

Infrastructure Commission - critical infrastructure challenges

Sustrans submission to the Infrastructure Commission into Northern Connectivity

March 2016

Summary

Sustrans is a leading UK charity enabling people to travel by foot, bike or public transport for more of the journeys we make every day.

Sustrans welcomes the opportunity to respond to the National Infrastructure Commissions call for evidence on Northern Connectivity.

Many of the apparent challenges facing northern cities and cities across England are similar in nature.

1. Across England there is a widening gap between funding and support for large road and rail transport infrastructure projects and cycling and walking.
2. The majority of everyday journeys in cities are local and demand is rising. Cycling and walking (active travel) can help meet this demand, making roads and rail more efficient for all users whilst benefiting society, the economy, and the environment.
3. Cycling also has a role to play in travel between cities, by connecting satellite towns to larger cities and enabling people to reach key transport hubs quickly and efficiently.
4. Many city's including Manchester, Newcastle and other cities in the north recognise this and have high aspirations for cycling and walking that are beginning to take shape but investment is required to enable active travel to fulfil its potential.
5. Active Travel can have profound and positive impact on people's lives and local environments, rivalling other forms of transport if investment is of sufficient scale and long-term in nature. We call upon the Infrastructure Commission to make cycling and walking a strategic infrastructure priority in every city in England.

Introduction

Sustrans is a leading UK charity enabling people to travel by foot, bike or public transport for more of the journeys we make every day. We work with families, communities, policy-makers and partner organisations so that people are able to choose healthier, cleaner and cheaper journeys, with better places and spaces to move through and live in.

Sustrans is responding to the National Infrastructure Commission's call for evidence in two areas:

1. Northern Connectivity
2. London's Transport Infrastructure.

This is our response to strategic investment in north's transport infrastructure.

A widening gap is emerging

There is a widening gap emerging between funding and support for large infrastructure projects and everyday travel, especially cycling and walking in England.

Investment in big road and rail infrastructure projects have been prioritised with a 50% increase in capital investment for the UK, including funding for programmes such as HS2, the Road Investment Strategy, and over £11bn of investment in London Transport, such as Crossrail 2.

In fact whilst £15bn has been committed in the Highways Investment Strategy only £300m has been so far committed to the Government's Cycling and Walking Investment Strategy. Whilst London invests comparatively more, cycling investment in the capital is still not on the same scale as investment in large rail projects, such as Crossrail or the Strategic Road Network.

This is despite the fact that most everyday journeys in England are local in nature with an average trip length of 7 miles¹. Many of these journeys can be easily made by cycling, walking or public transport. Yet only 2% of journeys are currently made by bicycle in England, and there is a downward trend in walking. We therefore need to maximise the efficiency of local transport networks, especially in London and cities across the north of England. One cost effective way of doing so with a huge potential to grow is to invest in cycling and walking for shorter journeys.

Investment in active travel should be a strategic priority.

Investing in cycling and walking across the north of England should be a strategic priority for the government and the Infrastructure Commission can play a key role in coordinating investment. Cities like Copenhagen, Munich and Amsterdam demonstrate over 40% of all commuter trips can be made by cycling and walking.

If cycling and walking was given similar priority in England it would meet demand and enable people to travel efficiently both within cities for everyday journeys, and to and from transport hubs to enable regional travel across the Northern Powerhouse and across the UK.

Prioritising active travel in every city in England would solve significant social, economic and environmental challenges including:

1. Improving air quality
2. Reducing congestion and improving the efficiency of roads and many public transport links
3. Improving physical activity and public health

¹ National Travel Survey

4. Improving our built environment, and coping with rising urban populations

Developing cycling and walking infrastructure to form a comprehensive, safe and convenient network across London and in every northern city should be seen as a strategic and necessary infrastructure programme. We call upon the Infrastructure Commission to make cycling and walking a strategic infrastructure priority in every city in England.

Question 1

To what extent are weaknesses in transport connectivity holding back northern city regions (specifically in terms of jobs, enterprise creation and growth, and housing)?

Many prominent weaknesses in transport connectivity exist in the north of England within cities themselves. Congestion, poor air quality, and a lack of physical activity can all hold back job creation and growth whilst population growth and housing developments will make this trend worse in years to come. Research undertaken by PWCⁱ found for example average commuting times across the 39 UK cities in the index having risen by 9%, or more than 2 minutes per journey. Coupled with increasing commuter times is increasing congestion. Local A roads account for around 9% of all roads in England but carry around a third of traffic. Traffic speeds having been reducing over the past three years on local A roads and over the past year speeds in the North West and North East have fallen 3.3% and 2.9% respectively.

The TomTom company measures congestion worldwide through their Traffic Index using GPS references within vehicles. A congestion level is the percentage longer it takes in comparison to freely flowing traffic. It ranks Manchester, Liverpool, Newcastle/Sunderland and Leeds/Bradford at a congestion level of between 26 and 32%, overall although congestion rises during the morning rush hour up to 67% for Manchesterⁱⁱ.

With expected population growth in Northern Cities and increased house building congestion is likely to continue. The latest predictions from the Department for Transport (DfT) estimate that, on the English road network, this growth in traffic is likely to translate to a 55% increase in road congestion in the period to 2040ⁱⁱⁱ.

Furthermore, congestion and increased journey times is likely to have major economic and social challenges that face northern cities in a number of ways:

Economic productivity

- Ensuring that journey times do not deteriorate under the pressure of population and employment growth
- To reduce absenteeism by improving health
- To maximise the uptake of walking and cycling for the efficiency of the road, rail and underground networks with respect to physical and environmental constraints
- Reducing transport poverty in many areas poorly served^{iv}

Public Health

- to reduce the number of killed and seriously injured on roads
- to reduce air pollution and its impact on health – the governments own data suggest poor air quality contributes to the deaths of approximately 23,500 people each year^v.
- to improve physical activity levels through everyday transport, helping to tackle a range of non-communicable diseases and reduce the burden on the health care system

Environment

- To reduce the north's contribution to climate change and adapt to its impacts

Therefore we recommend that local transport is also seen as a priority in enabling connectivity both locally for everyday journeys and for intercity travel as journeys will still require travel to city transport hubs.

Many satellite cities were recently found to be lagging behind their neighbouring larger cities in England on socio-economic performance according to a recent report by Demos^{vi}. Investment in cycling to connect satellite cities with their larger neighbours either directly or via public transport links would help to readdress this balance.

Question 2

What cost-effective infrastructure investments in city-to-city connectivity could address these weaknesses? We are interested in all modes of transport.

Therefore investment and wider policy activity need to focus on making the most efficient use of roads.

It is widely recognised that increasing road capacity generates more traffic, particularly in urban areas where congestion suppresses demand. The temporary benefit of a wider road and smoother traffic flow result in diverted journeys (people shifting their trips in time or route to make use of the new capacity) or induced travel (longer trips becoming more acceptable with better conditions on the road). This effect increases overall traffic levels and increases it during peak periods until congestion returns to its original levels. The effect of this is to worsen congestion at other points on the network with no improvement to journey times or reliability.^{vii}

That motor traffic grows because of increases in road capacity has been recognised since at least the SACTRA report on Trunk Roads and the Generation of Traffic in 1994.^{viii} A report that was released after almost a decade of road improvement projects that failed to meet their stated objective to reduce congestion. Increasing road capacity in London will have major negative effects, including:

- Increasing the volume of traffic – resulting in deteriorating air quality, increased road danger and severance of communities
- Expediting congestion to other parts of the road network – generating new air pollution hot spots
- Encouraging mode shift to private motor vehicles from public transport, walking or cycling or generating new trips entirely – reducing the efficiency of roads

Maximise the efficiency of the road network through walking and cycling

Active Travel (walking and cycling) has the potential to rival other forms of mass transit if catered for strategically. Given the limited road space in cities across the north of England and the need to reduce carbon emissions and air pollution this is hugely positive, but more can still be done at a strategic level, particularly for cycling.

Question 3

Which city-to-city corridor(s) should be the priority for early phases of investment?

Our focus is on improving local transport both for the benefit of local journeys and as stages of longer intercity journeys.

Prioritising active travel

Significant priority should be placed on maximising the efficiency of the road network – particularly through providing infrastructure for cycling and walking for short journeys, where there is significant potential. Through a strategic cycle network in every northern city, greater capacity is provided for short trips on the finite road space available.

Cycles are able to make much more efficient use of road capacity. While a car occupies one passenger car unit (PCU) of road space to convey on average 1.3 people, a bicycle occupies 0.2 PCU to convey one person. In other words, a cycle uses a fifth of the space of a car to transport the same number of people.

Moreover, transport modelling suggests that the cycling is the third most space efficient mode of travel after trams and walking. Given a 3.5 metre wide lane:

- Trams can convey 22,000 people per hour;
- cycles can convey 14,000 per hour;
- buses can convey 9,000 per hour;
- cars can convey 2,000 people per hour.^{ix}

With population within many northern cities continuing to increase the space efficiency of road based transport schemes should be a major consideration for their prioritisation.

Where to prioritise

We recommend prioritising the following:

1. All commuting city routes that experience significant congestion and pressure on both road and rail travel that cycling and walking could alleviate.
2. All significant planning developments in the region including:
 - a. Ensuring new housing developments are built within close proximity of cycling and walking provision.
 - b. Ensuring new transport infrastructure is equipped with cycle hub infrastructure. This would ensure that potential customers of the service are able to reach the stations in a sustainable manner and that as wide a catchment area as possible is catered for, through the integration of station plans with local cycling improvements.

3. We would also prioritise cycling infrastructure between satellite towns and cities to their larger neighbours. It is essential that satellite towns in the north do not get economically and socially left behind as has been recently suggested^x. For example City Connect is a project to build a Cycle Superhighway between Bradford and Leeds through Cycle City Ambition Grant funding.

Question 4

What are the key international connectivity needs likely to be in the next 20-30 years in the north of England (with a focus on ports and airports)? What is the most effective way to meet these needs, and what constraints on delivery are anticipated?

Sustrans is not responding to this question.

Question 5

What form of governance would most effectively deliver transformative infrastructure in the north, how should this be funded and by whom, including appropriate local contributions.

The continued devolution agenda has led to a complex array of local and regional bodies and governance across the north of England in respect of travel policy. At the same time there are significant opportunities arising from greater power and local governance.

It is essential that improvements and transformative infrastructure in the north is undertaken in a strategic way that links local, regional and national travel to demand. Integrated Travel Authorities provide a way to integrate priorities and travel policy across regions although they must work alongside local authorities, LEPs and City Regions to ensure longer term development meets the need. This will ensure transport solutions connect with other needs including new housing and planning developments, job creation, improving public health and creating more liveable cities.

Models including the Transport for Greater Manchester Committee and Transport for London provide useful examples that should be increasingly replicated across the north of England working together through Transport for the North. Both have cycling strategies and recognise the importance of encouraging cycling for both public health and the economy. Greater Manchester aims to achieve 10% of all journeys by bicycle by 2025 and London's Vision for Cycling aims to double cycling by 2020. Both recognise that converting shorter journeys to cycle trips creates less traffic enabling more efficient use of roads in the area whilst also relieving pressure on tube, bus and rail links at or over capacity.

We recommend the Infrastructure Commission influences all City Regions across the north of England to develop similar aspirations by 2018 to create a network of local transport that supports everyday local journeys to and as stages of longer journeys to from work and transport hubs in the region.

Our two recommendations here are for: joined up governance to ensure both local and regional travel compliments one another and enables people to travel sustainably and conveniently; and also for central government priority and resulting long-term investment to be forthcoming to support local decision making and investment.

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ⁱ PWC, 2015. Transport Strains. <http://pwc.blogs.com/publicsectormatters/2015/07/transport-strains-rising-commuting-times-put-city-success-at-risk.html>

ⁱⁱ TomTom, 2015. TomTom Traffic Index. http://www.tomtom.com/en_gb/trafficindex/#/list

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^{iv} Sustrans, 2012. Locked out: Transport Poverty in England. <http://www.sustrans.org.uk/lockedout>

^v Defra, 2015. Draft plans to improve air quality in the UK. https://consult.defra.gov.uk/airquality/draft-aq-plans/supporting_documents/Draft%20plans%20to%20improve%20air%20quality%20in%20the%20UK%20%20Overview%20document%20September%202015%20final%20version%20folder.pdf

^{vi} Demos, 2015. Talk of the Town. <http://www.demos.co.uk/project/talk-of-the-town/>

^{vii} **Litman, T.** (2015) Generated Traffic and Induced Travel: Implications for Transport Planning, Victoria Policy Institute

^{viii} **DfT/SACTRA** (1994) Trunk roads and the generation of traffic

^{ix} Botma, H. and Papendrecht, H. (1991) Traffic Operation of Bicycle Traffic, Transportation Research Record, 1320

^x Demos, 2015. Talk of the Town. <http://www.demos.co.uk/project/talk-of-the-town/>