

Create Streets Policy Paper

September 2023




David Milner

Moving Towards Growth: why it's time to build on Britain's Roadbelt

The economic cost of roads and the value
of streets

Endorsements



On so many of Onward's research trips across the country to struggling towns and cities we observe the same thing: how regularly we have to dodge traffic and cross perilous A-roads. Fast roads so often mean slower regeneration. This call to arms by Create Streets to build on Britain's Roadbelt will not be politically easy, but could not be more important.

Adam Hawksbee. Deputy Director, Onward

This insightful paper highlights a real opportunity for a future government to get our cities outside of London moving again while helping to tackle the climate crisis at a local level.

Sam Bright. Desmog's UK Deputy Editor and author of Fortress London, and Bullingdon Club Britain

Improving transportation infrastructure in places outside of London and the South East is central to reducing regional inequalities. However, as this paper rightly emphasises, to truly level up, transport investment must focus on improving streets and local public transport rather than costly roads. Embedding transport investment directly into neighbourhoods in this way can increase agglomeration effects and enhance people's sense of pride in place, a cornerstone of the levelling up agenda.

Graeme Atherton. Head of the Centre for Inequality and Levelling Up (CEILUP) and Director, National Education Opportunities Network (NEON)

I welcome these proposals to reform transport infrastructure spending. Prioritising sustainable transport and additional housing over major new roads would create more climate-friendly development and safeguard the environment, while boosting productivity and economic growth.

Sam Hall. Conservative Environment Network

This excellent paper addresses three pressing policy challenges - (1) regenerating our towns and cities, (2) tackling our housing shortage, and (3) decarbonising our transport system - in a way that creates more life, joy and economic activity in the places we live. At a time when road-building is becoming increasingly unviable, whether you look at it through a financial lens or a climate lens, these ideas are ripe for implementation across the country.

Cllr Charlie Hicks, Oxfordshire County Council, Labour & Co-operative Party Group

Green Alliance agrees with this report, the CCC and the Welsh Government - current and future roadbuilding needs to be reviewed (and brought in line with environmental targets). Rethinking how we plan our streets would allow us to make better use of public transport to drive growth and reduce emissions.

Rosie Allen. Policy Advisor, Green Alliance

David Milner shows us what we instinctively know: acres of asphalt does not equal human happiness or productivity. We have been conning ourselves for far too long, and the damaging results can be seen across Britain. This paper shows how in repairing this damage, there is enormous opportunity. We – and the government – should grab it with both hands.

Ben Gummer. The Rt Hon. Ben Gummer is a Visiting Fellow of Practice at the Blavatnik School of Government at Oxford University and a Senior Adviser at McKinsey & Company. Previously Minister for the Cabinet Office.

Our societies needs have developed well beyond the single function simplicity of roads, we now need to think of our urban infrastructure holistically to provide integrated urban circuitry, routing utilities, biodiversity habitat and movement into a coordinated system using nature based solutions that prioritises active travel. Moving Towards Growth sets out a compelling argument for this need and vision.

Stephen O'Malley. Chief executive, Civic Engineers and Chair of Institute for Civic Engineers North West

Another fascinating report from Create Streets that tells the story of how we ended up in the current road-based planning mess. David makes a compelling case for a different approach that prioritises people over roads, with some brilliant examples of towns and cities doing just that.

Lisa Hopkinson. Transport for Quality of Life

This excellent report offers a vision to restore some of our streets lost to inappropriate 1960s highways schemes. It suggests a way to provide generous numbers of good new homes on brownfield land – helping address the housing crisis, boosting local economies and improving the environment.

John Myers. Yimby Alliance

Moving Towards Growth: why it's time to build on Britain's Roadbelt

The economic cost of roads and the value of streets

Britain is stuck in a rut of low growth, low productivity and high energy costs. The government and local authorities are left making tough economic choices about where to cut budgets without accidentally killing growth-supporting projects. One such arena to boost jobs, skills and economic growth is investing in new transport infrastructure, supporting local agglomeration effects which are normally found to boost productivity.¹

However, not all transport projects are created equally.

Introduction: it's time to build on Britain's Roadbelt

Sadly, too many new transport plans, especially outside London, result in costly road schemes that, rather than boost local economies, damage communities' prosperity and productivity while failing to solve the problems they were designed to address: namely congestion. This article will highlight why many new roads make things worse not better and are an expensive liability. Creating simpler human-scale streets could be a route to enhanced local productivity and prosperity – at a fraction of the price. Specifically, if this thinking were applied to the cities and towns scarred by post-war urban road building, we could create proud boulevards lined with beautiful, sustainably located new homes on space currently given over to needlessly, indeed counter-productively, wide roads. Forget Greenbelt, this is Britain's Roadbelt and it's time to build on it.

Transport's role in economic growth is a story of trade. Historically, trade relied on effective transport networks for the exchange of food, materials and products. This is why all early economic thinking on geography and value focused on the distance between agricultural land and the towns which consumed their produce.² Now, however, the value of the ideas and technology we deploy is comparable to the value of the food we consume. We trade as much or more in ideas as in produce. The clustering of highly skilled workers in knowledge industries is therefore critical to increased productivity and wages. Despite this much of our infrastructure, especially outside London, remains oriented towards moving goods and vehicles across the country from one place to another.

¹ *Srour et al*, 2002. "Accessibility Indices: A Connection to Residential Land Prices and Location Choices" *Transportation Research Record*.

² *Boys Smith et al*, 2017. *Beyond Location*.

As Richard Florida has argued, it is quality of place that attracts innovators and helps to drive modern economies.³ To catch up with the modern demand for the trade of ideas, we should not first think about transport but think about place. (Bear with me here!) Our hyper-specialised society has left us accustomed to working in silos. This can result in accurate solutions to narrow metrics, but not always in the best outcome for society as a whole. One example is transport itself, which has fallen into this 'quantification trap' by trying to improve what can be measured easily, such as speed and time, leaving trickier metrics such as productivity, wellbeing and value to gather dust on the side lines. Transport solutions are normally left for traffic engineers to 'solve.' Unfortunately, traffic engineers are often given a narrow scope ("keep the cars moving as fast as possible")⁴ and consequently treat demand for movement as an inescapable symptom to be fixed by a transport project. Outside of London this is often a new, or bigger, road. The external cost attributed to severe road congestion in the governments TAG database is valued at 57.2 pence per km travelled, whereas excess noise is costed at a paltry 0.1 pence per km. Air quality is valued at 0.5 pence per km and greenhouse gases stand at 2.8 pence per km. This means all of these harms combined are given just 5 percent of the value of congestion on our roads.⁵

Clearly we shouldn't stop all roadbuilding as we need routes into new housing developments. However, these roads should be narrower, tighter and lined with new homes and amenities. Not single-minded soulless distributors and expressways.

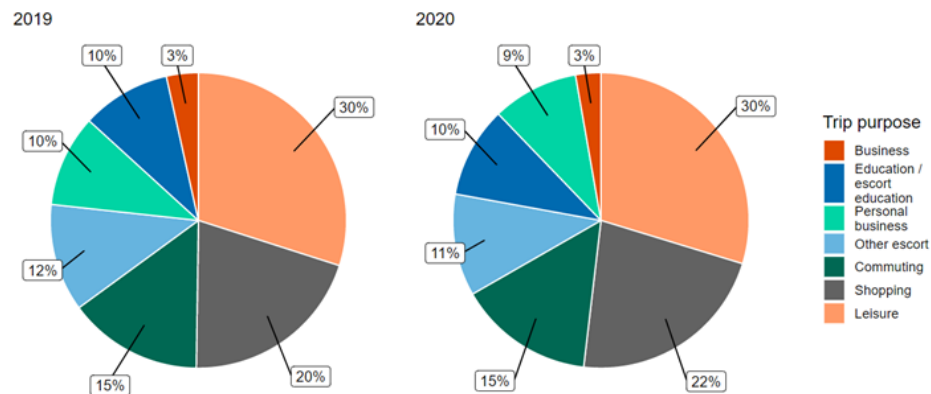
The biggest drivers of movement are where schools, shops and leisure amenities are placed. Deciding on the right location to put these will have as great an impact on movement as building a costly new road or widening a junction. Here's a Create Streets' top tip: stick these schools, shops and facilities in the centre of new developments and you'll reduce congestion by enabling more people to walk and cycle to them, possibly removing the need for a new road or wider junction. This will save the developer and council millions on road building. And it's not just money you are saving. With transport as our biggest climate culprit, (a stubborn 27 per cent of carbon emissions), helping more people walk to school, shops or work, rather than drive, will mean growth won't cost the planet.⁶

³ Richard Florida, 2017. *The Rise of the Creative Class*

⁴ Section 16 of the Traffic Management Act [here](#) states that local authorities have a duty to 'secure the expeditious movement of traffic on the authority's road network'

⁵ <https://www.createstreets.com/wp-content/uploads/2022/02/Computer-says-road-1.pdf>

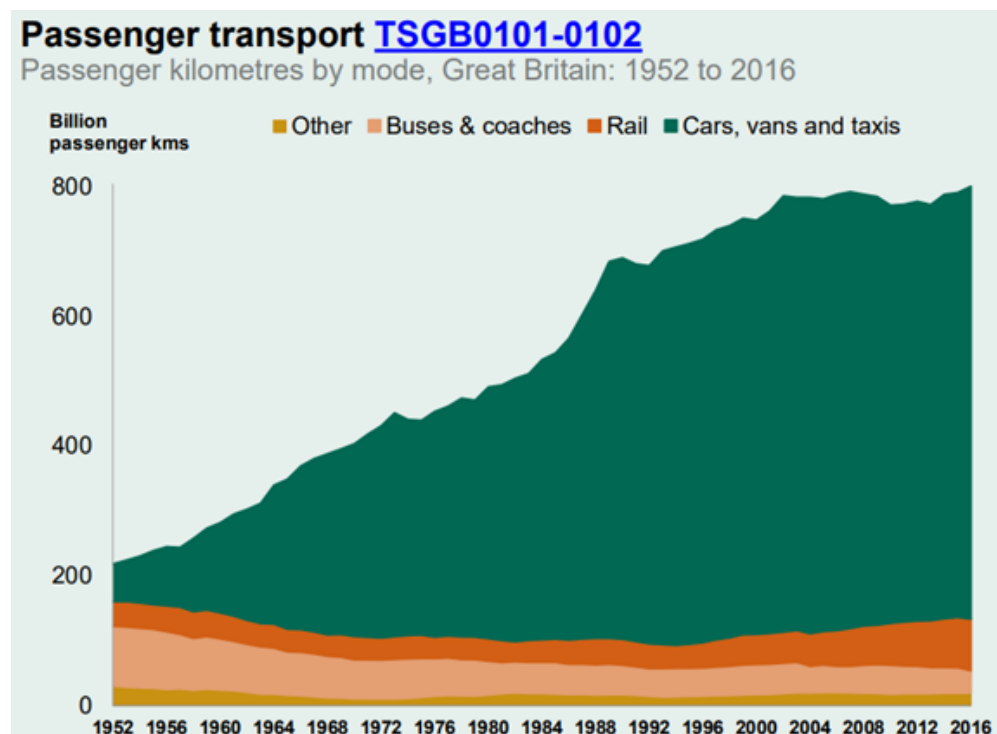
⁶ <https://www.gov.uk/government/collections/uk-territorial-greenhouse-gas-emissions-national-statistics>



Proportion of car trips per person per year, by trip purpose: England, 2019 and 2020 (NTS0409)

We are obsessed with speed

For centuries we have obsessed over travel speed. From canals to railways to cars, significant speed advancements allowed more people to have more access to shops, education and employment. However, as Professor David Metz explains in 'Decarbonising Travel After the Pandemic', the benefits of transport speed improvements in vehicle traffic to broaden access to amenities plateaued at the turn of the twenty first century.⁷



Transport statistics Great Britain 2017: Modal Comparisons, Department For Transport

Most current transport investments have failed to catch up, since they are based on saving marginal travel time, not increasing access to amenities. This leads to billions of pounds being poured into forlorn attempts to shave

⁷ David Metz, 2022. *Good To Go? Decarbonising Travel After the Pandemic*.

off a few minutes from a commute and reduce congestion by dualling existing roads or widening junctions. This is despite dozens of research studies showing that time-saving gains of adding lanes are nullified within several years by induced traffic: new traffic encouraged onto the road by the temporarily free-flowing traffic. A paper by economists Duranton and Turner found that vehicles miles travelled increases one-to-one with number of miles of new road built.^{8,9} I explore this theme in depth in my paper on the flaws of traffic modelling '*Computer Says Road*'.¹⁰

This fixation on speed results in a vain attempt to widen junctions and build new roads under a claim of easing congestion and getting commuters to work more quickly. It sounds intuitive. It sounds sensible. But is it actually true? London, our only city with a productivity level above the European average is notoriously difficult to cross by car. However, no sensible people now plan to carve motorways through it in the pursuit of growth. This is largely down to successful campaigns against urban motorway building in the late 60's due to the revulsion at destruction caused by the London Ringways plan, a scheme of elevated motorways carving up the city.¹¹ London and other highly productive European cities have abandoned roadbuilding, by adopting spatially efficient mass transport instead. They are thriving, able to move millions of us around every day. Why then do we expect to boost prosperity in other towns and cities, often those crying out to be 'levelled up', by spending billions on road widening and making the same mistakes of 50 years ago. Why do poorer cities need the prescription that richer cities do not?



Artist's impression of the Dalston interchange.

Artists impression of London's proposed Ringways. "North Cross Route: York Way to Hackney Wick, Investigation of alternative alignments", GLC, January 1967

8 Gilles Duranton & Matthew A. Turner, 2011. "The Fundamental Law of Road Congestion: Evidence from US Cities," *American Economic Review*, vol. 101(6), pages 2616-52

9 Aud Tennøy et al, 2019. "Effects of urban road capacity expansion – Experiences from two Norwegian cases" *Transportation Research Part D: Transport and Environment*, Volume 69, 2019, Pages 90-106

10 <https://www.createstreets.com/wp-content/uploads/2022/02/Computer-says-road-1.pdf>

11 For example, see the chapter on Euston in Boys Smith (2022), *No Free Parking*.

The cost of roads

We spend a lot of money on roads. And I mean a lot.¹² From spending on expanded strategic road junctions and new road schemes, such as the £1.4bn Black Cat junction and £9bn Lower Thames Crossing to local bypasses and new roads within housing estates. This is not to mention the maintenance bill. The Brent Cross flyover in London needs £50m just to stop it falling down. Of the national £27bn roads programme, almost half is earmarked for maintenance and operation.¹³ With every new road a future liability is created. It's time to put these schemes under the microscope and ensure we're getting bang for our buck.

Our roads are nationalised, bar a tiny section of the M6, and as with any public service we should demand value for money. When we do this, however, the results make for grim reading. A report in 2019 by Transport for Quality of Life assessed 25 road schemes, which had an objective relating to economic stimulus, to see if they had produced any real economic impact.¹⁴ It found that only five schemes displayed moderate or weak evidence of economic growth. Three even had a negative economic impact. Many road projects are justified on benefit-to-cost ratios driven by journey time savings which are monetised by nationally set formula. However, as we have seen in previous paragraphs these productivity savings are wiped out within a few years, due to induced demand, and the congestion returns. The What Works Centre for Local Economic Growth says of new road schemes 'A majority of evaluations show no (or mixed) effects on employment'.¹⁵

It's not just in the UK where road building is under the microscope. Market-led economies such as Hong Kong and Singapore have both departed from the state-led road urbanism of some Western nations. Instead, they are investing in high quality metro networks to pick up the slack and increase the number of people with easy access to jobs and amenities. Social democratic countries in Scandinavia have for decades also been rebalancing transport infrastructure from roads to trains and bikes. Even car -loving Germany has created large traffic free urban areas served by underground parking at the town's or town centre's edge permitting easy walking and cycling in the centre. This has been a component of sustained investment in place quality of German towns and cities (including putting back the street pattern destroyed in wartime bombing), which has resulted in substantially less regional variation in prosperity than in the United Kingdom.¹⁶

Road-led city design also pushes up the cost of living. Studies have found that people living in neighbourhoods in which they can easily walk to shops

¹² Open innovations.org – [link here](#)

¹³ <https://www.newcivilengineer.com/latest/north-london-flyover-hit-with-weight-restrictions-and-needs-50m-repair-07-10-2022/>

¹⁴ Sloman L, Hopkinson L and Taylor I, 2017, The Impact of Road Projects in England Report for CPRE

¹⁵ <https://whatworksgrowth.org/resource-library/transport/>

¹⁶ Coach et al, 2011, Thirty years of urban regeneration in Britain, Germany and France: The importance of context and path dependency. *Progress in Planning* 75.

and businesses, as opposed to those living in fast road residential-only estates, spent 28 per cent less of their average monthly income on transport.¹⁷

Despite all this, we are proposing to spend £27bn, more when various regional and local budgets are totalled, on roads designed to shave seconds off journey times, not on growing the economy.

The value of streets - access not speed

To deliver growth confidently and consistently we must accept that not all fast roads deliver growth. Some are malign. Some achieve little at huge cost. We should dispense with the obsession with speed in all circumstances and instead find projects that enable the most people to access the most jobs and services possible. This means investing in transport that increases access to opportunities *within* our towns and cities rather than just focusing on marginal speed improvements *between* them.

Fortunately, we already know the answer. And we have known it for millennia. Towns and cities already have many very effective roads, let's call them streets, that have already been built. Spending should focus on making these streets more efficient through wide pavements, light rail, trams, bus lanes and cycle infrastructure.¹⁸ This is better than widening and speeding up streets, which damages land values, undermines local economies and severs communities.¹⁹

One way in which productive streets historically drove wealth was by maximising the number of buildings with frontages onto the street, to capture passing trade. This was done by building narrow-fronted terraced housing with commercial premises on the ground floor, an example being the iconic streets of Amsterdam. The value was such that the state eventually collected tax based on building width in the city.²⁰

Slow streets, when combined with mixed-use places, drive value, often when they are away from fast moving, noisy traffic. Research shows that older street-based neighbourhoods, so called 'walkable neighbourhoods', financially outperform post-1950 neighbourhoods, which typically have wider and faster roads.²¹ Cast your eye on Rightmove for the price of property on riverside walkways, or quiet streets in London, versus urban motorways like the Westway or A40 if you doubt this. And people want more of it. A 2013 American study in showed that public attitudes are shifting in favour of more walkable neighbourhoods. 58 per cent of recent movers preferred this versus

¹⁷ https://www.researchgate.net/publication/273354289_Walk_This_Way_The_Economic_Promise_of_Walkable_Places_in_Washington_DC

¹⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877511/cycling-and-walking-business-case-summary.pdf

¹⁹ Boys Smith *et al*, 2017, *Beyond Location*

²⁰ https://dutchreview.com/culture/narrowest-house-amsterdam/We_have_them_in_Britain_as_well.They_are_called_burgage_plots.

²¹ Marohn, 2019, *Strong Towns: A Bottom-Up revolution to Rebuild American Prosperity*

38 per cent against.²²

And it's not just residential value. More walkable, slower streets allow businesses to open, children to play and meetings of minds to take place on street corners, which might lead to the next great invention, or at least a good weekend plan.²³ For retailers nervous about loss of trade by shifting the balance in favour of non-car users, the evidence shows that shoppers on foot can spend up to six times more than those who arrive by car.²⁴

Finally, we cannot consider the value of streets and walkable places without considering public transport. Whilst cars are excellent at delivering you from door to door, this model falls apart when everyone else in the city has the same idea, leaving everyone stuck in jams. We have already seen how widening roads damages values and makes places harder to walk around; the only solution left is to use these streets more efficiently. The National Infrastructure Commission supports this, stating that 'An effective urban transport network makes the best use of available space – providing more space efficient modes of transport such as bus or train'.²⁵

Luckily trams and metros are absurdly efficient at moving people and create enormous agglomeration boosts by allowing more people to live and work closer together. A 3.5m wide urban road lane used for a tram line can shift eleven times more people per hour than the same lane used by car-dominated traffic. This efficiency has obvious economic benefits. One UK example, the £226m Nottingham tram extension, is estimated to have generated £169m for the local economy and £217m in the supply chain alone.²⁶ Key drivers of this were a 9.8 per cent increase in employment within 400m of a tram stop, increased development along the tram corridor, increases in business property values and a 5.1 per cent increase in house prices within 1km of a tram stop.²⁷

Returning to our earlier focus on place, Richard Florida concluded that 'what we need are strategic investments in the kind of infrastructure that will push us closer together, as opposed to spreading us apart...away from roads and highways that spread us out and toward mass transit that helps cluster people and economic activity closer together'.²⁸

22 <https://plannersweb.com/2014/03/national-realtors-survey-indicates-strong-interest-walkable-mixed-use-neighborhoods>

23 Charles Montgomery, 2013. "Happy city: transforming our lives through urban design"

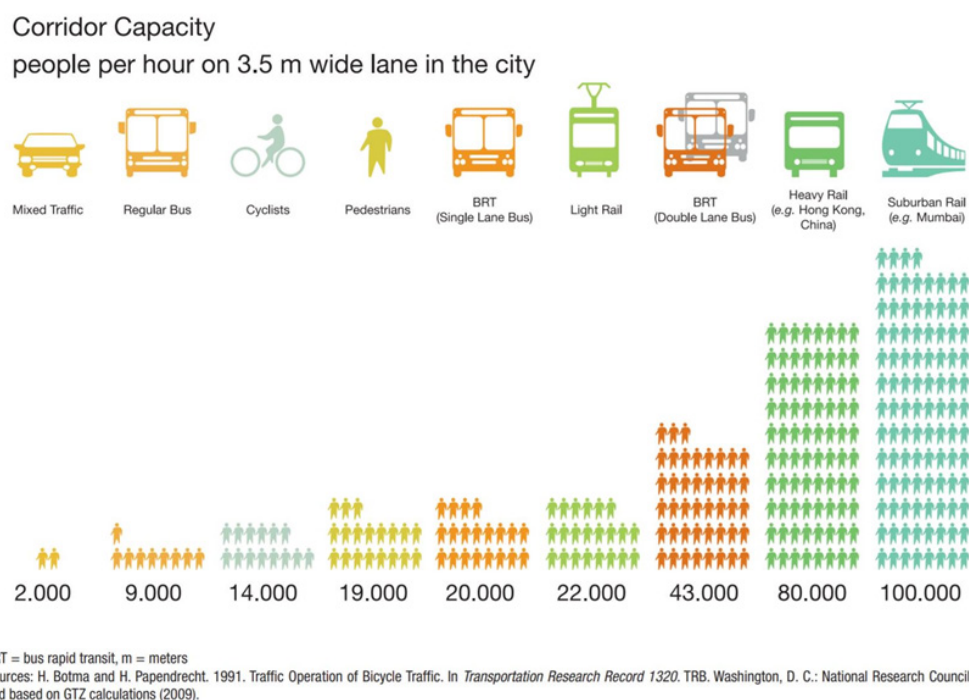
24 <https://www.livingstreets.org.uk/media/3890/pedestrian-pound-2018.pdf>

25 National Infrastructure Commission, 2022, Getting Cities Moving

26 Lisa Hopkinson, 2022, "Going for growth by boosting public transport" *Smart Transport Journal* November

27 https://tps.org.uk/public/downloads/nk_p4/TPS%20Bursary%20Paper%20-%20Stuart%20Northall%20.pdf

28 Richard Florida, 2017.



Graphic from SCOLAT Partnership

It is worth examining what happens when a big city doesn't invest in good public transport. This is what data analyst Tom Forth did for Birmingham. He found that to be able to travel into the centre within 30 minutes, a proxy for Birmingham's agglomeration boundary, you had to live as close as 3.5 miles away at peak times due to its poor mass transit system, far less than many European counterparts. This reduces the effective population of Birmingham by half, cutting the available workforce for growing businesses and diminishing the chance encounters of city life that drive so much innovation and growth. He believes this might explain why Britain's larger cities outside of London woefully underperform the equivalents in Europe. Lyon in France has four tram lines versus one in Birmingham despite having half the population. The paper's staggering conclusion is that if we assume agglomeration benefits in the UK are the same as in France then this would increase GDP per capita by 7 per cent.²⁹

This is supported by research from Centre for Cities who found that 'approximately, 67 per cent of people in big European cities can reach their city centre by public transport within 30 minutes, compared to only 40 per cent of the people in Britain's big cities.' They claim this decreases the effective size of our cities costing us £23.1bn every year.³⁰ Fortunately, Birmingham is now investing in an expanded tram network, but there is a long way to catch up with its European peers.

Birmingham's and indeed almost all UK cities' failure to live up to its 'population potential' is important, as Edward Glaeser shows us across the

29 <https://www.tomforth.co.uk/birminghamisasmallcity/>

30 <https://www.centreforcities.org/wp-content/uploads/2021/11/Measuring-Up-Comparing-Public-Transport-in-the-UK-and-Europes-Biggest-Cities.pdf>

pond, 'Americans who live in metropolitan areas with more than a million residents are, on average, more than 50 percent more productive than Americans who live in smaller metropolitan areas'. This is controlled for employee's education, experience, industry and even IQ.³¹

A final significant benefit of the combination of slower, more walkable places mixed with shops and offices supported by efficient public transport is that less space is required for parking. This allows land to be repurposed for much more value and growth enhancing uses such as new homes, shops of offices. This, in turn, further strengthens the productivity case for creating streets not wide, fast roads.

Making Roadbelt happen

1. Mayors and councillors to identify land-hungry road junctions and excessively wide road infrastructure in city and town centres.
2. Use a portion of the increased number of homes accessible by building onto defunct road space to fund metro and tram improvements.
3. Value the increased number of people who can access jobs with transport projects above the time saved on an individual road commute.
4. Adopt Vision-led transport modelling when assessing the impact of new development on local infrastructure.
5. Investigate whether portions of the £27bn strategic roads budget could be better spent on mass transit within cities and towns.
6. The DFT should appoint a light rail czar to boost the UK's connectivity and therefore productivity.

Building on Britain's Roadbelt - What good road investment looks like

Pick up a local paper and I guarantee you'll see an article about the latest 'road improvement scheme'. Look at the images and improvement is often the last word you'd use. Swathes of CGI asphalt devouring precious greenery or a perfectly functioning row of homes. Investing in infrastructure can be a wonderful thing, but when you're laying asphalt, please create valuable streets not costly roads.

An example of effective street investment can be found in Birmingham where a value destroying fast road was transformed into a value enhancing street, allowing movement and creating a proper place. In 1991 the midland's metropolis made the bold decision to remove its inner ring road, a physical and economic noose around the city, which had swept away many of Birmingham's beautiful Victorian buildings and their communities.³² Absurdly, it was only 20 years before that the road had been installed by Sir Herbert Manzoni, a Le Corbusier devotee who saw the removal of pedestrians from the street as the future. A future, it turns out, that nobody wanted.

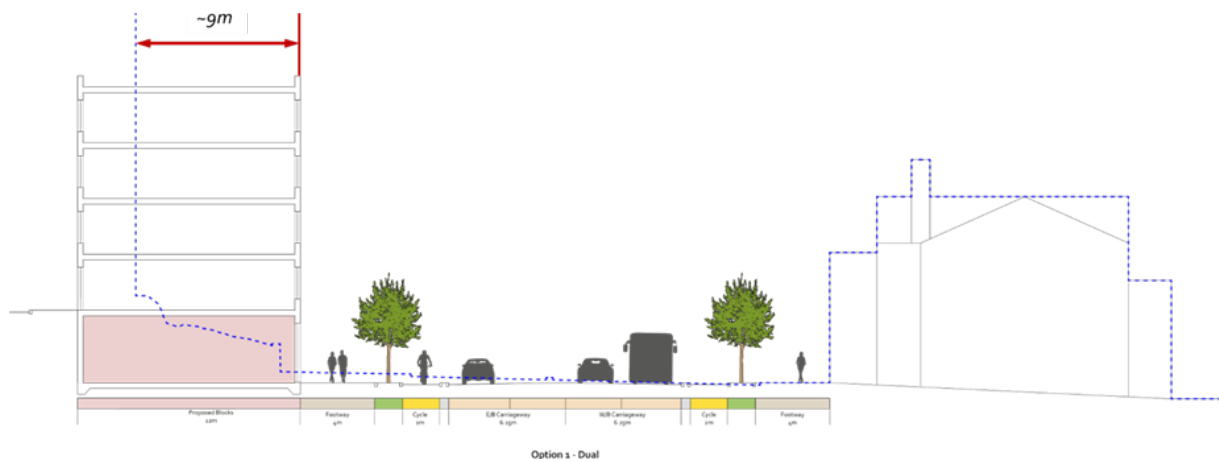
³¹ Edward L. Glaeser, *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*

³² <https://www.transformingcities.co.uk/project/breaking-the-concrete-collar/>

The city, inspired by what is now known as the Highbury Initiative, began giving streets and squares back to residents and these slower, less traffic dominated places started to attract business investment. Seven years later, by no coincidence, the city has captured 42 per cent of the UK's conference market. Birmingham's breaking of the 'concrete collar' still remains unfinished business. Nevertheless, with our current need to increase productivity and growth, replacing urban motorways across the country (every city and town has them) with vibrant, human-scale, streets and squares, full of businesses and desperately needed homes is a good place to start.

Rochdale

There are seeds of projects like this beginning to bed in. In Rochdale a project taking a single turning lane from a five-lane urban motorway has allowed designers to add a new row of homes, adding up to 400 more homes than if the road was left untouched. The four lanes of traffic are left untouched.



Removing a turning lane allowed a new row of development to be incorporated alongside a better street, Rochdale



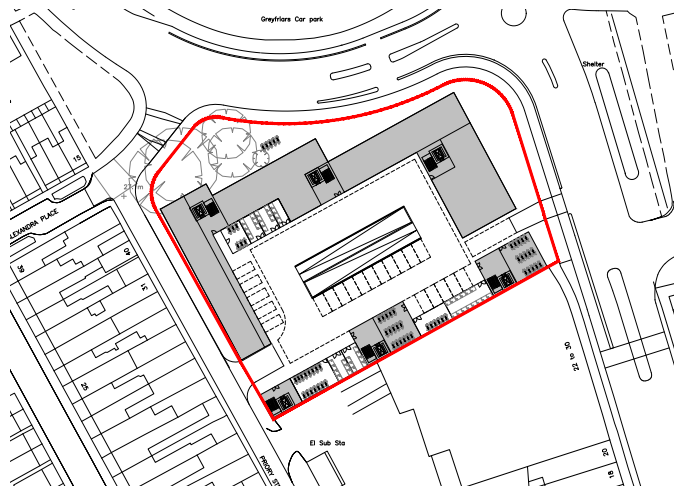
A vision for building on Britain's Roadbelt, in Rochdale, by Create Streets

Bedford

In a project in Bedford, a vast roundabout in the middle of the town could be replaced by a more humane junction allowing 105 homes and 850m² commercial space to be built.



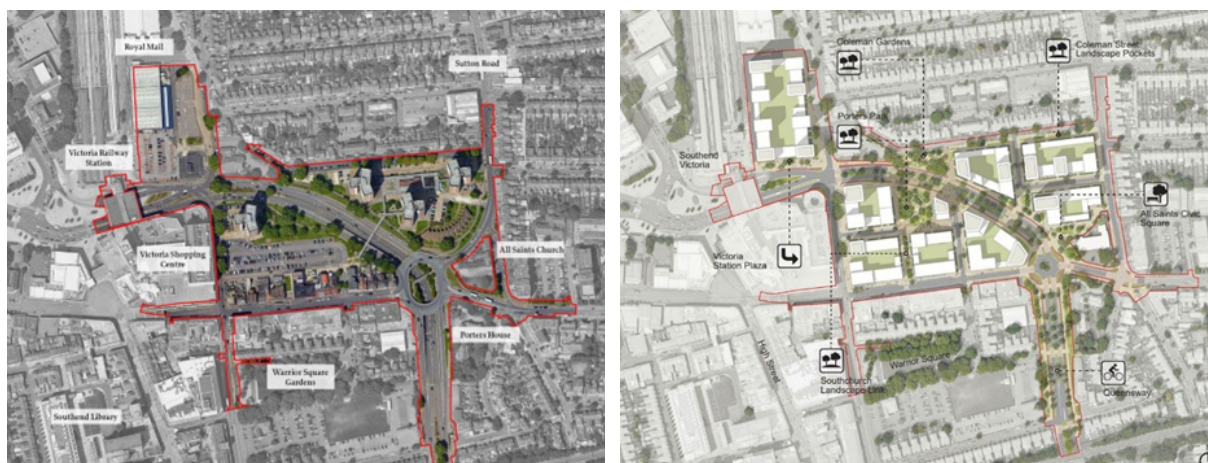
Left, the existing roundabout and right, the proposed mini roundabout, freeing up space for new homes and businesses



The new plan with room for more homes, businesses and a better street environment

Southend-on-Sea

In Southend-on-Sea a project to tame a vast elevated roundabout with seven lanes of traffic in places to a simpler four lane street and calmer roundabout has created space to create 1,760 homes and removes a huge barrier for people living either side of the road.



A step forward to undoing the heavy road infrastructure of a future we no longer want. Southend-on-Sea

We might call all of this building on 'Britain's Roadbelt' and it appears to be catching on once again with projects in Bedford, Southend-on-Sea and Rochdale seeking to replace fast, wide urban roads with streets, squares and homes.³³ By doing this across Britain's towns and cities, in one act, we could create thousands of beautiful, sustainably-located, homes, protect our countryside from suburban sprawl and boost skills, jobs and economic growth. Let's build on Britain's Roadbelt.

David Milner

Deputy Director of Create Streets

Acknowledgements

I would like to thank the following for advice in researching and drafting this paper: Lisa Hopkinson, Nicholas Boys Smith, Mina Kasherova, Nicholas Falk, John Myers, Tom Forth, Neil Murphy, Toby Lloyd, Chris Martin and Tom Noble.

³³ Projects by Create Streets, Urban Movement and Civic Engineers

GET IN TOUCH

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