Light rail: keeping city regions moving during the pandemic – and building back better afterwards

The Urban Transport Group brings together the public sector transport authorities for the largest city regions. This fact sheet is about the five LRT systems in England outside London which are part of the Urban Transport Group network. These systems are Manchester Metrolink, Tyne and Wear Metro, Sheffield Supertram, Nottingham Express Transit (NET) and West Midlands Metro.

Intrinsic benefits of light rail

- Serving the heart of town and city centres with permanent, visible, and high quality infrastructure.
- Regular, rapid, and reliable journey times and service patterns as well as good ride quality.
- Accessible stops.
- High passenger carrying capacity.
- Park and Ride facilities that are attractive to car users.
- Integration with new developments.
- Linking major traffic generators/attractors.
- Physical integration of light rail routes is often ‘designed-in’ (eg to major rail or bus stations or major developments).
- The permanence, image and status offered by light rail infrastructure, vehicles and operations gives individuals and business confidence in the local area when making location decisions.

Keeping city regions functioning during the pandemic

Throughout the pandemic, light rail has played a key role in keeping our cities moving, by getting key workers and others unable to work from home to their jobs; by supporting the opening up of more journey purposes; and by transporting people to healthcare and vaccination hubs.

Providing staff, patients and the public with access to hospitals, healthcare facilities, testing centres and vaccination hubs

The Queens Medical Centre (QMC) in Nottingham (the largest hospital in the region) has its own tram stop (including walkways directly into the hospital). Some 30% of the Nottingham conurbation live within 800 metres of a tram stop allowing them to easily access the hospital.

Trams are getting people to their vaccinations including mass vaccination centres at the Manchester Tennis Centre (served by Manchester Metrolink); Queen's Medical Centre and Forest Recreation Ground (served by NET); the Centre for Life in Newcastle (served by the Tyne and Wear Metro); and Sheffield Arena (served by Supertram)

Getting people to work where that work can't be done from home

Light rail systems have been a lifeline for low-income communities where car ownership is low and where the vast majority of people who are in employment have jobs which cannot be done from home.

The West Midlands Metro serves areas with a high concentration of industrial and blue-collar jobs and has been very well used during the pandemic. For example, during the summer of 2020, patronage recovered to as high as 80% of normal - much higher than for other forms of public transport. Similar trends could be found on other light rail systems. For example, the Manchester Metrolink experienced relatively higher patronage on lines serving lower income areas.

Building back better

In the longer term, our light rail systems will be key to a green and just recovery.

Rapid access to town and city centres, to retail and hospitality, colleges and universities, airports, visitor attractions and sporting venues

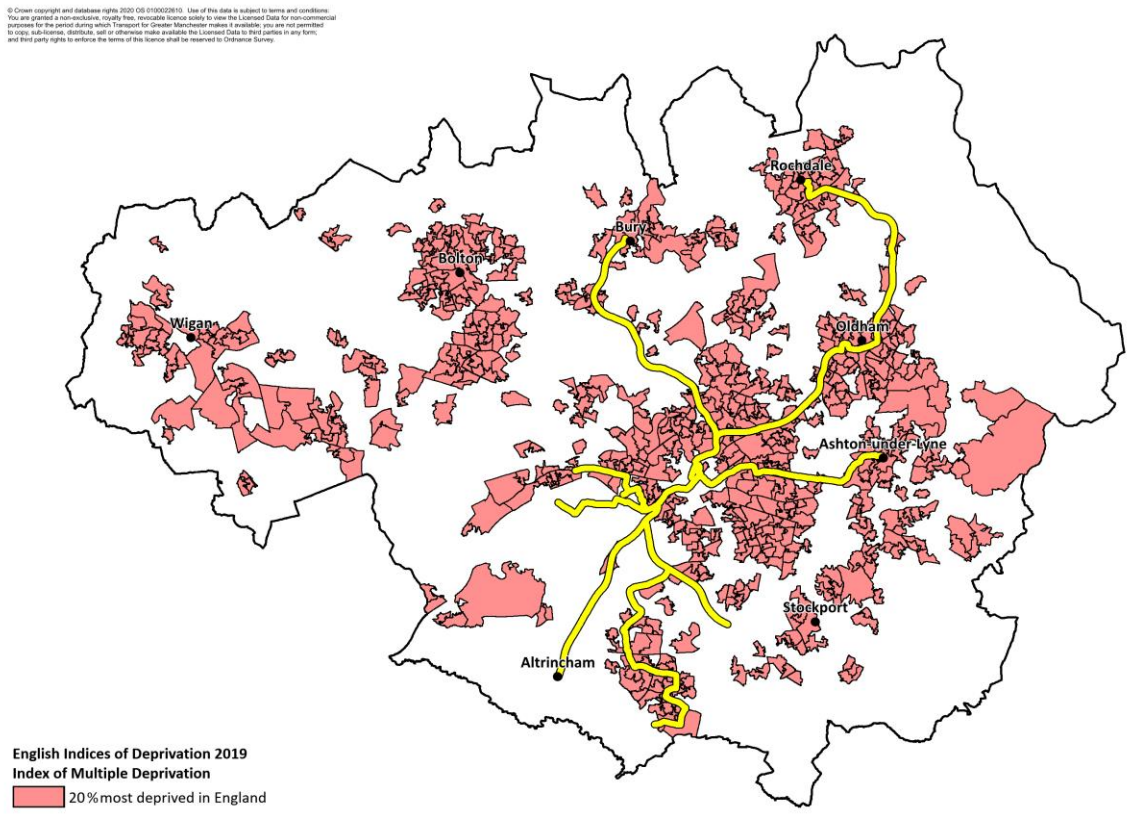
The Tyne and Wear Metro allows passengers to travel between south Sunderland and north Newcastle, passing through the two city centres en-route, in around 40 minutes. It serves the region's airport, the two major football clubs, as well as the business parks and residential areas that are strung along its lines, which are dotted with stations just 1.3 miles apart.

NET provides access to around 1,270 workplaces to which around 55,000 employees commute. Some 20 of the 30 largest employers in Greater Nottingham are within 800m of a tram stop. Businesses in Nottingham have cited good public transport links as a major factor in business relocation and expansion.

Levelling up and providing access to opportunity

Pre-Covid, 67% of Tyne and Wear Metro journeys were made by people who did not have a car available and 23 out of the 60 stations on the Metro serve areas which are in the bottom 30% of nationally defined areas of deprivation.

Manchester Metrolink also serves some of the most deprived areas of England. The shaded areas on the map below show the lower-layer Super Output areas used in the Census that are within the most 20% deprived in England, based on the Index of Multiple Deprivation.



In Sheffield, 43% of employment sites are within walking distance of a Supertram stop.

Getting motorists out of their cars and cutting congestion

In Nottingham, 30% of NET users switched from the car for part or all of their journey. This has contributed to growth in public transport use in the city of nearly 25% between 2004 and 2019 which in turn has led to Nottingham being one of the few cities outside London to see a reduction in car usage.

If the Tyne and Wear Metro was closed then there would be significant shift to private cars – for example as much as 42% of Metro passengers in North Tyneside would switch to car or taxi.

In Manchester, 48% of Metrolink passengers have a car available for the journeys that they made on Metrolink. When asked how they would travel if Metrolink was not available, 29% said they would travel as a car driver or passenger (22% as a driver), and 6% said they would not make the journey.

Supporting good local jobs

As well as connecting people to employment, our light rail systems provide good local jobs directly and support many more in their supply chains. They also invest in skills through supporting apprenticeships.

The Tyne and Wear Metro, for example, employs more than 800 people.

Building NET resulted in 2,900 years of employment in the local economy and a further 1,600 years of employment in the regional economy, creating GVA of £108m and £61m of gross value respectively.

Supporting town and city centre economies – and underpinning new developments

Salford Quays is a former dockyard area, lying 5km west of Manchester City Centre. The dockyard closed in 1982 and the redevelopment (including the flagship 'MediaCityUK' site) was built around the extension of Manchester Metrolink. There are now around 250 businesses in Media City, employing around 7,000 people (one in seven BBC employees are now based at Media City) and a further 1,000 business in the wider Salford Quays area, employing 27,500 people. The photographs below illustrate the area's transformation.

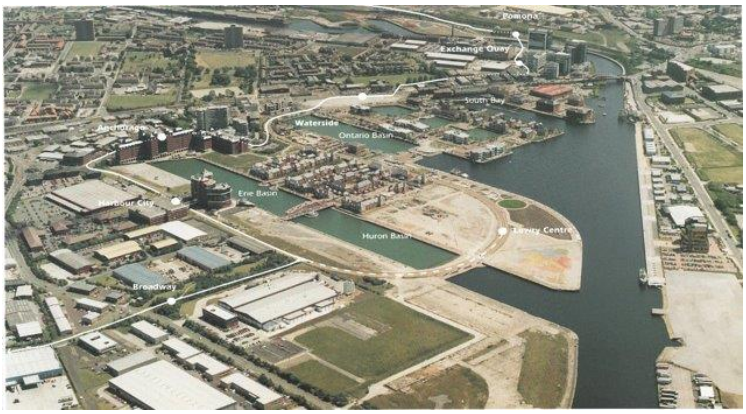


Figure 1 - Salford Quays pre-Metrolink

Figure 2 - Salford Quays post-Metrolink

A new £21 million interchange at South Shields on the Tyne and Wear Metro forms part of a wider £100 million regeneration of the town centre which includes renewing town centre retail and the market square, new commercial and housing developments as well as the new National Centre for the Written Word.

Recent extensions to NET are unlocking a number of significant development sites in the area, including the Southern Gateway, NG2 business park, Queens Medical Centre and Beeston town centre.

Supporting HS2

For HS2 to deliver on its potential, people will need easy access to its stations. Light rail has a key role to play in this.

In the West Midlands, the £27 million Eastside extension will serve the new HS2 Curzon Street Station as well as being instrumental to wider upgrades of the urban realm and inner city regeneration of Digbeth.

HS2 stations in Greater Manchester - at Manchester Airport and Manchester Piccadilly - will be served by Metrolink. Should it proceed, Northern Powerhouse Rail will also interchange with Metrolink and HS2 at Manchester Piccadilly.

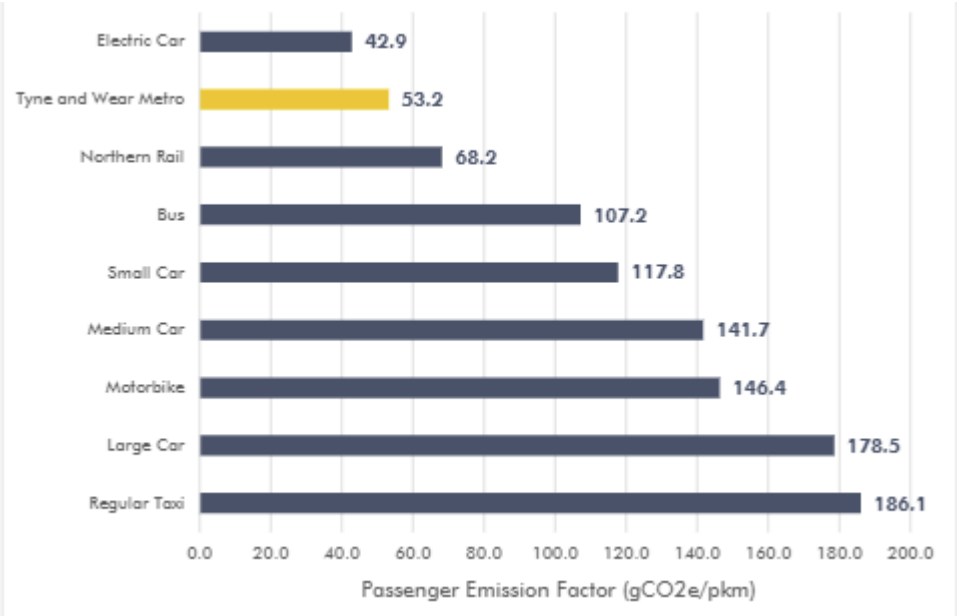
Elsewhere, East Midlands HS2 Hub will be served by NET and Sheffield Midland station, which will be served by HS2, is also served by Supertram.

Low carbon and low emission

As well as being clean and energy-efficient in itself, light rail also supports wider decarbonisation by taking traffic off the roads.

Manchester Metrolink's Phase 3 extensions (lines to Rochdale via Oldham, Ashton-under-Lyne, East Didsbury and Manchester Airport) remove around 39 million car kilometres from Greater Manchester's roads per year. In 2019/20 this helped to save 6,700 tonnes of CO2.

The new Tyne and Wear Metro fleet will be 30% more energy efficient than the previous fleet. Each new train will take 119 cars of the road and performs well against other modes for carbon emissions per passenger trip.



Both Manchester Metrolink and NET are powered by renewable energy.

National and local government have ambitious targets for reducing carbon emissions and improving air quality. Without light rail these targets will be difficult if not impossible to meet. For example, Greater Manchester has a commitment to be a carbon neutral city region by 2038. Its 'Right Mix' vision is to increase non-car mode share from 39% of trips in 2017 to 50% of trips in 2040.

Nottingham has made a commitment to become the UK's first carbon neutral city by 2028 and NET will play an important part in achieving this.

Making the most of recent investment in LRT

The Government has invested and is investing in light rail – it would make little sense to negate the value of that investment by cutting or ending services.

Examples of recent investment (not all Government funded) includes:

West Midland Metro

- Digbeth extension (opening 2025) - £227 million
- West side extension – £149 million

Manchester Metrolink (since 2008 £2 billion has been invested in the system). This includes:

- Salford to Trafford (2020) - £350 million
- Manchester Airport extension (2014) - £400 million
- Second city crossing (2017) - £165 million

Nottingham NET

- Clifton extension (2015) - £570 million

Tyne and Wear Metro

- Investment in a brand new train fleet - £363 million
- Metro Flow project – £100 million
- This follows £400 million of investment in Metro Infrastructure since 2010, with investment plans totalling a further £200 million.

South Yorkshire Supertram

- TramTrain infrastructure works - £75m

Value for money

Supporting light rail provides excellent value for money for the taxpayer

A 2018 report commissioned by Nexus concluded that each year, Metro and local rail contributes around £165.6 million of Gross Value Added to the North East economy. In a wider measure of GDP and welfare benefits, the overall contribution increases to £367.6 million per annum, which equates to an economic value of around £8.50 per passenger journey.

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