Delivery Policy 22: Future light rail and metro

We will continue to develop future light rail and metro capacity and connections, to serve more people and places.

This will include:

a) Expanding the light rail network and delivering new stops, stations and vehicles.
b) Tackling network capacity limitations (including investigating underground metro options to accommodate additional city centre movements).
c) Investigating options to radically improve our light rail and metro network (including adopting tram-train technology).
d) Ensuring the future light rail and metro network is fully integrated into the Bee Network.

Policy explanation

1. By 2040 we want at least 50% of all journeys in GM to be made by active travel and public transport. That will mean one million more sustainable journeys every day enabling us to deliver a healthier, greener, and more productive city-region.

2. The Right Mix target anticipates a much greater role for light rail and metro, supporting a stronger Regional Centre and a step change increase in the use of light rail for wider city-region trips, including to and from town centres. That will require the number of trips made by these modes to more than double by 2040, with an increase in connecting active travel trips by walking, wheeling and cycling, and connecting public transport trips by bus to further the positive shift towards these targets.

3. Currently, over two million (70%) of Greater Manchester residents cannot reach the regional centre in under 30 minutes. This lack of connectivity prevents employers from being able to access the highly skilled workforces they need and is holding us back (Resolution Foundation, 2023). Furthermore, orbital public transport connectivity is limited with only two of Greater

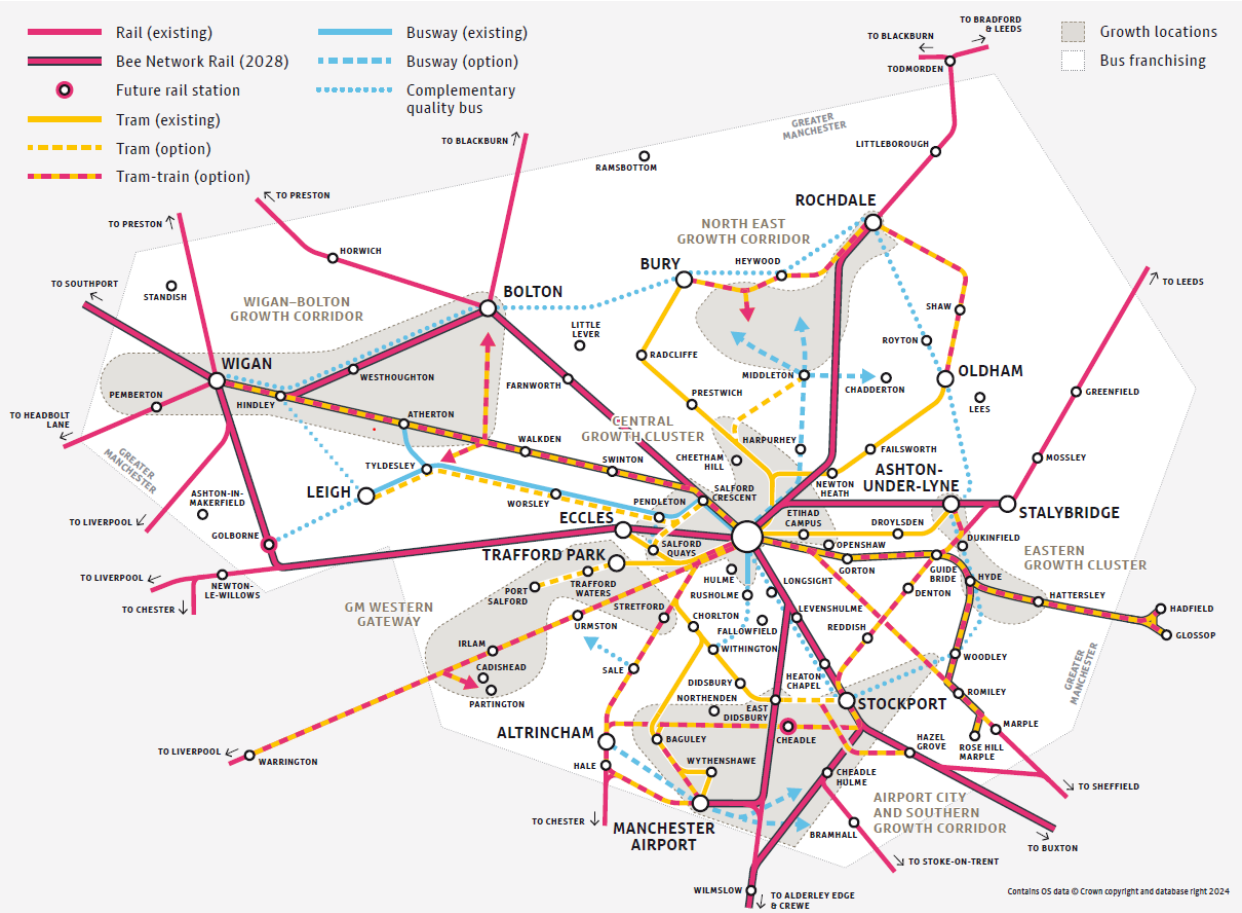
Manchester's main towns connected by Metrolink (Rochdale and Oldham) and four of Greater Manchester main towns connected by rail (Bolton – Wigan and Stockport – Altrincham).

4. In order to address this, attractive services with sufficient connectivity, capacity and reliability are required. We therefore need to invest in and expand the capacity and coverage of our light rail and metro system.

5. Providing travellers with more opportunities to travel by light rail has the potential to deliver on a number of our Network Ambitions, because it is an attractive alternative to car travel for middle distance trips, particularly into the regional centre.

6. Our light rail system, Metrolink, is the largest in the country with 99 stops across over 100km of track. The Metrolink system has been incredibly successful – offering a turn-up-and-go frequency, high levels of accessibility and comfortable, reliable services – and there remains huge potential for expansion which would help accelerate economic growth. To capitalise on this success, we need to improve and extend coverage and better integrate rail into the Bee Network – to offer seamless journeys.

Figure 1: Expanding our light rail and metro network



Expanding our light rail and metro network

Metrolink lines

7. Metrolink has expanded from two lines in its inception to eight lines today. Over time, patronage has continued to increase, alongside an increase in demand for suburban rail services. The increase in trips is not just a result of opening new lines. As with National Rail, Metrolink has seen strong growth on existing lines. Metrolink passenger numbers have now exceeded pre-pandemic levels during most weekday peaks and significantly exceeded them on weekends. This leads to a situation where demand exceeds capacity at peak times with some overcrowding.

8. One of Metrolink's particular strengths has been the growth in off-peak travel for shopping and leisure purposes. May 2024 saw the busiest month in Metrolink's 32-year history, with 4.1 million tram trips. Whilst travel patterns

and the nature of trips on our networks may have changed, the critical issue of capacity remains and growth in patronage is expected to continue (TfGM, 2024).

9. Options for expanding the network are shown in Figure 1 above. A number of potential light rail and metro extensions are being considered to assess their viability (taking into account the potential passenger demand and estimated cost of delivery) to understand and prioritise lines for delivery.

10. Expanding the coverage of Greater Manchester's light rail and metro network, with new and extended lines and new stops on existing lines, will also help accommodate planned areas of growth. This will be achieved through both increasing connectivity to the Regional Centre and orbital connectivity between Greater Manchester's towns.

New stops and stations

11. Major population or employment centres located near to existing light rail would benefit from improved access to public transport by delivering new stops and stations, enabling a greater number of people being able to access housing, leisure, employment, education and culture. Proposals for new stops at Elton Reservoir, Cop Road and Sandhills, new rail stations at Golborne and Cheadle, and a new stop on the LSM Busway at Mosley Common, are all currently in different stages of development with third party developer investment where appropriate.

New vehicles

12. In the past, crowding on the Metrolink network has been addressed by deploying additional trams in 'double' formations. However, the contract for procuring more of our current fleet of M5000 trams has now come to an end – limiting our ability to address crowding in this way. Progressing the development and procurement of the next generation of light rail and metro vehicles will therefore be vital.

Busway

13. Opened in 2016, The Leigh–Salford–Manchester Busway is complementary to our light rail system, carrying over two and a half million journeys per year and

removing the need for around half a million car journeys. There is potential to increase capacity of the busway by increasing service frequencies, new routes and stopping patterns. This will be considered as part of the area-based 'Network Reviews' (see **DP6: Bus Infrastructure**). New busway options could be considered where these services would offer significant benefits to potential users.

Tackling capacity limitations

14. To improve connectivity, we need to see a major increase in our existing light rail and metro capacity for travel to and through the Regional Centre. Our regional centre has a limited number of routes, which take up a space on a finite street network, to allow light-rail vehicles to travel in, out and through the city centre.

15. Exploring additional capacity that may be required at critical parts of the Metrolink network will become increasingly important as passenger growth continues and pressures on the network increase. A particular focus is the critical trunk section of the network between Cornbrook and St Peter's Square, which currently restricts aspirations for high frequency services to

more destinations. Improving capacity within the regional centre will involve incremental improvements (track, signalling, tram vehicle improvements, road vehicle routing and junction improvements etc.) but longer term will also need consideration of more radical improvements such as a Metro tunnel.

16. Capacity pinch points exist at locations where light and heavy rail services cross paths at flat junctions, greatly limiting capacity and causing journey time performance challenges. There are also key capacity issues, including but not limited to the longstanding issues on the Castlefield and Oxford Road Corridors in central Manchester. These issues lead to infrequent and unreliable suburban rail services on some existing lines (see **DP19: Rail integration**, and **DP20: Regional and national rail services**).

17. Opportunities to increase capacity are being explored, such as the viability of tunnelled options for Metro services. This could enable new connections between existing light rail lines, enhancing those services converging on the regional centre and, in combination with the development of tram-train technology, could serve to release capacity on the rail network (see Tram-Train section below). Underground services could also provide new interchange opportunities at key locations – such as Piccadilly or Victoria Stations. Northern Powerhouse Rail proposals would also benefit from improved local connections to services which continue outside of the city-region, aiding the growth of more local economies holistically across the North of England.

Tram-train technology

18. As part of the integrated transport network, continuing to develop tram-train technology becomes increasingly important. Tram-train can help to join up the light and heavy rail networks. It could also help release vital capacity on the heavy rail network, notably at city-centre stations, by allowing services to transfer from Network Rail track infrastructure onto Metrolink's light rail network– thereby reducing the number of vehicles seeking to stop at city-centre heavy rail stations and/or move through the congested city centre heavy rail network thus improving reliability of rail services.

19. Adopting tram-train technology, coupled with integrated fares, ticketing and passenger information, means that modal segregation – between light and heavy rail – becomes less relevant for the passenger. Therefore, vehicles which can operate on both light and heavy rail networks becomes paramount to ensure we can react dynamically in areas where capacity is restrained. If track capacity issues in the city-centre and across the network are not addressed, the city-centre will continue to restrict our ambitions for expansion and the wider network will suffer, causing delays to people's journeys and reducing local and national productivity.

20. A number of lines have been identified as long-term opportunities for Tram-Train, such as the Oldham-Rochdale-Heywood-Bury link using both the existing heavy rail and light rail networks to create improved orbital connectivity between these towns. Services from Manchester to Glossop, Hadfield, and Marple, as well as improved connections to Manchester Airport have also been identified for the deployment of tram-train technology.

21. Development of the 'Metrolink Next Generation Vehicles and Tram-Train Pathfinder' programme will be crucial to addressing capacity challenges, implementing successful ways of working with the heavy rail industry and developing viable business cases for tram-train schemes on a larger scale to serve more areas of Greater Manchester.

Integrating with the Bee Network

22. A number of policies within the LTP will also expand the connectivity of our light rail network through enabling smoother seamless journeys across different modes as expanded in **DP1: Delivering the Bee Network.**

References

TfGM (2024) 'Draft Rapid Transit Strategy' accessible at: https://democracy.greatermanchester-ca.gov.uk/documents/s33156/BNC%2020240725%20Draft%20Greater%20Manchester%20Rapid%20Transit%20Strategy%20-%20Appendix%201-compressed.pdf (accessed on 08/11/2024)

Resolution Foundation (2023) A tale of two cities (part 2): A plausible strategy for productivity growth in Greater Manchester and beyond, accessible at: https://economy2030.resolutionfoundation.org/wp-content/uploads/2023/09/A-tale-of-two-cities-p2-Manchester.pdf (accessed on 19/11/2024)