avoiding the need for journeys. See: ITF Climate Change Working Group and Global Labour Institute, *Transport workers and climate change: towards sustainable, low-carbon mobility* (2010)

[24] *Addendum to the Mayor's Transport Strategy: Proposal 24.1* (Mayor of London/TfL, 2022)

[25] David Dajnak et al, *London Health Burden of Current Air Pollution and Future Health Benefits of Mayoral Air Quality Policies* (Imperial College, 2019)

[26] Public Health England, *Health matters: air pollution* (Gov.UK, November 2018); Campaign for Better Transport, *Better Transport for Better Health campaign briefing*, June 2023

[27] GLA, *Air Quality in London 2016-2020*; *Addendum to the Mayor's Transport Strategy: Proposal 24.1*

[28] Emissions Analytics, "Gaining Traction, Losing Tread", May 2022; Imperial College "Prioritise tackling toxic emissions from tyres", May 2023; Dolphin N2, "New report highlights how non-exhaust emissions are now primary source of PM10 and PM2.5 from road transport", May 2023. A technical report commissioned by the government, Measurement of Emissions Brake and Tyre Wear (February 2023), called for more research on this issue

("shift") must be combined with electrification and other ways of making journeys less carbon-intensive ("improve"). (See "Transport and climate change", above.) It is urgent to end subsidies for car driving and prioritisation of car drivers over other road users. (See Part 4 below on transport policy.)

A decisive shift in investment, from private car travel to public transport, could create many thousands of decent, secure jobs in the transport sector.

City Hall's approach is inadequate. Positive changes, such as completion of the Elizabeth line and provision of bikes for hire, have been undermined by car-centred investment. Since the Mayor declared a "climate emergency" in 2018, his biggest transport investment decision was to build the Silvertown tunnel, which will significantly expand the road network and traffic volumes.[29]

After the "climate emergency" declaration, City Hall published a 1.5° C Compatible Climate Action Plan and the Mayor's Transport Strategy. Transport decarbonisation would be achieved mainly by electrification, according to accompanying documentation. Only a very modest reduction in traffic volume was envisaged: 10-15% fewer vehicle-kilometres driven, by 2041.[30]

In 2022, the Mayor declared that London should aim for "net zero" by 2030, rather than 2050. A report on how to achieve these more ambitious targets, by Element Energy, underlined that switching to EVs would not be enough:

> Due to limited supply chains, slow turnover of vehicle stock, and reliance on grid decarbonisation, reaching net zero early *cannot be achieved by technology alone*. The earlier the net zero target date, the greater the importance of behaviour change to *reduce demand for travel in high carbon modes* (primarily private vehicles)."[31] (Emphasis added.)

Sharp reductions in vehicle-kilometres driven by cars in London are needed, Element Energy concluded. It offered three scenarios: a reduction by 2030 of 12%, 27% or 40%. The Mayor has said climate policies are oriented around the middle, "accelerated green" scenario. This in turn raises two problems:

1. Even a 27% reduction in vehicle-km would leave London far short of the GLA's own climate targets, let alone science-based targets. Element Energy estimates that this reduction would leave residual transport sector emissions of 3.8 mt CO2eq per year – 31% above the 2.9 mt CO2eq transport sector carbon budget in City Hall's "accelerated green" scenario.[32]

2. In the two years since these new targets were announced, City Hall has not noticeably shifted from its emphasis on electrification as the main means to decarbonise transport. In 2022, City Hall reported its main transport decarbonisation actions as: (i) ULEZ expansion (implemented in 2023); (ii) ULEZ expansion with tighter pollution control standards; (iii) a low-level emissions charge; and (iv) a London boundary charge. City Hall expects these policies would collectively reduce road transport emissions by a few percentage points: the most ambitious measure, ULEZ expansion with tighter standards, would reduce emissions by 2.9% of their 2019 level.[33]

City Hall's ramping up of rhetoric and targets, while investing in road system expansion, is a classic example of what climate researchers call "discourses of climate delay".[34]

Independent analysis of transport decarbonisation, by researchers at Imperial College, London, shows that – in contrast to the GLA's approach – the only way for London to stay within science-based carbon budgets is to move away from the car-centred transport system and to cut traffic volumes more sharply.

The research, published by Lisa Winkler and her colleagues in *Nature Communications*

[29] See: Transport Action Network et al, The Silvertown Tunnel is in a hole, so Stop Digging (2020)

[30] Mayor of London, 1.5°C Compatible Action Plan (2018). The means to decarbonisation were set out in: Element Energy, London's Climate Action Plan: WP3 Zero Carbon Energy Systems (Cambridge: Element Energy, September 2018), page 31

[31] Element Energy, Analysis of a net zero 2030 target for Greater London, page 14

[32] Element Energy, Analysis of a net zero 2030 target for Greater London, page 50; and GLA, London's Zero Carbon Pathways Tool

[33] Author's calculation, based on GLA estimates of policy impacts. See: TfL, *Next steps for reducing emissions from road transport* (2022), p. 7

[34] W. Lamb et al, Discourses of Climate Delay (Global Sustainability, 2020)

journal,[35] presented scenarios with cuts of 43-81% in vehicle-kilometres driven by 2027.

To meet the carbon budgets set by the Tyndall Centre, the researchers concluded that London should aim for: a 72% reduction in car travel activity by 2025; a phase-out of fossil-fuelled cars by 2025 and 100% renewable electricity generation for electric cars; retrofitting one-third of scrapped fossil fuel cars with electric engines; and setting strict standards for EV manufacture.

Box B. Cutting traffic volumes is key to decarbonisation

The graphic, reproduced from *Nature Communications*, shows (part "a" on the left) the researchers' estimates of cumulative greenhouse gas emissions, between 2020 and 2050, from transport in cars in London. Each bar represents an estimated volume of emissions, measured in millions of tonnes of carbon dioxide equivalent (mt CO2eq).

The green bars show the possible volume of emissions from car transport, if London was to meet the carbon budgets worked out by the government's Climate Change Committee (CCC), or the Tyndall centre.

The remaining bars show the volume of emissions from car transport that the researchers estimate, if various policies are implemented.

Near the top are bars showing the limited effect of a transition to battery electric vehicles, or a one-for-one transition from fossil-fuelled cars to electric ones. These bars include emissions from fossil-fuelled cars, as the researchers assumed such transitions would only be possible over many years.

In the middle, retrofitting and lightweighting cars. Near the bottom, a reduction in traffic ("Car Travel Activity") and a scenario assuming that such a reduction is combined with other policies ("Combined Policies with CTA").

The bars labelled "Local Transport Strategy" and "Local Net Zero 2030 Target" reflect the researchers' estimate of cumulative emissions, if policies identified in City Hall documents are implemented.

The colours represent emissions from different sources. Black is emissions from cars' tailpipes when burning fossil fuels. Red and orange are emissions "embedded" in EVs, i.e. produced during the manufacture of vehicles.

Part "b", on the right, shows the researchers' estimates of energy demand that go with each scenario.

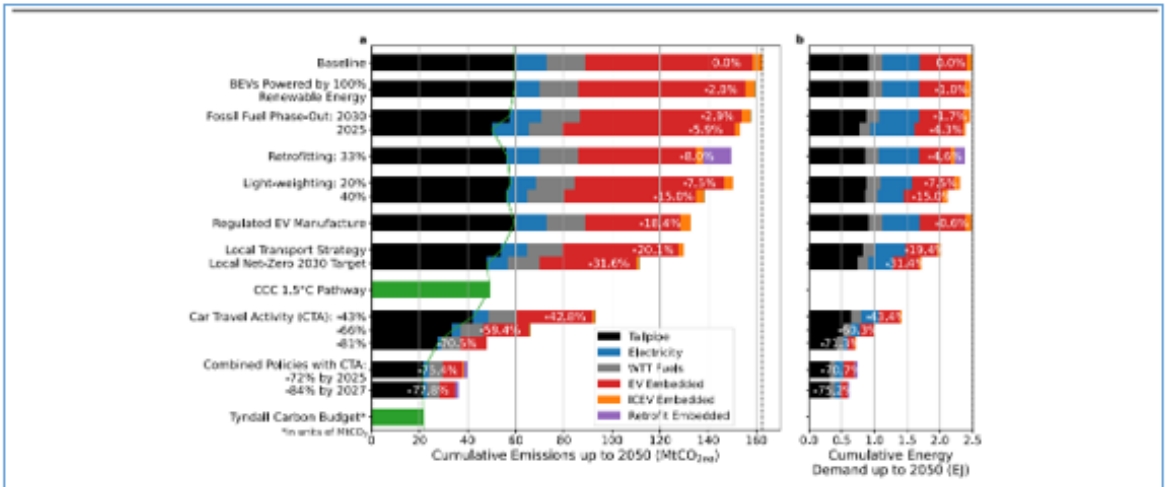


Fig. 1 | London car cumulative CO_{2eq} emissions and energy demand under different policies. Cumulative emissions (**a**) and energy demand (**b**) between 2020 and 2050 is shown for the baseline case and each policy applied onto the baseline case, as well as the local transport policy for London and a combined case consisting of all policies acting together. Emission projections are compared with the Tyndall Centre's estimate of the carbon budget (for well below 2 °C and pursuing 1.5 °C)[16] multiplied by the historical percentage of London's emissions from cars[17] and the CCC's cumulative emissions pathway for 1.5 °C for surface transport[10] multiplied by the historic percentage of UK surface transport emissions arising from London cars (see Supplementary Note 1). Emissions and energy demand are categorised by their source; the fossil fuel energy and tailpipe emissions from ICEVs (black), the electricity consumed for driving EVs (blue), the well-to-tank emissions from fuels (grey), the embedded emissions and energy from EVs (red) and ICEVs (orange) and the emissions and energy from retrofitting ICEVs with electric engines (purple). Note: the Tyndall carbon budget is in units of $MtCO_2$ and does not account for other greenhouse gases, so it is a slight underestimate of the entire CO_{2eq} budget.

[35] L. Winkler et al, "The effect of sustainable mobility transition policies on cumulative urban transport emissions and energy demand", *Nature Communications* (2023) 14:2357.

The importance of cutting traffic volumes is shown in Box B, which features a graphic from the Imperial College paper.

Electrification of vehicles

Current London transport policy relies too heavily on electrification of vehicles – which is necessary, as society moves to a zero-carbon way of living, but on its own can not decarbonise transport at the necessary pace.

Electric vehicles (EVs) produce fewer greenhouse gases, and less air pollution (but not fewer particulates) and noise (below 30 km/h) than fossil-fuelled cars, but do nothing to reduce congestion, collisions and carbon-intensive road infrastructure.

Points to remember about EVs are:

1. EVs produce fewer greenhouse gas emissions than comparable fossil-fuelled cars during their whole lifecycle (including manufacture, use and scrapping) – but there are still significant carbon costs. Their manufacture is on average more carbon-intensive. And although an EV uses less power in the form of electricity than a petrol car uses in fuel, the electricity may still be produced by burning fossil fuels. In the UK, it is most likely to be produced from gas.[36]

2. *Even the most optimistic timetables proposed by the UK government will leave millions of fossil-fuelled cars on the road*. This will mean missing climate targets by even wider margins than now. This makes traffic reduction measures essential, a point underlined recently by a group of the UK's leading transport researchers.[37]

3. *EVs are heavier than cars with petrol engines, and their batteries rely heavily on minerals usually produced from exploitative, extractive supply chains*.[38]

4. *Some advantages of electrification are being cancelled out by the marketing of heavier cars, such as SUVs*, and the failure of hybrid vehicles to reduce emissions as well as has been claimed.[39]

5. *EVs could do less than expected to tackle particulates problems*, because they are on average heavier than petrol vehicles, and most particulate matter comes from tyres, not tailpipes. (See "Transport and air pollution", above.)

6. *Political strategies focused on electrification do not tackle many factors that are increasing traffic volumes*, including: the sales and profit imperatives of politically powerful car manufacturers; the financialisation of sales that makes cars more readily available; and the increase in traffic caused by ride-hailing services (e.g. Uber) and delivery services.[40]

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Part 4. How zero fares fits into transport policy

Ambitious, sweeping measures such as free public transport have been made imperative by the climate emergency. It is one of the strategies needed to deliver "transport carbon reductions for a safe planet", researchers at Transport for Quality of Life argued in 2019, in a paper for Friends of the Earth and endorsed by Greenpeace.[41]

Transport is decarbonising far less effectively than the rest of the UK economy. The government's strategy of "electrifying the vehicle fleet, while still allowing traffic

[36] Making comparisons between the lifecycle emissions of EV and petrol cars is complex and politically contested. The IEA publishes a useful summary chart on its web site. A useful guide is: "Factcheck: how electric vehicles help to tackle climate change" (Carbon Brief, 2019). A recent research article is: A. Milovanoff et al, "Electrification of light-duty vehicle fleet alone will not meet mitigation targets", *Nature Climate Change* 2020 (10), 1102-1107

[37] Lisa Hopkinson et al, *The last chance saloon: we need to cut car mileage at least 20%* (Radical Transport Policy 2-Pager #10)

[38] See e.g. War on Want and London Mining Network, *A Just(ice) Transition is a Post-Extractive Transition* (2019); Thea Riofrancos et al, *Achieving Zero Emissions with More Mobility and Less Mining* (Climate and Community Project, January 2023); Institute for Sustainable Futures, *Responsible minerals sourcing for renewable energy* (2019)

[39] See e.g. C. Brand et al, *The role of energy demand reduction in achieving net-zero in the UK: Transport and mobility* (CREDS, October 2021)

[40] On financialisation, see: Tom Haines-Doran, "The financialisation of car consumption", *New Political Economy*, September 2023. On ride-hailing and delivery services, see: Paris Marx, *Road to Nowhere: what Silicon Valley gets wrong about the future of transportation* (Verso, 2022), pages 93-101

[41] Transport for Quality of Life, *Briefing: A Radical Transport Response to the Climate Emergency* (November 2019). See also: *Transport for Quality of Life, Briefing: Transforming public transport* (January 2019)

volumes to grow, building roads and expanding airport capacity" can not cut greenhouse gas emissions quickly or effectively enough, the researchers argued.[42] They continued:

> Rapid action to reduce car use will only be fair, and command public consent, if it takes place in parallel with big changes to our transport system, to give people decent, clean and affordable ways of travelling to work, education and services, by foot, bike or low-carbon public transport.

An effective means to this end is "a mileage-based Eco Levy for driving in towns and cities". Combining this with "free local public transport" could make it "a politically sellable policy".

Free public transport has been provided in many towns and cities across the world since the 1970s, the researchers pointed out. But there are no examples of cities combining free public transport with an Eco Levy, i.e. a form of road pricing, and other traffic control measures. London has an opportunity to take the lead.

London transport policy

The Transport for Quality of Life researchers argue that a transport system for a zero-carbon future must be universal (available to all), comprehensive, affordable, and must operate in line with our obligation to cut greenhouse gas emissions.[43] Starting from these principles, some potential policies for London are:

□ *Review all road projects for compatibility with climate policies and the shift towards public transport and active travel, as the Welsh government has done.*[44] *In London this would mean reviewing potential alternative uses for the Silvertown tunnel*.

The Silvertown tunnel is nearly complete, despite overwhelming local opposition. It has skewed London transport investment towards cars, when it should be moving in the opposite direction. The Stop the Silvertown Tunnel coalition, Newham and Greenwich borough councils, the Possible campaign group, the Greens in the London Assembly and others have called on City Hall to examine the potential for using the tunnel for public transport and active travel modes instead of for motor traffic.[45]

Resources put into the tunnel and other road projects are taken away from the shift to other modes. The Silvertown project has gone ahead, while the planned Westway cycle "superhighway" has been abandoned, and the proposed pedestrian and cycle bridge at Rotherhithe scrapped – due, TfL stated, to lack of funds.[46]

Public transport expansion projects envisaged in the Mayor's Transport Strategy (2018) are effectively frozen, such as the Bakerloo line extension to Lewisham and the Barking Riverside London Overground extension. On the other hand, the strategy indicated approval for the Lower Thames Crossing, the government's proposed climate-trashing six-lane motorway under the Thames at the Medway, and City Hall has raised no objection to it since.[47]

□ *Consider a London-wide road-user charging scheme, and parking charge reform, to discourage unneeded trips by car*.

Road pricing is tried and tested. It has been used in Singapore since 1999, mainly to address congestion; and in Milan, where traffic volumes in the city centre fell by nearly half after it was introduced.[48]

London has its own successful experience with road user charges: the Congestion Charge and the ULEZ. The Congestion Charge, introduced in 2003, resulted in a reduction in traffic volumes in the area covered by 20-30% in its first two years. By 2007 traffic volume was returning to pre-charge levels, but by 2022 traffic volume in central London (a larger area than the charge zone) was 35% below its level in 2000 and 7% below 2016.[49] The ULEZ has also effectively reduced NO2 emissions.

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[42] In 1990, transport accounted for less than one sixth of total UK greenhouse gas emissions (15.8%); in 2022 it accounted for more than one quarter (26.9%). See: UK Territorial Greenhouse Gas Emissions: National Statistics

[43] Transport for Quality of Life, *Briefing: A Radical Transport Response*, page 3

[44] Welsh government, *Written statement: Roads Review, One Year On* (2 February 2024); "Welsh road building projects stopped after failing climate review", *The Guardian*, 14 February 2023

[45] Sian Berry, "Londoners have better ideas for the Silvertown road tunnel", 19 December 2022; Possible, "Our visions for London's newest Thames crossing", 29 September 2023

[46] Transport Action Network and others, *Stop Digging* (2020), page 23

[47] *Mayor's Transport Strategy* (2018), pages 238, 243 and 300

[48] Transport for Quality of Life, Briefing: A Radical Transport Response, page 8; S-Y Phang, "Road Congestion Pricing in Singapore: 1975 to 2003", *Transportation Journal* 43:2 (2004), 16-26

[49] M. Mitchell and O. Nermond, *Moving with the Times: financial incentives for sustainable travel. Part 1* (Centre for London, July 2023), page 21; TfL, *Travel in London 2023: Annual Overview*, page 36

These schemes had specific, narrow aims: to reduce congestion in a small area, and to tackle the worst of London's air pollution problems. Now policies to minimise car use, and to stimulate the shift to other transport modes, are needed. (Note. Road charging is also seen as a revenue-raising measure. This is distinct from its function for managing traffic. For comments on funding free public transport, see Part 5.)

A London-wide road charging scheme is being considered by the London Assembly Transport Committee and TfL.[50] With current technology, it would be straightforward to adjust charges according to distance driven, size and polluting power of vehicles, drivers' income or other criteria. Exemptions could be arranged for key workers, disabled people, and so on.

□ *Progressive parking policies that are fair and consistent across London – with higher charges e.g. for SUVs and other high-emission vehicles – would help to open street space for others.*[51] This would require cooperation between the GLA and borough councils. Another option is a levy on companies that provide workplace parking, where public transport is available, a policy implemented successfully in Nottingham.[52] Paris residents recently voted in favour of tripling parking charges for SUVs, to €18/hour:[53] London could follow this example.

□ *Policies to encourage active travel, including people walking and wheeling, cycling and using priority vehicles, complement investment in public transport.* Built environment policies, including pedestrianisation and creation of local parks, are essential, building on measures already taken by the GLA and boroughs. More extensive provision of cycle hangars would overcome a barrier to cycling.[54]

□ *Commit to build on, and extend, the public service model of transport, with passengers' needs prioritised and a stable, respected and decently paid workforce.*

This requires substantial new investment in bus and rail networks, which in turn requires a new approach to funding. (See Part 5 below.)

This in turn requires a shift in policy not only by City Hall, but also by the government – which funds TfL jointly with the GLA, and has used negotiations over the annual budget to provoke disputes with the Mayor, Sadiq Khan, on party political lines.

Such a dispute was initiated by the government in talks about additional funding to cover TfL losses arising from the Covid-19 pandemic. In August 2022, a funding settlement was agreed that runs until March 2024. At that time, Grant Shapps, then transport secretary, wrote to the Mayor to say that:

(i) The government would not fund a freeze, or even a delay, in fare increases; nor fund fare concessions above the national average, such as free travel for Londoners aged 60-65, or free bus travel for teenagers;

(ii) The government will press ahead with preparations to introduce driverless trains on sections of the underground, which are opposed by trade unions on safety grounds, and with contentious pension reform plans that undermine TfL employees' living standards.[55]

The Mayor has pushed back against government cuts, making funds available for a fare freeze until March 2025, and a trial under which all fares on Fridays will be charged at off-peak rates.[56] But he has also cut bus services, in line with the government's approach. In the decade to 2023, the operated services have been cut by 28.7 million km, TfL data shows. The Mayor's commitment to redirect services from inner London to outer London boroughs has not been stuck to. Outer London services have increased overall by only 0.9 million km, with many borough suffering substantial cutbacks.[57]

Instead of piecemeal measures, we urge a bolder, transformational approach, providing free public transport and overhauling funding to serve the public interest.

[50] See: TfL, *2023 Business Plan 2022/23 – 2025/26*, page 25; M. Mitchell and O. Nermond, *Moving with the Times*, page 30; S.Barrett et al, *Green Light: Next Generation Road User Charging for a Healthier, More Livable London* (Centre for London, April 2019), page 7 and page 10

[51] Mitchell and Nermond, *Moving with the Times*, page 11; F. Ramjerdi et al, *Policies for Sustainable Commuting* (Oslo, 2017), page ii

[52] Mitchell and Nermond, *Moving with the Times*, page 22

[53] "Parisians vote in favour of tripling parking costs for SUVs", *The Guardian*, 5 February 2024

[54] Mitchell and Nermond, *Moving with the Times*, pages 24-25; Rachel Aldred, "Built Environment Interventions to Increase Active Travel: a Critical Review and Discussion", *Current Environmental Health Reports* (2019) 6: 309-315

[55] Letter from Grant Shapps to Sadiq Khan, 30 August 2022. Arrangements for phasing out the post-Covid funding settlement were covered in a letter from Mark Harper to Sadiq Khan, 18 December 2023.

[56] Mayor of London's press releases, on fare freeze, 19 January 2024, and on "off peak Fridays", 28 January 2024

[57] Mayor of London's press release on new funding for buses, 23 November 2022; press release on outer London boroughs losing out, by Sian Berry, London Assembly member, 14 September 2023; "Data shows scale of bus cuts", Evening Standard, 19 September 2023

Implementing free public transport

There are no obvious practical obstacles to implementing free public transport in London. All Londoners under 10 and over 60, TfL staff, military veterans and beneficiaries of other concessionary schemes are already eligible for free public transport. There are also partial concessionary schemes, such as the Zip Card for 16-17 year olds.

TfL has infrastructure to manage these concessions, which could be extended. There may be savings available, by dispensing with the need to police fare collection. Zero fares would improve relations between staff and passengers, as the requirement on staff to collect fares from those who struggle to afford it will be removed.

Free public transport may best be provided through Oyster cards (currently provided to concessionaires for an administrative fee). These might be useful (a) to TfL planners monitoring transport demand, (b) where staff wished to sanction passengers e.g. for violent or anti-social conduct, or (c) if TfL wished to charge certain categories of passengers (e.g. some tourists or business visitors).

National policy context

The fight for free public transport in London is part of the fight for a national transport policy supporting public investment in public transport and active travel, and against road-centred spending and subsidies for private cars, vans and HGVs.

This means reversing more than a decade of taxation policy that has supported driving, and individual car ownership, against public transport. Between 2010 and 2021, bus and rail prices rose by 80% and 43% respectively, while the cost of car travel rose by only 27%; the effect of the Covid-19 pandemic will widen the gap further, according to the government's own Climate Change Committee (CCC).[58]

Worse still, the government's transport investment plans are a recipe for climate disaster. The *Transport Decarbonisation Plan*, published in July 2021, included no specific targets for reducing overall traffic volumes, and focused instead on the introduction of electric vehicles. Even this inadequate measure was superceded by the *Carbon Budget Delivery Plan*, published in March 2023, which effectively junked efforts to reduce traffic volume or even manage demand.[59]

Transport policy specialists responded that "this is not gear change, this is reverse gear". Even the CCC warned that most policies supporting lower-carbon modes of transport had been removed from the government's plans and "no progress" made on calls for "car demand reduction".[60] While cutting the already modest allocation of funds for active travel, the government continues with its major road-building programme (RIS2), which will substantially increase greenhouse gas emissions from transport, when they need to be reduced sharply.[61]

The government's divisive attitude to TfL funding is in line with this car-centred, climate-trashing transport policy. Achieving free public transport in London will mean challenging this approach. The general election, due in 2024, is an opportunity to raise these issues.

Rail travel is an area in which national policy directly affects free public transport in London. Under an agreement between TfL and train operating companies, rail travel is provided to holders of travelcards and Oyster cards, including those entitled to free travel.

Due to government pressure, TfL last year considered withdrawing one-day travelcards that cover trains and TfL services, but an agreement was negotiated to preserve them.[62]

Pressure could be exerted again, by the government and companies, to undermine travel as a public service. Conversely, if free travel is extended to more people, free travel on trains would be extended.

The background to this is the crisis created by years of profiteering and mismanagement by train operating companies, seven of which have been taken back into public ownership as a result. This trend may continue.[63] The Labour party has stated that it will set up a nationally integrated public railway if it forms the next government.

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[58] CCC, Progress in reducing UK emissions: 2023 Report to Parliament, pages 114 and 120

[59] See: *Transport Decarbonisation Plan* and *Carbon Budget Delivery Plan*

[60] Greg Marsden, *Reverse gear: the reality and implications of national transport emission reduction policies* (CREDS, May 2023); CCC, *Progress in reducing UK emissions: 2023 Report to Parliament*, pages 108-109

[61] Lynn Sloman and Lisa Hopkinson, *The Carbon Impact of the National Roads Programme* (Transport for Quality of Life, July 2020). The Transport Action Network is seeking to challenge an Appeal Court decision that blocked its legal challenge to the programme. See here

[62] "Agreement to save Day Travelcard for rail passengers", Rail Business Daily, 25 October 2023.

[63] "Our pathway to public ownership", Bring Back British Rail, 11 December 2023; GB Rail: Labour's plan for a nationally integrated publicly owned railway (Labour Party, 2020)

Part 5. How to fund free public transport

Reforms to taxation, at London and national level, could finance free public transport in London, and indeed across the country, in myriad ways.

In this Briefing we do not propose any particular method. Rather, we consider: why London relies more heavily on fare income than other big cities to fund public transport; the funding gap that would arise if a zero fares policy is adopted; and how the GLA and national government could fill that gap.

In round numbers, TfL's total gross expenditure (roughly, its total outgoings) was £8.5 billion in 2022-23, of which £7 billion was operating costs. £4 billion was collected in fares, comprising just under three-quarters of income, excluding temporary government grants.[64] (See Box C: TfL's sources of income.) TfL raised fares in March 2023 by 5.9%.[65]

Box C. TfL's sources of income

In 2022-23, TfL's total gross expenditure was £8,490 million, including operating costs of £7,055 million.

Its revenue comprised:

□ *Fares income* of £4,046 million, the largest item;

□ *Other income*, including £956 million from the Congestion Charge and ULEZ, and £608 million of rents, commercial advertising and other income;

□ *Grant income* from the government and a share of London Business Rates, totalling £3,523 million; and

□ *Prudential borrowing and cash reserves*.

Source: TfL Annual Report and Statement of Accounts 2022/23, pages 109-113, 136, 162 and 172-173

London's transport system relies far more heavily on fare income than other big cities'. Before the pandemic, the proportion of revenue raised from fares in London was slightly lower than now, at 70% – while in Paris it was 26%, Hong Kong 36%, New York 38% and Singapore 46%. Other big European cities rely, more than London does, on other types of revenue, including local taxes, road pricing and government grants.[66]

During the last decade, with central government dominated by anti-public-service policies, the London transport system's relative independence was seen as a strength. During the Covid pandemic, though, the situation changed. Central government grants were needed to cover the losses caused by the sharp fall in journeys made.

If public transport is made free this year, it is reasonable to assume that a funding gap of £4-5 billion/year would open up, to cover operating costs. In addition to this, substantial new capital investment in public transport is needed.

In London, such sums could be raised from local taxation reform and/or road user charging (see "What London could do", below). Some of the most effective measures require parliamentary legislation to give the GLA the necessary powers. With a general election due in 2024 and a change of government likely, this is a realistic prospect. It is realistic, too, for the GLA to reconsider its approach of prioritising independence from central government.

A central government committed to tackling the climate crisis and the cost-of-living emergency could, even with modest changes to taxation and transport policy, raise sums sufficient to pay for free public transport not only in London but nationwide (see "What national government could do", below).

What other big cities do

London could reduce its reliance on fare income for public transport by adopting methods used in other big cities. These include:

□ *Paris*. Roughly half the cost of public transport is paid from a local tax (versement transport or VT), introduced in 1973. It is paid by firms in the city with more than 11 employees, and amounts to 1.4-2.6% of the firm's gross payroll expenditure. The public transport system's total revenue comprises 52% VT and other taxes, 27% fares, 18% central government grants and 3% other sources. Guilherme Rodrigues of the Centre for Cities, who last year conducted a study of funding options for TfL, argued that the Paris model "stems from a belief that the transport network is for the city's good".[67]

□ *Hong Kong*. Raising tax from property development is central to the funding of MTR, the Hong Kong transport authority, which runs

[64] TfL, *Annual Report and Statement of Accounts 2022/23*, page 110

[65] TfL, *Annual Report and Statement of Accounts 2022/23*, page 119, and 2023 Business Plan 2022/23 – 2025/26, page 21

[66] Guilherme Rodrigues, "How should TfL fund itself in the coming years?", Institution of Civil Engineers Blogs, August 2022. See also G. Nielsen et al, *Public transport – planning the networks. HiTrans Best Practice guide no. 2* (2006), pages 70-75

[67] G. Rodrigues, "How should TfL fund itself in the coming years?", ICE Blogs, August 2022; G. Rodrigues, "Should transport in London be funded in the same way as in Paris", Centre for Cities blog, July 2022

a system half the size of London's but with more passengers. The government of Hong Kong grants development rights on land around new stations to MTR, at pre-railway values, and allows MTR to tender the land for around-station developments, and receive either a property sale value or some rental income. In Hong Kong in 2019, 60p was collected in this way for every £1 collected in fares.[68]

□ *Singapore*. The road-user charging system in Singapore (see Part 4 above) not only manages congestion but also raises significant revenue: 10% of the transport authority's income, compared to 4% that London earned from the congestion charge in 2019.[69]

□ *New York*. Fares account for just 37% of the transport system's revenue – compared to 70+% in London. Another 43% is raised through a range of dedicated levies, i.e.: tunnel and bridge tolls (12% of revenue); a mobility tax similar to Paris's (10%); a transportation business tax on firms in the city (8%); sales tax (6%); real estate-related taxes (4%); and a petroleum business tax (4%). To use similar measures, the GLA would need to be given more revenue-raising powers by central government.[70]

What London could do

London could build on the methods used in other big cities, particularly if central government agrees to expand the GLA's revenue-raising powers.

□ *Road user charging.* A London-wide smart road user charge would both reduce traffic levels and fund public transport. So would an improved system of parking fees. (See Part 4 above). These measures do not need central government approval; the latter requires cooperation with borough councils.

□ *Land value capture*. TfL used land value capture methods to finance the Elizabeth Line, raising £4.1 billion for the £14.8 billion project through enhanced business rates, and £600 million through a Community Infrastructure Levy (CIL). The Institution of Civil Engineers estimates land value uplift within 1km of Elizabeth Line stations of £5.5 billion, only about 10% of which is captured by the CIL.[71] TfL has also launched a commercial office development programme, with plans for developments over Bank, Paddington and Southwark stations. The Centre for Cities argues that such measures should be the rule, not the exception. It estimates that a Land Development Charge imposed around stations could raise an estimated £66-82 billion[72] – sufficient to fund free public transport for many years.

□ *Other taxes on property*. Progressive taxes that reduce the burden on low-income households, and more efficiently tax owners of big, expensive properties, could raise billions of pounds per year in London for transport and other public services. The Institute for Public Policy Research has proposed such a system: a property tax proportional to the value of homes, to replace council tax; exemptions for empty and second homes to be abolished and for these to be taxed at higher rates; and for devolution of the council tax system to the GLA.[73] Such measures would need the support of central government and parliament.

□ *Payroll tax.* A tax similar to the one used in Paris, equal to 0.6% of London's gross wages (on average, £20.40 per worker) could raise £1 billion per year, according to the Centre for Cities. This would require primary legislation in parliament, and would be less regressive than raising council tax.[74]

What national government could do

Central government, as well as supporting legislation to enable the GLA to raise funds, could by some straightforward tax reforms raise tens of billions of pounds per year, part of which could be used to support free public

[68] G. Rodrigues, "TfL could learn from Hong Kong's public transport funding model", Centre for Cities blog, July 2022

[69] G. Rodrigues, "Raising cash from car-restricting policies: what can London learn from Singapore", Centre for Cities blog, August 2022

[70] G. Rodrigues, "Could New York's transport funding system hold the answer", Centre for Cities blog, August 2022

[71] Institution of Civil Engineers, State of the Nation 2018: Infrastructure Investment

[72] TfL press release, "TfL launches search for new joint venture partner", May 2022; G. Rodrigues, "TfL could learn from Hong Kong's public transport funding model", Centre for Cities blog, July 2022

[73] L. Murphy and C. Snelling, *A Poor Tax: reforming council tax in London* (IPPR, May 2019)

[74] G. Rodrigues, "Should transport in London be funded in the same way as in Paris", Centre for Cities blog, July 2022

transport in London and across the country.

□ *Ending the freezing and cutting of fuel duty is an obvious measure*. These freezes and reductions are a long-standing, climate-damaging subsidy to car drivers, worth billions of pounds per year, at everyone else's expense. Fuel duty is the tax levied on petrol and diesel sold to road users. The last Labour government introduced a "fuel duty escalator" that would have raised the levy each year, by 1p + the rate of inflation. But successive coalition and Tory governments have cancelled these increases. The chancellor's 2022 spring statement cut fuel duty by 5p per litre, and the 2023 spring budget extended this for a year and cancelled the inflationary increase.

Fuel duty is now 37% lower than the rate planned in 2010, according to the Institute for Fiscal Studies. The government's Office for Budget Responsibility says the cost to the public finances has been £80 billion in 2010-23, and will be a projected £15 billion more over the next five years.[75] Such sums could be a material contribution to funding free public transport across the country.

Higher fuel duty would have encouraged drivers to seek alternative modes of transport, and could have cut UK greenhouse gas emissions by up to 7%, Carbon Brief estimates. Fuel duty freezes and cuts reward high-income drivers while doing little to help low-income drivers, according to the Social Market Foundation.[76]

□ *A consistent approach to taxing wealth, and clamping down on corporate tax evasion, would raise billions for public services including transport.* The UK's widening gulf between the rich and the rest could be narrowed by modest tax reforms, analysed in the *New Statesman*.

£28 billion per year could be raised by (i) a small annual property tax that supercedes council tax (see also "What London could do" above); (ii) the application of National Insurance to the wealth of landlords and speculators; and (iii) the reversal of the capital gains tax cut in 2016. A one-off wealth tax of 1%, on assets of more than £10 million, could raise £11 billion.[77] A political decision to tax wealth thoroughly would open up many more opportunities.

Basic measures against corporate tax evasion would also bring in billions of pounds that could be spent on public services, including transport. The Tax Justice Network (TJN) estimates the total loss of UK tax revenue due to global tax abuse at $44.6 billion per year.

Some loophole-closing measures could produce results overnight. The government could raise an extra £2.5 billion per year in corporate tax, by exercising the power it has had since 2016, to require public country-by-country reporting by multinationals. Instead, the government "continues to facilitate cross-border tax abuse and other illicit financial flows", the TJN said recently.

The UK underfunds corporate tax enforcement, that would bring in an estimated £8 for each £1 spent, and brings 23 times as many criminal prosecutions of benefits fraud as of tax fraud.[78] The way that proceeds of corporate tax evasion find their way to the London property market has been extensively researched.[79]

We point to the scope national government has for taxing wealth, not to suggest that all funds raised would or should be devoted to free public transport, but to underline the government's vast array of choices. It is about political will, or lack of it.

The GLA, for its part, could (i) give notice of its intention to reduce TfL's reliance on fare income to zero, and (ii) commission research on how this can best be achieved.

[75] "Analysis: fuel duty freezes", Carbon Brief, March 2023

[76] "Analysis: fuel duty freezes have increased UK CO2 emissions by up to 7%", Carbon Brief, March 2023; "Cutting fuel duty helps the rich, not white van man", Social Market Foundation, March 2023

[77] Harry Lambert, "The triumph of Asset Britain", *New Statesman*, 1-7 September 2023. See also: Ignacia Pinto and Sue Himmelweit, "The UK chancellor could have taxed income from wealth properly", Tax Justice Network, December 2022

[78] Alex Cobham, *Tax Justice Network letter to King Charles III*, April 2023

[79] See e.g. Transparency International, *Faulty Towers. Understanding the impact of overseas corruption on the London property market* (2017); and Transparency International UK, *Through the Keyhole. Emerging insights from the UK's register of overseas entities* (February 2023)

Part 6. Zero fares: international experience

Zero fares has a long history.[80] It was implemented in 1962 in Commerce, a suburb of Los Angeles in the USA, and in 1973 in Bologna, Italy. In the 1980s, London made its own highly-successful experience by cutting fares, albeit not to zero. In the 1990s, zero-fares schemes in Hasselt, Belgium, and Templin, Germany, resulted in big increases in public transport use. Austin, Texas, USA, also experimented with the policy.[81] In the 2020s, zero-fares policies have taken on a new meaning, as a way of combining social justice policies with action on greenhouse gas emissions and air pollution.

Of the dozens of zero-fares cities and towns, some that may offer lessons for London include:

Estonia and Luxembourg

Tallinn, the capital of Estonia (population 420,000), and Luxembourg (population 640,000) are the two largest European cities with current zero-fares policies.

Tallinn's zero-fares policy was adopted in 2013. Between 1991 and 2012, after Estonia became independent from the Soviet Union and moved to a market economy, car ownership doubled and public transport use fell by 30%. Prior to the introduction of zero-fares, fares were already relatively low; they had been cut by 40% for city residents in 2003, and 36% of users were exempt.

Over its ten years of operation, the scheme has arrested the decline in public transport use, but has not affected the volume of car traffic, which has risen slightly. Transport researchers who reviewed the scheme argued that this was partly due to the hurried, populist manner in which it was introduced, during the mayor's re-election campaign, and the city's failure to coordinate zero-fares with other transport policies.[82]

Luxembourg, Europe's richest country, started from a very different place, with 696 cars per 1000 people, compared to an EU average of 560. Free public transport was introduced in 2020 across the whole (small) country, with the explicit aim of reducing motor traffic.

After three years, traffic volumes fell by 11% and public transport use increased by 25% – at a time when the Covid-19 pandemic has reduced public transport use and increased private car use in most of Europe. The high standard of public transport (low waiting times, adequate staffing, safety, etc) has helped to attract people in Luxembourg away from cars.[83]

Other European countries

Aubagne, near Marseille in France, introduced zero-fares in 2009. As a result, public transport use more than doubled between 2008 and 2011, and there was a shift from motor vehicles. Free public transport, aimed at addressing working-class poverty and youth exclusion, was funded principally by increasing the transport tax levied on companies with more than 11 employees.[84]

Another long-running schemes, in Frydek-Mistek, Czechia, has been in place since 2011; it also covers journeys into the surrounding countryside. A research assessment of the city's experience underlined that zero-fares does not work on its own: "synergy with other transport (dis)incentives" is vital.[85]

The French coastal city of Dunkerque introduced zero-fares in September 2018. Since then, public transport use has doubled at the weekends, and risen by about 60% during the week. A survey showed that about half of new users had substituted public transport for their

[80] For a comprehensive survey, see: Judith Dellheim and Jason Prince (eds.), *Free Public Transit, and why we don't pay to ride elevators* (Montreal: Black Rose Books, 2018)

[81] Oded Cats et al, "The prospect of fare-free public transport: evidence from Tallinn", *Transportation* (2017) 44: 1083-1104; and Wojciech Keblowski, "Why (not) abolish fares? Exploring the global geography of fare-free public transport", *Transportation* (2020) 47: 2807-2835

[82] D.B. Hess, "Decrypting fare-free public transport in Tallinn, Estonia", *Case Studies on Transport* Policy 5 (2017), 690-698; Cats et al, "The prospect of fare-free public transport"

[83] "Three years of free ride", Luxembourg government press release, 23 March 2023; "Ditch the car", Luxembourg Institute of Socio-Economic Research, 8 December 2023; "The world's richest country made public transport free", Euronews, 22 March 2023; M. Maciejewska et al, "Assessing public transport loyalty in a car-dominated society: the case of Luxembourg", *Journal of Public Transportation* 25 (2023) 100061

[84] Keblowski, "Why (not) abolish fares?"

[85] D. Straub, "The effects of fare-free public transport: a lesson from Frydek-Mistek (Czechia)", *Sustainability* 2020:12, 9111

cars, and some decided not to buy a car as a result. The policy seems to be contagious: cities nearby, including Calais and Valenciennes, are now considering it.[86]

Other zero-fares experiments in progress in Europe include in Montpellier, France (from December 2023), Malta (from October 2022) and Cascais, Portugal. A recent partial experiment, Germany's temporary introduction of a €9/month unlimited rail travel pass in summer 2022, was deemed a success in shifting people away from cars.[87]

The Americas

Cities across the USA are considering zero-fares, primarily as a social justice measure. Kansas City, Missouri (population 500,000), launched a pilot scheme in 2020; it increased public transport use. A proposal now under discussion to restore fares has been vehemently opposed by medical professionals, who point to the scheme's evident health benefits.[88]

In November 2023, a two-year zero-fares pilot scheme was launched by Albuquerque, New Mexico (population 570,000) – the result of a campaign by Together for Brothers, a community organising group led by young men of colour. They argued that free transport would empower the city's young people of colour, 73% of whom have no access to a car. Zero-fares policies are also under discussion in Richmond and Alexandria in Virginia.[89]

There have also been several zero-fare initiatives in Brazil. In Marica, in 2014, the local mayor supported free public transport as a "people's right", in an attempt to break the effective monopoly of private transport operators.[90]

London in the 1980s

London's own experience with a sharp reduction in fares, in the 1980s, was highly successful in increasing the use of public transport and making it more accessible to low-income households. The reduction was implemented by the Greater London Council (GLC), after the Labour party took control in May 1981, on a manifesto that promised "Fares Fair" on buses and the underground, with a substantial fares reduction and a simplified zonal charging system.

The policy was opposed by the Conservative government, and a legal challenge brought by Bromley council was upheld by the law lords in December 1981. The GLC leadership then launched a two-pronged initiative: a public campaign to change the law, and adjusted fiscal proposals to fund fares reform in the light of the law lords' judgment. This went alongside measures to reverse cuts in other public services, funded by an increase in rates.[91]

The outcome, in May 1983, was a substantial reduction of fares, by an average of 32%. By the end of 1983, bus use had increased by 11% and underground use by 20%, and the use of cars for commuting had fallen by one tenth.

This was only one aspect of the political battle between the Conservative government and Labour-controlled councils who sought to protect and extend public services. The GLC, and London's public transport system, were among the victims. In June 1984 legislation was passed allowing the government directly to control the city's public transport. In the years that followed, fares were again increased.[92] The GLC was disbanded in 1986.

Some preliminary conclusions

There is now a substantial body of research on the outcomes of free public transport schemes. Points relevant to this Briefing include:

□ *Temporary and/or partial schemes*, e.g. the UK's free bus travel for older people or Germany's €9/month rail card, have been

[86] "French city of Dunkirk tests out free transport", France 24, 31 August 2019; "Le gratuité des transports pour changes les comportements de mobilité? Premiers retours de l'experience dunkerquoise (2018-19)", *Transports urbains* 2020:1, pages 23-27

[87] "These EU cities have embraced free public transport", TheMayorEU, 14 June 2022

[88] "Fare-free buses might be good for Kansas Citians' health", *Kansas City Beacon*, 15 December 2023; "What can cities learn from Kansas City's free-fare program?", Governing.com, 29 November 2023

[89] "Zero Fares is here to stay", Albuquerque city press release, 9 November 2023; "Transit equity movement wins their biggest zero fare victory", Inequality.org, 5 December 2023; "Albuquerque makes final push for free transit", Governing.com, 24 October 2023

[90] Keblowski, "Why (not) abolish fares?"

[91] John Carvel, *Citizen Ken* (London: Chatto & Windus, 1984); Philip Bagwell, *The Transport Revolution* (Routledge, 1988), pages 408-412

[92] Bagwell, *The Transport Revolution*

successful in their own right. But they can not easily be used to evaluate the pros and cons of free public transport for all, provided as a public service, as part of an integrated policy to shift people away from cars.

□ *Local context counts*. The effects of free public transport may vary from one city to another. Free public transport has not yet been introduced in a city the size of London: to do so would be a valuable policy innovation on a global scale.

□ *To tackle greenhouse gas emissions and air pollution* from transport, the volume of motor traffic must be reduced. Free public transport by itself may not achieve this aim, as shown e.g. in Estonia and the Czech republic.[93] But it can be a powerful complement to road pricing and other measures designed to discourage unnecessary driving. There is some evidence[94] that free public transport could cause a shift from cycling and walking for some journeys, and may have a minor negative impact in terms of reducing emissions and public health outcomes. But these problems are secondary to those caused by car-based urban transport arrangements – and they can be solved, by greater investment in active travel as a complement to free public transport. This can avoid these negative impacts and potentially reduce some demand for public transport.

□ *As a social justice measure*, the overwhelming conclusion of the research is that free public transport has been a huge success, everywhere that it has been introduced.

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The "banshees" street theatre group protesting against the Silvertown Tunnel project, July 2020. Photo by Ben Darlington / SSTC web site

[93] See also: "Free public transport alone won't get people out of cars", *Cities Today*, June 2022, and "The case for making public transit free everywhere", *Wired UK*, 29 July 2022

[94] See e.g. D. Straub, "The effects of fare-free public transport"

For more information: farefreelondon.org

email: info@farefreelondon.org