

JANUARY 2019

TRANSPORT



GMSF Transport Topic Paper

Section 1: Introduction

1. To summarise the evidence base and policy context that has shaped the Greater Manchester Spatial Framework (GMSF), a series of topic papers have been prepared.
2. Each topic paper:
 - Summarises and cross-references the relevant evidence and explains how this has informed the draft GMSF.
 - Summarises the previous consultation comments that are relevant to the topic.
 - Explains how the draft GMSF policies and allocations have been derived based on the evidence, consultation comments and Integrated Assessment.
3. This topic paper is about transport, which is fundamental to delivering sustainable economic growth and social inclusion across Greater Manchester.
4. The GMSF is a joint plan of all ten local authorities in Greater Manchester, providing a spatial interpretation of the Greater Manchester Strategy which will set out how Greater Manchester should develop over the next two decades up to the year 2037. It will;
 - Identify the amount of new development that will come forward across the 10 districts, in terms of housing, offices, and industry and warehousing, and the main areas in which this will be focused.
 - Ensure we have an appropriate supply of land to meet this need
 - Protect the important environmental assets across the conurbation.
 - Allocate sites for employment and housing outside of the urban area.
 - Support the delivery of key infrastructure, such as transport and utilities.
 - Define a new Green Belt boundary for Greater Manchester.

Section 2: Policy context

5. This section summarises national, regional and local policy, legislation, plans and programmes on the subject of transport and connectivity that will have impact on the Revised Draft GMSF. This section will first look at several key documents that set the vision for the future of Greater Manchester from a transport perspective that include:
 - The Greater Manchester Strategy
 - The Greater Manchester Transport Strategy 2040
 - The Strategic Transport Plan for the North of England
 - National Planning Policy Framework

6. This section will then discuss the wider transport policy context for Greater Manchester, including the following themes:
 - Congestion
 - Cycling and Walking
 - Clean Air Plan
 - Bus Reform
 - Transport for the North and Highways England
 - High Speed 2 and Northern Powerhouse Rail
 - Funding

The Greater Manchester Strategy

7. The new Greater Manchester Strategy (*'Our People, Our Place'*) published in 2017 underpins the GMSF as the overarching new plan for Greater Manchester which covers health, wellbeing, work and jobs, housing, transport, skills, training and economic growth.
8. Priority 5 of the Greater Manchester Strategy is *"World-class connectivity that keeps Greater Manchester Moving"*. Within this priority, the Greater Manchester Strategy defines the following ambitions:
 - World-class connections that support long-term, sustainable economic growth and access to opportunity for all.
 - Reducing congestion and improving air quality.
 - A key international gateway to the UK and a gateway to the world for UK businesses and communities.
 - World-class digital infrastructure.

The Greater Manchester Transport Strategy 2040

9. The 2040 Transport Strategy, published in 2017, is Greater Manchester's long-term plan to establish a fully integrated, high capacity transport system across Greater Manchester. The GMSF and the 2040 Transport Strategy seek to be mutually supportive documents, which share a common vision for the future of transport in Greater Manchester and a common set of emerging priorities for future interventions on the transport network to achieve this vision.
10. The 2040 Transport Strategy outlines a vision for Greater Manchester to have *"World class connections that support long-term, sustainable economic growth and access to opportunity for all"*¹. This in turn supports the Greater Manchester Strategy (see above). It is centred around five 'spatial themes', each representing a different type of journey at a different spatial scale, covering all modes. Although the spatial themes are described separately, the journeys that people make may involve a number of different elements, covered by different spatial themes. By using the five 'spatial themes' the 2040

¹ Transport for Greater Manchester (2017), Greater Manchester Transport Strategy 2040, p. 3.

Transport Strategy explicitly adopts a journey focused approach to planning, instead of planning for individual modal networks.

11. The five spatial themes from the 2040 Transport Strategy are shown in the diagram below.

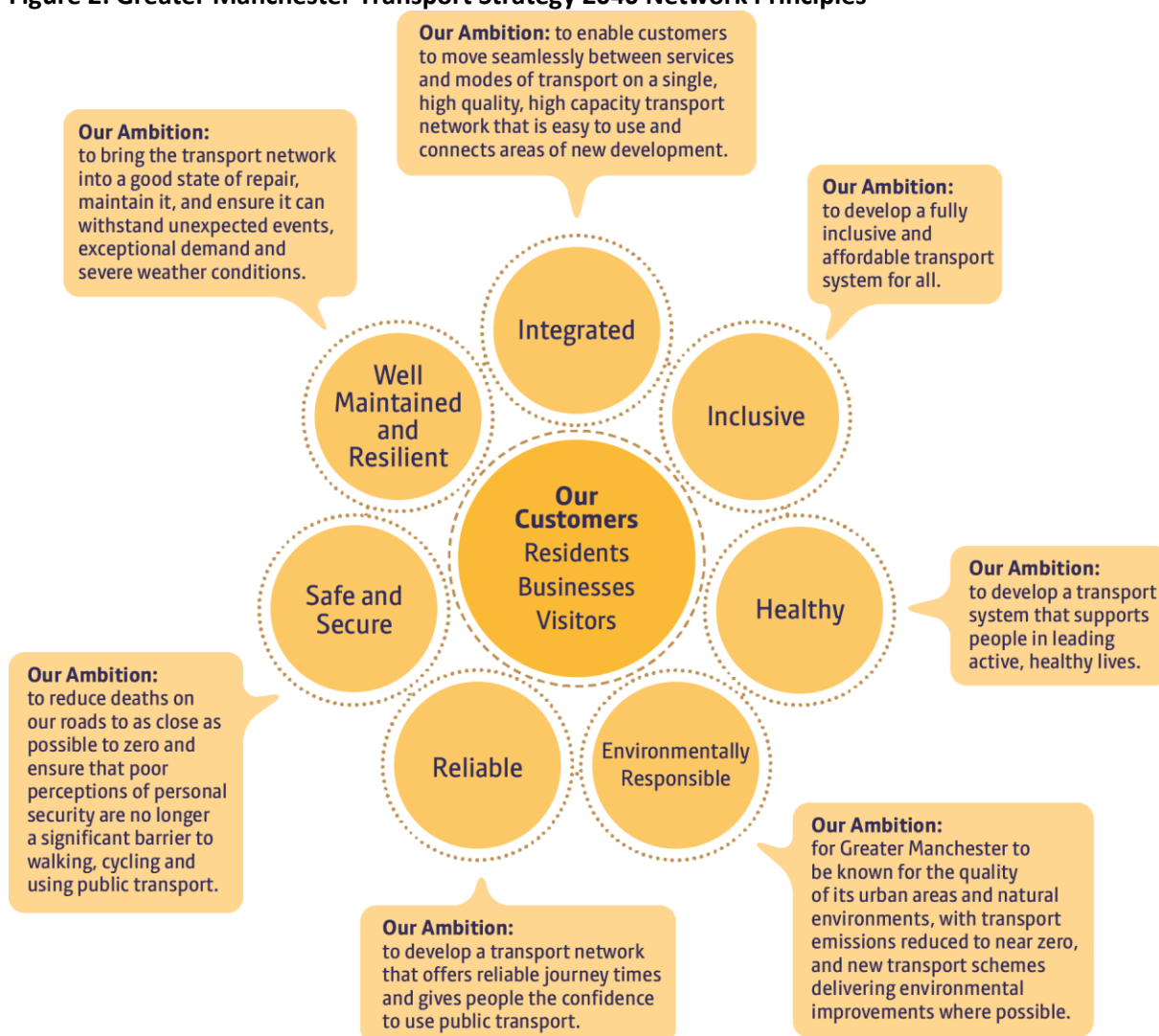
Figure 1: Greater Manchester Transport Strategy 2040 Spatial Themes



Source: Greater Manchester Transport Strategy 2040

12. The 2040 Strategy also defines seven mutually reinforcing 'Network Principles'. These network principles will be applied to all transport interventions to ensure that the transport system meets the needs of our residents, businesses and visitors. These principles are set out in the diagram below.

Figure 2: Greater Manchester Transport Strategy 2040 Network Principles



Source: Greater Manchester Transport Strategy 2040

13. The 2040 Transport Strategy is supported by a detailed Evidence Base document, and a 5-year Delivery Plan. The Delivery Plan provides an update on progress in delivering the strategy, and short-term proposals for new investment and future studies to support the delivery of the 2040 Transport Strategy.
14. To support the new draft of the GMSF, Greater Manchester has published *a new 2040 Transport Strategy: Delivery Plan 2020-2025* for consultation. The new draft Delivery Plan has been prepared alongside the new draft GMSF, and sets out the practical actions we want to achieve in the next five years, achieve mayoral ambitions, and provide a coordinated approach to transport investment.
15. More information on the new draft Delivery Plan 2020-2025 is included in Section 3 of this Topic Paper.

Greater Manchester and the Northern Powerhouse

16. Transport for the North (TfN) became England's first statutory sub-national transport body in April 2018. Prior to this, in January, TfN published its draft **Strategic Transport Plan** setting out proposals for the pan-Northern transport network through to 2050. Following a major consultation exercise, TfN is now developing the final version of the Strategic Transport Plan prior to its adoption as a statutory document. TfGM and the Greater Manchester authorities are working with TfN to ensure that the final published version of the Strategic Transport Plan is aligned with Greater Manchester priorities.
17. Highways England, TfN and TfGM are jointly developing potential solutions for improving strategic and regional connectivity in the north west of Manchester. The **Manchester North West Quadrant Strategic Study** considers potential improvements both on the motorway (led by Highways England); as well as multi-modal elements of the Greater Manchester transport system to improve journey times, connectivity and safety (led by TfN and TfGM). The next stage of this work will involve identifying the options which will deliver best value for money whilst mitigating adverse impacts on the environment. Highways England are also developing plans for other parts of Greater Manchester's motorway network, including the delivery of multiple Smart Motorways schemes.
18. In March 2018, TfGM and the Greater Manchester Combined Authority (GMCA) launched Greater Manchester's strategy for high-speed rail ('The stops are just the start') which details how **HS2 and Northern Powerhouse Rail (NPR)** can support new jobs, new homes and new opportunities for Greater Manchester. TfN has also set out its vision for the Northern Powerhouse Rail network in the draft Strategic Transport Plan for the North.
19. The delivery of high-speed rail at Manchester Piccadilly, Manchester Airport, Stockport and Wigan remains crucial to the successful delivery of the 2040 Strategy. TfGM are working collaboratively with Government to refine the plans for high-speed rail and ensure the plans are funded in a way that is sustainable, equitable, and aligned with both local and national policy.

National Planning Policy Framework

20. The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for employment, housing and other development can be produced. The revised NPPF was published in July 2018 and replaces the previous NPPF published in 2012.
21. The NPPF includes a chapter entitled "Promoting sustainable transport" that emphasises the importance of considering transport issues during the early stages of plan-making and development proposals. This chapter states that the following should be considered in regards to transport²:

² Ministry of Housing, Communities & Local Government (2018), National Planning Policy Framework, p. 30.

- the potential impacts of development on transport networks;
 - opportunities from existing or proposed transport infrastructure, and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated;
 - opportunities to promote walking, cycling and public transport use;
 - the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
 - patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.
22. The National Planning Policy Framework states that the planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.

Congestion

23. Greater Manchester residents and businesses have shaped our views on how transport can foster sustainable economic growth. In 2017, the GM Mayor's Congestion Conversation identified the significant negative impact of congestion on people's time, access to employment, education and opportunities and health and wellbeing.
24. This highly participative approach resulted in the publication of a Greater Manchester **Congestion Deal** in 2018, which identified a range of schemes that could be brought forward over the next 3 years to help to tackle congestion³. The short-term actions to tackle congestion identified in the Congestion Deal have been incorporated into the new draft *Delivery Plan 2020-2025* (see Section 3 below).
25. Building on this, Greater Manchester will also start to implement its '**Streets for All**' approach over the next few years. 'Streets for All' is Greater Manchester's new way of thinking about the role of our street network, with a focus on the needs of people and places, rather than considering the movement of vehicles alone. It will enable Greater Manchester to deliver better streets to create sustainable, healthy and resilient places; tackling issues such as congestion, air pollution, bus service reliability; improving interchange between modes; walking and cycling improvements; and local centre enhancements in an integrated and holistic way which improves the quality of life of Greater Manchester's residents. A number of major corridor studies using a 'Streets for All' approach are already underway.
26. Greater Manchester rail customers bore the brunt of the **rail timetable crisis** in the summer of 2018 and we are working hard with the rail industry to ensure these problems do not happen again. We will be contributing evidence and expertise to the various reviews taking place, including the Government's report (Williams) into whether rail franchising is the best model for delivery of services.

Air Quality

27. Improving air quality is a key priority for Greater Manchester. The city-region is one of 37 areas across the UK where mean nitrogen dioxide (NO₂) concentrations exceed statutory limits. Road transport is responsible for 80% of NO₂ pollution at the roadside, where it is most damaging to health.

³ <https://www.tfgm.com/congestion>

28. Government has set out a strictly defined process with extremely challenging deadlines for such areas to reduce NO₂ levels to safe limits. Accordingly, the Greater Manchester local authorities, alongside GMCA and TfGM are now developing a **Clean Air Plan** that can meet nationally-specified standards in the shortest time possible. This will also build on the commitments in our existing **Low Emission Strategy** and **Air Quality Action Plan (2016-21)**.
29. The **Clean Air Plan** will set out a package of measures designed to address air pollution problems, which are a major contributor to ill-health; and that also support Greater Manchester's wider public policy and transport objectives. The agreed measures set out in the emerging Clean Air Plan will be embedded into future updates of the Delivery Plan.

Walking and Cycling

30. Walking and cycling are the most efficient forms of transport for urban areas. They are also the only forms of transport that can simultaneously help to tackle congestion, pollution, poor health and social inequality, which is why they are a top priority for the Greater Manchester Mayor and ten Local Authority leaders.
31. The **Greater Manchester Moving Plan for Physical Activity and Sport 2017-2021**⁴ has been developed by the Mayor, Greater Manchester Health and Social Care Partnership, Sport England and the GMCA to secure the fastest possible improvement to the health, wealth and wellbeing of people who live in the city-region.
32. In December 2017, the Greater Manchester Cycling and Walking Commissioner, Chris Boardman, published his **Made to Move** report⁵, which aims to further increase levels of active travel in Greater Manchester. A key priority was to develop and deliver a new **Greater Manchester Cycling and Walking Network**, encouraging the two thirds of people who currently use their car as their main mode of transport to walk and cycle more often. This led to the publication of the **Bee Network** proposal in summer 2018. The proposals are being further developed to enable us to publish a **Greater Manchester Cycling and Walking Infrastructure Plan** in 2019.
33. Initial versions of the Bee Network plans have now been published online. TfGM and the ten Greater Manchester local authorities are continuing to develop and refine these proposals, working together with local residents; an updated plan of the Bee Network will be published in early 2019.

Bus Reform

34. The Transport Act 2000 (as amended by the Bus Services Act 2017) provides the Mayor with new powers to reform the bus market. The options available include different types of partnerships, and franchising, which is the system used in London and other cities globally. These new powers have the potential to bring significant benefits, such as improved routes, frequencies, timetables, fares, ticketing, network integration and quality standards.
35. On behalf of the GMCA, TfGM is currently preparing an assessment of a proposed bus franchising scheme, which also includes consideration of other realistic options to reform the bus market. Following the completion of this assessment, and subject to the GMCA deciding to undertake an independent audit of the assessment, the GMCA will decide whether to proceed with a consultation on any proposed franchising scheme. Following the consultation, the Mayor will be able to use the powers provided by the Transport Act 2000 to make a decision on whether to introduce any reform of the bus market or not.

⁴ <https://www.greatersport.co.uk/get-active/23gmmoving-the-plan-for-physical-activity-and-sport-2017-21>

⁵ <https://www.tfgm.com/future-travel/cycling-and-walking>

Funding

36. The Government's award of £243m of the Transforming Cities Fund up to 2021/22, and the recent additional award of £69.5m up to 2022/23, has provided a short-term capital funding boost to Greater Manchester. The Greater Manchester Mayor has announced that the first funding allocation from the Transforming Cities Fund would be used for the acquisition of new Metrolink vehicles and for a Mayor's Challenge Fund for walking and cycling, benefitting all Greater Manchester residents. Work is currently underway to develop and finalise the business cases for these proposals, so that delivery can commence.
37. In the 2017 Autumn Budget, the Chancellor of the Exchequer noted that alongside the short-term funding from the Transforming Cities Fund, the Government will continue to work with TfGM to explore options for future funding. The Government will undertake a full multi-year Spending Review in 2019, and Greater Manchester will look to Government to use this opportunity to gain clarity over long-term transport capital funding for the region.
38. Greater Manchester may benefit from the recommendations of the National Infrastructure Commission's **National Infrastructure Assessment (NIA)**, published July 2018. The NIA recognises the importance of local plan-making and funding to enable towns and cities to flourish. Greater Manchester is ahead of other UK city-regions in terms of the powers and funding that have been devolved to-date, but much more needs to be done and the NIA recommends that the next wave of transport infrastructure upgrades take place within the fastest growing city-regions, such as Greater Manchester.
39. In response to the National Infrastructure Assessment, Greater Manchester is working on establishing a second Greater Manchester Transport Fund with central Government to enable the city-region to deliver its long-term transport investment programme. Further information on Greater Manchester's aspirations for long-term transport funding is contained in the draft *Delivery Plan 2020-2025*.

Section 3: Summary of evidence

40. On behalf of the GMCA, TfGM and the ten local authorities have undertaken a significant volume of transport study work to support the GMSF, known as the GMSF Transport Study. The work on the GMSF Transport Study to date consists of two parts:
- *Part 1: Understanding the Issues.* This part of the GMSF Transport Study brought together a large group of transport experts in the city region, including representatives from TfGM and all ten local authorities, to identify the key transport issues for Greater Manchester given the expected growth of the region. A key part of this process has been to review the transport-related comments from the public, received through the consultation on the first draft of the GMSF. The final output for Part 1 of the Study is the ***Understanding the Issues Report*** (published alongside the new draft GMSF and Delivery Plan 2020-2025).
 - *Part 2: Addressing the Issues.* The purpose of this part of the GMSF Transport Study was to define how the critical transport issues for Greater Manchester, as identified in Part 1, can be addressed. To that end, Part 2 developed a more detailed plan of what Greater Manchester's future transport system could look like, building on the strategic direction for transport set out in the Greater Manchester Transport Strategy 2040. The results of Part 2 have been incorporated into the new draft ***2040 Transport Strategy Delivery Plan 2020-2025***, published alongside the new draft GMSF.
41. This section briefly summarises the core messages contained within these supporting documents for the GMSF.
42. In addition to the GMSF Transport Study, TfGM has also updated the ***2040 Transport Strategy Evidence Base*** document, which was originally published alongside the 2040 Transport Strategy in early 2017. The updated Evidence Base document provides the latest factual information on key transport trends, such as public transport patronage, travel to work patterns and customer satisfaction. The facts and figures contained in the updated 2040 Evidence Base document have been used to underpin the new Delivery Plan 2020-2025.
43. All of the above documents can be found on www.tfgm.com/2040.

GMSF Transport Study: Understanding the Issues Report

44. The *GMSF Transport Study: Understanding the Issues Report* presents the outcomes of the first part of the ongoing work to prepare the transport evidence base for the Greater Manchester Spatial Framework (GMSF). The purpose of the Issues Report is to summarise the critical transport issues for Greater Manchester that have been identified in the context of the planned housing and employment growth in the city region.
45. The critical transport issues for Greater Manchester have been established through a collaborative process, involving all ten Greater Manchester local authorities as well as other key stakeholders. A key part of this process has been to review the transport-related comments from the public, received through the consultation on the first draft of the GMSF.
46. Though this collaborative process, the GMSF Transport Study defined the following future transport vision to support the new GMSF:
- A radical transformation of the Regional Centre's public transport and walking and cycling facilities.
 - Creating sustainable new communities and employment locations, and building on the strengths of existing urban centres and public transport connections.

- Reducing the reliance on the car for movements across the wider city-region, including orbital connections between town centres.
 - Ensuring that pan-Northern transport interventions for city-to-city journeys are fully integrated with regional and local networks.
 - Investing in local neighbourhoods to make walking and cycling the natural choice for short journeys, and to stimulate town centre and neighbourhood renewal.
 - Maximising the efficiency and reliability of Greater Manchester's existing transport networks.
 - Strengthening the role of Manchester Airport as the international gateway to the North of England.
 - Exploiting new opportunities for the sustainable movement of freight.
 - Being prepared for future innovations in technology and travel behaviour, while recognising ongoing uncertainty.
47. In addition to these overarching conclusions for *GMSF Transport Study: Issues Report* also identifies more specific transport issues for different types of journey and for different parts of Greater Manchester.
48. The *GMSF Transport Study: Understanding the Issues Report* is being published as supporting evidence alongside the new consultation draft of the GMSF.

2040 Transport Strategy: Delivery Plan 2020-2025

49. The *2040 Transport Strategy: Delivery Plan 2020-2025* follows on from the *Understanding the Issues Report*. This Delivery Plan (2020-2025) refers to what the elected Mayor, GMCA, local authorities, and TfGM collectively want to achieve in the next 5 years as the first steps towards delivering the transport vision Greater Manchester set out in the 2040 Transport Strategy.
50. The new Delivery Plan has been explicitly aligned with the GMSF, and the outcomes of the GMSF Transport Study have formed a key input into the Delivery Plan.
51. This Delivery Plan sets out what transport interventions are planned to be delivered over the next five years. It sets out the strategic background to the plan, and includes information on committed and potential scheme investment (subject to investment case and funding) over the 5-year period. It also highlights the studies and scheme development and further transport reforms that will be needed to deliver our long term priorities.
52. The core of the Delivery Plan document presents the delivery programme to support Greater Manchester's long-term vision. This delivery programme is grouped under three thematic headings: Public Transport, Streets for All, and Integration. However, the programme has been developed in an integrated way in order to address all key issues:

Public Transport	Streets for All	Integration
<ul style="list-style-type: none"> • Bus • Metrolink and Bus Rapid Transit • Rail 	<ul style="list-style-type: none"> • Local Highways • Walking and Cycling • Motorways and Trunk Roads • Freight and Logistics • Asset Management 	<ul style="list-style-type: none"> • Clean Air and Carbon • Future Mobility and Innovation • Fares and Ticketing • Behaviour change • Safety and security • Town Centres and interchanges

53. Each section includes some explanatory text on the theme and then outlines:

- **The interventions that are committed for delivery in the next 5 years**

These interventions have significant funding allocated and the case for change has already been demonstrated; although final funding arrangements and approval of the business case may still be needed. They also include some interventions with a degree of commitment in Network Rail or Highways England industry processes.

- **The interventions for which we aim to complete the business case in the next 5 years**

These interventions are those with potential to be delivered by 2025 subject to prioritisation, funding and approval of a business case which demonstrates value for money.

- **The interventions we will develop options for in the next 5 years**

These are the interventions which need further investigation or development in order to identify future options and determine feasibility. This work may identify interventions that could be delivered by 2025, and we will aim to achieve that wherever possible, but most are longer term projects that would be delivered in later years.

Future iterations of this Delivery Plan will demonstrate the evolution of these interventions – some may become priorities for delivery while others may prove to be unfeasible and won't be progressed.

- **And the interventions programmed for investigation beyond this 5 year Delivery Plan...**

We recognise that there are a number of studies and schemes that we would like to investigate, but which are unlikely to commence in this Delivery Plan period. These studies may eventually be needed to achieve our long-term vision for transport, but there are currently no plans to commence investigation work before 2025.

54. Example key interventions that are committed for delivery in the next 5 years include:

- New Trafford Park Metrolink Line, 27 new trams and associated infrastructure
- Rail infrastructure improvements, such as improvements to the Castlefield corridor (Piccadilly – Oxford Road – Deansgate), Trans-Pennine Route Upgrade to Leeds and Hope Valley Line upgrade to Sheffield
- First tranches of the Mayor's Challenge Fund for walking and cycling

- Major town centre enhancements packages, such as in Stockport and Oldham, and new transport interchanges, such as in Stockport and Ashton-under-Lyne
- Implementation of Smart Motorway on further sections of motorway, including on the M62, M6 and M56
- New link roads to support growth and relieve congestion, such as the M58 and A49 Link Roads in Wigan and the Mottram Moor and A57(T) to A57 Link Roads in Tameside
- Metrolink service and ticketing enhancements
- Mobility Hubs/Park & Ride upgrades

55. Example key interventions for which we aim to complete the investment case in the next 5 years include:

- Implementation of Bus Rapid Transit and Quality Bus Transit on high-frequency corridors between key centres
- Early interventions associated with the HS2 Growth Strategies at Piccadilly, Stockport and Wigan
- Manchester Airport expansion highway improvements and Metrolink extension to Terminal 2
- Tram-train Pathfinder projects to test the feasibility of tram-train technology on Greater Manchester's rail network
- New infrastructure to support growth at Port Salford, including further phases of the Western Gateway Infrastructure Scheme (WGIS)
- Clean Air Plan measures
- Streets for All network improvements
- New stations

56. Example key interventions we will develop options for in the next 5 years include:

- High Speed 2 and Northern Powerhouse Rail, including new dedicated stations at Piccadilly and Manchester Airport
- A city centre metro tunnel
- Metro/tram-train services on key commuter rail corridors, for example to Wigan, Glossop, Marple, Stockport/Hazel Grove and/or Warrington
- Further 'Phase 4' Metrolink extensions, for example to Port Salford, Middleton and/or Stalybridge
- Further Bus Rapid Transit corridors, for example from the Manchester Airport HS2 station to Altrincham
- Further electrification of rail lines

57. Example key interventions programmed for investigation beyond this 5 year Delivery Plan include:

- Further new rapid transit corridors between Greater Manchester's key town centres

58. Following the consultation on the new draft of the GMSF, the new Delivery Plan will be reviewed against the consultation comments, and updated as required. The final portfolio of transport evidence to support the GMSF will be published prior to Examination of the Final GMSF.

Greater Manchester Transport Strategy 2040: Evidence Base – 2018 Update

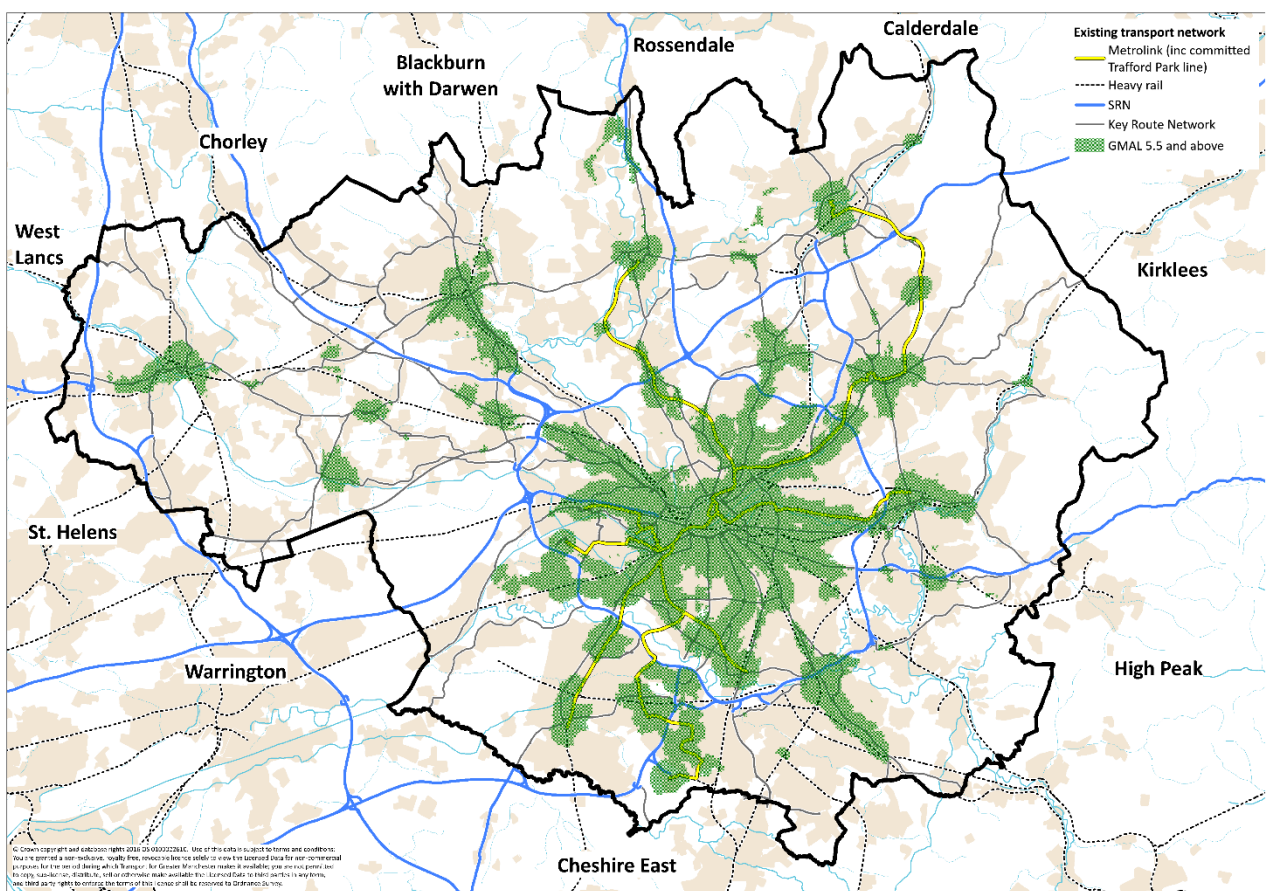
59. The Greater Manchester Transport Strategy 2040: Evidence Base provides the compendium of evidence that supports the policies set out in the Greater Manchester Transport Strategy 2040 (see Section 2). In 2018 TfGM conducted a comprehensive review of key transport trends and their implications for the GMSF and 2040 Transport Strategy, and updated the evidence base accordingly. This resulted in the *Greater Manchester Transport Strategy 2040: Evidence Base – 2018 Update*.
60. The updated Evidence Base document begins by setting out recent trends in **Travel in Greater Manchester**. This chapter focuses on providing a picture of the current transport situation, with reference to recent travel trends in Greater Manchester.
61. This document then includes new evidence and analysis undertaken by TfGM to support **Our Vision for 2040** as set out in the new *Delivery Plan 2020-2025* – namely, for 50% of all journeys in Greater Manchester to be made by public transport, walking and cycling by 2040; equivalent to a million more sustainable journeys every day.
62. The remainder of the Evidence Base includes five thematic sections which focus on different drivers of transport demand:
- Economy and Employment.
 - Society and Community.
 - Urban Development.
 - Environment and Resources.
 - Technology and Innovation.
63. A brief summary of the evidence from each of these sections is shown below.

Travel in Greater Manchester: summary of recent trends

64. 2.1 billion journeys per year are made by Greater Manchester residents; this corresponds to approximately 5.6 million journeys per day.
65. 74% of all journeys are covered by 5 broad trip categories (shopping, commuting, sport and entertainment, visiting friends, and education), of which shopping accounts for the largest volume of journeys made by Greater Manchester residents.
66. Car is the dominant mode of transport, accounting for 39% (driver) and 19% (passenger) of all journeys. Walking accounts for 26% of journeys.
67. In 2016/17, 266 million journeys were made on public transport: 202 million on bus, 26 million on rail, and 38 million on Metrolink.
68. 73% of all journeys made by Greater Manchester residents take place wholly within the local authority of residence, with 20% involving movement between local authority areas. 7% of all journeys end outside of Greater Manchester.

69. Greater Manchester residents travel 35 million km per day averaging 6.2km per trip. 76% of all kilometres travelled are made by car (either as driver or passenger).
70. Almost half of journeys made by Greater Manchester residents are fewer than 2km in length. 67% of journeys up to 1 km are made on foot and 30% by car.
71. Greater Manchester's accessibility to the public transport network, including Bus, Rail, Metrolink, and Local Link (Flexible Transport Service) is displayed in the figure below. The figure shows areas of good public transport access, which is defined as those areas with a Greater Manchester Accessibility Level (GMAL) score of 5.5 and above. Service provision is concentrated in areas where demand is highest, which encompasses areas most densely populated by residents and workers, including the regional-centre, and local town centres.

Figure 3: Good Public Transport Accessibility, GMAL 2018⁶



72. Greater Manchester is a net importer of goods: approximately 58 million tonnes of freight arrive into Greater Manchester every year, and 50 million tonnes leave the city-region. On average 17,500 goods vehicles make journeys into Greater Manchester town centres each day.

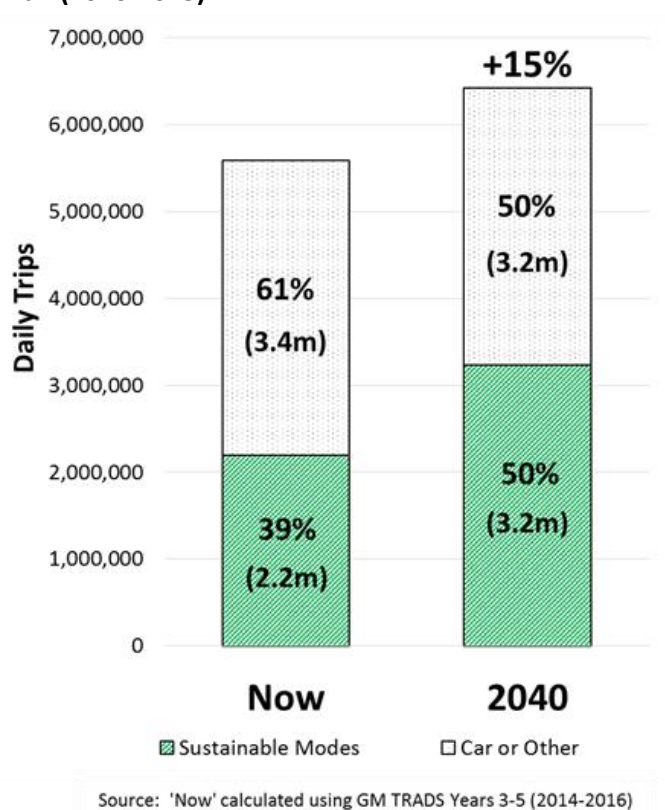
⁶ TfGM (August, 2018): Greater Manchester Accessibility Level 5.5. Greater Manchester Accessibility Levels (GMAL) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester's Local Link (flexible transport service), taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region. For further detail on how GMAL scores are defined and calculated, please see here:

<http://odata.tfgm.com/opendata/downloads/GMAL/GMAL%20Calculation%20Guide.pdf>

Our Vision for 2040: the “Right Mix”

73. Our vision – set out in the new *Greater Manchester Transport Strategy 2040: Delivery Plan (2020-2025)* – is to improve our transport system so that we can reduce car use to no more than 50% of daily trips, with the remaining 50% made by public transport, walking and cycling. This will mean a million more trips each day using sustainable transport modes in Greater Manchester by 2040 (Figure 4).
74. Our analysis, contained in this chapter of the 2040 Evidence Base document, suggests that achieving this vision will enable us to deliver our economic growth ambitions reflected in GMSF without increasing overall motor-vehicle traffic in Greater Manchester. This vision – to be achieved by 2040 – entails 50% of trips by sustainable modes and no net increase in motor-vehicle traffic. It is termed the “Right Mix” of transport modes.

75. **Figure 4: Our vision for 2040 – as set out in the Greater Manchester Transport Strategy 2040: Delivery Plan (2020-2025)**



76. In this section of the Evidence Base, a proposed pathway is set out for achieving the Right Mix. The pathway is set out as a series of steps, which would in reality be made at the same time, but which are described as separate sequential steps to assist explanation. The steps in the pathway to the Right Mix are defined using the framework of the spatial themes in the Greater Manchester Transport Strategy 2040. Trips by Greater Manchester residents have been categorised into the spatial themes.
77. The steps in the pathway to achieve the Right Mix are as follows:
- Step 1: 15% population growth leads to 15% growth in trips (and trip-kilometrage) by all modes.
 - Step 2: Land-use and transport policies (plus changes in individual preferences) lead to a redistribution of 5% of trips from Wider City Region to Neighbourhood.

- Step 3: Land-use and transport policies (plus changes in individual preferences) lead to a redistribution of 10% of Wider City Region trips to Regional Centre.
 - Step 4: Land use change and transport interventions lead to a higher mode share for walking for Regional Centre and Neighbourhood trips.
 - Step 5: Transformational cycling policies lead to a switch to cycle from other modes – reaching a 10% mode share for Regional Centre and Neighbourhood trips and a 5% mode share for Wider City Region trips by 2040.
 - Step 6: Improved metro and suburban rail services and complementary policies cause metro and rail to increase their mode-share, with metro taking 5% of Wider City Region trips.
 - Step 7: Transport policies (including travel demand management) lead to a 5% reduction in trip-length of Wider City Region car-trips.
78. The seven steps above do not quantify any specific proposed increase in public transport mode share for city-to-city trips (a potential 'Step 8'). This is considered to be a cautious assumption, which leaves potential to offset any shortfall in achieving any of the other steps in the pathway to the Right Mix.
79. Each of the steps in the pathway to the Right Mix, and the evidence behind them, are described in more detail in the full *Greater Manchester Transport Strategy 2040: Evidence Base – 2018 Update* document.

Economy and Employment: summary of trends and implications

80. The Greater Manchester Forecasting Model 2017 (GMFM 2017) suggests that over the next 20 years, under baseline conditions, GVA could grow at 1.7% per annum up to 2035, broadly comparable to the UK average (1.8% per annum). This is equivalent to an additional £23.9 billion of economic activity in GM's economy in 2035 (measured in constant 2013 prices), with GVA rising to a total of £81.7 billion. Total employment is forecast to grow at 0.5% per annum in GM, slightly faster than the UK average (0.4%), equating to a net increase of 141,000 employees from 2015 to 2035.
81. The GMCA also commissioned forecasters to produce an Accelerated Growth Scenario (AGS-2017) for GM. This scenario predicts GVA growth of 2.2% year on year, giving an uplift of £8.5 billion GVA per annum above baseline conditions by 2035, and an additional 190,000 jobs representing a 0.6% growth rate for GM, higher than that projected for the UK. This increased number of jobs in Greater Manchester will lead to a significant increase in total travel demand in GM. The precise nature and location of these jobs will determine what transport interventions will be needed to keep this growing workforce moving.
82. A more productive workforce, in higher paid jobs, focusing on more specialised and skilled activities, has historically tended to lead to increased commuting distances and more complex trip patterns. Data from the 2011 Census shows that this trend applies to Greater Manchester residents: approximately 49% of residents with no qualifications travelled no further than 5km to work, whilst only 31.3% of residents with Level 4+ qualifications travelled less than 5km to work.
83. Employment in later life is increasing steadily, leading to a more diverse set of working patterns, additional travel demand, and a broadening set of traveller needs. 8.5% of Greater Manchester residents aged over 65 were in employment in 2017, equal to around 36,600 people. The number of Greater Manchester residents over the age of 65 in employment has more than doubled since 2005, when it stood at around 17,300.

84. An increasingly centralised distribution of Greater Manchester employment is expected, emphasising the need to continue to invest in improving accessibility to the Regional Centre and principal town centres by means other than car. The Regional Centre (which covers the City Centre as well as Salford Quays and the Etihad Campus) is the main concentration of employment in GM, accounting for 19% of all jobs. Outside the regional centre, employment is more dispersed. Trafford Park accounts for 3% of employment, Manchester Airport 2% and collectively the 8 principal town centres account for 10%. 65% of employment is therefore outside these large locations.
85. For the majority of commuter movements the private car is the dominant mode, in part due to the dispersed nature of employment within and outside of Greater Manchester. Evidence from Greater Manchester Travel Diary Surveys for the 3 years to the end of 2016 shows that for commuting journeys over 2km, the car is highly dominant with over 70% of journeys being made in a car or van as either a driver or passenger. Even between 1km and 2km 62% of journeys are made in a car. It is possible that some of these commuting journeys are linked to other journeys; such as dropping children at school.
86. If not managed effectively, severe road congestion and public transport overcrowding during peak periods could undermine GM's ability to improve economic productivity and deliver its growth aspirations. The 2016 Greater Manchester Business Survey identified transport and congestion as the leading cause of major business disruption in Greater Manchester. Around a quarter of respondents (28%) cited at least one of the disruptions presented in the survey with the most likely being 'Transport & congestion' at 10%. The Manchester Rail Network Capacity Study also highlighted the heavy and light rail lines in Greater Manchester that are the busiest and therefore potentially more susceptible to constraints through congestion and over-capacity. The Warrington Central, Bolton (Preston) and Bolton (Westhoughton) lines were identified as having been over total capacity (including standing capacity) on journeys to Manchester City centre during the AM Peak; in addition, a range of other lines are over seating capacity.
87. In 2016 Manchester was ranked as the third most visited city in the UK in regards to 'staying visits' inbound visitors to Britain, with over 1.1 million overseas visitors staying one night or more in the city. With a continuing increase in the numbers of visitors to Greater Manchester it will be important to accommodate the needs of those who are unfamiliar with Greater Manchester in a manner that promotes sustainable travel choices. According to a 2014 Marketing Manchester and New Economy study, half of all visitors entered Greater Manchester by car, with this rising to 57% for day visits and decreasing to 41% for staying visits. The next most frequent method used was train (27%), showing consistent levels of usage for both day visitors (28%) and staying visitors (26%). The other most frequently used method varied between day and staying visitors. 19% of staying visitors reported travelling by air, with a further 8% using bus /coach. This compares to 9% travelling by bus/coach, for a day visit, and just 1% by air.

Society and Community: summary of trends and implications

88. Over recent years Greater Manchester has experienced population growth, a 7.7% increase between 2006 and 2016, and is projected to reach over 3,000,000 in population by 2035. This increase in population will lead to an increase in the number of journeys to be fulfilled on the transport network.
89. This population growth in Greater Manchester has not occurred equally across the region. Census data from 2001 and 2011 has shown that the majority of population growth has occurred in the Regional Centre with increases in population recorded as being over 2,000 people per sq km over a ten year period. This is in contrast to areas outside of the Regional Centre which were recorded as having increases in population between 0 to 500 people per sq km or even a reduction in population. However, some town centres in Greater Manchester outside of the Regional Centre prove to be exceptions with Bolton, Rochdale and Altrincham recorded as having increases in population between 500 to 1000 people per sq km over this ten year period.

90. Population projections suggest that there will be significant increases in the numbers of people aged 60 or over living in Greater Manchester. This growth in the elderly population is most notable in Wigan, Tameside and Stockport, where the 60+ age group is forecast to make up approximately 30% of their resident populations by 2035. This growing elderly population is likely to lead to increased demand for more accessible transport infrastructure and services.
91. A key priority identified in the Greater Manchester Strategy is to tackle income and employment-related inequality through reducing barriers to accessing opportunities, including considering the affordability of transport and improving access to key facilities such as employment, health and education. Evidence gathered as part of Greater Manchester's Local Sustainable Transport Fund programme revealed 35% of job seekers found transport a barrier in getting to work. When asked which barriers were considered when deciding what type of transport to use, cost was most considered, by 72% of respondents.
92. Transport has a role to play in improving the health of residents across Greater Manchester. National government advice recommends adults achieve at least 150 minutes of moderate intensity physical activity per week. Within Greater Manchester, approximately 60% of residents aged over 16 achieve this according to data provided by ONS. Increasing levels of active travel through the development of infrastructure and supporting wider take-up in Greater Manchester could therefore improve health outcomes for Greater Manchester residents.
93. The extent to which behaviours are directly attributable to attitudes, and the scope for attitudinal change, is uncertain. National research indicates a change over time of licence holding and car driving mileage between age cohorts and genders. Research from specialists from the University of the West of England and Oxford University commissioned by the Department for Transport shows driver licensing among young people peaked in 1992/94 with 48% of 17 to 20 year olds and 75% of 21- to 29 year olds holding a driving licence. By 2014 only 29% of 17 to 20 year olds and 63% of 21-29 year olds held a driving licence.
94. Perceptions of personal safety and security are key factors that influence people's decisions to choose walking, cycling and public transport. Recent research of Greater Manchester residents carried out by TfGM and Sustrans in the *Bike Life: Greater Manchester 2017* report demonstrates several indicators including reliability, safety and flexibility are by far the most important factors when making transport decisions. 27% of responses ranked Reliability and Safety as 'Essential' whilst an additional 60% and 56% of responses ranked Reliability and Safety as 'Very Important' respectively. This does however vary between groups. While young people are relatively less concerned about safety (8% of students felt it is unimportant), 30% of those with children/young people in the household see it as essential.
95. In Greater Manchester there has been a trend of falling casualties from road accidents in recent decades. Killed and Seriously Injured (KSI) casualties have fallen from 434 casualties per 1,000,000 population in 2000 to 246 casualties per 1,000,000 population in 2016. There does however, remain an ongoing issue in relation to vulnerable road users. Pedestrians, cyclists, motorcyclists, and young drivers aged 17-25 make up a minority of overall road users, but represent a disproportionately high number of all KSI casualties. In 2014-2016, pedestrians, pedal cyclists and motorcyclists accounted for 18.5%, 10.2%, and 8.4% of all casualties respectively; but for KSI casualties, these numbers rise to 37.1%, 13.3% and 20.8% respectively.

Urban Development: summary of trends and implications

96. As reflected in Economy and Employment and Society and Community sections, the prospective high levels of economic growth and new housing delivery within Greater Manchester and neighbouring areas will equate to a large increase in the overall demand for travel in Greater Manchester. The

location, density and design of that development will significantly affect the levels of new demand for travel.

97. The design of new development will affect the likelihood of viable public transport links being provided and will determine the type of public transport that can be supported. Analysis of National Travel Survey data shows that:
- areas with higher densities tend to have shorter annual travel distances, particularly by car, and lower car mode shares than average;
 - there is a broadly inverse relationship between settlement size and average distance travelled – metropolitan areas, large urban areas and settlements larger than 25,000 population tend to have shorter annual average travel distances; and
 - there is broadly an inverse relationship between distances travelled by car driver and accessibility of key services.
98. Work to support the regeneration of Greater Manchester's Key Centres continues at pace. Recommendations from the Greater Manchester Town Centres Review (2013) are currently being implemented and although recommendations for transport improvements varied between centres the common themes were:
- a need to improve the quality of waiting facilities, including the desire to relocate or redevelop interchanges to free up development sites or to better integrate the transport offer;
 - a need to improve internal connectivity - improving movement in and around centres (including from public transport stations and stops) for pedestrians and cyclists; and
 - a need for reliable evidence on the impact and importance of free parking/reduced fees and any benefits to town centre businesses.

Environment and Resources: summary of trends and implications

99. With more and more people living in cities, emissions are having a greater effect on people's health, especially in urban areas. It is likely that air pollution contributes a small amount to the life expectancy and mortality of a large number of people, rather than being the sole cause of the death of individuals. The main pollutants of concern in the UK are oxides of nitrogen, principally nitrogen dioxide (NO₂), and particulates (PM). In Greater Manchester, over 75% emissions of nitrogen oxides and over 81% of particulates were the result of various modes of transport and the main contributor is road transport which alone contributes to over 65% of emissions of nitrogen oxides and 79% of particulates.
100. Significant advances in technology have been made in recent years that will contribute towards the reduction of transport related pollution which include the fitting of abatement technology, light weighting, aerodynamics, engine efficiency and the continued development of electric vehicles. Greater Manchester has already taken strides to implement technological improvements such as the installation of 324 electric vehicle charge points. There were also 2,234 registered Ultra-Low Emission Vehicles (ULEVs) in Greater Manchester as of 2017.
101. According to the England Noise Map published by Extrium motorways have the highest levels of noise, including the M60 and the M62, although these are less likely to be in the direct vicinity of residential areas, unlike A and B roads. With regard to air travel, the area directly surrounding the airport, and take-off and landing approaches are the worst affected areas. Possible solutions for noise pollution linked with transport include the use of noise reducing surfacing materials and encouraging the take-up of quieter ULEVs.

Technology and Innovation: summary of trends and implications

102. New transport technologies are likely to significantly improve the customer experience and change the way people travel in Greater Manchester. Specific areas of focus include:
- **Smart Payment Solutions** – Many cities have largely moved from paper based tickets to account based ticketing, including smart cards and mobile ticketing. Greater Manchester has recently rolled out its own smart card system, the Get Me There scheme. In other city regions, contactless payments (via credit and debit cards), smartphone payments and wearable technology payments (watches etc.) have now emerged as mainstream payment mechanisms for accessing services and products. Some transport authorities have taken advantage of the contactless payment rise by incorporating the mechanism into transport ticketing. In the UK, Transport for London lead on contactless payment systems for public transport access. In 2017/18, over 535 million journeys were made using contactless payment methods.
 - **Mobility as a Service (MaaS)** – “Mobility as a Service” (MaaS) is a concept that relates to the integration of various forms of transport services (e.g. taxi, public transport and cycle hire) into a single customer experience, which is accessible on demand and uses a single payment application. The proof of this concept in practice is being tested in Greater Manchester through the MaaS4EU project. To undertake the project a living lab has been established and individuals have been recruited to use the services in real life conditions, while their travel patterns are evaluated during their use of the services. The result will be the definition of user models which can inform personalised mobility packages for MaaS service planners.
 - **Connected and Autonomous Vehicles (CAVs)** – Autonomous, and semi-autonomous, vehicles are emerging as a disruptive innovation, and are being developed with urgency by multiple car and technology manufacturers, such as Google and Tesla. CAVs could reduce congestion in urban areas, by exploiting the ability to safely drive closer together and therefore take up less road space. The development and use of CAVs in Greater Manchester is being trialled between Stockport Station and Manchester Airport. The project involves deploying platoons of 3 electric powered, autonomous GTM sports cars to travel 10km, from Stockport train station to terminal 2 of Manchester Airport (and vice versa), via a newly developed section of the A6 to Manchester Airport Relief Road, and 3 autonomous pods to take passengers from a car park to the passenger terminals of Manchester airport over a distance of 2km. Trials for the autonomous pods and platoons are scheduled to take place in 2019, with the project due to be completed by 2020.
 - **Electric vehicles** – The UK government has a firm commitment to a future zero emission vehicle fleet with plans to ban the sale of new petrol and diesel cars in Britain by 2040. Greater Manchester is determined to follow this national policy by increasing the uptake of electric vehicles and provide the infrastructure required. The introduction of the Greater Manchester Electric Vehicles (GMEV) scheme has helped to increase in the number of drivers registering from 48 in 2013 to 1,808 in January of 2018. In terms of supporting infrastructure Greater Manchester has so far installed 324 public charging sockets comprised of 160 dual headed 15kW posts (7kW per unit) with 4 rapid chargers across the region.
 - **Bicycle Sharing Schemes** – Bicycle sharing schemes have become significantly more popular in urban areas over the last decade, and Smart bicycle sharing schemes are the latest evolution of this trend. Smart bicycle schemes depend on information technology-based systems to offer better services in electronic payment systems, GPS tracking as well as better managed docking systems. Following the recent departure of Mobike, TfGM and the Greater Manchester local authorities are now actively pursuing opportunities for a new bike sharing scheme to be implemented in Greater Manchester.

- The Sharing Economy – Greater Manchester Car Club has been introduced to promote accessibility through the sharing of transport including cars. This concept has been introduced with the aim to save money, reduce carbon emissions and to improve sustainable travel choices for local authority staff and members of the general public. 64 shared vehicles are currently available across Greater Manchester including 4 electric vehicles in Salford. The number of members increased from 1,703 in December 2014 to 1,941 in December 2015, an increase of 238 members. It is planned that 1,200 members of Salford Council will be able to use the club for business travel in the future.
- Value of travel time – Travel time has traditionally been considered unproductive but as technology has advanced this has begun to change. A Norwegian study highlighted that around 65% of commuters and 47% of business travellers felt their journeys are more productively spent if they are connected, or using, an electronic device.

Section 4: Summary of consultation

103. Following the publication of the first draft of the GMSF in October 2016, an initial formal consultation period ran from October 2016 to January 2017. More than 27,000 responses were received during this time period.
104. In terms of general transport issues, over half of the transport-related responses stated that existing traffic congestion and pollution from cars was already unacceptable and would only get worse with additional development. A small number of these responses also stated that there would be increased pressure on existing local facilities and services which GMSF currently makes no provision for. Almost one in five responses stated the need for investment in the highway network, public transport and active travel. 23% of responses challenged or questioned the ability to deliver the required transport infrastructure and/or if the necessary funding would be made available. Finally, 18% of responses stated that GMSF needed to be better integrated with the 2040 Transport Strategy.
105. In total 126 responses were received relating to the specific accessibility policy, with approximately 20% of responses stating that accessibility was vital to the overall success of the GMSF. Many responses stated that further investment in public transport and active travel networks were key priorities alongside the highways network. Over a third of all responses stated that existing congestion on the highway network in the peak period is already a serious problem, stifling economic growth. Some of these responses also suggested that there are congestion issues on the highway network in Greater Manchester outside of peak times in certain areas. Many responses also reported that the public transport network was overcrowded, inadequate and did not cater for the needs of the population. Approximately 8% of all responses relating to accessibility challenged the ability of the GMSF to deliver the required transport infrastructure, or questioned if the funding required would be made available.
106. 111 responses related to the wider infrastructure policies with 19 responses stating that existing infrastructure, including transport, is incapable of dealing with current levels of demand that would only be made worse given future expected levels of development. Another 11 responses also stressed the need for investment and development in the highways network and public transport infrastructure needs to occur before any other employment or residential development.

Section 5: Summary of the Integrated Assessment Process

107. An Integrated Assessment has been undertaken as part of the GMSF, incorporating the requirements of a Sustainability Appraisal, Strategic Environmental Assessment, Equality Impact Assessment, and Health Impact Assessment. A summary of the recommendations for Transport Connectivity policies from this process is below, extracted from the assessment framework matrix. This includes both the Integrated

Assessment of the 2016 GMSF Consultation Draft, and a new Integrated Assessment conducted in October 2018, for the updated GMSF Consultation document.

Integrated Assessment: Enhancement and Mitigation Recommendations of GM6 Accessibility Policy, GMSF 2016 Consultation Draft

Air Quality:

108. There is potential for negative air quality effects from new transport movements. The location and type of infrastructure will affect the air quality of certain areas, with associated health impacts.

Equality of Access:

109. Equality of access (e.g. for disabled people, the elderly or those without access to a private motor vehicle) should be explicit in the policy or supporting text, to ensure new schemes consider this throughout. Similarly, consideration of the different requirements travel/accessibility of urban, suburban, urban fringe and rural areas should be mentioned in the policy or supporting text.

Environmental Impacts:

110. Development of new accessibility and infrastructure projects should consider inclusion of environmental improvements, including new/enhanced blue/green corridors, planting and/or improved links between existing sites of interest.

Character Impacts:

111. Projects have the potential to affect landscape, historic environment and local character. Projects of all scales should be developed sensitively and through less harmful routes where impacts will be minimised. With investment in public/active transport, there will be opportunities to improve areas (e.g. town centres, local centres or footpaths), and this should be recognised in the policy.

Previously Developed Land Impacts:

112. The schemes outlined have potential to have a positive effect on previously developed land by improving access and making it viable.

Integrated Assessment: Enhancement and Mitigation Recommendations of Draft Transport Connectivity Policies, 2018

113. A further Integrated Assessment has been conducted upon policies in October 2018. A summary of the recommendations from this review is below.

114. Making clear links to supporting economic growth and reducing poverty was recommended, including through:

- Maximising the education and upskilling opportunities for local populations that GMSF transport delivery will provide;
- Providing equality of access to transport, beyond cities and towns, as well as through highway infrastructure improvements; and,
- Highlighting the social benefits of including quality of place.

115. Highlighting wider environmental benefits was also noted, including:

- The links between improving transport infrastructure and green infrastructure, specifying the types of greenery to be supported.
- The benefits of tackling congestion on greenhouse gas emissions.

116. Furthermore, additional points were raised including minimising travel associated with housing, and, including provision for utility improvements within highway and freight infrastructure improvements.

Section 6: GMSF Strategy, policies and allocations

117. This section outlines recommendations for what may be needed in a Revised Draft GMSF in relation to transport connectivity, taking account of the policies, legislation and guidance, and the findings of the GMSF Transport Study, 2040 Evidence Base update, and the issues raised from the Integrated Assessment and public consultation on the Draft GMSF.

118. It is suggested that a range of transport policies be included within a revised draft GMSF, broken down into the following themes:

World-class connectivity

119. In seeking to deliver a globally competitive Greater Manchester, key overarching connectivity policies will include:
- a. Delivering a pattern of development that minimises both the need to travel and the distance travelled to jobs and other key services, including healthcare, education, recreation facilities, green space and green infrastructure;
 - b. Transforming transport infrastructure and services, and locating and designing development, to deliver a significant increase in the proportion of trips that are made by walking, cycling and public transport;
 - c. Securing investment in new and improved transport infrastructure that will promote social inclusion, support economic growth, and protect our environment; meet customer's needs; and provide access to jobs and other key services;
 - d. Ensuring that development and transport investment fully considers the needs of people, and those modes which make most efficient and sustainable use of Greater Manchester's limited road space, by following the Global Street Design Guide hierarchy; and
 - e. Developing local transport industry skills and education to ensure the right mix of skills is available into the future.

Walking and Cycling

120. Developing a high quality walking and cycling network that provides safe connections for neighbourhoods across Greater Manchester will be essential. This will incorporate:
- a. Creating a safe, attractive and integrated walking and cycling network, connecting every neighbourhood and community across Greater Manchester;
 - b. Ensuring routes are direct, easily navigable and integrated with the public transport network;

- c. Creating, where practicable, dedicated separate space for people walking and cycling, with pedestrians and cyclists given priority at junctions;
- d. Increasing the capacity of the walking and cycling network in locations where significant growth in the number of short journeys is anticipated and where quality of place improvements are proposed; and
- e. Utilising and enhancing green infrastructure to create opportunities for walking and cycling.

Public Transport

121. Major improvements to the public transport network are also required to accommodate and deliver future growth. Specific examples will include:
- a. Enhanced connections to other major cities, with Greater Manchester at the hub of a high-speed rail connection to London and Northern Powerhouse Rail;
 - b. Tackle the bottlenecks in Manchester city centre on both light and heavy rail networks to enable improvements to reliability, resilience and capacity across the whole of Greater Manchester;
 - c. Improved public transport links to the Regional Centre;
 - d. Improved public transport access to Manchester Airport;
 - e. Enhanced connections between other key locations, major allocations and public transport interchanges, and the upgrading of key sections of the strategic public transport network;
 - f. More and higher quality public transport interchanges with better integration of different public transport modes and services; and
 - g. Improved access to rapid transit routes.

Transport Requirements of New Development

122. Through the planning process, new developments should also contribute to achieving a greater proportion of journeys made by walking, cycling and public transport. This will be done by:
- a. Prioritising safe and convenient access to the site and buildings for all users in accordance with the user hierarchy in Policy 'World-class connectivity' above;
 - b. Incorporating new and enhanced walking, cycling and public transport routes and stops, through and around the site, to improve the coverage, quality and integration of the wider walking, cycling and public transport networks;
 - c. Providing direct, safe and convenient walking and cycling routes to nearby facilities, employment areas, public transport stops and other parts of the walking and cycling network;
 - d. Incorporating sufficient secure and covered cycle parking to meet peak long-term demand from occupiers and visitors in a convenient location that helps to maximise its use, and where appropriate providing additional facilities

- e. Ensuring that the nearest public transport stops (both within and outside the development site) are attractive to users such as in terms of seating, shelters, information and ease of access on foot;
- f. Subsidising new or amended public transport services where the development would otherwise have inadequate public transport access;
- g. Making adequate parking provision for disabled people;
- h. Promoting alternatives to car ownership, such as the use of low emission car clubs rather than the provision of car parking;
- i. Complying with any car parking standards set out in local plans;
- j. Promoting the increased provision of electric vehicle charging points including meeting any standards set by district Local Plans;
- k. Providing designated pick-up/drop-off points for taxis and other demand-responsive transport services where appropriate, taking into account the potential increase in demand if car ownership falls;
- l. Making appropriate provision for deliveries and servicing in a way that reduces emissions, the number of vehicle movements and the need for repeat deliveries; and
- m. Ensuring Construction Management Plans are produced for developments, where appropriate, to mitigate construction logistics impacts on the surrounding area and encourage sustainable deliveries.

Highways

123. Targeted improvements to the highway network will be sought where they complement the aim of securing a significant increase in the proportion of trips made by walking, cycling and public transport (as set out in the policies above). Greater Manchester will work with Highways England to ensure:
- a. Improvements to the highways network are part of a multi-modal strategy to increase public transport, cycling and walking and improve access for all – as set out in the 2040 Transport Strategy Delivery Plan;
 - b. Any new infrastructure minimises the negative effects of vehicle traffic, to deliver environmental and health benefits; and
 - c. New infrastructure includes provision for utilities and digital infrastructure where required.

Freight

124. To further Greater Manchester's continued global competitiveness, consideration for freight will include:
- a. Protecting existing rail and water-served sites and associated infrastructure;
 - b. Completing the tri-modal Port Salford, including a rail spur from the Manchester-Liverpool line, canal berths on the Manchester Ship Canal, and a container terminal;
 - c. Accommodating the expansion of air freight activities at Manchester Airport;

- d. Enabling the provision of consolidation and distribution centres; and
- e. Ensuring that new development makes appropriate provision for deliveries and servicing, in accordance with Policy 'Transport Requirements of New Developments'.

Streets for All

125. A new focus on planning for streets, that adopts an approach focussed on the quality of place, and supporting high levels of walking, cycling and public transport would help address the breadth of themes raised within the evidence review including:
- a. Understanding the 'movement and place function' of streets as the starting point for improvement;
 - b. Ensuring that streets are welcoming for all, and respond to the needs of those with reduced mobility;
 - c. Delivering new and improved routes as part of the walking and cycling network;
 - d. Maximising the ability of pedestrians and cyclists to navigate easily, safely and without delay, and minimising barriers and obstacles to their movement;
 - e. Providing frequent opportunities for people to rest, linger and socialise, and for children to play, particularly in streets with a high 'place function';
 - f. Setting aside space for cycle parking (including for bike-sharing schemes where appropriate), high quality public transport waiting areas, and other facilities that will support sustainable modes of travel;
 - g. Incorporating increased levels of greenery wherever possible;
 - h. Offering shelter from wind and rain, and shade from the sun;
 - i. Delivering priority public transport and facilities for public transport users;
 - j. Providing appropriate places and routes for servicing, deliveries and 'drop-off';
 - k. Mitigating the impacts of air and noise pollution from road transport;
 - l. Ensure the efficient movement of people and goods on streets with a high 'movement function'; and
 - m. Harnessing new mobility innovations such as traffic signals technology and Ultra Low Emission Vehicle charging networks.

GMSF site selection

126. Connectivity to public transport is a key factor in the selection process that underpins the new allocations within the GMSF. Among other considerations, sites are specifically identified for development where they meet the following criteria:
- Land which is well served by public transport.

- Land which capitalises on the benefits from planned major strategic public transport investment which will result in the site being well served by public transport – namely HS2 Airport, Piccadilly and Wigan Stations, and the Airport Metrolink Western Leg extension.
- Land within 800m of a main town centre boundary or 800m from the other town centres' mid-points.
- Land where transport investment (by the developer) and the creation of significant new demand (through appropriate development densities), would support the delivery of long-term viable sustainable travel options and deliver significant wider community benefits.