MOVING FORWARD

IMAGINING A SUSTAINABLE TRANSPORT SYSTEM

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Published: December 2024

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INTRODUCTION

This briefing paper examines transport in the UK from the perspective of universal basic services (UBS), which makes the case for meeting human needs within planetary boundaries. It considers the implications for transforming the transport system to achieve that goal.

Through the UBS lens, transport is addressed as *eco-social policy*, where environmental and social interests are pursued together – not as competing forces but as partners that support and reinforce each other. Eco-social policy learns from social and climate sciences and is informed as much by studies of social change and welfare regimes, as by the work of the Climate Change Committee (CCC) and the Intergovernmental Panel on Climate Change (IPCC). We contend that this is the only way to develop policies that address the multiple and interlocking crises we face today.

This is the third in a series of papers that develop the UBS theme, following *A Fair Start for All*[1] on childcare and early education, and *Meeting Needs within Limits,*[2] which explores the potential role of public services in achieving environmental goals. Building on ideas and evidence from a wide range of experts across these disciplines, we apply the generic features of UBS to the specifics of transport in the UK, to help map out a pathway towards a sustainable system. Our briefing offers synthesis, questions, and suggestions rather than definitive solutions. It is intended as a resource for those already interested in UBS who want to know more about the implications for transport, as well as for transport experts who want to know more about an eco-social, needs-based approach to universal and sufficient services.

We focus chiefly on passenger rather than freight travel and on five transport modes: buses, trains, cars, planes, and active travel (bicycle, foot, wheelchairs, etc.). (Other modes such as trams and e-bikes deserve attention, but are beyond our current scope.)

We start by setting out what we mean by meeting needs within limits and the key features of UBS. We then consider the specific characteristics of transport and how these map onto the goal of a universal and sufficient service. We briefly describe the baseline challenge, which is the state of transport in the UK today. We summarise the main transport-related proposals in the government's year one legislative programme and offer recommendations – first, for transforming the system as a whole and, second, for tackling selected modes of transport. We end with practical examples that show what is already being achieved in the UK and other European countries.

1. MEETING HUMAN NEEDS WITHIN ENVIRONMENTAL LIMITS

Our starting point is that everyone should have access to the core necessities that make life possible and worth living. There's broad, evidence-based agreement about what these are: a home to live in, nourishing food, education, people to care for us when we can't do so ourselves, healthcare when we are ill, clean air and water, domestic energy, fair laws and a secure environment, access to the internet and – crucially for this discussion – access to transport.[3] We call these *life's essentials*: they satisfy the basic human needs of health and autonomy that enable people to participate in society.[4] They are interrelated but they are non-substitutable – you can't compensate for lack of food by providing more education, for example. A healthy planet underpins them all: without it, the goal of meeting human needs is ultimately futile.[5]

As a needs-based approach, universal basic services (UBS) recognises limits, both upper and lower, to what it takes to ensure that life is possible and worth living for everyone. That's because needs are satiable – unlike wants or preferences, which can escalate endlessly. Having more than you need can be redundant or even counter-productive: think of food or security, for example. UBS is thus a *universal* strategy that embodies the principle of *sufficiency*.[6] Enough for all so that everyone can have enough, now and in future. This aligns with the vision of "doughnut economics" providing a "fair and just space for humanity" between a social foundation and an ecological ceiling[7] and the related idea of a "consumption corridor" that allows for sufficiency within limits that exclude deprivation and excess.[8]

2. KEY FEATURES OF UBS

Universal basic services (UBS) anchors policy in people's daily experience. It applies to the whole population on a fair and equal basis. It aims to meet human needs within planetary boundaries and to integrate social and environmental policies so that they work together to support each other.

This approach is beginning to gain ground – finding resonance in key documents that are influencing policy internationally. The International Panel on Climate Change (IPCC) recommends changes that "reinforce sufficiency and emphasis on solidarity, economies built around care, livelihood protection, collective action, and basic service provision, linked to reduced emissions".[9] A 2024 report for the EU Council calls for "universal access to essential services … to meet basic human needs to live and to participate in society".[10] These are described as services of general interest (SGIs). "Accessible, affordable, and quality" SGIs are seen as crucial for building strong, cohesive economies.[11]

UBS recognises that all of life's essentials are equally important and interact with each other as part of a whole system. While different areas of need are bound to be met in different ways, geared to specific characteristics of each sector, key features apply in every case: broadly, this is a collective approach to delivering universally accessible, high-quality, sufficient services.

- ***Collective measures*** that deliver life's essentials. The term UBS is used to convey what we can do together, through our democratic institutions, to enable all of us, no matter what our circumstances, to access life's essentials. None of us – not even the rich – can meet all our needs privately. Where markets fail, we rely on concerted action to meet our needs, primarily public services, investment of public funds, and regulation in the public interest. (Throughout the paper we use "services" and "UBS" as shorthand for this range of measures.)
- ***Universally accessible*** according to need not ability to pay. Services must be both available and genuinely affordable for all who need them. They are (wholly or partly) in-kind benefits that generate a virtual income or social wage for those who use them. This is made possible when some or all of the costs of delivering UBS are met by public funds. Where services are shared by all who need them (rather than acquired through individual purchasing) and managed in the public interest, costs can be kept low through economies of scale, reducing transaction costs, and curbing profit extraction.

- *High-quality services* that are capable of meeting needs. This can best be achieved where power is devolved; where public authorities have sufficient funds to invest in services; where residents are meaningfully engaged in decisions about how their needs are met; where workers have decent pay and working conditions, including skills training and career development; and where there is effective regulation. A regulatory system of social licensing is proposed to ensure that providers in all sectors are bound by a shared set of public interest obligations.
- *Sufficient provision* to meet needs within limits. Services are designed from the outset to cut harmful emissions and safeguard natural resources, so that they can continue meeting the needs of successive generations. This is possible when they are managed primarily to serve the public interest rather than to generate profit.

All this requires public funds. But it is not simply public expenditure: it's a sound investment in the social and material infrastructure on which we all depend. Investment in UBS generates substantial value:

- *For society*: the in-kind benefits derived from services that deliver life's essentials make a significant – and too often overlooked – contribution to living standards. They combat poverty and reduce inequalities. They also help to build and maintain public support for state action because they are not targeted solely at those with the least.
- *For the environment*: shifting provision and consumption of life's essentials from markets to the public realm is increasingly recognised as a crucial lever for achieving climate and environmental goals.[12] Meeting needs helps build public support for climate action, by generating confidence that the government is acting in the public interest.
- *For the economy*: UBS helps to prevent problems such as ill-health, unemployment, homelessness, social conflict and unrealised human potential, which otherwise trigger demand for costly coping measures across the public sector. It helps build a healthy, productive population, which is the foundation of a thriving economy.

3. SPECIFIC CHARACTERISTICS OF TRANSPORT

Transport very obviously interacts with other life's essentials, because it so often enables people to gain access to what they need. Certain factors specific to transport that have to be considered in applying the universal basic services (UBS) approach are summarised as follows:

Why people travel and what's 'essential'

Mostly, people travel for a purpose: to get to work; visit family and friends; shop for provisions; reach schools, healthcare, and other public services; take part in community, cultural, and political activities; get fresh air and exercise; or take a break. They also travel to play, explore, and have fun.

How do these reasons for travel map onto the idea of "life's essentials"? First, there is evidence that lack of access to core necessities can cause various kinds of (often accumulating) harm,[13] including unemployment, poverty, isolation, ill health, distress, and inequality. Travel may therefore be considered essential when it prevents harm by providing access to core necessities.

Secondly, some journeys are considered integral to acceptable living standards. The UK minimum income standard (MIS) aims to provide "a vision of the living standards that we, as a society, agree everyone in the UK should be able to achieve".[14] It identifies a bundle of goods that everyone should be able to afford through wages and/or benefits. Standards are arrived at through qualitative research, involving representative samples of the public in group discussions. The 2024 MIS report includes a second-hand car for households with children, "sufficient resource to travel as far as the next major town or city, to access a range of work opportunities" and "a budget for visiting friends or family further afield and for the one holiday a year agreed for each household type".[15]

Other reasons for travel – to play, explore, have fun – may be deemed inessential, but there is nothing inherently wrong with them. Whether these journeys are sustainable depends largely on distance and mode of travel.

Modes of transport and ecological impact

Different modes of transport have widely varying ecological footprints. Travelling by bus, train, or bicycle will be much less damaging to the natural environment than

travelling by car or plane (even as electric vehicles and greener aviation fuels become more plentiful).

It follows from the logic of UBS that priority be given to modes with the lowest possible ecological footprint. However, while these are not universally accessible, there are bound to be trade-offs between meeting needs and respecting limits. These are influenced by where people live, where they need to go, and what their personal capabilities are.

Location, distance, and capability

People who live in rural areas and outlying suburbs will almost inevitably find it harder to travel by bus and train. Travelling "as far as the next major town or city" or to visit "friends or family further afield" requires a private car or taxi – not just because public transport services are currently patchy and unreliable, but also because even vastly improved buses and trains will never be as frequent and well-connected as they can be in urban areas. Cycling, walking, and wheeling may offer no alternative over long distances or steep hills (let alone in bad weather), even for the super-fit, but particularly for those who are old, frail, or disabled.

4. IMAGINING A SUFFICIENT TRANSPORT SYSTEM

Figure 1 explores the idea of a "consumption corridor" for transport, where there is room for sufficiency between an upper ceiling, above which there is excess and a lower floor, below which there is deprivation.[16] It is not supposed to be definitive, but to encourage further discussion about how to develop a transport system capable of meeting human needs within planetary boundaries.

Figure 1: Consumption corridor for transport

<table>
<tr><th colspan="2"></th><th>Active travel</th><th>Buses</th><th>Trains</th><th>Cars</th><th>Flights</th></tr>
<tr><td colspan="2">EXCESS: BREACHING ENVIRONMENTAL LIMITS</td><td></td><td></td><td></td><td>Non-essential journeys, inappropriate use of SUVs and other energy-intensive models.</td><td>Multiple and non-essential journeys, short-haul flights, private jets</td></tr>
<tr><td colspan="7">CEILING</td></tr>
<tr><td rowspan="2">SUFFICIENCY</td><td>COMFORTABLE</td><td rowspan="2">Safe routes, signposting, support, etc.</td><td>Some non-essential and international journeys powered by renewables</td><td>Some non-essential and international journeys powered by renewables</td><td>Some non-essential journeys in decarbonised vehicles</td><td rowspan="2">Essential journeys only</td></tr>
<tr><td>ESSENTIAL</td><td>Essential domestic journeys, where possible in decarbonised vehicles</td><td>Essential domestic journeys, where possible on decarbonised routes</td><td>Essential domestic journeys, where possible in decarbonised vehicles</td></tr>
<tr><td colspan="7">FLOOR</td></tr>
<tr><td colspan="2">DEPRIVATION</td><td colspan="5">Transport poverty, social isolation, little or no access to other essential services, immobility, lost opportunities, etc.</td></tr>
</table>

Source: Authors' own

Here we have assumed that "essential" is defined by avoidance of harm and by existing definitions of acceptable living standards. The sufficiency space between the ceiling and the floor allows for what is "comfortable" but not "excessive", alongside essential journeys. It recognises that decarbonisation is an urgent priority, but that some essential journeys will use vehicles fuelled by non-renewables, while that process is underway.

Carving out a corridor for sustainable transport is about making life worth living for everyone, now and in future, and about conjuring a vision of "enough for all" that can

win support from the public. It's much more about giving than taking away. The exercise does, however, make clear that meeting needs within planetary boundaries goes beyond the goal of expanding and improving transport services; it involves cutting down and cutting out ecologically unsustainable forms of transport that are not necessary for meeting needs. There's no hope of reaching net zero unless we do this.

Avoid, shift, improve

Avoid, shift, improve (ASI) is a well-established strategy for urban transport designed to "reduce the environmental impact of transport and thereby improve the quality of life in cities".[17] It introduces a clear sequence of priorities: avoid unnecessary journeys; where that's not possible, shift to active travel and public transport; and where that's not possible, improve other modes for example by electrifying cars. While we agree with these objectives, for the purpose of this briefing – meeting transport needs within environmental limits – we envisage an adapted ASI strategy that aims to:

- *Avoid deprivation* by promoting universal access to transport for essential purposes.
- *Shift* the population to sustainable modes of transport and shorter journeys, through collective measures that improve the system.
- *Improve* the system by:
    - extending equitable access to affordable transport and active travel networks.
    - decarbonising manufacture and operation of all transport modes.
    - maximising sustainable resource use across the system.
- *Avoid excess* by eliminating high-carbon transport for non-essential purposes.

As the ASI approach recognises, people will not shift to more sustainable modes of transport unless viable alternatives are available. What's required, then, is a sequence of changes, all of which take time and require concerted public intervention, including long-term planning, service delivery, investment, and regulation – as well as sustained public engagement and awareness-raising.

5. THE BASELINE CHALLENGE: UK TRANSPORT TODAY

Transport in the UK today lets too many of us down – especially if we don't earn much and live outside London. Over the last century, opportunities have multiplied to travel farther and faster, although this has not always saved people time or made them happier.[18] Successive UK governments have favoured private cars and undermined public transport through inadequate investment, deregulation, and privatisation. Recent NEF analysis finds that new housing developments in England are increasingly car-dependent and too often lack decent public transport links.[19] Alongside locked-in car dependence that is hard to shift, the UK experiences widespread transport poverty and profoundly unequal access. The system also takes a massive toll on the natural environment.

A distorted system

There are 12 cars for every 10 households in England and Wales.[20] Around 3 in 4 people who live outside London travel to work by car.[21] Profit extraction and public spending cuts have reduced investment in public transport, coinciding with rising bus and train fares.[22,23] The average price of a UK train ticket has surged to five times that of the French equivalent.[24] Four thousand bus services have been closed,[25] while in 80 local authorities, bus service levels have fallen by more than 60% since 2008.[26] Throughout the 2010s, funding per person on transport infrastructure was 60% lower in the north of England than in London.[27]

A huge ecological footprint

Transport has higher greenhouse gas (GHG) emissions than any other sector in the UK: it is responsible for 26% of the total, with more than half of all domestic transport emissions coming from cars and taxis.[28] Aviation is extremely carbon intensive, domestically and internationally.[29] Travel by the highest 0.1% of earners emits at least 12 times more than those on the lowest incomes.[30] Roads and road transport that proliferate in car-dependent places harm biodiversity by fragmenting habitats and producing various forms of pollution.[31,32,33]

Driving poverty and inequality

Poor access to transport reinforces inequality and social exclusion.[34] Five million people (8% of the UK population) fall into poverty because of transport costs alone, while

another 8 million are already below the poverty line and pushed further below it by transport costs.[35] In the lowest income quintile, four in ten households do not own a car, which is more than twice the average of the rest of the population.[36] There are severe regional inequalities, too: 12.5% of the population in the north-east and 11.9% in the West Midlands suffer from transport poverty, compared with 3.5% in London.[37] More than a million people in the north-east and south-west of England live in "transport deserts"[38] that restrict residents' opportunities to travel for essential purposes.[39] People can access up to 7 times more jobs by public transport in southern England than in the north.[40]

Women are more dependent on buses and make more care-related journeys, which are inadequately served compared with peak-time commutes.[41] They are also less likely to be the main driver of the household.[42] People from ethnic minority groups are less likely to travel by car,[43] as are those with disabilities, who have very poor access to public transport.[a,44]

A heavy toll on health and prosperity

Community severance occurs when transport infrastructure separates residents from everyday necessities, such as healthcare and other public services, jobs, shops, and family and friends. This is common in rural and suburban areas where public transport links are poor or non-existent and is strongly associated with ill health.[45,46] Car dependency has led to increasingly choked-up town centres and grievous levels of air pollution, which is the largest environmental risk to public health in the UK.[47] Deprived areas, ethnic minority groups, and children are most exposed.[48,49,50] Pollution from cars and vans costs the NHS around £6bn per year.[51]

Local businesses suffer when they can't get the staff or when customers can't reach them due to poor transport options. The combined dynamics can have devastating effects on local economies by upsetting revenue streams, squeezing tax receipts, and limiting investment.[52]

[a] For example, only one in five railway station has full step-free access.

6. WHAT IS THE GOVERNMENT PROPOSING?

For its first year, the new Labour government has introduced the following measures to improve buses and trains:

- *The Buses Bill*, presented to Parliament in September 2024,[53] gives more power to local transport authorities to run their own franchised bus systems and removes the ban on municipally owned bus services. The government acknowledges that buses are the most common form of transport in the UK and disproportionately used by those on low incomes, and that good local bus services are "an essential part of prosperous and sustainable communities".[54] The Bill aims to empower local communities to build the bus services they need, to allow more flexible funding arrangements so that authorities can plan ahead, and to ensure standards are raised across the country.
- *The Passenger Railway Services (Public Ownership) Bill*, enacted in December 2024[55] makes public ownership of rail services the default position rather than a last resort. It enables services to be transferred to a public-sector operator as existing contracts expire. The government says this "will end years of fragmentation and waste, and deliver more effectively for the customer", serving the "interests of all users and the taxpayer, rather than focusing on maximising financial returns to private-sector operators".[56]
- *A Shadow Great British Railways*, announced in September 2024,[57] anticipates primary legislation to bring management of the railway network and delivery of passenger services into a single public body that aims to make train travel "reliable, affordable, efficient, quality, accessible and safe" through measures such as simplified ticketing and a new Passenger Standards Authority. The government wants to shift incentives, improve efficiency, bring more passengers back to the railway, and increase passenger revenues, to "grow the economy and deliver best value for money for the taxpayer".[58]
- *The High Speed Rail (Crewe to Manchester) Bill*, originally introduced as part of the now defunct HS2 project, is repurposed to provide powers to improve rail infrastructure and east-west connections in the north of England. Set before Parliament in July 2024,[59] it reflects the government's acknowledgement that the northern rail network falls far short of national standards and that rail is the "most effective, environmentally friendly way to improve transport capacity between city centres, and journey times between them".[60]

If these Bills are all passed and implemented, they will considerably improve the transport system. Moves towards more local control of bus services and stemming the extractive tendencies of private rail companies are especially welcome. The swift introduction of four transport Bills in the first year of government is impressive, and further measures will hopefully follow. For example, the government has announced an *Integrated National Transport Strategy* to link different transport networks and empower local leaders.[61] Also, the Transport Secretary disclosed an intention to invest "unprecedented levels of funding" in cycling and walking as a critical part of plans to improve health and inequality,[62] though the additional £100m announced in the 2024 Autumn Budget is unlikely to go far enough to encourage a significant shift towards these green alternatives.[63] NEF analysis shows that upgrading active travel infrastructure in English regions outside London will require an investment of £17.4bn between 2025 and 2034.[64]

Other parts of the government's programme will also make welcome contributions. Most notable for this discussion are the *Great British Energy Bill*, the *English Devolution Bill* and the *Employment Rights Bill*. They promise, among much else, to achieve clean energy by 2030, shift more power from Whitehall to local authorities, improve conditions for all workers, and strengthen trade unions. Labour has committed to reinstating the phase-out date of 2030 for new cars that rely solely on fossil fuels.[65] All these measures could help realise the vision for transport set out herein – although it is too early to assess their eventual impact.

Inevitably there are critics. On rail transport, for example, some fear that failure to increase public control over rolling stock companies will leave too much power and influence with financialised capital, undermining the capacity of Great British Rail to serve the public interest. There are enduring worries that private capital due to be crowded in by the proposed National Wealth Fund will distort investment priorities in favour of corporate interests.

In the 2024 Autumn Budget, Chancellor Rachel Reeves announced a change to the fiscal rules that would enable higher levels of borrowing to invest in vital infrastructure.[66] However, recent NEF modelling shows that an additional £15.6bn of public investment in transport services and infrastructure outside of London is required annually to meet needs and climate targets,[67] suggesting that the Department for Transport's settlement doesn't go far enough.[68] Meanwhile, fuel duty was frozen, while the £2 bus fare cap was set to increase by 50% to £3[69] and train fares by 4.9% (above inflation).[70] These decisions not only risk exacerbating regional inequalities, since the bus ticket hike will not apply in

London and other devolved urban centres such as Manchester, but also do nothing to encourage the uptake of sustainable alternatives to private cars.

A Bill to support UK production of sustainable aviation fuel (SAF), also announced in the King's Speech, has been claimed as "an important part of the strategy to decarbonise air travel".[71] It reflects the ambitions of ReFuelEU, a new law under the European Green Deal package, which mandates that 70% of aviation fuel be sourced from fuel substitutes by 2050, with interim goals of 6% by 2030 and 20% by 2035. However, as NEF has pointed out elsewhere, "the aviation sector has missed all but one of 50 climate targets set in the 21st century" and there are serious doubts about "the net environmental impact of even the most promising variants of so-called SAF, as well as the trade-offs these fuels create (eg the loss of land and energy available for other uses such as food, heating, and local transport)".[72]

7. RECOMMENDATIONS

7.1 TRANSFORMING THE SYSTEM

To fulfil a universal basic services (UBS) vision for transport, the government will need to build on the best of its year one legislative programme and lock in a direction of travel that brings substantial benefits for social wellbeing, environmental sustainability, and economic prosperity over the coming decade.

This calls for a long-term strategy for sustainable transport, which makes clear to the electorate what the government intends to do over the next two parliaments. Labour has announced the launch of an *Integrated National Transport Strategy*, which is still being developed.[73] The aim should be an interconnected, universally accessible, fully decarbonised, multi-modal system. It can't be achieved all at once, but each change can make a positive contribution if designed to maximise benefits for both society and the environment. Drawing up the strategy requires fresh – and urgent – negotiations between government departments and between Whitehall and local and regional authorities, as well as an intensive campaign of public engagement and awareness raising. We offer the following recommendations to help inform and shape this process.[b]

Change the rules

While positive changes were made in the recent Autumn Budget to redefine public debt and enable more borrowing for investment in key capital infrastructure, Labour's commitment to its fiscal rules and growth of the economy prevents it from investing sufficiently in essential services and social infrastructure. However hard the government tries, growth will come slowly and will not deliver fast enough to rescue ailing public services, let alone to meet everyone's basic needs across the country. As leading economists and non-governmental organisations (NGOs) point out, the economy depends on people and will not flourish unless they do.[74] It is vital, then, to prioritise investment in the social infrastructure and foundational economy that enable people to live good lives and fulfil their potential. Growth may follow – but will not lead – the development of healthy human functioning, which is the bedrock of a healthy economy.

[b] Throughout this section, recommendations are based on our own analysis and – where referenced – on proposals from individuals and organisations with expertise in specific areas of transport policy.

Invest early

Success depends on early investment in essential services to prevent harm and provide a vital foundation for a flourishing economy. For example, the government's commitment to "empower local leaders to design and build their own, region-specific networks" depends on ensuring that local authorities have adequate funds to make these changes.[75] There is a growing consensus among progressive policymakers and economists that large-scale investment is essential and urgent, and that there are multiple sources for funding for this agenda, including borrowing and tax reform,[76] or reallocation of existing transport budgets.[77,78] Investment would more than pay for itself in benefits,[79] as examples herein indicate (Section 7.2). As already noted, recent NEF modelling shows that to meet needs and climate targets, an additional £15.6bn of public investment is required in transport services and infrastructure outside London.[80]

Join the dots

Transport is a system made up of different services and travel modes that interact and influence each other. To get the full benefit of better buses and nationalised trains, these services must not only be accessible and affordable for everyone, but also connect with each other as seamlessly as possible. Integrated ticketing across transport modes has been successfully introduced in Austria and Germany as well as in Greater London (Examples 1 and 2). They must also link up with safe routes for walking, wheeling, and cycling. All this must go hand-in-hand with measures to speed up the electrification of road vehicles, drastically reduce dependence on private cars and eliminate excessive air travel. Transport planning must focus on enabling people to connect with the full range of everyday essentials, starting with housing, to ensure access to schools, employment, healthcare, shops, and other public services.[81] The aim is to get all parts of the system working together so that everyone has access to transport that is sufficient to meet their needs within the limits of the natural environment.

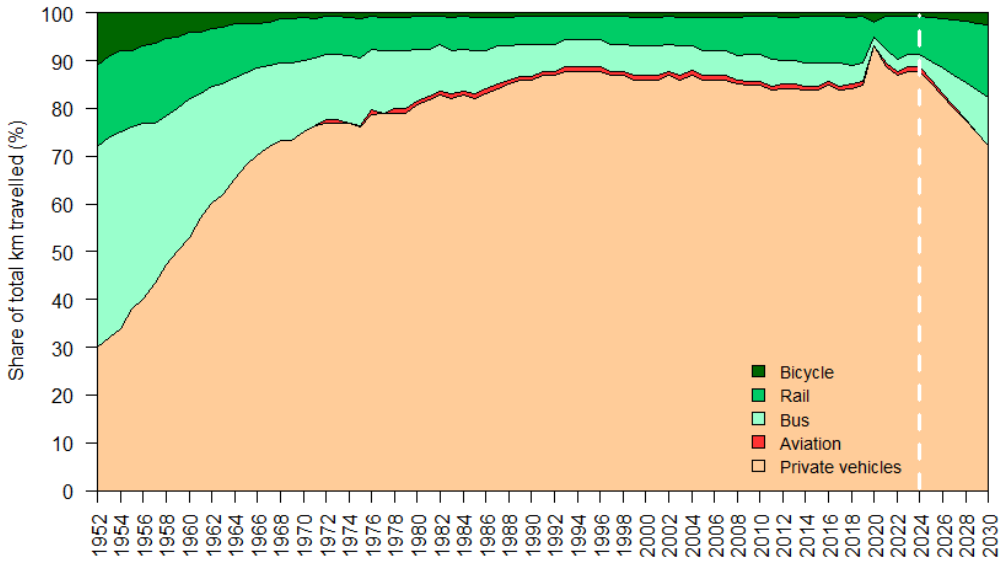
Decarbonise urgently

Beyond supporting domestic production of sustainable aviation fuel (SAF), there is not yet any mention of what must be done across the transport system to cut greenhouse gas (GHG) emissions and safeguard natural resources. Plans for greening the economy are largely confined to energy policy. Yet domestic transport is the leading source of emissions in the UK, prioritised in each of the six Carbon Budgets set by the Climate Change Committee (CCC).[82] There is ample evidence that shifting from cars to other modes of transport would greatly reduce emissions.[83] A top priority must be to improve

and extend public transport services to enable people to make that shift. Excessive transport (inessential carbon-intensive journeys) will have to be restricted and eventually eliminated. Examples are likely to include inappropriate use of SUVs, short-haul domestic flights that could be taken by train, business flights for meetings that could be conducted remotely, and frequent holiday flights. More broadly, shifting consumption from individual market-based activities to collectively provided services is a crucial lever for achieving climate and environmental goals.[84] Sustainable practice must be built into transport planning and delivery with strong, consistent enforcement. Making this an explicit priority for transport policy is vital to avoid climate breakdown.

Figure 2 projects how travel patterns must change dramatically within the current decade to meet carbon targets and avert climate catastrophe. It also suggests that change is possible within a limited time frame: note the shift to private car use through the 1950s and 1960s and the sudden increase in cycling in 2020 during Covid-19.

Figure 2: Shifting domestic travel patterns in line with climate targets



Source: Authors' own using data from the Department for Transport.[85]

Redress the balance

Over decades, a bundle of largely unregulated transport markets has deepened poverty and widened inequalities. People on low incomes in rural areas, those living outside London and the south-east of England, women, ethnic minorities, and people with disabilities are most likely to suffer from unmet transport needs. Transport emissions are unequally shared among the population too, with the wealthiest responsible for the lion's share: the richest 0.1% emit 12 times more than average while half of all transport

emissions come from the top income quintile.[86] The plan to improve infrastructure and east-west connections in the north of England is only the beginning. Priority must be given to achieving more equal access across the whole transport system, redistributing resources so that affordable services are universally available where they are needed.

Engage the public

It is vital to meaningfully engage the public in decisions about their transport needs and how to meet them. Bills that support locally controlled bus networks and devolve power from Whitehall go some way towards meeting this goal. But creating a genuinely sustainable transport system means raising awareness and building consensus about what is essential, sufficient, and excessive, and how a transformed system can meet people's needs across the country. As noted, the aim is to win support for measures that ensure universal access to essential services and curb or eliminate the kinds of transport that are excessive, in terms of both purpose (what the journey is for) and the ecological footprint (what mode of transport fulfils the purpose). Deliberative methods such as citizens' forums, juries, and assemblies, should be used at national, regional, and local levels to identify ways of meeting needs locally; this will help get the message across and build support across the population.[c] Without meaningful public engagement at national and local levels, there is a real risk of political resistance, fuelled by powerful lobbies within the corporate sector.

Regulate in the public interest

Despite moves to bring more buses and trains into public ownership, the UK transport system will continue to be a mixed economy, including private sector manufacturers and service providers. Regulation in the public interest is important across the whole transport system so that all organisations that receive public funds – directly or through subsidised fares – are bound by a shared set of obligations to meet needs within limits. This system of "social licensing"[87] is intended to ensure access according to need, sustainable practice, sufficient service quality, and fair pay and conditions for service workers. Applied across all essential services, it offers an alternative to wholesale public ownership, encourages innovation by local authorities, and curbs anti-social and extractive tendencies of financialised capital.

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[c] The North East Public Transport Users' Group is one example: a public-led campaign driving changes to local transport. https://neptug.org.uk/local-groups/north-tyneside-ptug/

7.2 RETURNS ON INVESTMENT IN SUSTAINABLE TRANSPORT

Far from being a drain on public finance, investing in low-carbon transport will yield handsome dividends by enabling people to stay well and fulfil their potential, and by avoiding harmful downstream costs arising from failure to invest:

- The Office for Budget Responsibility points out that "delaying [climate] action and then introducing it abruptly carries a greater fiscal cost than early action".[88] Their latest modelling shows that damage costs to the economy would be much greater under a 3°C warming scenario than if warming is kept to below 2°C.[89]
- Shifting to more public transport and active travel could save the NHS £2.5bn annually.[90]
- If everyone switched one journey from car to bus per month by 2030 and then switched to two by 2050, this would produce savings of £14.9bn in cumulative health benefits over this period, through fewer road accidents and casualties, lifestyle improvements and reduced noise pollution.[91]
- A study in London found that neighbourhoods designed for access to public transport and active travel experienced greater levels of economic activity than those without improvements, with walkers, cyclists, and public transport users spending around 40% more with local businesses than car drivers.[92] In 2021 alone, walking, wheeling, and cycling in the UK generated £36.5bn for the economy.[93]
- Returns on investment in cycling infrastructure are strong, with Sustrans finding that every £1 spent can generate returns of up to £19 in best-case scenarios.[94]
- Returns on investment of over £5 are expected for every £1 spent on improving bus networks around the country.[95]
- Economic benefits worth £2.50 were generated from each £1 spent on railway works in 2019, before Covid-19 service disruptions.[96]

7.3 TACKLING SELECTED MODES OF TRANSPORT

This section draws together insights and recommendations from a range of experts as a resource for policy development. We begin with cars, which are notably absent from the government's year one legislative programme, then turn to buses and trains, which are its main focus. We touch briefly on aviation and finish with a summary of proposals for supporting active travel. We offer examples in the following section, referenced here, to illustrate what has already been achieved in some areas.

Cars

Cars are the most widely used form of transport in Britain and are highly charged politically. Being on the side of the motorist has long been considered an electoral advantage by leaders of mainstream parties, overriding other issues such as social justice and environmental sustainability.

Supporting vehicle electrification can only ever be part of the solution.[97] The manufacture of electric vehicles (EVs) makes intensive use of energy as well as raw materials, including rare earth minerals. Delivery and usage at the scale required to replace every car on the road with an EV would raise serious concerns about sustainable, ethical resource extraction[98] and involve levels of energy generation that are incompatible with climate targets.[99,100,101] Moreover, the shift to EVs is likely to widen inequalities: eight in ten people in the UK currently find purchasing an electric car too expensive.[102]

A systemic approach is needed to provide as many people as possible with viable alternatives to private car use, mainly by improving public transport services (covered in the following sections). Here, proposals for cars focus on reducing carbon emissions and resource extraction, and on making car travel accessible to all who need it where alternatives are not available.

- Continue the shift to car electrification. Ban sales of new cars dependent solely on fossil fuels by 2030 as pledged and of hybrids by 2035 or sooner. Commit to scrappage schemes that adequately compensate owners who want to replace polluting vehicles with electric alternatives.
- Encourage more people to buy EVs sooner by making an early announcement of the planned future date for abolishing tax breaks for EV owners (so that people will buy before they lose the current tax advantage), as suggested by the Resolution Foundation.[103] And distribute the cost of EV ownership more fairly by bringing kerbside charging in line with domestic charging.

- Increase taxes on cars with higher emissions to discourage purchase. Evidence from several European countries shows how this helps shift customer choices (private and corporate) towards models with a smaller ecological footprint.[104] Regulate credit arrangements for new-car purchases to further encourage this shift.
- Set a clear target for cutting car mileage overall, with priority given to essential journeys where there is no viable alternative. A reduction of at least 20% is necessary by 2030 to meet the CCC's recommended decarbonisation pathway according to the Green Alliance,[105] Transport for Quality of Life, and Trades Union Congress (Figure 2).[106] The Scottish government has committed to a 20% reduction in kilometres travelled by car by 2030[107] and the Welsh government has committed to a 10% cut.[108] The Mayor of London is aiming for a 27% reduction in the capital.[109] There is not yet a UK-wide or English target.
- Support expansion of measures such as road pricing, low emission zones, congestion charges, and road speed reductions to help reduce car use and mileage. Change physical infrastructure to deter car use, for example by creating low-traffic neighbourhoods, expanding cycle lanes, and reducing parking provision. In an official study, low-traffic neighbourhoods were recently found to attract local support in aggregate, with twice as many residents surveyed in favour than in opposition.[110] Positive effects were also recorded, including some evidence of schemes encouraging the uptake of walking and cycling, and reduced traffic volumes in their zones (without causing spillover congestion in nearby streets).
- Increase fuel duty while EVs are still being phased in, using revenues to fund socially and ecologically oriented transport alternatives. Freezing or cutting fuel duty is not – as often claimed – an effective way of lowering the cost of driving, according to the Social Market Foundation, which points out that this is also highly expensive for the government, having cost more than £100bn since 2011.[111]
- Support and expand car clubs and other sharing arrangements. This can help to reduce overall mileage and emissions[112] while making car use more widely accessible and affordable where there are no viable alternatives. The Green Alliance calls for a 5% increase in car club usage in urban areas to reduce car mileage in line with climate goals.[113] The Department for Transport's car club toolkit provides local authorities with guidance for employing schemes of this kind.[114]

- Pilot a social leasing scheme for electric vehicles, which are much cheaper to run than petrol or diesel cars, but currently more expensive to buy. The French government introduced a scheme in December 2023 that provided 25,000 electric cars to eligible applicants from £85 a month.[115] It proved highly popular, with demand doubly outstripping vehicle availability within six weeks. A similar scheme in the UK could give priority to people on low incomes without suitable access to public transport.
- Ensure that all these measures are designed to maximise fair access for essential journeys and to synergise local and national schemes. This underlines the importance of devolved powers that enable local policymakers and stakeholders to assess when and how to use them.

Buses

Buses offer the best opportunity for transforming public transport at speed and scale across the country. Changes that are required include more routes and more frequent and reliable services that respond to the range of reasons people need to travel; fares that are genuinely affordable for everyone; good connections between different bus routes as well as between buses and other transport modes, with compatible ticketing arrangements; and fully electrified bus fleets.

Transport for London (TfL) is a flagship model for the UK, with a range of companies serving the entire Greater London region under a unified ticketing system (Example 1 in the following section on examples of good practice). It is also inspiring to see that many places in Europe have greatly reduced travel costs, or made local travel entirely free (Example 3). Transforming bus services so that they meet needs within limits will mean building on the government's proposals to make changes in the following areas:

- To develop effective local transport systems, local and regional authorities must have access to sufficient funding. Enabling them to borrow more easily for this purpose and raise more local taxes would help shift power to localities, but there is still a major role for central government – both to ensure fair distribution of funds between localities and to make the necessary capital investment to expand bus networks and electrify fleets.
- Municipal ownership of buses enables local governments to maximise control over services and fully harness the bus networks' value for public utility. Revenues can then be used to benefit local communities instead of being extracted as profit for companies based elsewhere. Some bus operators are already municipally owned, such as in Nottingham (Example 4).

- A viable alternative to direct ownership is a system where private-sector bus companies operate under contract with the local authority. Rather than a partnership arrangement, the contract would bind the companies to comply with specific conditions that serve the public interest, enabling the authority to take control of many aspects of service delivery, including routes, timetables, branding and fares, as well as pay and conditions for bus service workers. Greater Manchester's Bee Network is an exemplary model (Example 5).
- Engaging residents in decisions about the design and delivery of bus services will help to ensure that people get the buses they need – to reach jobs, schools, health and care services, shops, parks, and other local amenities. When buses are controlled by democratically elected authorities, representatives can be held to account for responding to local issues.
- The technology required to manufacture new electric buses and retrofit existing models is readily available [116]; compared to diesel models they cut emissions by around 70%.[117] Yet at the current pace of deployment, the whole of the UK's bus fleet won't operate at net zero until 2060.[118] Projected costs for expanding networks of zero emission, electric buses across the country range from an additional £9bn by 2030 to decarbonise fleets, expand networks nationally, and match London's provision per head in other metropolitan areas,[119] to an additional £7.5bn a year until 2030 plus a capital expenditure of £25bn by 2035 to improve connectivity extensively at net zero.[120] Combined benefits from stimulating industry, generating employment, improving health and other multiplier effects would greatly outweigh investment costs.[121]

Trains

Trains will never be as flexible or accessible as buses, but if they are managed in the public interest they can play a major role in delivering affordable, dependable, fast, frequent, sustainable transport. They offer a viable alternative to short-haul flights.[122] Until now, many people have avoided trains because fares are prohibitively expensive, services are unreliable, and routes are too often inadequate or poorly connected. The government proposes to bring track and trains together under a single public authority and pledges to put passengers at the heart of planning and delivery. The benefits of public control over rail services are evident in some European countries (Example 6). The government is committed to making train travel "reliable, affordable, efficient, quality, accessible, and safe".[123] Here are some examples of measures that could help to fulfil that commitment.

- Trains, like buses, should be treated as a public good, not a commodity, with services designed to meet the needs of as many people as possible, rather than prioritising higher-income commuters.
- Recognising the key role that trains can play in meeting needs within limits and supporting a thriving economy, there should be adequate levels of public investment to make services genuinely accessible and affordable wherever possible. This involves improving and extending routes and connections, with coordinated timetables and ticketing (Example 2).
- Priority must be given to parts of the country where connections are especially poor, helping to bolster local economies in disadvantaged areas.
- To help achieve these objectives, there's a case for reopening abandoned railway lines, because it is a great deal cheaper than building new lines and a good way to connect towns and villages that have been cut off from train travel for decades. It has been argued that a specific programme of reopenings would "bring half a million people within walking distance of a train station and allow an additional 20 million passengers journeys a year on the network".[124]

Flights

Aviation is the most environmentally damaging way to travel. Train travel is seven times more eco-friendly.[125] The Resolution Foundation estimates that, by 2040, annual aviation emissions from the top quintile of the income distribution will exceed the poorest quintile's road transport, electricity, building, and aviation emissions combined.[126] It remains to be seen whether or how far the government's proposal to support UK-based production of SAF will help to decarbonise the sector. It is beyond the scope of this briefing to deal with aviation in detail, but since it is a significant component of the UK transport system, the following proposals are relevant to the transformation we envisage:

- Limit domestic flights. In France, domestic flights equivalent to a 2.5-hour train journey or less are prohibited. For the UK, the Intergenerational Foundation recommends a ban on domestic flights that could be travelled by rail in 4.5 hours or less, estimating that this would result in a 53% reduction in GHG emissions from domestic air travel.[127] On average, affected journeys would only be around 15 minutes longer by rail[128] – but of course, this depends on an affordable, reliable railway system.
- End tax exemptions and subsidies to domestic aviation companies that contribute to artificially cheap plane tickets and help incentivise air travel over rail.

- Introduce a frequent flyer levy. A high proportion of air travel is carried out by a small number of people, tending to be the wealthiest in society.[129] To disincentivise regular flying, a levy could work by charging passengers for every additional flight at an increasing rate following their first tax-free return trip per year.
- We welcome the higher tax imposed on private jets (increasing Air Passenger Duty rates by 50%) in the recent Autumn Budget.[130] These are around nine times more polluting than commercial flights, yet up until now passengers have been charged the same rate of Air Passenger Duty as first-class passengers on commercial flights. The Campaign for Better Transport calls for a larger tax, set at ten times the current higher rate for domestic flights, with the potential to raise £1.4bn annually.[131] On top of this, adding VAT to the price of every private jet journey could raise between £79m and £623m annually.[132]
- Pause airport expansion until a comprehensive review of the UK's air transport sector has been conducted to assess the full social, economic, and climate-related costs and benefits of developing the aviation industry.[133]

Active travel

Active travel, including walking, wheeling, and cycling, is the most environmentally friendly way to get around. When accounting for life cycle emissions, including vehicle production, fuel, and disposal, cycling is around ten times greener than driving an electric car.[134] Higher levels of active travel are also associated with improved health[135] and increased local economic activity.[136] There is much potential to extend and improve active travel infrastructure around the UK and get more people to walk, wheel, and cycle. This would involve such measures as redesigning neighbourhoods to minimise use by motorised vehicles and make them more obviously safe and attractive for pedestrians and cyclists, and user-friendly for those with buggies and wheelchairs. The benefits have already been demonstrated in some localities (Example 7). The surge in active travel during the Covid-19 pandemic suggests that a great deal can be achieved in a short period. Vocal government support over the last two decades has not been matched by sufficient investment and over that period there has been no significant improvement in national rates of active travel.[137] A change of direction was signalled in August 2024, when the Transport Secretary announced plans to invest "unprecedented levels of funding" in active travel, including upgrading cycle routes and improving road safety.[138] However, the £100m committed to active travel in the Autumn Budget is unlikely to be enough for local authorities across the country to encourage significant

uptake of walking, wheeling, or cycling.[139] Labour has also supported enabling local authorities to decide – in consultation with residents – where to introduce low traffic neighbourhoods (LTNs).[140]

The following changes have been proposed by organisations with expertise in this area: they may help to shape government policy over the coming years:

- Increase investment in active travel infrastructure, education, and promotion. The Institute for Public Policy Research (IPPR) recommends a 10-year investment guarantee for active travel from 2025 to 2035.[141] Funding would be allocated within long-term funding settlements to local and regional authorities. The level of expenditure from the Scottish government on active travel is exemplary – reaching nearly £60 per head (around 10% of the total transport budget), compared with £10 per head in England outside London and £24 in the Capital (together amounting to just 2% of England's total transport budget).[142]
- To level up support for active travel beyond London, increase expenditure outside the capital to £35 per head per year on infrastructure, plus an additional £15 per head on revenue spending, amounting to over £2bn a year.[143] This would cover costs such as public engagement, behaviour change schemes, bike storage, and a subsidy scheme for bike access.
- For rural areas, empower local and regional authorities to develop targeted, place-based interventions suited to specific localities.[144] Support incentive schemes that make e-bikes more accessible and affordable, especially where people need to travel longer distances over hilly terrain.[145] Where local planners identify the need, invest in segregated, long-distance cycle lanes.
- Encourage more inclusive and equitable active travel. Males made almost three times as many cycle trips as females across all ages in England through 2022.[146] Factors such as ethnicity, socioeconomic status, and ability also influence cycling uptake.[147] This calls for meaningful engagement with as wide a range of people as possible in locally based decisions about what they need – and how their needs can best be met.
- Ensure equitable distribution of funds to support safe and accessible active travel infrastructure in all localities across the country, especially for those on low incomes and those who currently find active travel difficult.

8. EXAMPLES OF GOOD PRACTICE

This selection of case studies shows how transport authorities in the UK and several European countries have pioneered ways of making transport fairer and greener. There are other inspiring innovations, too plentiful to be included here.

EXAMPLE 1: Transport for London

London's regulated authority, TfL, is an exemplary integrated system that illustrates how licensing agreements can be managed for the public good. TfL oversees most of the transport network in the capital: buses, light rail, the underground, overground, principal road routes, and cycling infrastructure. Fully-owned public subsidiary companies, private sector franchises, and independent licensees all operate its many services. It provides coordinated timetables, with a unitary payment system via ticketing, Oyster cards, or contactless, underpinning a simplified zonal fare structure. Free passes are available for children under 12, disabled passengers, and residents over 60, while there are discounts for students, claimants, and others. London has the lowest modal share for private transport of anywhere in the UK.[148] It has also been able to pioneer the electrification of green bus fleets, with the largest zero emissions bus fleet in western Europe and is on track for a fully zero-emission fleet by 2034. From 2016 to 2019, London's air pollution improved at five times the rate of the national average, despite progress stalling due to the pandemic.[149] TfL has multiple sources of revenue, including fares and other charges. In 2022, it secured a funding settlement worth £3.6bn until 2024.[150] As this suggests, quality, integrated transport is not possible without significant financial stimulus and support from the central government. Although other cities would struggle to replicate all of TfL's achievements, because of its unique history and circumstances; it nevertheless offers a wealth of ideas and evidence that can be adapted for other locations.

EXAMPLE 2: Integrated 'climate tickets' in Austria and Germany

Since 2021, the Klimaticket has offered seamless travel across all modes of public transport in Austria "to galvanize the nation's fight against climate change". Priced at €21 a week, with discounts for younger, older, and disabled passengers, it has proved highly popular and inspired similar moves in other EU countries. Germany's Deutschland Ticket was introduced in 2023, priced at €49 a month. It excludes inter-city trains, yet attracted 11 million subscribers within 3 months and led to a 28% increase in

passengers on regional trains in the first year. Both have been described as game-changers enabling more and more people to use "environmentally friendly public transport". France, Portugal, and Hungary have followed suit with more limited schemes.[151]

EXAMPLE 3: Free public transport in European cities

The provision of free public transport in several European cities fits with the notion of mobility, motorised transport in particular, as one of life's essentials. In France, 46 towns and cities offer at least some transport services free of charge.[152] At the end of 2023, Montpellier launched a scheme providing residents with access to its bus and tram networks at no cost.[153] Other examples of cities in Europe that provide universally accessible transport include Luxembourg City[154] and Estonia's capital, Tallinn.[155] One study found that the absence of fares in Tallinn made it easier for carers to coordinate care tasks and achieve greater independence from car ownership.[156] While some authorities find it difficult to introduce free travel passes because they depend on revenue from fares, others have found this can be partly offset by eliminating the costs of ticketing.[157]

EXAMPLE 4: Nottingham City Transport

NCT is one of nine bus operators already municipally owned when Labour entered government. The council has resisted privatisation on several occasions, maintaining its majority stake in the service. As a result, NCT has been governed in the interest of residents, workers, and the environment. Longer-term planning is made possible under council ownership, facilitating the provision of less popular and more extensive routes that are unlikely to operate in similarly sized cities where buses are privately owned. By maintaining strong relations with its unionised workforce and upholding decent working conditions, NCT has experienced better rates of staff retention than in the private sector. It has one of the largest fleets of gas buses in the country and is currently working towards full electrification.

Despite the Transport Act 1985,[158] which obliged councils to allow competing companies with appropriate licences to operate, NCT has been able to maintain dominance and avert large-scale commercialisation of routes in the city. By comparison, in Leicester, a smaller city nearby in the East Midlands, there are ten private bus operating companies competing to secure profitable routes.[159]

EXAMPLE 5: Manchester's Bee Network

Uneven and inadequate bus services have been a problem in Greater Manchester since their deregulation. While some parts of the conurbation are well served, others are less so – and these tend to be the more deprived neighbourhoods. A large number of different operators pursuing different strategies has led to a highly fractured system with poor connectivity in some areas. The Greater Manchester Combined Authority launched the Bee Network in 2022, a franchised system covering buses, trams, and active travel.[160] This made it the first region in England to retake control of a deregulated bus service after 40 years of privatisation.

The Bee Network is intended to provide a more accessible, joined-up system, including standardised and daily capped fares. Reregulation has brought together social policy and decarbonisation, facilitating greener transport that better meets people's needs in Greater Manchester. In September 2023, 50 electric buses were introduced to three districts previously affected by poor connectivity, with hundreds more deployed in other areas years since.[161] Two nearby authorities, the city region of Liverpool and the West Yorkshire Combined Authority, plan to follow suit.[162]

EXAMPLE 6: Swiss Federal Railways

In Switzerland, the state-owned company, Swiss Federal Railways (SBB), controls the railway infrastructure and operates most lines of the Swiss network, including more than 240 local train services. Across the country, all these services are integrated within a unitary ticketing and timetabling system. With all routes electrified,[163] it is one of the world's most advanced and intensively used networks.[164] Switzerland came first in the European Railway Performance Index, last conducted in 2017, measuring usage, service quality, and safety.[165] In 2023, SBB maintained high punctuality rates of 92.5%,[166] compared to 68.3% across the UK in the most recently recorded quarter.[167]

EXAMPLE 7: Waltham Forest's 'Mini-Holland'

The Greater London Authority's (GLA) Mini-Holland programme provided funding through the 2010s to encourage walking, cycling, and improved public spaces in outer London boroughs. In Waltham Forest, £27m from TfL was invested in segregated bike lanes, traffic calming measures, a zero-emission cargo bike delivery service, cycle training for 15,000 residents, and greening public spaces.[168] On average, residents walked or cycled for an additional 41 minutes per week as a result. A five-year longitudinal study demonstrated that active travel increased in GLA Mini-Holland

target areas and provided some evidence of car ownership and usage decreasing.[169] These researchers project that the £100m programme will generate over £1bn in health economic benefits in total. In another study, it was found that air quality had consequently improved and life expectancy had increased by around nine months in Waltham Forest.[170]

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