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METROLINK FOR THE MASSES

An exploration of the social impacts of extending Greater Manchester's light rail network into Stockport



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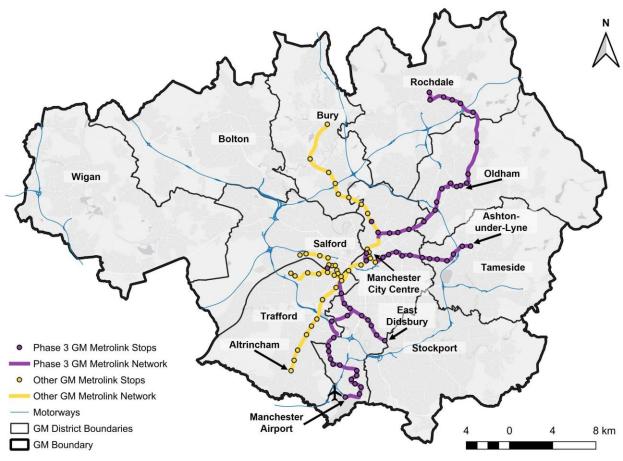
1. Introduction

1.1 What is Metrolink?

The Greater Manchester Metrolink, hereafter referred to as "Metrolink", is the largest light rail system in the UK, comprising a network of 99 stops and 103 km of track (KeolisAmey, 2023). The Metrolink network is operated by KeolisAmey on behalf of Transport for Greater Manchester (TfGM) and spans eight lines across seven local authorities, connecting important regional centres including Bury, Rochdale, Oldham, Ashton-under-Lyne and Altrincham to Manchester city centre. Manchester Piccadilly Station and Manchester Victoria Station are serviced by Metrolink and are connected to Manchester Airport via a line that runs through Wythenshawe. Wigan, Bolton and Stockport are the only local authorities in Greater Manchester not connected to the Metrolink network, with the East Didsbury line terminating on the border of the Stockport local authority.

Figure 1 illustrates the existing Metrolink network. Metrolink Phase 3 was a major upgrade to the network comprising new lines to Manchester Airport, East Didsbury, Ashton-under-Lyne, Oldham and Rochdale, alongside the creation of a new stop at MediaCityUK on the Eccles line and a Second City Crossing in Manchester city centre to increase resilience at the heart of the network (TfGM, 2016).

Figure 1: Existing Metrolink Network



Source: data.gov.uk (2022)

In the financial year ending March 2020, prior to the onset of the Covid-19 pandemic, 44.3 million journeys were made using Metrolink. This figure decreased to 10.3 million journeys at the height of Covid-19 regulations but has since recovered with 36 million passenger journeys (81% of the pre-pandemic patronage) recorded in the financial year ending March

2023 (Gov.uk, 2023). Data from January 2023 suggests that the number of commuter trips has recovered to approximately 88% of pre-pandemic patronage, with the number of trips undertaken in the AM peak between Tuesday and Thursday typically exceeding 100% of the pre-pandemic figure (Manchester City Council, 2023).

The Greater Manchester Transport Strategy 2040 identifies that Metrolink is a highly popular mode of transport in Greater Manchester due to the network's accessibility, speed, and frequency of service. This has been achieved through a high degree of segregation from other traffic. Between July and August 2023, 89.9% of trams on the network departed less than two minutes late and 99% of planned miles were operated with only 0.3% of journeys cancelled (TfGM, 2023). Trams are typically scheduled at a stop every 6-12 minutes (Monday to Saturday) and every 15 minutes (Sunday). Operating hours are typically between 06:00 – 00:00 (Monday to Thursday), 06:00 – 01:00 (Friday to Saturday) and 07:00 – 00:00 (Sunday).

Our Five Year Transport Delivery Plan 2021-2026 notes that as of July 2019, a contactless tap-on, tap-off ticketing system has been in place to enable a daily fare-cap on journeys across the network, with physical tickets also available to purchase at Metrolink stops. The daily fare-cap has been enabled by a zonal fare structure across Greater Manchester.

1.2 Aim and Objectives

The overarching aim of this paper is to explore how the social impacts of a Metrolink extension into Stockport could differ between two hypothetical routes. The objectives for this paper are as follows:

- **Objective 1**: To explore whether the existing Metrolink network has generated positive environmental and social impacts.
- **Objective 2**: To identify two hypothetical Metrolink extension routes into Stockport that may result in differential social impacts.
- **Objective 3**: To conduct a thematic spatial analysis informed by stakeholder engagement and policy review to understand the social opportunities and challenges facing both routes.

2. How Did Metrolink Phase 3 Perform?

The most recent extension to the Metrolink network was the Trafford Park line which opened in March 2020. However, due to the recency of the line opening and prevalence of the Covid-19 pandemic, it has been challenging to determine the impacts of this development. Metrolink Phase 3 therefore serves as a useful case study for investigating the environmental and social impacts of the light rail network. The Metrolink Phase 3 Monitoring and Evaluation Second Report was published in March 2021 by TfGM and follows on from initial findings presented in an Early Findings Report published in 2016. The evidence provided in the second report pre-dates the impact of Covid-19 and is therefore a reliable assessment of Metrolink's performance.

2.1 Environmental Impacts

Metrolink is operated using a combination of renewable energy sources, namely wind, solar and nuclear power. This enables Metrolink to effectively operate as a zero carbon transport mode.

Metrolink Phase 3 has resulted in a significant reduction in carbon emissions. In a sample of over 3,000 respondents, 45.7% of Phase 3 users (and 57.6% of East Didsbury line users) stated that they had a car available to travel but had elected to use the tram. In the absence of the Phase 3 extensions, 18% of Metrolink users stated that they would drive instead, which equated to approximately 38.8 million car kilometres removed from the road network in 2019/20. This mode switch is estimated to have reduced nitrogen oxide (NO_X) emissions by 12.8 tonnes in 2019/20. Estimates also suggest that Phase 3 contributed to saving 6,700 tonnes of CO₂ equivalent in 2019/20¹.

2.2 Social Impacts

Interviews with businesses in proximity to Metrolink Phase 3 stops have indicated that the perception of their site has improved against multiple indicators since the arrival of Phase 3. This message was reinforced during a stakeholder engagement process, wherein stakeholders acknowledged the positive contribution Metrolink Phase 3 has made to the regeneration of corridors. Analysis has also demonstrated that areas within one kilometre of new Metrolink stops experience an average property value uplift of 6.5% relative to control areas.

A public transport model was used to calculate the impacts of Phase 3 on access to healthcare, employment and colleges of further education. Modelling has identified that door-to-door access using public transport has improved by at least 10% for:

- 19.8% of the Greater Manchester population accessing major hospitals.
- 18.2% accessing employment.
- 18.8% accessing further education.

For the population in the lowest decile of deprivation in Greater Manchester, accessibility improvements were more pronounced. Modelling has identified that door-to-door access using public transport has improved by at least 10% for:

- 29.5% of the lowest deprivation decile of the Greater Manchester population accessing major hospitals.
- 30.5% accessing employment.
- 27.8% accessing further education.

A survey of 1,023 residents in Wythenshawe on the Manchester Airport line identified that 52% of those travelling to the city centre prefer to use Metrolink. However, 35% of the sample do not view the tram as an affordable means of travel, with employers also highlighting cost as a barrier for non-users. For Wythenshawe residents making a trip to the city centre, a single day of unlimited, any time travel would be priced at £7.10 or £4.90 for unlimited off-peak travel (after 9:30am on weekdays and all day on weekends) (TfGM, 2020).

¹ This does not include embedded carbon from the provision of infrastructure and trams.

2.3 Summary

The post-opening monitoring and evaluation of Metrolink Phase 3 has demonstrated that Greater Manchester's light rail network has the potential to shift the behaviour of car users towards adoption of public transport. As Metrolink is zero carbon in operation, this mode shift represents a substantial environmental benefit over private car use. However, since 82% of survey respondents indicated that they would have used a mode of transport other than driving in the absence of Phase 3, it can be assumed that Metrolink is largely a substitute for other public transport and active travel options.

Metrolink Phase 3 has also delivered significant regeneration benefits through an uplift in local property values in proximity to new stops. Moreover, there has been a disproportionately positive impact on the accessibility of deprived communities due to Phase 3. Despite this, businesses and residents have indicated that the price of travel on Metrolink is unaffordable. This is likely to be a salient issue for more deprived communities and may be resulting in prospective users from low income backgrounds being priced out of Metrolink despite the additional accessibility it generates.

3. Route Identification

3.1 Background

Given that Metrolink Phase 3 has delivered environmental and social benefits, the focus of this paper now turns to the transferability of these positive social impacts. An optimal case study to address this focus is consideration of extending the Metrolink into Stockport.

The Stockport Rail Strategy identifies that Stockport Council has aspired to connect the Metrolink network into Stockport since the light rail system became operational in the early 1990s. At present, there are strong radial links between Manchester city centre and Stockport via the West Coast Main Line rail service. However, despite important economic linkages to Trafford and Tameside, orbital public transport options from Stockport are limited.

Consequently, two hypothetical Metrolink extension routes into Stockport will be considered in parallel to investigate how routing decisions can influence the social impacts of a transport intervention. These routes are defined in greater detail over the course of this chapter but are provisionally as follows:

- Route A: Manchester city centre to Stockport town centre via Belle Vue a hybrid route combining radial and orbital elements.
- Route B: East Didsbury to Stockport town centre an orbital route connecting into the existing East Didsbury line.

To support the definition of these routes, this chapter will explore:

- References in strategy and policy documents to existing proposals for a Metrolink extension into Stockport.
- Existing physical infrastructure and barriers.
- Index of Multiple Deprivation.

3.2 References in Strategy and Policy Documents

There is a body of general support backing the extension of Metrolink into Stockport. *Policy T3* of Manchester's Local Development Core Strategy highlights that Manchester City Council is in favour of supporting proposals that contribute to a sustainable transport network, including aspirations to extend the Metrolink network into Stockport. Likewise, the Stockport Local Development Framework Core Strategy notes that orbital public transport links are poor across the borough and Stockport would benefit from enhancements.

The Stockport Council Plan 2023-24 presents Stockport Council's development ambitions for this financial year. Recognition is given to "green, inclusive, resilient and safe" transport infrastructure which could be exemplified through the delivery of a Metrolink business case. Moreover, the benefits of Metrolink in Stockport have been outlined in a Stockport Council Communities and Transport Scrutiny Committee meeting entitled Next Stop Stockport. Identified benefits of an extension included supporting town centre plans; connecting Stockport to employment hubs in the Regional Centre and MediaCityUK; and providing access to opportunities without reliance on private vehicles.

The appeal of Metrolink has also been bolstered by the development of tram-train technology. Our Five Transport Delivery Plan 2021-2026 highlights that tram-train technology would enable new light rail vehicles to operate on both the existing on-street light rail line and the heavy rail line currently occupied by trains. The Stockport Rail Strategy posits that tram-train technology would facilitate the use of underutilised rail lines, thereby reducing the capital costs of Metrolink extensions.

3.2.1 Route A (Manchester to Stockport)

The Greater Manchester Transport Strategy 2040 identifies several routes that have the potential for tram-train technology, including Manchester to Marple. Our Five Year Transport Delivery Plan 2021-2026 highlights that this option will be developed over the next five years, in addition to consideration of a tram-train route from Stockport to Tameside via Denton and Reddish. The existing Stockport to Ashton-under-Lyne rail line, which routes through Denton and Reddish, has been without a regular passenger service since the early 1990s.

The Stockport Rail Strategy indicates that TfGM have previously considered a Manchester to Marple and Stockport town centre line via Belle Vue. Tram-train technology on the Manchester to Marple line would replace local rail services and provide a more frequent service that connects directly into Manchester city centre. Previous considerations have also suggested that the Manchester to Marple line could branch off into Stockport town centre using the Reddish South line, which is consistent with Stockport Council's ambition to improve services along this route.

The proposed Manchester to Marple line would operate from Manchester Piccadilly Station on the east side of the city centre. This is consistent with the aspiration to better integrate Metrolink and city-centre rail stations, as outlined in the City Centre Transport Strategy to 2040. Two of the main rail stations in Manchester city centre are already well-integrated into the Metrolink network with Manchester Piccadilly Station and Manchester Victoria Station operating as interchanges. However, Manchester Oxford Road Station operates separately from the Metrolink network despite being located only c.500m away from St Peter's Square (the primary city centre Metrolink interchange).

The University of Manchester (UoM), Manchester Metropolitan University (MMU), the Royal Northern College of Music (RNCM) and Manchester Royal Infirmary (MRI) are located along the same corridor to the south of St Peter's Square and Manchester Oxford Road Station.

Together, 'Corridor Manchester' is home to more than 70,000 students, 60,000 employees and is forecast to become one of the top five innovation districts in Europe. The Corridor Manchester Strategic Vision to 2025 outlines that the area has the "densest, most diverse and distinctive collection of cultural facilities outside London". There is an ambition to ensure that Corridor Manchester improves its contribution to economic and social inclusion, particular in deprived surrounding areas such as Rusholme and Longsight.

3.2.2 Route B (East Didsbury to Stockport)

Our Five Year Transport Delivery Plan 2021-2026 highlights that TfGM are planning to develop options for a Metrolink or tram-train extension of the existing East Didsbury line into Stockport over the next five years. *Core Policy CS10* of the Stockport Local Development Framework Core Strategy identifies that the Council will safeguard land to deliver a Metrolink extension to Stockport town centre from East Didsbury, including the provision of a new station serving Adswood.

The Strategy also notes that the development of a public transport interchange in Stockport town centre will be 'future-proofed' to accommodation the anticipated extension of Metrolink into Stockport. Construction of Stockport Interchange commenced in August 2021, as captured in **Figure 2**, and will deliver "state-of-the-art transport facilities and improved links between the interchange and train station" (Stockport Council, 2023).

Likewise, Next Stop Stockport outlines an ambition for a Metrolink route from East Didsbury into Stockport town centre. This could then subsequently link into orbital routes to Manchester Airport and Ashton-under-Lyne, as well as radial extensions to Marple and Hazel Grove. Finally, the Stockport Rail Strategy suggests that creation of an East Didsbury to Stockport link would provide much-improved connections between Stockport and MediaCityUK and improve access to Manchester city centre from Edgeley and Adswood.

Figure 2: Stockport Interchange





Source: Stockport Council (2023)

3.3 Physical Infrastructure and Barriers

Figure 3 provides an initial illustration of *Route A* and *Route B* relative to the existing Metrolink and rail network. Contours and surface water have also been visualised to identify any physical barriers to either route.

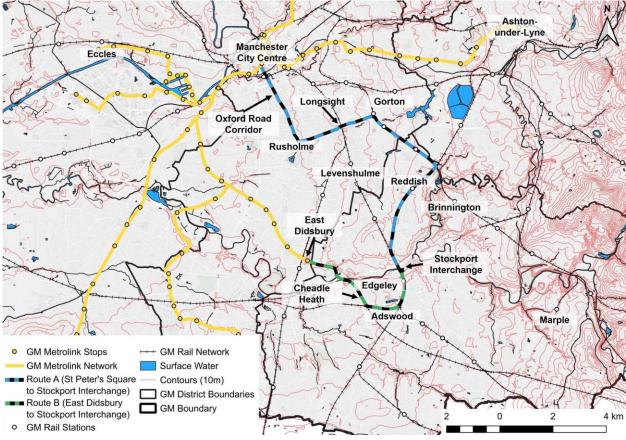


Figure 3: Greater Manchester Rail Network and Physical Features

Source: data.gov.uk (2022); OS Open Zoomstack (2023)

Route A proposes a hybrid orbital and radial connection from Manchester city centre to Stockport town centre. The route would connect into Manchester city centre via St Peter's Square and extend radially south-east along the Oxford Road Corridor to connect into Manchester Oxford Road Station and Corridor Manchester. Between the Oxford Road Corridor and Rusholme, there is a diverse collection of shops, food outlets and cultural institutions called the 'Curry Mile'. The majority of the Oxford Road Corridor is characterised by bus priority with segregated cycle lanes, whereas the Curry Mile is subject to high levels of vehicular traffic and congestion, particularly during peak hours. This is captured in **Figure 4**.

Route A would then connect from Rusholme to the existing Belle Vue Station. This stretch is located along the A6010 Dickenson Road and would require major traffic relocation or tunnelling to be feasible. From Belle Vue Station, tram-train technology would operate to carry Metrolink south-east along the existing Manchester to Marple rail line, before joining the Stockport to Tameside rail line and heading south into the Stockport Interchange terminus.

Route B would also terminate at Stockport Interchange. The existing East Didsbury line would be extended to the east, travelling along a minor road before crossing the river Mersey and connecting into the existing freight rail line running past Adswood, Edgeley and Stockport Station through the use of tram-train technology.

Aside from traffic reallocation concerns along the A6010 Dickenson Road, *Route A* is relatively flat and would likely have limited severance impacts. Likewise, *Route B* is flat and would not have to contend with major traffic reallocation. However, structural work would be required to traverse the river Mersey.

Figure 4: The Curry Mile and Oxford Road Corridor





Source: Google Earth (2023)

3.4 Index of Multiple Deprivation

The Indices of Multiple Deprivation (IMD) are a collection of measures published by the Ministry of Housing, Communities and Local Government (MHCLG) that quantify relative deprivation across England. The overall deprivation ranking is captured by the index of multiple deprivation.

Figure 5 illustrates the index of multiple deprivation at a Lower layer Super Output Area (LSOA) level around the two routes. The majority of LSOAs adjacent to *Route A*, particularly around the Longsight and Gorton area, are in the top 10% most deprived LSOAs in England. Deprivation is also prevalent around Stockport Interchange. Whilst the neighbourhoods adjacent to *Route B* are relatively less deprived than *Route A*, Adswood and Edgeley are still characterised by high levels of deprivation.

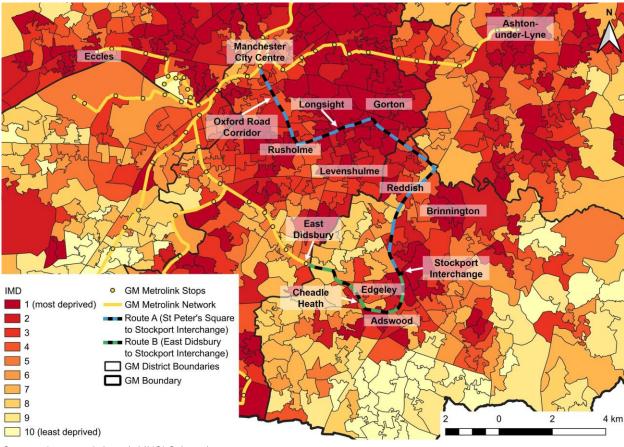


Figure 5: Index of Multiple Deprivation

Source: data.gov.uk (2022); MHCLG (2022)

The disparity in index between the two routes is beneficial for investigating the transferability of social impacts. The two routes are likely to serve populations characterised by different age groups, disabilities, health outcomes, education levels and economic status. This means that the routing decision for a Metrolink extension into Stockport could significantly influence which social impacts arise. Population characteristics will therefore be explored further in **Chapter 5**.

3.5 Summary of Routes

Two hypothetical routes extending the Metrolink into Stockport have been identified in this chapter and are captured in **Figure 6**.

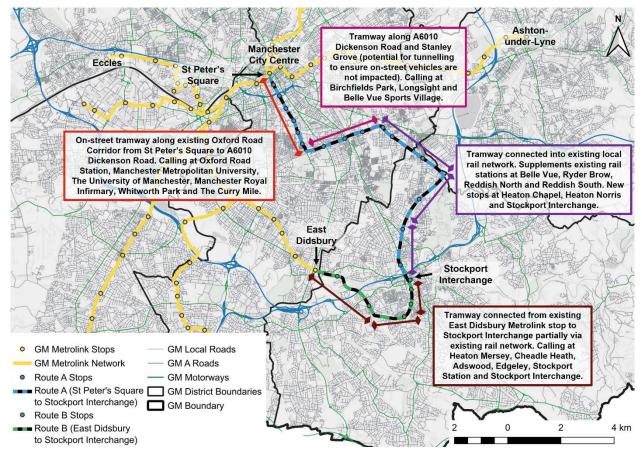


Figure 6: Metrolink Extension Routes and Stops

Source: data.gov.uk (2022); OS Open Roads (2023)

Illustrative stops have also been identified to align with existing rail stations and key trip generators such as Corridor Manchester. A full list of these stops for both routes was created to inform TRACC analysis and can be viewed in **Appendix 8.2**.

Route A is approximately 14km long and would take c.40½ minutes to complete end-to-end, factoring in a 30 second stop time. Based on a Google Maps search, this is quicker than the St Peter's Square to Rochdale town centre journey (c.54 minutes) but slower than the St Peter's Square to Altrincham journey (c.26 minutes).

Route B is approximately 5.7km long and would take c.13 minutes to complete end-to-end, factoring in a 30 second stop time. If an individual boarded the Metrolink at St Peter's Square and travelled to Stockport via East Didsbury, the journey time would be c.39 minutes.

The identification process for these routes has considered multiple factors to ensure the hypothetical routes are largely realistic. However, these routes may not deliver against other important factors including cost, operation and public and stakeholder acceptability.

4. Stakeholder Engagement

4.1 Method

Stakeholder engagement was conducted to inform the possible social impacts of both routes. A distribution list of 131 stakeholders was compiled. To ensure compliance with GDPR, named individuals and contact details in the distribution list will not be made accessible; however, a summary of the organisations and stakeholder groups is outlined below:

- Councillors across wards in Manchester and Stockport that would be impacted by the development of either route.
- Senior employees at Manchester City Council, Stockport Council and TfGM.
- Transport operators and research bodies.
- Equality groups including the panels ran by the Greater Manchester Combined Authority².
- The Environment Agency and Natural England.
- UoM, MMU and RNCM.
- Nurseries, schools and further education colleges within a 15 minute walk of the hypothetical Metrolink stops.
- Hospitals in Manchester and Stockport.

A set of stakeholder engagement information packs were produced and circulated via email. Stakeholders were assigned to a tailored information pack based on their type (political, equality group, education, etc.) and which route would impact them (*Route A, Route B*, both routes).

Stakeholders were provided with a background of the existing Metrolink network and an explanation of this research project. They were then asked to identify what impact delivery of the route(s) would have on the following themes:

- Method of travel and mode switch.
- Local accessibility of public transport.
- Public realm improvements and regeneration.
- Support for those with disabilities or belonging to marginalised social groups.
- Safety of streets.
- Employment, education and health opportunities.
- Crime.

A sample copy of an engagement pack is attached in **Appendix 8.1**. Stakeholders were given eight working days to respond to the request for engagement.

² Equalities - Greater Manchester Combined Authority (greatermanchester-ca.gov.uk)

4.2 Responses

The circulation of stakeholder information packs on 21st November unknowingly coincided with an article published on the BBC News home page that same day, titled "Stockport calls for 'action, not words' on long-awaited tram link" (BBC, 2023). The article outlined growing frustrations within Stockport Council over the delayed delivery of a Metrolink extension into Stockport.

Following the article, TfGM advised sending a follow-up email to stakeholders with an updated disclaimer, specifying that this research project is for non-commercial purposes and is not representative of the views of, or indicative of any plans currently being developed by, organisations in Greater Manchester. The follow-up request highlighted both the politically sensitive nature and the importance of this research project.

A total of two responses were received in the allotted timeframe. Several prospective stakeholders expressed an inclination to engage but indicated that the response window was too short. The engagement timeframe is a feature which could be easily improved in a future study.

5. Spatial Analysis

5.1 Method

Basemap TRACC software was used to develop accessibility isochrone maps that capture the 20 minute walkable catchment (in five minute intervals) around the stops on both routes. TRACC analysis assumed a 07:00 to 09:00 peak period using OS Open Roads and a walk speed of 4.8km/h in line with Department for Transport guidance. An indicative inbound and outbound timetable was required for each route and can viewed in **Appendix 8.2**.

Figure 7 illustrates the walking accessibility isochrones of both routes. The 15-20 minute catchment area was used as a baseline for determining the study area of LSOAs for analysis.

Spatial analysis was conducted using *QGIS* software and Census 2021 data. Given that the Census 2021 was conducted at the height of the Covid-19 pandemic, data should be interpreted with caution and may not reflect current trends.

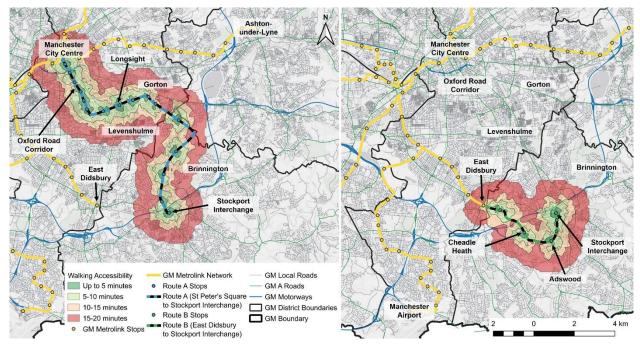


Figure 7: TRACC Walking Accessibility Isochrones

Source: data.gov.uk (2022); OS Open Roads (2023)

5.2 Demographics

5.2.1 Population Density

The Places for Everyone Joint Development Plan identifies that population density is one of the main factors supporting the expansion of public transport services. **Figure 8** therefore illustrates the population density within the walking catchments of both routes.

LSOAs around *Route A* exhibit a greater population density than those around *Route B*, particularly in the Rusholme and Levenshulme area. *Route A* has a catchment of c.271,000 residents within a 20-minute walk of a Metrolink stop. Conversely, *Route B* has a catchment of c.81,500 residents, over three times less. This is partially reflected in the length of the routes but also illustrates greater densification closer to Manchester city centre.

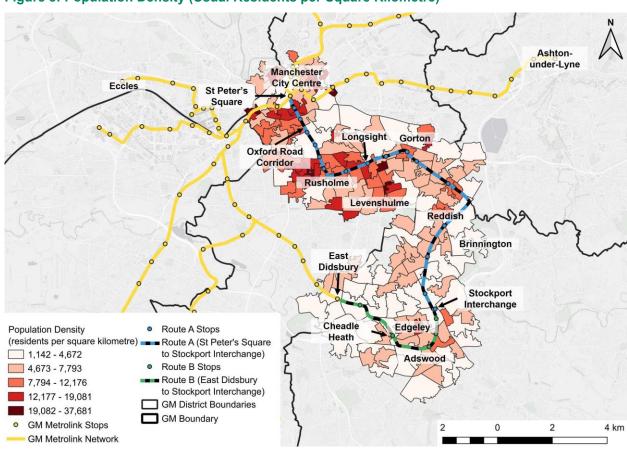
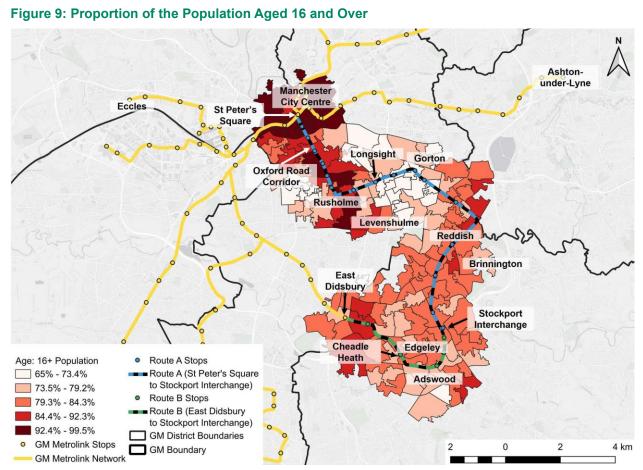


Figure 8: Population Density (Usual Residents per Square Kilometre)

Source: data.gov.uk (2022); ONS (2023)



Source: data.gov.uk (2022); ONS (2023)

5.2.2 Age

Figure 9 illustrates the proportion of the population aged 16 and over (working age) within a 20-minute walking catchment of both routes. The Oxford Road Corridor has the greatest proportion of working age population, reflecting the employment and education hotspots in the area. By contrast, the areas to the north and south-east of Longsight have greater proportions of children which may be a critical factor influencing deprivation.

Figure 10 illustrates the proportion of the population aged 65 and over. *Route B*, and the Stockport borough as a whole, has a much greater proportion of people aged 65 and over compared to Manchester. *Policy 5* of the Greater Manchester Transport Strategy 2040 recognises that an accessible transport network will be crucial to support residents regardless of their age or mobility.

Ashtonunder-Lyne Manchester City Centre St Peter's Square Longsight Gorton Oxford Road Corridor Rusholme Levenshulme Reddish Brinnington Fast Didsbur Stockport Interchange Cheadle Edgeley Heath Age: 65+ Population Route A Stons Route A (St Peter's Square 0% - 3.7% to Stockport Interchange) 3.8% - 8.2% Route B Stops 8.3% - 12.9% Route B (East Didsbury 13% - 19.2% to Stockport Interchange) 19.3% - 31% GM District Boundaries GM Metrolink Stops 4 km GM Boundary GM Metrolink Network Source: data.gov.uk (2022); ONS (2023)

Figure 10: Proportion of the Population Aged 65 and Over

5.2.3 Gender

Figure 11 illustrates the proportion of females within the population of the catchment area. There are no major discrepancies between the two routes.

The Greater Manchester Streets for All Strategy highlights the importance of considering gender when designing for inclusive public transport. Women are more likely than men to feel unsafe when travelling at night in Greater Manchester. There is a need to design inclusive streets which work to ensure all people feel safe enough to choose public transport over private car travel. The public realm surrounding the transport corridor, including adequate street lighting, is an important factor in ensuring females' personal safety.

Ashtonunder-Lyne Manchester **City Centre Eccles** St Peter's Square Longsight Gorto Oxford Road Corridor Rusholme Levenshulme Reddish Brinnington Didsbury Stockport Interchange Cheadle Edgeley Gender: Female Route A Stops ■ Route A (St Peter's Square 38.2% - 44% Adswood to Stockport Interchange) 44.1% - 47.5% Route B Stops 47.6% - 50.3% ■ Route B (East Didsbury 50.4% - 52.2% to Stockport Interchange) 52.3% - 54.5% GM District Boundaries GM Metrolink Stops 4 km GM Boundary GM Metrolink Network

Figure 11: Female Proportion of the Population

Source: data.gov.uk (2022); ONS (2023)

5.2.4 Disability

Figure 12 identifies the proportion of the population who are classed as disabled under the Equality Act and are limited in day-to-day activities. There is a notably high proportion of disabled individuals around Stockport Interchange and Adswood. Reddish also exhibits a relatively high proportion of disabled individuals.

A stakeholder response was received from a representative of the Greater Manchester Disability Design Reference Group. They highlighted that disabled people generally prefer Metrolink as a method of transport because it is frequent, quicker, more reliable and cannot detour. Metrolink also offers a sense of familiarity as the vehicles and platforms are consistent across the network, thereby reassuring anxious travellers, assisting visually impaired people and aiding wheelchair users in boarding and alighting. Metrolink is particularly accessible as it has clear visual and audio stop announcements.

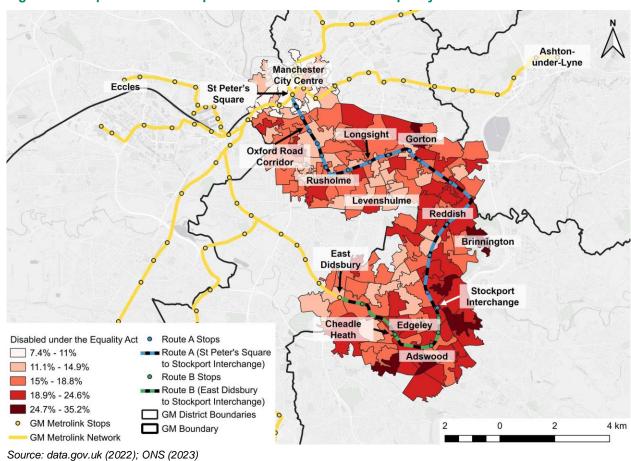


Figure 12: Proportion of the Population Disabled Under the Equality Act

5.3 Social Infrastructure

5.3.1 Health

Figure 13 illustrates the health deprivation and disability IMD domain. From St Peter's Square to Reddish North, *Route A* is surrounded by LSOAs ranked in the top 20% most deprived in England. Deprivation is also prevalent around Stockport Interchange. For *Route B*, health outcomes are comparatively better from East Didsbury to Cheadle Heath.

There are numerous General Practices (GPs) located within a 20 minute catchment of *Route A*, alongside access to the MRI on Oxford Road Corridor. Although *Route B* does not provide this level of healthcare accessibility between East Didsbury and Stockport Interchange, it does connect Edgeley and Adswood to GPs and hospitals along the existing East Didsbury line.

Ashtonunder-Lyne Manchester City Centre St Peter's Square Gorton Oxford Road Corridor Rusholme Levenshulme Reddish Brinnington East GM NHS GP Practices Health Deprivation and Disability IMD Stockport 1 (most deprived) GM Metrolink Stops Interchange 12 **GM Metrolink Network** Cheadle Edgeley 3 Route A Stops Heath Route A (St Peter's Square to Stockport Interchange) Adswood Route B Stops Route B (East Didsbury 7 to Stockport Interchange) 8 **GM District Boundaries** GM Boundary 10 (least deprived) 4 km GM Hospitals

Figure 13: IMD Domain - Health Deprivation and Disability

Source: NHS (2020); data.gov.uk (2022); MHCLG (2022)

5.3.2 Education

Source: data.gov.uk (2022); gov.uk (2023); ONS (2023)

Figure 14 shows the proportion of the working age population with no qualifications. There is a clear disparity between the area around Longsight and Gorton – with high proportions of unqualified adults – and the area between East Didsbury and Cheadle Heath.

Similar to the health analysis, the catchment area of *Route A* covers numerous schools at all education levels, including higher education facilities. *Route A* could connect the relatively low-skilled neighbourhoods around Longsight and Gorton with educational opportunities in the Manchester Corridor.

Ashton-University of Manchester, under-Lyne Manchester Manchester Metropolitan City Centre Eccles St Peter's University, Royal Northern College of Music Square Longsight Oxford Road Corridor Rusholme Levenshulme Reddish Brinnington East Didsbury Stockport Interchange Education: Aged 16+ No Qualifications OM Metrolink Stops Edgeley Cheadle 0.8% - 6.7% **GM Metrolink Network** Heath 6.8% - 13.4% Route A Stops 13.5% - 19.1% Route A (St Peter's Square Adswood to Stockport Interchange) 19.2% - 25.8% Route B Stops 25.9% - 36.8% Route B (East Didsbury to Stockport Interchange) ★ GM Primary Schools GM District Boundaries ★ GM Secondary Schools GM Boundary ★ GM 16+ Schools

Figure 14: Proportion of the Working Age Population with No Qualifications

5.4 **Economic Activity**

Source: data.gov.uk (2022); ONS (2023)

Figure 15 illustrates the unemployment rate within the catchment area. Unemployment is substantially higher around the Gorton and Longsight area, which suggests that there could be intersectionality with the high proportions of the population possessing no qualifications. By contrast, unemployment is very low along most of *Route B*.

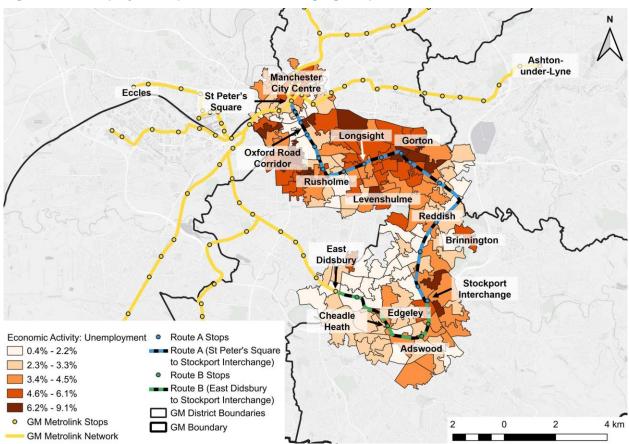


Figure 15: Unemployed Proportion of the Working Age Population

The Greater Manchester Transport Strategy 2040 indicates that affordability of public transport is an issue for part-time workers and residents on limited incomes, many of whom rely on public transport. **Figure 16** showcases the IMD domain of income deprivation, which again highlights deprivation along a large section of *Route A* and comparatively higher incomes along *Route B*. This suggests that the population catchment around *Route B* is more likely to be able to afford to travel using Metrolink; however, this may not be targeting the neighbourhoods most in need of investment.

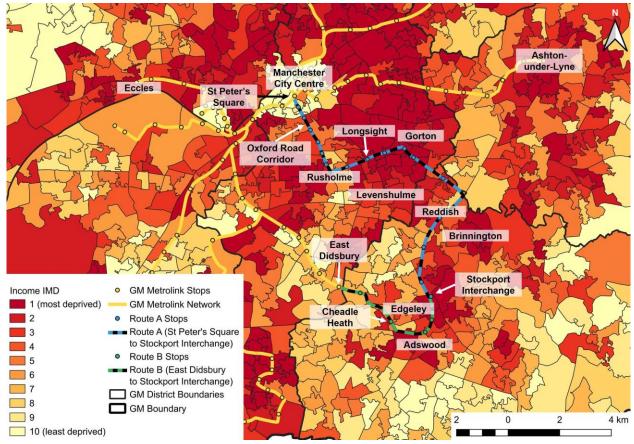


Figure 16: IMD Domain - Income Deprivation

Source: data.gov.uk (2022); MHCLG (2022)

5.5 Regeneration and Public Realm

A crucial aspect of investing in public transport is the ability to stimulate regeneration along the corridor. Metrolink has a proven record with uplifting property values to generate economic regeneration. However, an additional consideration for regeneration is the ability to create benefits for the wider public realm. The Greater Manchester Transport Strategy 2040 identifies an ambition to create an attractive public realm through visually interesting streets, safer neighbourhoods and enhanced social interaction. The Manchester Cultural Ambition 2016 – 2026 seeks to enhance this by offering a greater cultural experience for lower socio-economic groups, particularly by improving transport provision to make it easier for Greater Manchester residents to access cultural institutions.

6. Conclusions

This research paper has sought to explore the social impacts of extending Metrolink into Stockport by comparing two routes:

- Route A a hybrid radial/orbital extension from St Peter's Square (Manchester city centre) into Stockport Interchange.
- Route B a direct, orbital extension from the existing East Didsbury line into Stockport Interchange.

The analysis has demonstrated that the social impacts of Metrolink extensions are contingent on a range of factors including demographics of the population, social infrastructure and economic activity. *Route A* presented the prospect of connecting deprived communities with cultural and employment opportunities, whereas *Route B* identified a greater disabled and elderly population whose transport needs could be served by Metrolink.

At present, there is no definitive answer on what social impacts a Metrolink extension into Stockport could deliver. The success of replicating a transport intervention, even one that has previously demonstrated positive environmental and social impacts, will ultimately be contingent on understanding the characteristics of the local people and place that it intends to serve.

7. References

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8. Appendix

8.1 Stakeholder Engagement Information Pack

Dear Sir or Madam,

Thank you for accessing this Information Pack. The purpose of this document is threefold:

- To provide a background of the existing Transport for Greater Manchester (TfGM)
 Metrolink network.
- To explain the research being undertaken on behalf of the Transport Planning Society.
- To generate a list of themes and impacts that should be considered in your response to this engagement process.

Existing Metrolink Network

The Greater Manchester Metrolink network is the largest light rail system in the UK, comprising a network of 99 stops along 103km of track. Metrolink is a highly popular mode of travel in Greater Manchester and enables approximately 40 million trips per annum with services that are "accessible, fast, and frequent with a high degree of segregation from other traffic"³.

The Metrolink network is illustrated in **Appendix 1**. Trams run through seven of the ten Greater Manchester local authorities, connecting Manchester City Centre to important regional centres including Salford, Bury, Rochdale, Oldham, Ashton-under-Lyne, and Altrincham. Manchester Piccadilly Station and Manchester Victoria Station are serviced by Metrolink and are connected to Manchester Airport via a line that routes through Wythenshawe.

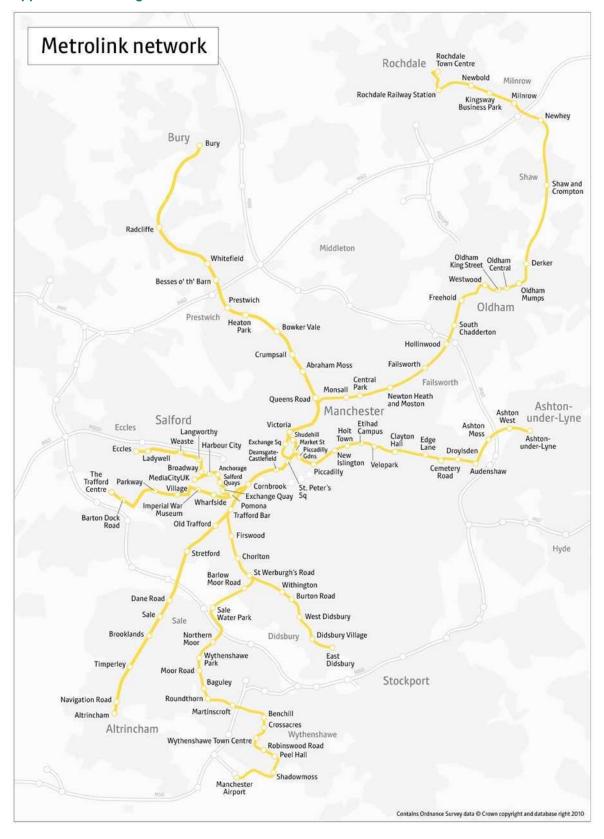
Trams are typically scheduled at a stop every 6-12 minutes (Monday to Saturday) and every 15 minutes (Sunday) with frequency dependent on how many lines run through that stop. Operating hours are typically between 06:00-00:00 (Monday to Thursday), 06:00-01:00 (Friday and Saturday) and 07:00-00:00 (Sunday). Metrolink platforms and trams are designed to be accessible to individuals with mobility impairments. A contactless tap-on, tap-off ticketing system is in place with physical tickets also available for purchase at tram stops.

Metrolink does not currently run through to Stockport town centre. The closest line to Stockport terminates at East Didsbury.

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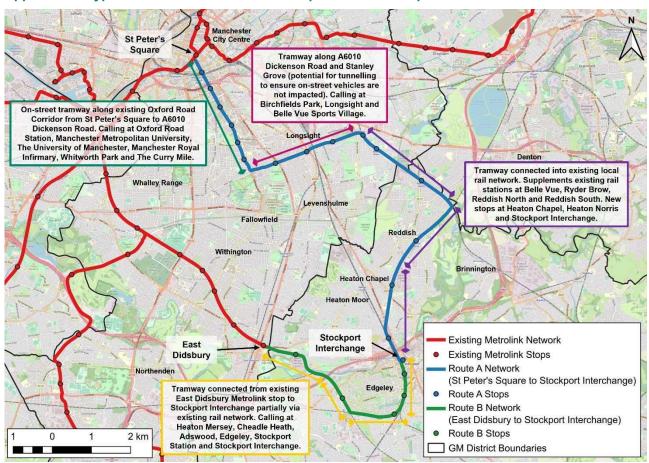
³ Greater Manchester Transport Strategy 2040, TfGM.

Appendix 1: Existing Greater Manchester Metrolink Network



This Research Project

This research project has been commissioned by the Transport Planning Society to investigate the socioeconomic and environmental impacts of extending the Metrolink network into Stockport. Supported by references in strategy and policy documents, a study of deprivation deciles across lower super output areas, and a consideration of the present physical infrastructure and public realm, this research has identified two hypothetical routes to investigate. These routes are illustrated in **Appendix 2** and described below.



Appendix 2: Hypothetical Metrolink Extension Options into Stockport

Route A: St Peter's Square to Stockport Interchange

This route would start from the existing St Peter's Square tram stop. An on-street tramway would run southeast along the Oxford Road corridor towards Fallowfield with the tram calling at Oxford Road Station, Manchester Metropolitan University, The University of Manchester, Manchester Royal Infirmary, Whitworth Park and The Curry Mile. The tramway would then route northeast across the A6010 Dickenson Road and Stanley Grove, potentially via a tunnel to ensure on-street vehicles are not impacted, during which it would call at Birchfields Park, Longsight and Belle Vue Sports Village. The tramway would connect into the existing local rail network at Belle Vue Station and run southeast before connecting into another local rail line and running southwest into Stockport Interchange. The tram would call at the existing stations at Belle Vue, Ryder Brow, Reddish North and Reddish South, with the creation of new stops at Heaton Chapel, Heaton Norris and the terminal destination of Stockport Interchange.

Route B: East Didsbury to Stockport Interchange

This route would start from the existing East Didsbury tram stop. A segregated tramway would run east over the River Mersey, calling at Heaton Mersey before connecting into the existing local rail network. The tramway would then route southeast before heading north into Stockport Interchange, calling at Cheadle Heath, Adswood, Edgeley, Stockport Station and the terminal destination of Stockport Interchange.

Response Considerations

You have been selected as a stakeholder because both routes would have an impact in terms of public transport accessibility and public realm improvements.

I invite you to provide a comprehensive response to the hypothetical Metrolink extension routes and their associated stops. Within your response, please identify what impact both routes (considered in isolation) would have on some of the following themes:

- Method of travel, including whether people would be likely to switch from travelling using a private vehicle to travelling using public transport
- Local accessibility of public transport i.e., being within a reasonable distance to walk or cycle to a Metrolink stop
- The public realm e.g., suitability of streets for pedestrians, greenery, air quality
- Regeneration of the local area
- The physical and natural environment
- Supporting those with mobility impairments and disabilities and those belonging to marginalised socioeconomic groups
- Safety of streets
- Employment opportunities
- Education opportunities
- Health opportunities
- Crime
- Any other factors relating to social deprivation, the environment, regeneration, public transport connectivity and active travel (walking and cycling)

Your response is not limited to these themes and can include anything you feel may be relevant. Consideration of these questions may also assist in generating a response:

- Would new Metrolink stops in the local area change how people travel to employment, leisure, recreation, health and social opportunities?
- Would new Metrolink stops in the local area help people to access places that they
 previously could not access? What and where are these places?
- Would new Metrolink stops improve the local area in terms of safety, crime, employment opportunities and greenery?
- Would new Metrolink stops in the local area better support those with mobility impairments and disabilities? Why?

Please provide an email response to this research project by Friday 1st December at the latest. Your response will be anonymised in the project write-up and treated with due regard to GDPR.

I hope you find consideration of this research project interesting. If you have any questions, please get in touch via email: sinnett10@gmail.com

Kind regards,

Greg Sinnett BSc (Hons), MSc, MTPS

8.2 TRACC Route Timetables

Route A (St Peter's Square to Stockport Interchange) Inbound Timetable

INBOUND (07:00 - 09:00)		X- Coord	Y- Coord		D = Depart, A = Arrive
St Peter's Square	Existing Stop	383963	397969	D	07:02:00
Oxford Road Station	New Stop	384108	397537	Α	07:04:00
Oxford Road Station				D	07:04:30
Manchester Metropolitan University	New Stop	384325	397126	Α	07:06:30
Manchester Metropolitan University				D	07:07:00
The University of Manchester	New Stop	384569	396654	Α	07:09:00
The University of Manchester				D	07:09:30
MRI	New Stop	384860	396193	Α	07:11:30
MRI				D	07:12:00
Whitworth Park	New Stop	385016	395755	Α	07:14:00
Whitworth Park				D	07:14:30
The Curry Mile	New Stop	385176	395325	Α	07:16:30
The Curry Mile				D	07:17:00
Birchfields Park	New Stop	385979	395226	Α	07:20:00
Birchfields Park				D	07:20:30
Longsight	New Stop	386773	395519	Α	07:22:30
Longsight				D	07:23:00
Belle Vue Sports Village	New Stop	387438	395768	Α	07:25:00
Belle Vue Sports Village				D	07:25:30
Belle Vue	New Stop	388209	395931	Α	07:27:30
Belle Vue				D	07:28:00
Ryder Brow	New Stop	388551	395587	Α	07:30:00
Ryder Brow				D	07:30:30
Reddish North	New Stop	389696	394777	Α	07:32:30
Reddish North				D	07:33:00
Reddish South	New Stop	389556	393251	Α	07:36:00
Reddish South				D	07:36:30
Heaton Chapel	New Stop	388939	392129	Α	07:38:30
Heaton Chapel				D	07:39:00
Heaton Norris	New Stop	388847	390784	Α	07:41:00
Heaton Norris				D	07:41:30
Stockport Interchange	New Stop	389215	390227	Α	07:42:30

Note: departure and arrival times repeated every six minutes until reaching the time closest to 09:00:00 without exceeding it e.g., 08:56:00 departure from St Peter's Square.

Route A (St Peter's Square to Stockport Interchange) Outbound Timetable

Υ-Χ-D = Depart, **OUTBOUND (07:00 - 09:00)** Coord Coord A = Arrive**New Stop** 389215 390227 D Stockport Interchange 07:02:00 **Heaton Norris** New Stop 390784 388847 Α 07:03:00 Heaton Norris D 07:03:30 Heaton Chapel New Stop 388939 392129 Α 07:05:30 Heaton Chapel D 07:06:00 Reddish South New Stop 389556 Α 07:08:00 393251 Reddish South D 07:08:30 Reddish North New Stop 389696 394777 Α 07:11:30 D Reddish North 07:12:00 Ryder Brow New Stop 388551 395587 Α 07:14:00 Ryder Brow D 07:14:30 Belle Vue New Stop 388209 395931 Α 07:16:30 Belle Vue D 07:17:00 Belle Vue Sports Village New Stop 387438 Α 07:19:00 395768 Belle Vue Sports Village D 07:19:30 New Stop Α Longsight 386773 395519 07:21:30 Longsight D 07:22:00 Birchfields Park New Stop 385979 395226 Α 07:24:00 Birchfields Park D 07:24:30 The Curry Mile New Stop 385176 395325 Α 07:27:30 The Curry Mile D 07:28:00 Whitworth Park New Stop 385016 Α 395755 07:30:00 Whitworth Park D 07:30:30 MRI New Stop 384860 396193 Α 07:32:30 MRI D 07:33:00 The University of Manchester New Stop 384569 Α 396654 07:35:00 The University of Manchester D 07:35:30 Manchester Metropolitan New Stop 384325 397126 Α 07:37:30 University Manchester Metropolitan D 07:38:00 University Oxford Road Station **New Stop** 384108 397537 Α 07:40:00 Oxford Road Station D 07:40:30 St Peter's Square 07:42:30 Existing Stop 383963 397969

Note: departure and arrival times repeated every six minutes until reaching the time closest to 09:00:00 without exceeding it e.g., 08:56:00 departure from Stockport Interchange.

Route B (East Didsbury to Stockport Interchange) Inbound Timetable

INBOUND (07:00 - 09:00)		X-	Υ-	D = Depart,	
1100000 (07.00 - 09.00)		Coord	Coord		A = Arrive
East Didsbury	Existing Stop	385655	390605	D	07:01:00
Heaton Mersey	New Stop	386477	390373	Α	07:03:00
Heaton Mersey				D	07:03:30
Cheadle Heath	New Stop	387666	389263	Α	07:06:30
Cheadle Heath				D	07:07:00
Adswood	New Stop	388987	388854	Α	07:10:00
Adswood				D	07:10:30
Edgeley	New Stop	389242	389326	Α	07:12:30
Edgeley				D	07:13:00
Stockport Station	New Stop	389252	389873	Α	07:15:00
Stockport Station				D	07:15:30
Stockport Interchange	New Stop	389215	390227	Α	07:16:30

Note: departure and arrival times repeated every six minutes until reaching the time closest to 09:00:00 without exceeding it e.g., 08:55:00 departure from East Didsbury.

Route B (East Didsbury to Stockport Interchange) Outbound Timetable

OUTBOUND (07:00 - 09:00)		X-	Υ-		D = Depart,
		Coord	Coord		A = Arrive
Stockport Interchange	New Stop	389215	390227	D	07:01:00
Stockport Station	New Stop	389252	389873	Α	07:02:00
Stockport Station				D	07:02:30
Edgeley	New Stop	389242	389326	Α	07:04:30
Edgeley				D	07:05:00
Adswood	New Stop	388987	388854	Α	07:07:00
Adswood				D	07:07:30
Cheadle Heath	New Stop	387666	389263	Α	07:10:30
Cheadle Heath				D	07:11:00
Heaton Mersey	New Stop	386477	390373	Α	07:14:00
Heaton Mersey				D	07:14:30
East Didsbury	Existing Stop	385655	390605	Α	07:16:30

Note: departure and arrival times repeated every six minutes until reaching the time closest to 09:00:00 without exceeding it e.g., 08:55:00 departure from Stockport Interchange.