GREATER MANCHESTER
DOING THINGS DIFFERENTLY

GREATER MANCHESTER TRANSPORT STRATEGY 2040

Published February 2017, updated October 2020

FINAL DRAFT – subject to final adoption by GMCA

Contents

Part 1
Introduction to our Greater Manchester Transport Strategy 2040

Overview

1. Greater Manchester is changing. Not only is our city-region growing - in terms of population and economy - but it is continuing to set the agenda on English devolution. We are leading the way in making use of the powers and funds devolved to us by national Government, and we are confident that our city-region is on a path towards more powers and funding, supported by our directly elected Mayor and ten council leaders. More local decision-making leads to greater benefits for our people and communities, including by enabling us to create better places and develop a London-style, integrated transport network.

2. It is in this context that we are continuing to develop and deliver the Greater Manchester Transport Strategy 2040 (hereafter referred to as the 2040 Transport Strategy), led by Transport for Greater Manchester (TfGM) on behalf of the Greater Manchester Combined Authority (GMCA) and the Greater Manchester Local Enterprise Partnership (GMLEP). The initial version of this 2040 Transport Strategy made clear that we would 'review our Strategy on a regular basis to respond to changing trends and new opportunities and priorities'. This document has, therefore, undergone a 'light touch' policy refresh to reflect work undertaken, and the changed context, since 2017.

3. Transport is crucial in supporting Greater Manchester's ambitious plans, including those set out in the Greater Manchester Strategy (GMS) with its vision 'to make Greater Manchester one of the best places in the world to grow up, get on and grow old'. This Transport Strategy supports Greater Manchester's Plan for Homes, Jobs, and the Environment - the Greater Manchester Spatial Framework (GMSF) - and the Greater Manchester Local Industrial Strategy, as sustainable growth will both need, and be driven by, improved connectivity. This is true on both a local and pan-northern level; as Greater Manchester has a fundamental role to play in national efforts to 'level up' and re-balance the UK economy.

4. Why 2040? The opportunities offered by devolution and greater local determination of policies, funding and delivery allow us to take a much bolder and longer-term view of our transport needs. This means we can identify an evidence-based, long-term vision for our transport network. This Right Mix vision is for 50% of trips to be made by sustainable modes, with no net increase in motor vehicle traffic, by 2040 (further details are set out in the Greater Manchester Transport Strategy 2040 'Right Mix' Technical Note – a copy of which can be found in the form of an appendix to this document). Our city-region also has a long-term environmental ambition for carbon neutrality by 2038. It is vital that we act to reduce the impact of transport on the environment. At every stage, this Strategy takes into consideration the actions needed to protect people's health, reduce air pollution and tackle the Climate Emergency.

5. Our 2040 Vision for Transport, which we consulted on in 2015, set out our ambitions for a radical new approach to planning our transport system in support of long-term needs and aspirations. This 2040 Transport Strategy builds on that Vision, highlighting the priority interventions needed to achieve it. The Strategy is, in turn, supported by a series of Five-Year Transport Delivery Plans which describe the progress made in delivering this Strategy and set out our short-term delivery priorities.

6. Importantly, the 2040 Transport Strategy is not about simply predicting what the future might hold and responding accordingly. For example, the spread of Covid-19 throughout 2020 had a profound impact on people's lives and wellbeing in a way that would have been impossible to predict. This Strategy is - instead - about helping to shape and create a successful, resilient city-region, ready to tackle the challenges, and opportunities, of the 21st century. By being clear on our priorities, we can realise them more effectively; we can develop funding mechanisms better linked to the benefits of improved connectivity; and we can develop a skills base to enable our residents to benefit from employment in the transport sector.

7. Our priority interventions range from transformational investment in HS2 and new, fast east-west rail connections across the North; to establishing Greater Manchester as a modern, pedestrian and cycle-friendly city-region, including through the Bee Network. There are plans to support town centre regeneration through new sustainable transport connections, interchanges and crucially, to build on the success of our commuter revolution, with the delivery of new and enhanced rapid transit links and a transformed local bus network. We also want to make our local road system more reliable and safer for all users, including freight and commercial traffic.

8. Ultimately, all interventions will come together to offer flexible and customer-focused travel choices, supported by smart information, ticketing and payment systems, across a truly integrated Greater Manchester transport network.

9. A vision for this integrated, modern and accessible transport system was set out by the Greater Manchester Mayor in 2019, through the launch of Our Network. Designed to align with the 2040 Transport Strategy, Our Network provides a passenger focused way of communicating what we want to achieve in the medium-term on our public transport and walking and cycling networks.

10. Our travelling customers – residents, business and visitors – sit at the heart of this Strategy. An effective transport system supports a strong economy by enabling goods to reach customers, and businesses to access skills and talent. And it has a major bearing on people's health and well-being by supporting social interaction, encouraging more active travel and reducing pollution.

11. This Strategy focuses on the critical long-term challenges we are facing in Greater Manchester, such as global warming, a rapidly growing and ageing population; low productivity and the need to reduce poverty and social inequality. This is supported by a more holistic approach to the needs of passengers and freight, with a strong focus on integration across different modes of transport, and with wider policy areas, such as spatial planning and health. Technology and innovation also have a key role to play.

12. We will take a consistent and long-term approach to tackling these major challenges, while also reviewing our Strategy on a regular basis to respond to changing trends and new opportunities and priorities. This approach is supported by plans that cover the short and medium term, including: a series of Five-Year Transport Delivery Plans; Local Implementation Plans (for each of the ten Greater Manchester local authorities) and the development of sub-strategies including : Streets for All, the City Centre Transport Strategy, the Local Bus Strategy, the Rapid Transit Strategy and the Freight Strategy.

13. Our 2040 Vision - and the Right Mix - will not be easy to deliver but, in preparing this long-term Strategy, we believe we are putting in place the right framework to face up to the challenges of the next 20 years.

Our Vision and the Right Mix for 2040

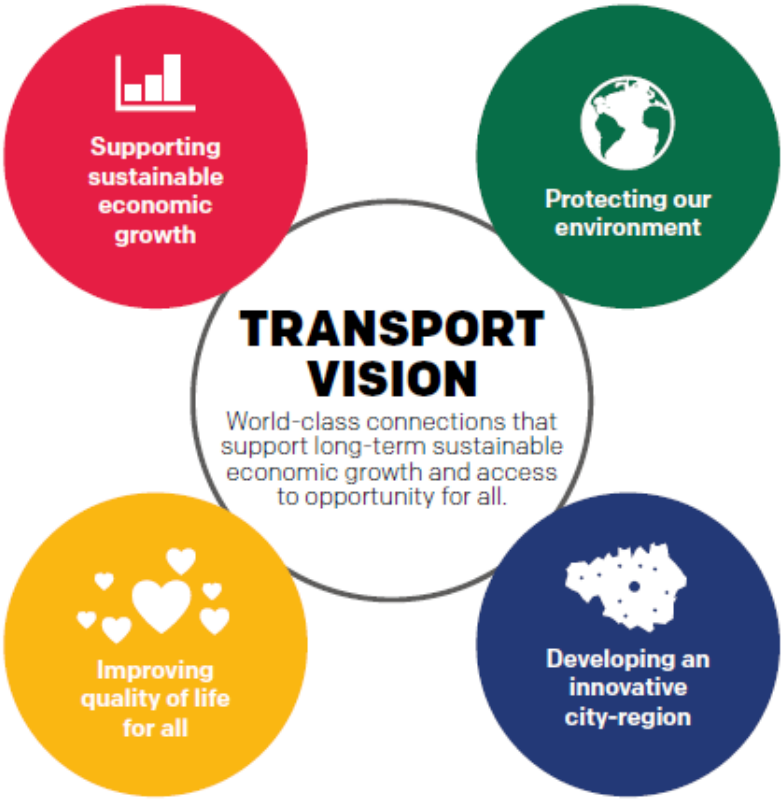
14. Our vision is for Greater Manchester to have '***World class connections that support long-term, sustainable economic growth and access to opportunity for all'***. Our approach to achieving this was set out in the Greater Manchester Transport Strategy 2040: Our Vision.

15. As well as meeting the requirements of our travelling customers, our transport system needs to help the local economy to flourish and prosper, and our residents to contribute to and benefit from that prosperity, as set out in the refreshed Greater Manchester Strategy.

16. Our transport system must connect people to opportunities and information, entrepreneurs with ideas and capital, and employers with talent and skills. It also needs to create better places: improving the environment, reducing the dominance of cars and goods vehicles and supporting new development and regeneration.

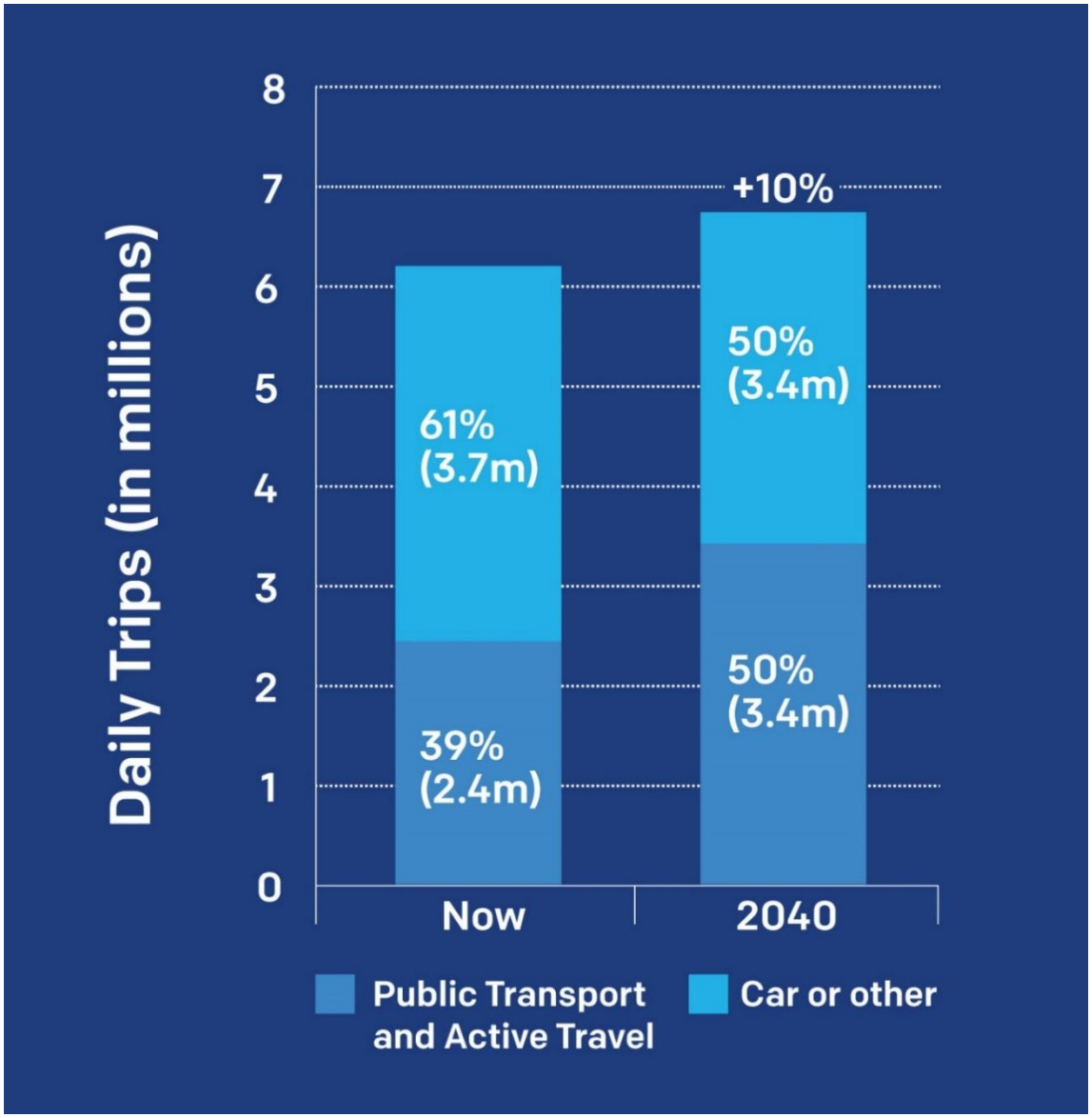
17. Finally, the role of technology and innovation will be even more important in the period up to 2040, enabling us to: improve quality of life, reduce costs and resource consumption, encourage sustainable travel, reduce overall journeys and support Mobility as a Service, the integration of transport services into an accessible on demand, single customer experience with simple payment.

18. The four key elements of our Vision, which represent the goals of our Strategy, are set out below.



19. In 2019, we set out our ambition to improve our transport system so that - by 2040 - 50% of all journeys in Greater Manchester are made by public transport or active travel, supporting a reduction in car use to no more than 50% of daily trips. This will mean one million more sustainable journeys every day in Greater Manchester by 2040, enabling us to deliver a healthier, greener and more productive city-region. We call this the transport 'Right Mix'. Achieving the Right Mix is expected to lead to zero net growth in motor vehicle traffic in Greater Manchester between 2017 and 2040.

The Right Mix for Greater Manchester

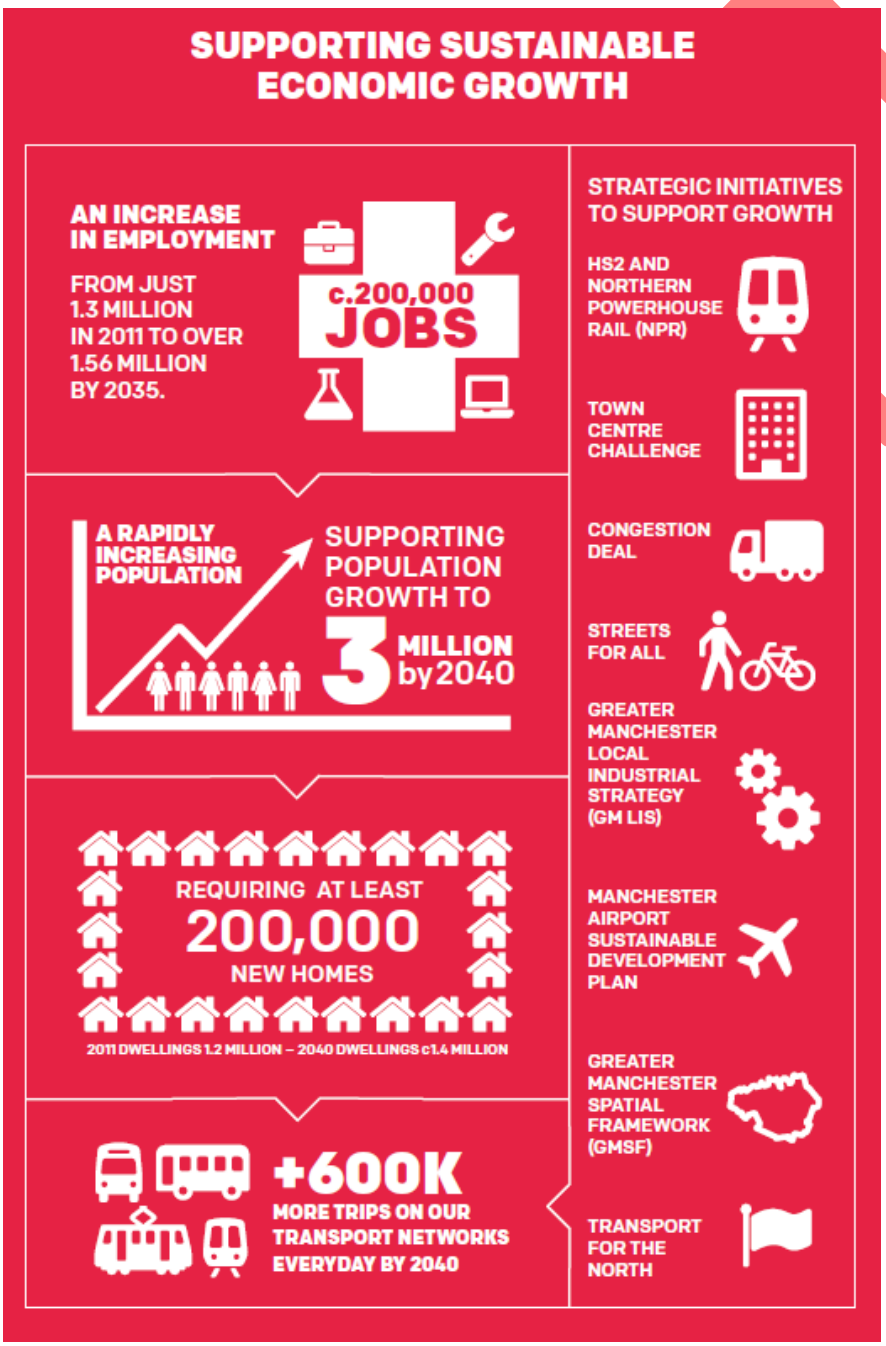


Critical Transport Challenges for Greater Manchester

20. We face challenges in achieving our vision, and these are analysed in depth in our 2040 Evidence Base, which should be read alongside this 2040 Transport Strategy. They are also summarised below.

Supporting Sustainable Economic Growth

21. Greater Manchester has ambitious growth plans over the coming 20 years, with major growth in employment (particularly in knowledge-based industries) leading to a rapidly increasing population and an urgent need to build 10, 500 new homes every year from 2020 until 2037.



22. Significant work has been undertaken to develop Greater Manchester's Plan for Homes, Jobs and the Environment - the Greater Manchester Spatial Framework (GMSF) - in a way that is closely aligned with this Greater Manchester Transport Strategy 2040 and Our Five-Year Transport Delivery Plan. This is vital, to ensure that we correctly identify the transport infrastructure needed to support movement across the city-region, taking into account current and future travel demands.

23. Key challenges for our strategy in supporting sustainable economic growth are as follows:

- Growth will lead to thousands more trips on our transport networks, which could result in significant highways congestion and overcrowding on our public transport networks, ultimately choking off investment and damaging prosperity. Preventing increased congestion will need more people to travel by public transport or to walk or cycle, and fewer goods vehicles on our roads during peak periods. This will require a significant improvement in the alternatives, providing more capacity and creating a flexible, integrated London-style transport network that meets customer needs. Additional transport links will be needed to unlock growth areas, particularly as the scale of growth means that sites on the edge of the urban area will need to be developed.

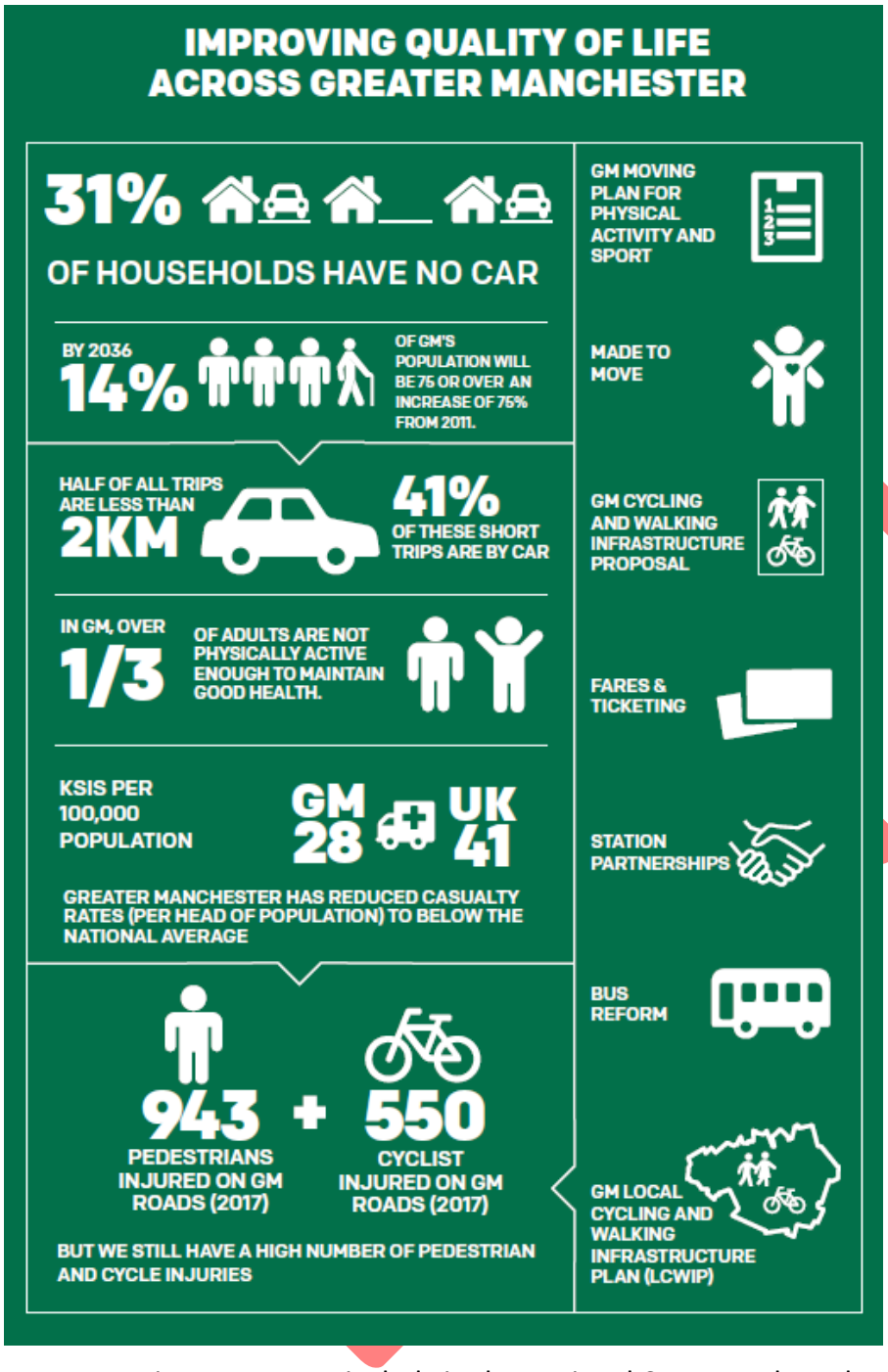
- Access to skills and markets needs to be improved to allow people to take up the new jobs on offer, employers to recruit the best workers and businesses to deliver goods efficiently.

- Journey time reliability on our roads and on public transport is essential, reducing the cost to business of delayed deliveries and employees arriving late. The cost of congestion in Greater Manchester has been estimated by TfGM to be £1.3 billion per year.

- Networks need to be well maintained in order to function. We face an increasing challenge to keep networks open in the face of adverse weather (linked to climate change), ageing infrastructure and more intensive operation.

- The perception of Greater Manchester as a good place to live, work, invest and visit is vital to the economy. We must deliver the sort of efficient, seamless, intelligent and easy-to-use public transport enjoyed by leading world cities, and create public spaces that offer a safe, attractive and clean environment for walking and cycling.

Improving the Quality of Life



24. Economic success, particularly in the Regional Centre and southern parts of Greater Manchester, has not yet spread to all areas, and there are significant pockets of severe deprivation throughout the conurbation. Many of our residents do not have access to a car and therefore rely heavily on public transport. We also have major challenges in terms of air pollution, physical inactivity and road collisions. This Strategy can make a major contribution to improving the quality of life of all our residents by helping to address some of the critical challenges highlighted below:

- Many people do not currently see sustainable modes as realistic alternatives to taking the car, and we must continue to work hard to improve the quality of our walking, cycling and

public transport and to provide people with the facilities and training to make them natural, easy choices. The design of new development also needs to make it easier for people to use sustainable modes.

- Access to jobs and training needs to be improved so that transport is not a barrier to work, or moving to a better job. Where businesses operate 24/7 or have variable working hours it can be difficult to provide public transport, and the cost of travel is a serious issue for those in lower-paid jobs.

- Good access to services such as education, healthcare, shopping and recreation is essential, particularly for disadvantaged groups and people living in isolated areas. Our town centres are threatened by changing retail trends and elsewhere many of our services, such as healthcare, are becoming more centralised and, in some cases, more difficult to reach.

- Improving health is an area where transport can make a significant contribution by increasing levels of active travel and reducing pollution. Much needs to be done to make this a real option by improving safety, providing better infrastructure and building confidence through training. We must make walking and cycling the natural choice for everyday shorter trips, many of which are currently made by car.

- Poor air quality damages everyone's health, but it can have particularly significant effects on the most vulnerable in our communities. Long-term exposure to elevated levels of particulates and nitrogen dioxide can contribute to the development of cardiovascular or respiratory diseases, and may reduce life expectancy. It is estimated that approximately 5% of deaths in GM are attributable to particulate pollution. Currently GM is compliant with the legal limits of particulate matter, but because of its impact on health it is important to ensure that it is reduced as much as possible.

- Nitrogen dioxide (NO_2) is a type of air pollution which is at levels above legal limits at numerous sites in Greater Manchester. The main source of NO_2 is road vehicles (especially older, diesel ones). Reducing these emissions is vital, to clean up the air we breathe and prevent people contracting and suffering from serious health conditions.

- Safety and security are fundamental. Good progress has been made in reducing the number of people killed or seriously injured on our roads, but all partners must work hard to deliver our vision of reducing deaths to close to zero by 2040. Public transport is a very safe way to travel, but some people are deterred from using it by the fear of crime and anti-social behaviour, which we must continue to tackle.

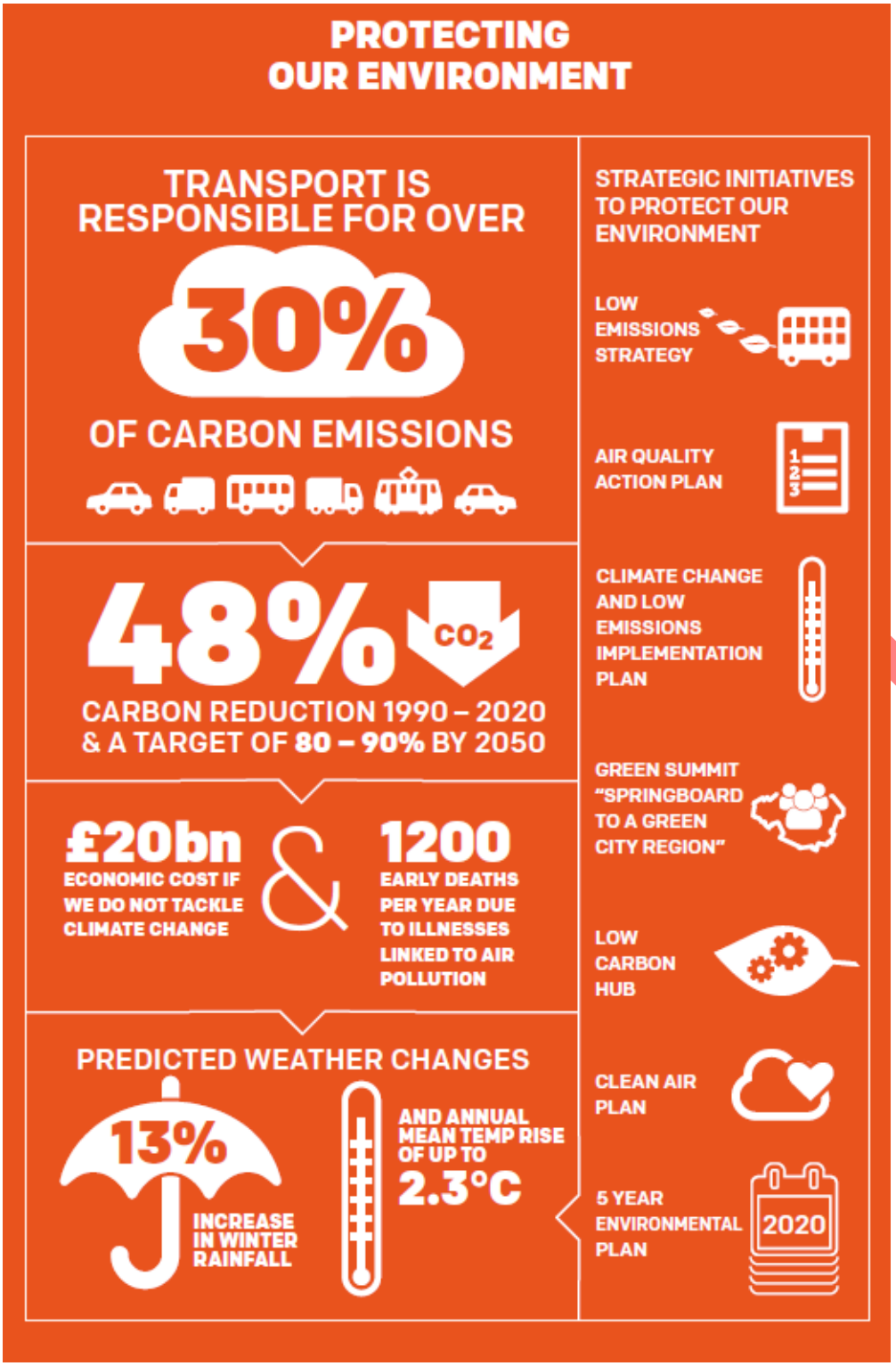
- These quality of life challenges - from struggling to incorporate physical activity into daily lives; to poor air quality; to travel delays due to full-to-capacity public transport services and congested road networks - need to be addressed in a holistic manner. Greater Manchester is pioneering the Streets for All approach, which offers a people-centred way of taking decisions about how our streets are designed and managed. When it comes to quality of life, local neighbourhood trips offer the greatest potential for change as large numbers of short car journeys could be switched to walking or cycling.

Protecting our Environment

25. Motorised transport has brought great benefits to society, giving easy access to a wide range of opportunities, but its impact on the environment is very damaging. At a global level, carbon dioxide (CO_2) emissions are a major contributor to climate change.

26. All ten Greater Manchester local authorities, and the GMCA, have declared a Climate Emergency, making clear that urgent action is needed to put Greater Manchester on a path to carbon neutrality by 2038, and for GM to make its fair contribution to a stable global climate and to the Paris Agreement of holding the increase in global temperatures to well below 2°C.

27. Greater Manchester is taking action through the 5-Year Environment Plan (launched in 2019, at the second Greater Manchester Green Summit). The Plan includes priorities for improving our air quality and reducing emissions in relation to the way we travel, including reducing the distance we need to travel, increasing the use of public transport and active travel, phasing out fossil fuelled vehicles, establishing a zero-emissions bus fleet and decarbonising road freight.



Further challenges and opportunities when it comes to protecting our environment include:

- Reducing transport emissions, including by implementing the measures required to meet carbon and air quality targets. This needs to be done in the context of economic and population growth, which will increase demand. Making the best use of existing infrastructure will help to reduce environmental impacts. Locating new development where there is good access to public transport and services will reduce car travel and

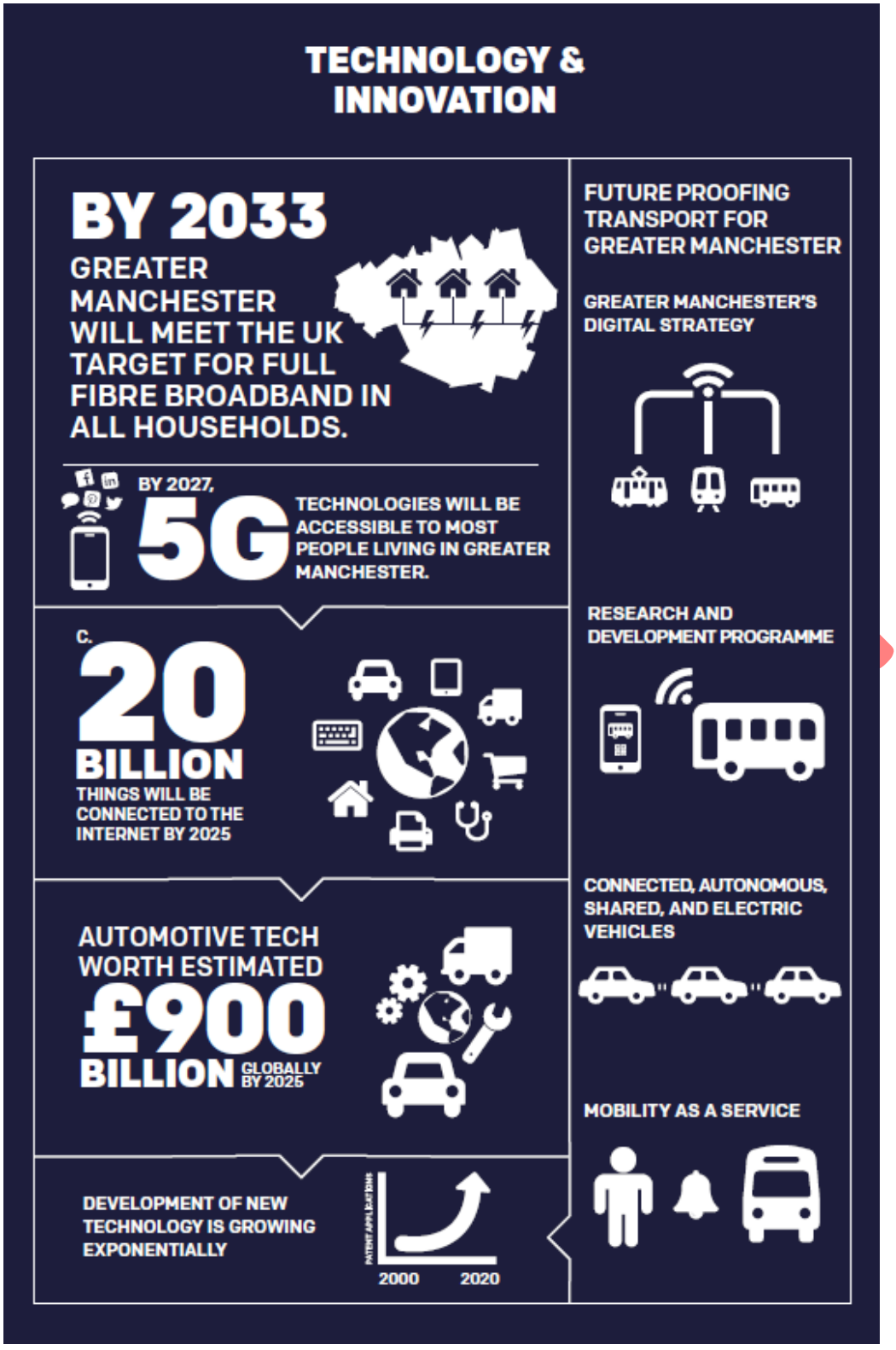
therefore emissions. Road and rail networks must also be used efficiently and be well maintained.

- Protecting natural and built environments from the impacts of transport. Damage to, or loss of, habitats as a result of construction, disturbance from traffic noise or street lighting, and pollution due to run-off from highways must all be minimised.

Developing an Innovative city-region

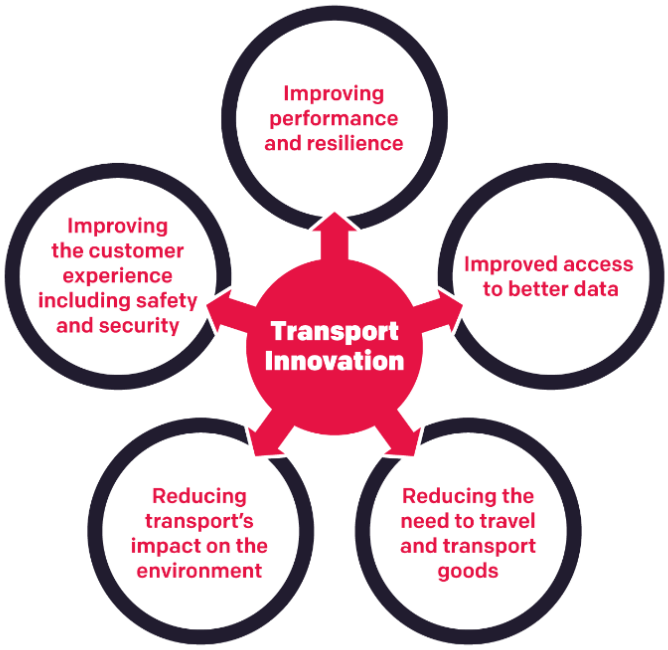
28. Without significant capital investment, existing transport solutions will not fully overcome obstacles to sustainable and equitable growth in Greater Manchester. A great deal of work is currently being undertaken in our city-region, to identify opportunities to develop, test and implement new mobility solutions.

29. Transport innovation in Greater Manchester focuses on three main areas – Intelligent Mobility, Smart and Shared Mobility, Connected Infrastructure and Place – all of which are achieved through partnership and collaboration. Our city-region participates in many collaborative transport innovation projects with UK-based and international partners to ensure we remain at the forefront of this area.



30. Following the completion of multiple successful projects and trials in recent years, several 'pathways to innovation' have been identified using cross-sectoral working to ensure developments in Mobility as a Service, Connected and Autonomous Vehicles and shared mobility are customised to meet the needs of our residents and visitors.

31. We will exploit new technologies and innovative approaches where we believe they add real value to the delivery of our Strategy, and particularly in the five key areas shown in the graphic below:



32. The development of connected infrastructure, shared services and placemaking has been at the forefront of the transport innovation agenda in Greater Manchester. Innovation projects are helping us better understand the impact of these services and new mobility solutions and overcome any technical, regulatory and commercial barriers. Projects such as eHUBS are creating community hubs with access to shared, electric, sustainable mobility solutions, while the legacy of the ground-breaking CityVerve project forms the foundation of our ambition to be a world-leading smart city.

33. TfGM's intention to be at the forefront of developing and implementing new technology can also be seen in its involvement in the 5G Create project, which is trialling the use of 5G technology and artificial intelligence to improve the efficiency of traffic signals.

Building on Success

34. We have already made significant progress when it comes to improving the capacity and resilience of our transport network. Details of work completed or progressed to date are included in this 2040 Transport Strategy, Our Five-Year Transport Delivery Plan and Our Network.

- In 2019 the Greater Manchester Rail Prospectus set out the city-region's priorities for its rail network. These include improving infrastructure and rolling stock; increasing passenger

numbers into the Regional Centre; working with rail and community partners to improve stations, increasing services to Manchester Airport and delivering local turn-up-and-go services that operate at least four trains an hour. The Prospectus also sets out the opportunities provided by rail reform and greater local control.

- On our highways, we continue to develop our Greater Manchester-wide approach to managing, maintaining and improving our Key Route Network of major roads which play the biggest role in supporting our city-region economy, and we have been investing heavily in innovative real-time traffic management and information systems to improve their reliability.

- Further expansion and upgrades to Greater Manchester's Electric Vehicle Charging Infrastructure network (GMEV) are planned. Work started in 2020, and more opportunities for rapid charging are being rolled out. As the uptake of Electric Vehicles increases, we will work in partnership with the private sector increasing investment to upgrade, expand, operate and maintain a re-branded EV charging infrastructure network to make Greater Manchester truly EV-friendly and support air quality and carbon reduction targets. Work is also underway to roll out Greater Manchester's Streets for All approach, which strikes a better balance between movement demands and place functions on our streets.

- Greater Manchester is rolling out world-class walking and cycling infrastructure. This includes through the Mayor's Challenge Fund for Cycling and Walking to deliver the Bee Network - a plan to connect every neighbourhood and community in Greater Manchester - and the long-term Cycling and Walking Infrastructure Vision for Greater Manchester, which builds on the recommendations made by Greater Manchester's first Cycling and Walking Commissioner in his 2017 Made to Move report.

- Transport investment will be essential in regenerating Greater Manchester's town centres. Local authorities are working on plans to improve access to, and within, town centres. The Mayor's Town Centre Challenge and other initiatives will help regenerate town centres by creating more attractive places to live, with local retail and leisure, supported by transport and digital connections.

- Greater Manchester has invested in modern, attractive interchanges in our town centres, supported by programmes of targeted bus priority and passenger facility improvements across our bus network. The Bus Services Act (2017) gave Greater Manchester the power to consider options to reform its bus market and potentially improve bus availability, reliability and affordability. Bus reform also offers opportunities for more integration between the bus network and other sustainable and active modes.

35. The scale of the growth challenge we are facing, however, requires more investment and careful planning and management of our transport network, co-ordinated across the different elements of Greater Manchester's sustainable growth and public service reform agenda.

36. The policies and interventions set out in this document in Parts 2 and 3 have been developed to provide a comprehensive toolkit for addressing the challenges outlined above. As we move from broad interventions to specific schemes and funding programmes set out in Our Five-Year Transport Delivery Plan, we will need to prioritise measures which best meet our long-term goals, with a particular focus on raising prosperity, while establishing sustainable growth.

Scope of this Document

37. This document sets out Greater Manchester's Transport Strategy for 2016 to 2040. It takes as its starting point the Greater Manchester 2040 Transport Strategy: Our Vision, which received widespread support through public and stakeholder consultation in the summer of 2015 (the results are reported at www.tfgm.com/2040). The initial version of this Strategy was developed by TfGM, in consultation with the ten Greater Manchester local authorities (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan), the GMLEP, and approved by the GMCA and the then interim Greater Manchester Mayor in 2017. This version of the Strategy was updated in 2020.

38. We recognise that the world is likely to change significantly over the next twenty years, in ways that we cannot always predict. For example, the spread of Covid-19 throughout 2020 had a profound impact on people's lives and wellbeing in a way that would have been difficult to imagine. We will continue to refresh our Strategy on a regular basis to reflect new challenges and opportunities. In particular we will need to ensure we have the appropriate transport infrastructure and services to support future growth in Greater Manchester, while keeping in mind our long-term vision for the Right Mix of transport on our network: for 50% of trips to be made by sustainable modes by 2040, supporting a reduction in car use to no more than 50% of daily trips.

39. Greater Manchester has adopted an adaptive, vision-led approach to transport planning. This means that the steps needed to achieve our Right Mix vision will be continually monitored and adjusted to achieve our goals. This is important, given the potential for our plans to be knocked off course by external events. Changes in the way we achieve the Right Mix could lead to changes to the type of interventions set out in Greater Manchester's transport plans.

40. Greater Manchester's Plan for Homes, Jobs and the Environment (the Greater Manchester Spatial Framework) which will identify new development locations, is still under development and so our transport strategy needs to be flexible to enable it to influence and support proposals as they are brought forward. This flexibility can be achieved in a number of ways, including through a series of Five-Year Transport Delivery Plans, which accompany this Strategy. Each Delivery Plan is updated annually to describe the progress made in delivering the 2040 Transport Strategy and to reflect any changes needed. The Delivery Plans have appendixes in the form of a Local Implementation Plans for each of the ten local authorities. Local Implementation Plans build on the main Delivery Plan to set out further details of each local authorities' transport ambitions, targets and priorities over each five-year period. Taken together, the Strategy and Delivery Plans constitute Greater Manchester's Fourth Local Transport Plan, as shown overleaf.

41. This Strategy has been developed in line with current Local Transport Plan guidance and European best practice in creating Sustainable Urban Mobility Plans. It is based on a thorough analysis of supporting evidence, which is presented in more detail in our refreshed 2040 Evidence Base report. We have also undertaken an Integrated Assessment of the Strategy to ensure that it fully considers environmental, health, habitats and equalities impacts.

42. Sitting alongside these documents, Our Network is a passenger-focused way of communicating of our vision for an integrated, modern, accessible and sustainable transport network. Launched by the GM Mayor in 2019, Our Network is designed to bring to life Greater Manchester's planned transport projects and policies, and show how different modes of public transport – bus, tram, rail, tram-train – and cycling and walking - could form a London-style, integrated transport network with seamless connections, simplified ticketing and an aspiration for capped fares.

43. The draft Strategy and first Five-Year Transport Delivery Plan were the subject of a 12-week consultation, beginning in July 2016, to which over 80 stakeholder groups and almost 1,690 members of the public responded. The consultation included a dedicated webpage, an animation that distilled the strategy into a three-minute video, strong media coverage, a comprehensive social and mainstream media plan, and a well-attended stakeholder event. The documents themselves were available online and this included accessible versions: a British Sign Language video, Easy Read, Large Print and Audio versions.

44. Responses to the online questionnaire showed that 72% of respondents either agreed or strongly agreed that the Strategy would help to deliver the vision. There was also strong support for the principles, priorities, spatial themes and the Delivery Plan. Respondents also had the opportunity to answer an open question on 'What one thing would make travel in Greater Manchester easier for you?' The responses to this question, along with stakeholder comments were used to amend the draft documents.

45. A report on the consultation outcomes was approved by GMCA in October 2016 and the Final Strategy and Delivery Plan were approved in December 2016.

46. The second Five-year Transport Delivery Plan (setting out Greater Manchester's transport plans for the period 2020 -2025) was published in draft form, for public consultation, in January 2019 alongside the Greater Manchester Spatial Framework. The decision was taken to revise the Spatial Framework, to allow for deeper engagement with local communities and other stakeholders. A refreshed draft Delivery Plan was published alongside the revised Spatial Framework – Greater Manchester's Plan for Homes, Jobs and the Environment – and a refreshed version of this document in November 2020.

47. The remainder of this document is structured around three key parts:

- **Part 2** sets out our strategic principles and policies for delivering a more customer-focused Greater Manchester transport system. These cover the principles we need to apply across our transport system as well as our strategic approach to planning and managing different modes of transport, including highways, walking and cycling, and public transport.

- **Part 3** focuses on the five spatial themes which we introduced in our 2040 Vision, highlighting challenges, ambitions and interventions for different types of travel in Greater Manchester.

- Finally, our approach to delivery is set out in more detail in **Part 4**, including our approach to funding and prioritisation, and how we will measure performance.

Part 2
Supporting Travel in Greater Manchester in 2040: Strategic Principles and Policies

Introduction

48. Since we published our first Local Transport Plan in 2001, Greater Manchester's transport strategy has had a consistent focus on sustainable transport and regeneration. We have long been working hard to tackle the environmental, economic and quality of life challenges described in Part 1.

49. However, we will need to go much further in order to deliver the scale of ambition set out in our 2040 Vision document - and in other plans published since then - including the Greater Manchester Strategy, Greater Manchester Plan for Homes, Jobs and the Environment and Greater Manchester's long-term environmental vision for carbon neutrality by 2038.

50. Greater Manchester's growth and reform agenda, secured through the ground-breaking 2014 Greater Manchester Agreement, provided us with some of the tools needed to achieve our aspirations, through the devolution of powers and funding to a locally elected Greater Manchester Mayor. Subsequent devolution deals gave Greater Manchester more powers - including over additional elements of the transport system - and notably, in 2017, powers to manage the city-region's health and social care budget.

51. We will build on our existing successful transport strategy and continue to develop and apply consistently a series of strategic principles and policies across our transport system. These are set out in more detail within this section and along with a framework within which we can bring forward measures to tackle issues in different parts of Greater Manchester, as described in Part 3.

A More Customer-Focused Transport System: Our Network Principles

52. Meeting the transport needs of our residents, businesses and visitors is at the heart of our 2040 Transport Strategy. We are mindful that our transport system carries both people and goods, and we must consider the needs of both as we plan for the future.

53. We have therefore established seven mutually reinforcing principles, set out below, which we will apply consistently as we improve Greater Manchester's transport system to ensure that it meets the needs of all customers:

Integration at the Heart of our GM Transport Strategy 2040

Our Ambition: To enable people to move seamlessly between services and modes of transport on a single, high quality, easy-to-use network; maximising choice and supporting low-car lifestyles, made possible by integrated land use and transport planning.

54. A fundamental aspiration of the 2040 Transport Strategy is to provide Greater Manchester's residents, visitors and businesses with real choice in their mode of travel and how goods are transported. We must provide sustainable travel options that offer an attractive alternative to the private car and minimise the negative impacts of road freight on our city-region. Tackling these issues will enable Greater Manchester to deliver its economic growth, environmental and quality of life goals without traffic congestion and pollution undermining its long-term success.

55. A major barrier to enabling people and goods to travel more sustainably is the lack of integration across the different parts of the transport network. This makes it difficult for customers to understand what travel options are available to them; how they access and pay for these; and how to move between different modes of transport for more complex journeys. Much of this is due to the complexity of different institutions and transport operators involved in planning and delivering our transport system. This fragmented nature – which means passengers changing between Metrolink, train and bus have to buy multiple tickets from different companies, with no coordination between services – was a key reason for the development of Our Network, which sets out our ambition for a London-style integrated network with seamless connections between different modes of transport. Developing a more joined-up approach to planning and delivering transport is at the heart of Greater Manchester's devolution and reform agenda.

An Integrated Transport Network

56. While the concept of integration is not new, the delivery of a truly integrated transport system has, in the last 30 years, been beyond our reach due to regulatory and institutional barriers.

57. Through this Strategy, we will stop viewing different modes of transport as separate networks, with individual asset management, service planning, and fares and ticketing regimes, and instead plan our transport system as a single, highly-connected entity that all customers can move through seamlessly. This will allow us to prioritise transport improvements more effectively, based on the needs of different travel markets and to save resources by minimising duplication of expenditure and activity.

58. A network approach will also enable us to meet a much wider variety of travel demands, facilitating easier interchange at key nodes on our transport network and, along with improved services, enabling people to make orbital, as well as radial, movements much more easily.

59. We will enhance our public transport so that bus, rail and tram services and facilities are planned and delivered in a much more integrated way to minimise the time and cost of changing between services. It is hoped that steps taken by Greater Manchester to reform bus services in the city-region could drive the development of this more joined up public transport

network. A franchising scheme for the whole of Greater Manchester - for which there was a large amount of public support during the 2019 consultation - would enable decisions about routes, frequencies, timetables, quality standards and ticketing to be taken at a local level.

60. We will develop comprehensive and easy to understand cycle and walking networks that access a range of destinations and integrate well with public transport, including Greater Manchester's Bee Network and the emerging city-region-wide bicycle hire scheme. We will also continue to develop and roll out our Streets for All approach to planning and maintaining our strategic and local highways networks, to meet the sometimes conflicting needs of different users and considering the role - both positive and negative - of highways in shaping local places.

61. Over the coming years, we will continue to focus on significantly improving people's travel experience. Our aim is to enable customers to make their journeys in the most flexible way, using multiple modes of transport, through innovative new ways of planning and paying for travel and through access to real-time information. The latter will enable customers to make informed choices about their travel, putting them in control and encouraging sustainable journeys. We are also working towards transforming Greater Manchester's rapid transit stops into Travel Hubs, including better pick up and drop off provision, cycle facilities and electric vehicle charging points.

62. Technological developments open new opportunities for delivering an integrated and customer-focused transport system to meet future customer needs. Greater Manchester is working to deliver connected and autonomous vehicles (CAVs) projects that could move people around the city-region in a more efficient, inclusive and sustainable way.

63. Such an approach also blurs the traditional boundaries between public and private transport, and TfGM's role will have an increasing focus on enabling mobility and improving connectivity for everyone no matter how they choose to travel.

64. We recognise that there are parts of the current transport offer in Greater Manchester that are under-developed, thereby making car use essential, rather than optional. Later in this document, we set out the types of improvement needed for different transport modes. However, there is also potential to exploit the increasingly popular sharing economy concept to enable people to access a car or a bike for occasional trips, even if they do not own one. Hence, we want to see a more comprehensive low-emission car club offer, as well as continuing to develop our bicycle hire scheme. This will provide a more comprehensive travel offer to our residents and businesses, and has potential to reduce the number of cars on the roads and parking needed.

65. We also recognise the importance of other supporting modes of transport, such as taxis, private hire and demand responsive services, which can fill gaps in our transport system. Specialist accessible transport is also essential for people who have mobility impairments and cannot easily use conventional public transport.

66. Again, the development of new demand responsive technologies and applications will make it easier for people to plan, book and pay for journeys, potentially as part of longer multi-modal trips. We will continue to work with commercial and community transport operators to ensure that these supporting modes of transport are fully embedded into our Transport Strategy and

are seen as an integral part of a fully integrated, accessible transport system in Greater Manchester.

Policy 1: We will work with partners to ensure that modes of transport such as taxis, private hire vehicles and other demand responsive services—as well as shared mobility solutions such as car clubs, cycle hire and other forms of shared transport - are available and fully integrated into the Greater Manchester transport network.

Integrated Information, Fares and Ticketing

67. Journey planning and wayfinding tools need to be available to customers 24/7 and they should provide customers with consistent, simple and straightforward information about their travel options. TfGM will adopt a digital first approach, with technology increasingly enabling these apps and web-based tools to be tailored to the needs of individual customers. Where feasible, we will make our data available as Open Data to allow third parties to develop apps which will benefit our customers.

68. TfGM and its partners will focus on developing travel planning tools to improve customer information, make this information available in more places and to enable us to respond more quickly to transport incidents. Future developments could include adding data on roadworks, incidents/events, and a predictive function to warn customers of potential impacts on their journey, eg adverse weather. Expansion of CCTV and other sensor coverage will allow better real-time monitoring and enable more accurate travel information.

Fares and Ticketing Objectives

- **Simplicity:** Customers can easily understand and choose options to pay for their journey, including for multi-modal travel

- **Convenience:** Transactions are easy for the customer; one payment allows multi-modal travel and delivers efficiencies to the operator
- **Value for Money:** Passengers see fare as fair for the service they get.
- **Transparency and Trustworthiness:** Customers have clear understanding of pricing and product
- **Inclusivity**: Related to the affordability of travelling by public transport and informed by concessions policy
- **Balanced Funding:** Fares should raise the revenue needed to balance costs with available subsidy

69. We will continue to provide information in a range of formats, recognising that not everyone has access to digital devices. We will develop a much more consistent approach to transport information and payment systems to allow customers to search and pay for a range of different travel services, such as public transport, car clubs, cycle hire and parking. This approach could involve the development of a multi-modal, account-based travel platform, sometimes referred to as Mobility as a Service (MaaS). MaaS could be delivered through a smartcard, credit/debit card, mobile phone or other cashless technology. Such an approach could also support a more sophisticated and responsive approach to managing demand on our transport networks through nudging travel behaviour.

70. We will develop a set of multi-modal principles to inform decisions relating to fares and ticketing. This will support the development of a much more consistent approach to pricing if and when we receive the necessary powers. Decisions relating to fares and the ticketing will be informed by customer feedback, surveys, sales data and the evaluation of schemes and interventions, as well as by the 2040 Transport Strategy and other GM policies.

Policy 2: Working with partners, we will seek to deliver integrated pricing and payment systems across the transport network, including smart ticketing for public transport, to encourage use of public transport in line with the GM Transport Strategy 2040.

Integrated Sustainable Journeys

71. To make effective use of our transport networks and obtain value from public investment, we need people to be able to make informed decisions about their travel and which mode best suits their needs.

72. We will focus on measures that encourage people or freight to travel most efficiently on our transport network, making the best use of available capacity, particularly during peak periods. This will include a holistic look at travel behaviour, such as encouraging more home working rather than commuting. Future demand management will encourage people to make at least some of their journeys by public transport, walking and cycling, which has long been at the heart of Greater Manchester's transport strategy. In addition to physical measures (bus priority, reallocating road space for pedestrian and cycling infrastructure, car share schemes, and constraints on long-stay parking), a range of supporting behaviour change measures will be needed.

73. A consistent, long-term approach to travel choices, promotions and marketing will provide people and businesses with the information, training and incentives to make better informed travel decisions and the impact of their choices. It will also seek to improve travel horizons for those whose life and employment choices may be constrained by a lack of travel awareness. Greater Manchester already has a Sustainable Journeys programme which works with businesses to encourage their staff to travel sustainably; helps jobseekers travel to interviews and to their workplace during the initial period of employment; encourages individuals and communities to use public transport, cycling or walking infrastructure in their area; and promotes walking and cycling in schools. A continuing programme of broadening travel choices will be important in complementing the interventions described in Part 3 and we will seek partnership funding for this, including developer contributions, to focus on:

- Reducing the carbon and environmental cost of journeys;
- New ways of working which make the best use of the transport network;
- Maximising the benefit of new, integrated transport infrastructure and services;
- Delivering public health benefits through enabling more active travel;
- Supporting town and city centre economic vitality and sustainability;
- Improving access to key services and jobs;
- Maximising sustainable travel in new developments; and
- Becoming more resilient to disruption.

74. Future programmes will be targeted at locations and population groups where progress to our Right Mix target can be maximised. For example, to make the best use of the existing transport network, target areas might include commuter corridors and economic centres, while target groups could comprise commuters, parents of school children, those with the potential to switch mode, or those who are at lifetime transition points such as moving house or starting a new job. We will also target travel choices programmes at areas with poor air quality.

Policy 3: We will maintain a conurbation-wide programme of interventions designed to encourage people to make sustainable journeys, supported by journey planning tools and information; to encourage travel behaviour change and mode shift, in order to make the most efficient use of available capacity, particularly during peak periods.

75. We also need to reduce demand on road space from the road freight sector, particularly during peak periods, through measures such as freight consolidation, delivery and servicing plans, freight routing strategies and use of sustainable modes. This is discussed in more detail later in this document.

Integration with Spatial Planning

76. Greater Manchester is a rapidly growing city-region and has a key role to play in a levelling up the national economy to help reduce the disparities in productivity and earnings across the UK. It is likely that Greater Manchester will have a population in excess of 3 million (currently 2.7 million) by the mid-2030s. Further devolution of transport and spatial planning powers to Greater Manchester provides an important opportunity to plan our development and transport in a more integrated way.

77. Greater Manchester's Plan for Homes, Jobs and the Environment (the Greater Manchester Spatial Framework) is currently in development, and will set the scale and distribution of housing and employment growth across Greater Manchester over the next twenty years. It is clear that the challenges involved in achieving the expected growth are considerable.

78. Accommodating this scale of growth without significant additional congestion - while supporting measures to reduce carbon and emissions on our already busy transport networks will be a huge challenge. We will need to identify not only development locations that are well served by public transport, walking and cycling, but less accessible locations where a sufficient scale and density of development could support new public transport provision.

79. A further fundamental aspect of this this will be minimising the need to travel. This will be achieved by creating local neighbourhoods where people can live, work and access services and shops, alongside behavioural change, such as mode shift and flexible and home working.

80. Integration with spatial planning is critical in influencing people's travel choices. Fundamentally, the transport network needs to connect the places people live with the places where they work, study, play, shop, visit, and access services like healthcare. Locating housing close to facilities and public transport tends to reduce car use. While most places in Greater Manchester are served by public transport, some developments have been designed around the car making them difficult to reach in any other way.

81. The car will continue to play an important role in supporting economic growth and opening up opportunities for people to improve their quality of life. However, many of the negative impacts of transport, such as congestion, high emissions, noise and road traffic casualties, are a consequence of our over-reliance on cars, and the planning decisions that made car use the most convenient, or only choice for some journeys.

    The design of developments, eg the availability of parking, safe and direct walk/cycle routes, secure cycle parking and EV charging points, also influences travel choices.

82. The draft GM Spatial Framework is also clear that, although connectivity has historically been about transport, digital connectivity is increasingly fundamental to our lives, enabling us to connect with people irrespective of location, and to access an unparalleled range of learning, employment and retail.

83. TfGM and local planning authorities will continue to work with developers to better integrate transport and new development in accordance with the principles of:

- Reducing the need to travel;
- Reducing the need to travel by car, and the distance travelled;
- Maximising accessibility by sustainable modes;
- Making the best use of existing infrastructure, particularly through increasing the density of development close to public transport nodes;
- Maximising opportunities to provide additional public transport; and
- Designing to encourage active travel.

Policy 4: We will work with developers to ensure that new developments are accessible by sustainable modes, and to reduce transport emissions and impacts on the highway network.

An Inclusive Network

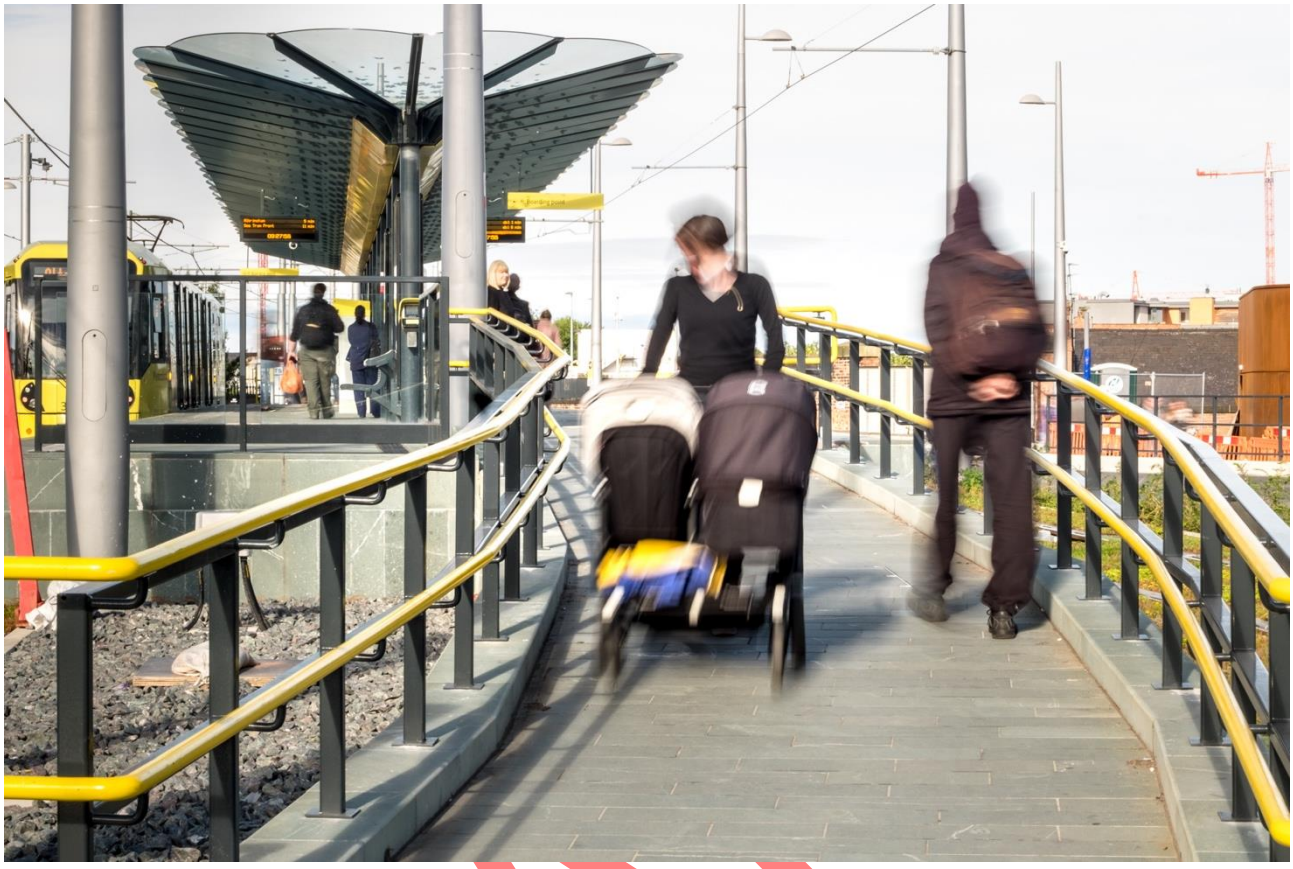
Our Ambition: To develop a fully inclusive and affordable sustainable transport system for all.

84. To meet the scale of ambition set out in the Greater Manchester Strategy, we must ensure that everyone in Greater Manchester is able to access a range of employment, training, health and leisure to enable them to lead productive, healthy and fulfilling lives. In 2018, 4% of the GM population was claiming Disability Living Allowance, but the number of people with some form of mobility impairment will be much higher. Therefore, we must make sure that our transport network is as inclusive and accessible as possible. An accessible transport network will become even more critical as our elderly population continues to grow over the coming decades. Consistent standards of vehicles, facilities and customer care are also needed to give disabled people the confidence that they can make their journey on public transport.

85. In line with our responsibilities under the Equality Act, 2010, we will continue to ensure that all new transport infrastructure, vehicles and information are designed to be as accessible as possible to all our customers, regardless of their age and mobility. We will also continue to deliver accessibility improvements to our existing transport networks, targeting those parts of our transport system which most require improvement and cause most disadvantage to those with a mobility impairment. To help us do this most effectively, TfGM set up a Disability Design Reference Group (DDRG) in 2008. The DDRG is actively involved in transport-improvement projects. It has advised on a wide range of features to improve journeys, including strong colour-contrasting infrastructure, clear signage and audio information.

Policy 5: We will work with public transport operators and Network Rail to ensure that all of transport infrastructure, vehicles and information are as accessible as possible for all our customers, regardless of their age and mobility.

86. The importance of good street design and management to support people who walk and cycle has gained greater prominence in recent years. In Greater Manchester, this includes design criteria set out in the GM Cycling and Walking Commissioner's Made to Move guide, such as ensuring that all proposed pavement and public realm improvements pass the test of being accessible to all, especially pedestrians, the partially sighted and a parent with buggies. Alongside this guidance, Greater Manchester's Streets for All approach sets out a people-centered way of thinking to how our streets are designed and managed so that people are encouraged to travel sustainably and spend more time on them. Engaging communities in scheme design is also at the core of the GM Mayor's Cycling and Walking Challenge Fund.



87. Affordability of transport is also an important issue, particularly for residents on limited incomes, many of whom depend on public transport. Season tickets can offer good value to people who need to travel five days or more a week, but these do not benefit part-time workers, who have to pay higher daily fares. We are now seeing increasing numbers of people working or studying on a part-time, flexible or short-term contract basis, or homeworking a few days a week. This means that flexible ticketing options are vitally important to support our rapidly changing economy. In response to this, TfGM has introduced the Clipper Metrolink ticket, which provides 10 one-day travel cards that have to be used within 28 days. Clipper saves customers money if they are working flexibly or travelling less often than the conventional Monday to Friday working week.

88. We must also ensure that our transport system is priced in a way that encourages sustainable travel and manages demand effectively on our constrained networks. More flexible fares and ticketing are a critical part of our Vision for Bus (see section 170). The GMCA's proposed bus franchising scheme may help to provide greater value for money for customers, which could also enable investment to further improve bus services.

89. Concessionary fares play an important role in meeting people's travel needs. The national scheme provides free weekday bus travel after 9.30 am for those who have reached pensionable age or have a disability. In Greater Manchester, older people can also choose to pay £10 for a year's unlimited off-peak travel on Metrolink and trains within the city-region. We also recognise the importance of public transport for young people. TfGM, on behalf of the GMCA, has supported a trial of Our Pass, launched by the GM Mayor, which enables 16-18 year olds to travel by bus for free across Greater Manchester (for a one-off £10 administration

fee). TfGM also supports apprentices across the city-region with a free 28-day travel pass, valid on bus and Metrolink services. The Women's Concessionary Travel Pass, launched by TfGM in 2018, enables women affected by the change in the state pension age to free off-peak travel on bus, train and tram.

90. For those without access to a car, the availability of public transport may determine whether they can access jobs or training or attend medical appointments without having to use more costly individual travel options. This can be a particular issue for people working in the night-time economy. TfGM provides support for a network of socially necessary bus services, which would not otherwise be provided, but this is limited by budget. We will continue to work with bus, rail and Metrolink operators to ensure that the network meets peoples' needs as far as possible. We will also work with partners to better co-ordinate the provision of door-to-door transport, to increase its availability to disabled customers.

91. For those who can cycle, we will strongly promote cycling as a low-cost alternative for travel to work and education, including developing cycle links to key employment areas.

Policy 6: We will work with partners to better integrate accessible travel services across Greater Manchester, to increase availability and convenience for customers.

Policy 7: As we plan our transport network, we will support the creation of a more inclusive economy for GM by considering how best to improve the prospects of people living in deprived communities - including by ensuring that more people can access jobs, education, skills training and childcare.

Supporting a Healthier Greater Manchester

Our Ambition: To develop a transport system that supports people in leading active, healthy lives.

92. Transport can have a major impact on people's health. It provides access to healthcare and other services, enables people to visit friends and family, and links them with green spaces. On the negative side, motorised transport can make people less active, leading to obesity; cause severe traffic accidents and produces damaging emissions which either affect health directly or through climate change.

93. The huge potential of walking and cycling to reduce car mileage, improve access to key facilities, and improve public health, is now widely understood. While recognising the role of personal choice in travel, we will encourage people who are able to do so to travel actively in order to improve their health, as discussed in Part 1. This is particularly important in tackling childhood obesity - establishing active travel behaviour early in life for day-to-day journeys or for leisure can greatly improve health later in life.

Policy 8: We will work with partners to deliver transport interventions that improve the health of Greater Manchester residents, including: mitigating against pollution from motor vehicles; increasing levels of physical activity; improving access to healthcare; and reducing social isolation.

94. In recent years, reduced local authority budgets have made it increasingly difficult to provide socially necessary bus services, including door-to-door services provided for people with disabilities, which are not provided by commercial operators. We will continue to monitor the impact of this on social isolation and to safeguard against health problems such as depression or the inability to attend health appointments.

95. The devolution of health and social care to Greater Manchester has enabled a much more joined-up approach to health by linking it to other aspects of life. People who are more active will enjoy better health and be less likely to need medical intervention and this will bring savings to health budgets.

96. We know that air pollution is linked to a wide range of serious illnesses and health conditions. It contributes to the equivalent of 1,200 deaths a year in Greater Manchester. NO_2 is a type of air pollution which is at levels above roadside legal limits at numerous sites in Greater Manchester. Government has instructed many local authorities across the UK, including those that make up Greater Manchester, to take quick action to reduce harmful NO_2 levels. Here, the ten local authorities, the GMCA and TfGM have worked together to consider measures to tackle air pollution, alongside a charging Clean Air Zone. Together, these form the Greater Manchester Clean Air Plan, which aims to bring NO_2 emissions within legal limits as quickly as possible.

97. Encouraging walking and cycling - especially for short, daily trips, is also key to improving people's health and fitness. The Bee Network and the long-term Cycling and Walking Infrastructure Plan for Greater Manchester are vital to enable healthy lifestyles by making walking and cycling attractive, convenient and safe ways to travel. The Greater Manchester Cycling and Walking Commissioner's Made to Move report (see section 159) sets out an

ambitious vision for more active travel across the city-region. The goals are to double and double again levels of cycling and to make walking the natural choice for as many short trips as possible. Working with the Mayor, TfGM, councils and other partners, the Commissioner aims to make Greater Manchester one of the world's best places for cycling and walking.

98. We have also been very successful in securing funding and establishing new partnership arrangements, for example with Sustrans, to deliver major improvements to our active travel infrastructure, such as significant expansion of our network of cycle routes and cycle parking, together with supporting activities such as cycle training and maintenance, and promoting walking for health.

99. While cycling is increasing much more needs to be done to achieve the desired scale of change and more investment is essential to provide safe and convenient routes that connect people to jobs, services and recreation. In view of the serious health consequences of inactive lifestyles, and the significant numbers of very short trips which are currently being made by car (88% of trips within Greater Manchester are of five miles or less, and more than half of these are by car) we have forged strong partnerships to work across sectors in an attempt to further increase levels of walking and cycling.

100. The focus of activity to drive much higher levels of active travel is influenced by available funding. At present, the GM Mayor's Challenge Fund (made possible through national Government's Transforming Cities Fund) supports schemes set out in Our Five-Year Transport Delivery Plan (2020-2025), the Made to Move report and the Bee Network infrastructure proposal. This fund has so far made £160 million available to deliver schemes across Greater Manchester until 2022.

Made to Move

Made to Move, published in 2018, is a a 15-step plan to transform how people travel in Greater Manchester.

Its goal is to double and then double again cycling in Greater Manchester, and to make walking the natural choice for as many short trips as possible. We must do this by putting people first, creating
world-class streets for walking, building one of the world's best cycle networks, and creating a genuine culture of cycling and walking throughout the city-region.

Made to Move sets out steps towards:

- Encouraging the two thirds of people who currently use their car as their main mode of transport
  to walk and cycle more often;
- The creation of a Greater Manchester Cycling and Walking Infrastructure Proposal (published in summer 2018);
- Cycling and Walking Infrastructure Proposal plans, which have now been published online. TfGM and the ten local authorities are continuing to develop and refine these proposals, in collaboration with local residents.

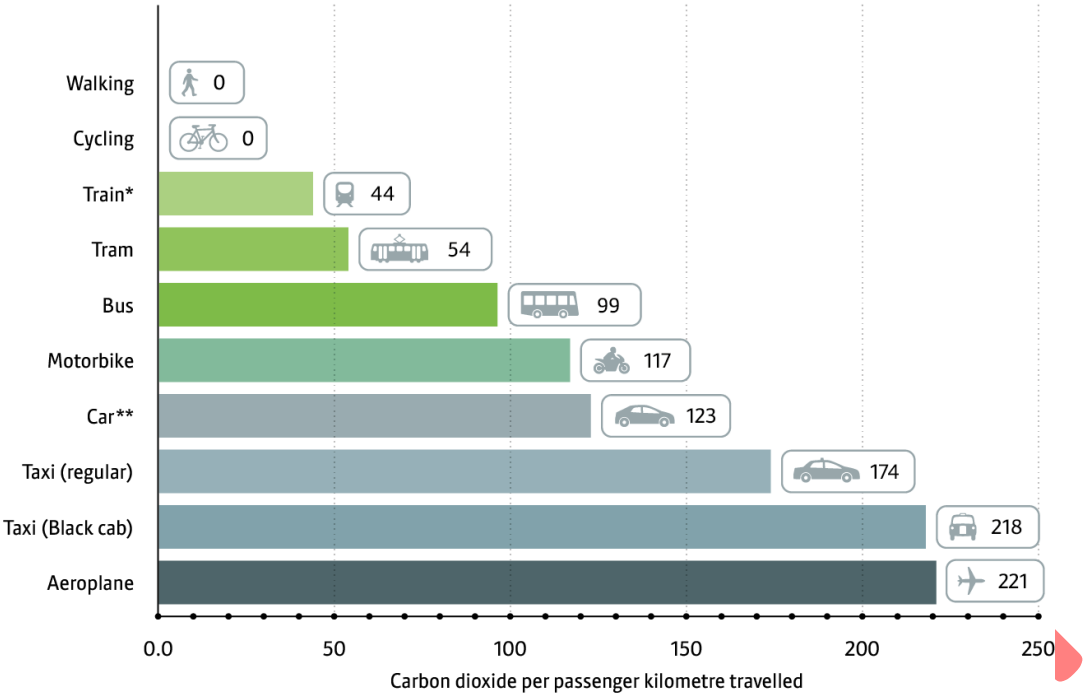
Environmental Responsibility

Our Ambition: For Greater Manchester to be known for the quality of its urban areas, natural environments with transport emissions reduced to near zero, and new transport schemes delivering environmental enhancements whenever possible.

101. Local air pollution and carbon emissions cause significant harm to health and the environment. Evidence suggests that poor air quality harms everyone in the long-term and in the short-term impacts the most vulnerable, including children, older people, those with existing respiratory or cardiovascular disease and those living in areas of depravation. Greater Manchester's air pollution mostly consists of NO_2 (Nitrogen Dioxide) and particulates in the form of $PM_{2.5}$ and PM_{10} (small particles which are harmful even in low concentrations). In Greater Manchester 80% of roadside NO_2 is caused by traffic. Long-term exposure to both of these may contribute to respiratory illness, as well as cardiovascular problems and cancer, leading to thousands of early deaths in Greater Manchester every year.

102. Climate change - mainly caused by CO_2 and other greenhouse gas emissions – is causing an increase in warm spells and heavy rain and a decrease in cold spells. More extreme weather patterns could potentially impact food and water supplies and lead to increased flooding. Road transport is a major source of all three emissions in the conurbation.

Transport Carbon Emissions



Adapted from: DEFRA Greenhouse Gas Conversion Factor Repository (2013)

Train, bus and tram figures based on national average patronage.
* Average Diesel and Electric Rail Combined.
** Average Large and Small Car Combined.

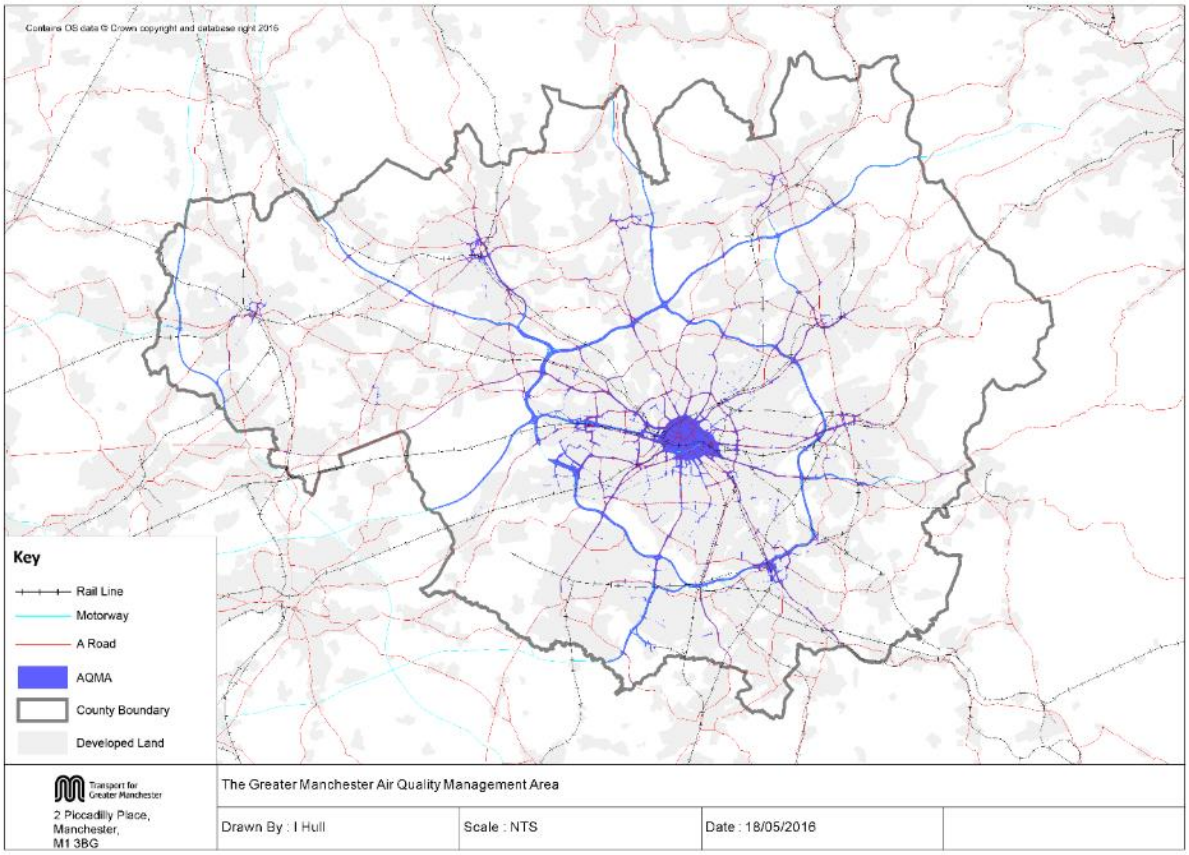
103. The GMCA, and ten local councils, have each declared a Climate Emergency and that urgent action is needed to put Greater Manchester on a path to carbon neutrality by 2038. Greater Manchester has demonstrated a clear commitment to achieving this target, including through the 5-Year Environment Plan, launched in March 2019 during the second Greater Manchester Green Summit. The Plan sets out Greater Manchester's long-term environmental vision and the actions we all need to take, over the next few years, to achieve this.

104. Greater Manchester is also working in collaboration with international partners, and is a signatory to three International commitments on climate change: The Integrated Covenant of Mayors, The Compact of Mayors, and the Under 2 Memorandum Of Understanding.

105. At present (in 2020), the UK is in breach of EU air quality standard for NO_2. A single Greater Manchester Air Quality Management Area (AQMA) was declared in May 2016 (replacing the previous ten District AQMAs), covering the areas where the legal level of NO_2 are exceeded (or are at risk of being exceeded) and where there is risk of exposure to the general population. These are mainly areas close to the motorway network and the major roads converging on the Regional Centre and town centres, as shown on the map below.

106. Government has instructed many local authorities across the UK, including those that make up Greater Manchester, to take quick action to reduce harmful NO_2 levels. The Greater Manchester local authorities, alongside GMCA and TfGM, have developed a Clean Air Plan that aims to meet nationally specified standards in the shortest time possible. The Clean Air Plan builds on the commitments in our existing Low Emission Strategy and Air Quality Action Plan (2016-21).

GREATER MANCHESTER Air Quality Management Area



107. Greater Manchester's Outline Business Case (OBC) for its Clean Air Plan was submitted to Government in 2019, and proposed the introduction of a Greater Manchester-wide Clean Air Zone: a designated area within which the most polluting vehicles would pay a daily charge. It is hoped the Clean Air Zone will reduce the number of polluting vehicles in Greater Manchester and also encourage drivers to upgrade to cleaner vehicles.

108. Greater Manchester's Clean Air Plan also proposes: a funding package to support local businesses to upgrade to cleaner vehicles and trebling the number of electric vehicle public charging points to support people, businesses, and other organisations across Greater Manchester to play their part in reducing air pollution from transport.

109. Following a public consultation - and if approved by Government - the Greater Manchester Clean Air Plan Full Business Case (FBC) proposals will be rolled out over the coming years.

110. While our primary ambition is to encourage a shift to more sustainable modes of travel – particularly for shorter journeys - we recognise that some journeys will always need to be undertaken on the highway network. In these instances, our priority is to reduce the harmful emissions and population exposure levels. Greater Manchester's Streets for All approach to network planning is underpinned by the need to ensure the right movement is happening on the right streets. For example, the M60 and other motorways within Greater Manchester

should be carrying larger vehicles on longer journeys to ensure pollution caused by motorised traffic on local, residential streets is minimised.

111. The ambition for smaller vehicles is a shift to a fully electric fleet. Greater Manchester is already home to an extensive electric vehicle infrastructure network and we will expand this further as funding allows. For heavy vehicles, we will work with Government and other city-regions to establish a consistent policy framework to encourage an accelerated uptake of alternatively fuelled vehicles. Within GM we will work with infrastructure providers and fleet operators to encourage a shift to alternatively fuelled vehicles, or a retrofit of existing vehicles.

Policy 9: We will work with partners and key stakeholders to bring nitrogen dioxide (NO_2) levels on local roads within legal limits, and to reduce levels of particulate matter - both of which are emitted from internal combustion engines.

Policy 10: We will play our part in delivering carbon neutrality, including by working towards: implementing measures that will mitigate against climate change, improving air quality, encouraging responsible consumerism, ensuring net environmental gain wherever possible and making sure our future built environment is resilient to the impacts of

112. In addition to climate change and pollution, the noise from motorised traffic can impact on the quality of life in residential areas and deter people from walking and cycling. Defra has identified Noise Important Areas (NIA) in all the major cities where noise is a problem. While electric vehicles will reduce this problem in the medium to long-term, we will take opportunities to reduce noise through design (including the use of noise-reducing surfacing) or traffic management where possible.

113. Greater Manchester and its surrounding areas contain statutory nature conservation sites of European level importance. These include Special Areas of Conservation, Special Protection Areas, Sites of Special Scientific Interest (SSSI) and Ramsar sites. In addition to these areas protected under the European Habitats Directive, there are many locally important sites and green spaces, which both support wildlife and contribute to people's wellbeing. These locations are vulnerable to the effects of motorised traffic and the development of new infrastructure.

114. A high-quality environment is increasingly seen as the key to attracting and retaining the best businesses and skilled workers, and 'liveability' is therefore an important issue. It is influenced, to some extent, by transport. Urban areas with a rich cultural heritage and diverse green infrastructure, which are attractive and safe for people to walk and cycle in, and have access to efficient public transport, are generally more pleasant living environments. Creating attractive public realm to reduce the dominance of the car and create visual interest at street level can create safer neighbourhoods with more opportunity for social interaction and they can also attract economic investment.

115. Reducing the impact of traffic, by increasing the use of public transport and through effective traffic management, will be essential if we are to achieve this. It will improve quality of life by reducing noise, severance and pollution. Transport is already contributing to regeneration, including through the expansion of Metrolink, which is stimulating investment in surrounding areas, and through transforming Greater Manchester's rapid transit stops into Mobility Hubs,

to include better pick up and drop off provision, cycle facilities and electric vehicle charging points.

116. Greater Manchester is fortunate in having great countryside, such as the Peak District National Park, within a relatively short distance. More needs to be done, however, to improve access to this countryside through better public transport or active travel provision so that everyone, no matter their means or mobility, can enjoy it.

117. New transport infrastructure can negatively impact on natural spaces and habitats. This can be through construction on these sites; construction and operational disturbance (such as noise, light and vibration pollution) and emissions and other pollution (air, water, soil). They also provide opportunities to incorporate and support nature. We will look for opportunities to enhance biodiversity and green infrastructure through our transport schemes, for example, through planting. TfGM is a partner in the City of Trees[1] project, which aims to plant a tree for every man, woman and child who lives in Greater Manchester within a generation.

118. Transport can pose a risk to water quality eg through runoff from highways following gritting. Pollution of water bodies (including groundwater) and increased risk of flooding must be prevented, both during the construction and operation of transport projects. This could be through Sustainable Urban Drainage schemes, bio-remediation and use of tree pits.

[1] http://cityoftrees.org.uk/

119. Transport infrastructure and traffic can have a significant effect on the built environment and through this be detrimental to people's quality of life. New transport projects need to be designed sensitively to be sympathetic with the existing urban environment's character and opportunities for improving their setting and share public spaces should be examined.

120. Any development that would have an adverse impact on an important environmental site should be avoided as far as possible. If this cannot be achieved, the adverse impacts will be adequately mitigated, or, as a last resort, compensated for. In the case of European designated sites, a Habitat Regulations Appropriate Assessment is required for any proposal likely to have significant effects on the site.

Policy 11: We will work with partners, including the Canals and Rivers Trust, to enhance green and blue infrastructure to provide a safe and attractive environment for walking and cycling.

121. Our aim is to minimise the impact of transport on the built and natural environment. Large transport schemes will be subject to a statutory Environmental Assessment, as required by the planning process. We will also continue to apply our established principles for the design of new infrastructure projects, as described in the Delivery Plans that support this Strategy.

A Reliable Network

Our Ambition: To develop a transport network that offers reliable journey times and gives people the confidence to use public transport.

122. Reliable transport networks are essential to allow the economy to function and grow. Journey times by road need to be predictable, particularly when journeys are time critical. Public transport needs to be regular and dependable if people are going to have confidence in it and cycle network need to be well maintained.

123. The cost of congestion on the highway network in Greater Manchester has been estimated at £1.3 billion a year[2]. In addition to frustration for motorists and delays for business, highway congestion can have a significant impact on bus journey times, making public transport less attractive. Reducing congestion can therefore help the planning and management of more fuel-efficient transport, particularly for freight.

124. Road works are a major contributor to congestion and disruption. In 2013 the Greater Manchester Road Activities Permit Scheme was introduced to better co-ordinate the timing of road works and to monitor their impact. In the future there is the potential to make greater use of this data for journey planning, enabling people to change their route or mode of travel to avoid disruption.

125. The existing traffic signal network is operated and controlled by Greater Manchester's Urban Traffic Control team through TfGM's Control Centre which uses technologies - including SCOOT (Split Cycle Offset Optimisation Technique) and MOVA (Microprocessor Optimised Vehicle Actuation) - to optimise traffic signal control and manage traffic congestion.

[2] Cost of Congestion in Greater Manchester, TfGM HFAS Report 1853, 2015

126. We will continue to monitor the performance of the highway network and to identify improvements, such as changes to signal timings or redesign of junctions at hotspot locations. In a dense urban area, however, the solution to increasing demand will need to involve a shift to sustainable modes rather than the provision of additional highway capacity. This may include re-allocating road space to public transport and cyclists in order to maximise capacity.

127. The Greater Manchester Congestion Deal followed a congestion 'conversation' between the Greater Manchester Mayor and people living in the city-region in 2017. Transport for Greater Manchester, the ten local authorities and a reference group of transport experts developed the Deal by assessing new ideas and identifying existing schemes that could be expanded or brought forward for implementation over three years (to 2021). This included measures to improve the way the road network is managed and to provide better use of road space and non-traditional transport solutions, such as working with businesses and other employers to enable more flexible working so that fewer people have to travel at peak times.

128. Interventions which form part of the Congestion Deal include a 24/7 control centre to monitor Greater Manchester's roads, and new traffic cameras and technology that work smartly to ease road congestion. These have been trialled to keep buses running on time along some of Greater Manchester's busiest corridors.

129. On the public transport network, we will continue to monitor reliability and work with operators to improve it. On rail and Metrolink, reliability is closely linked to resilience (which is discussed in more detail later in this document).

130. The GM Mayor's Our Network vision has a strong focus on improving public transport reliability, and makes the case that, in order to achieve this, other public transport modes should be run based on the principles which underpin the Greater Manchester-owned Metrolink network:

- Convenient: Reliable and regular services.
- Affordable: Integrated fares and ticketing across bus, rail, tram and bike hire.
- Sustainable: Zero emissions and powered by renewable energy.
- Accessible: Fully accessible to all residents.
- Accountable: Run for the people of GM and locally accountable.

Policy 12: We will aim to minimise the impact of transport on the built and natural environment - including townscape, the historic environment, cultural heritage, landscape, habitats and biodiversity, geodiversity, water quality, pollution, flood risk and use of resource - and will seek to deliver environmental enhancements and biodiversity net gain where possible.

A Well Maintained and Resilient Network

Our Ambition: To bring the transport network into a good state of repair, maintain it in that state and ensure that it is able to withstand unexpected events, exceptional demand and severe weather conditions.

131. The economic performance of the city-region depends on a functioning transport network. All assets, whether they are roads, rail lines, signals, interchanges, bus stops or cycle routes, need to be well maintained both to keep them in a safe and useable condition and to avoid the cost of replacing them unnecessarily.

132. If a section of road, or a structure, is allowed to deteriorate, the impact on collisions (and therefore safety), vehicle damage, network resilience, travel comfort, network performance and the 'liveability' of an area, can be significant. Recent winter weather has caused severe and unpredictable damage, and exacerbated maintenance issues for roads and structures.

133. On the rail network, a lack of spare capacity and alternative routes means that the impact of incidents is all the more disruptive. We will work to identify the locations where additional capacity could be beneficial in helping the network to recover from major incidents.

134. Transport networks need to continue to provide a service even when planned or unplanned events intervene. When rail or tram services are unavailable due to a fault or engineering works, well publicised alternatives need to be available eg flexible ticketing allowing transfer to other modes/operators, or replacement services. When roads are closed (including closures due to flooding or snow) clearly signed diversionary routes are needed, along with information on the availability of alternative modes. Finally, when there are major visitor events the whole network needs to be managed (including provision of additional capacity where appropriate) to cope with much greater demand.

135. In the winter, key roads have to be gritted and cleared of snow and gullies cleared, while rail and tram routes have to be de-iced. We will also need to adapt to different, or more extreme, weather, such as increased flooding, as a result of climate change. Measures to reduce run-off from the highway will be important, eg planting trees, which have the potential to reduce run-off by as much as 80% compared to asphalt.

Policy 13: We will continue to deliver measures, and put in place appropriate management systems, to improve the reliability of the transport network.

136. In addition, we recognise that oil is a finite resource and that there is a risk that future price volatility will impact on the cost of travel and hence the economy. Our proposals to encourage a shift to sustainable modes will reduce this risk. However, we also need to recognise that the increased electrification of transport, which brings environmental benefits, may place pressure on power supply in some areas and we need to work with the electricity industry to ensure that there is capacity.

A Safe and Secure Transport System

Our Ambition: To reduce deaths on our roads as close as possible to zero and ensure that poor perceptions of personal security are no longer a significant barrier to people using public transport or walking and cycling

Improving Safety

137. Safety is a fundamental requirement of any transport system. The immediate aim is to contribute to the achievement of national forecasts and targets, as appropriate for road safety, but our ultimate ambition must be to eliminate road deaths, as far as we can. We will also focus on preventing serious injuries to vulnerable groups, including addressing the dangers posed by motorised traffic.

Policy 14: Working with partners, including through the Safer Roads GM Partnership, we will deliver initiatives aimed at improving safety on the highway network, with a particular focus on the most vulnerable road users.

138. Working through the Safer Roads GM (SRGM) Partnership, which comprises the ten local authorities; TfGM; Greater Manchester Police (GMP); Highways England; the Greater Manchester Fire & Rescue Service; the North West Ambulance Service; and GM Health, we have been successful in reducing deaths and serious injuries to road users. The most vulnerable road users are pedestrians, cyclists, young drivers and their passengers, and motorcyclists. There is historic under-reporting of collisions involving pedestrians and cyclists, so the figures may be higher than we know.

139. A key source of danger on our roads comes from motorised traffic. Excessive speed is considered to one of the biggest problems in road safety. Not only does it contribute towards the severity of injuries, but it also stops more people walking and cycling. We will work closely with GMP to continuously improve data and intelligence to assist in the prioritisation of resources and interventions aimed at education and compliance. We are also delivering education; training and/or engagement to audiences including motorcyclists; younger drivers and passengers; and older road users. We also use geodemographic data to assist in the targeting safer roads marketing campaigns on careless driving; drink and drug driving; wearing a seatbelt; not using a mobile phone and speed.

140. In 2020, we started work - alongside GMP - to conduct an in-depth study into the root cause of fatal traffic collisions, to develop an evidence base that will significantly improve our understanding and assist in the prioritisation of interventions and resources. Work is also ongoing to develop an Outline Business Case (OBC) for a programme to upgrade the safety camera technology used to encourage compliance with speed limits.

141. Safety must also be a fundamental consideration in the design of all new transport schemes and programmes. Where these involve the highway network, the needs of a range of different users need to be considered, making it particularly important to reduce conflicts between the most vulnerable road users and other traffic. TfGM's Road Safety Audit procedure has been developed in collaboration with the ten local authorities, to ensure that Road Safety Audits are carried out in a consistent and systematic way across GM. It sets out

the key principles for undertaking Road Safety Audits on Greater Manchester's Key Route Network (KRN). The Road Safety Audit procedure ensures that operational road safety experience is applied during the design and construction process of new highway schemes on the KRN. The procedure also applies to all relevant TfGM sponsored schemes such as Metrolink and transport interchanges. Maintenance also has safety implications, with potential for injury to pedestrians and cyclists from broken pavements or potholes. Safety must be a key consideration in our strategy to get more people walking and cycling. It is also vital in the design and operation of public transport services and waiting facilities, underpinning our mode shift ambitions.

Improving personal security

142. We recognise that security - and the perception of security - is an important element in persuading people to travel by public transport, or to walk or cycle. Personal security is also an important consideration in terms of the growth of jobs in the night-time economy, as people are travelling at a time when they may feel more vulnerable.

143. We will continue to prevent and tackle crime and antisocial behaviour on Greater Manchester's bus and tram network through partnership working between TfGM, local authorities, operators, Greater Manchester Police, Local Community Safety Partnerships, British Transport Police and Network Rail, to share information and safeguard the network. The pilot Travelsafe Partnership was launched in 2015, providing a dedicated team of police constables, police community support officers, special constables and security personnel to provide regular patrols. Led by TfGM and GMP, the scheme uses data on crime and antisocial behaviour provided by contributing operators to target patrols in hotspot areas at key times and support front line staff. Where appropriate, legal powers are used to ban offenders from public transport and deliver restorative justice schemes following, or as an alternative to, prosecution. There is also a focus on preventative measures and youth education as to the dangers, impacts and consequences of crime and anti-social behaviour on public transport.

144. Personal security is also an important element in the design of public transport vehicles and infrastructure. We will continue with programmes to upgrade interchanges through measures such as removal of blind spots, improved lighting, CCTV and customer help points, developing consistent standards across all our public transport networks. It is also important for pedestrians and cyclists, and personal security is therefore a key consideration in the design of new walking and cycling routes, eg in terms of lighting and natural surveillance. There is evidence that personal safety and security is a greater barrier to walking and cycling for certain age groups, such as teenagers. These concerns need to be addressed to increase levels of active travel.

Policy 15: Working through Safer Roads Greater Manchester (SRGM), we will facilitate the delivery of interventions to address road safety issues, with a focus on supporting those who are walking and cycling.

145. Security of property is also important and ensuring that car parks and cycle parking are secure, with good natural surveillance or CCTV, is essential for encouraging people to use them.

Our Greater Manchester Modal Principles for 2040

146. Our GM Transport Strategy 2040 focuses principally on creating an integrated, well-co-ordinated transport system which supports a wide range of different travel needs. However, there are some modal principles which cut across the entire strategy and define our specific aspirations for bus, rail, Metrolink, active travel and highways. These are summarised in the graphic below, and explored further in the following sections.

Streets for All

147. Streets for All provides an overarching framework for everything we do on streets in Greater Manchester. It is about making our streets easier to get around - and more pleasant to be in - for everyone who uses them, while achieving our ambition for 50% of all journeys in Greater Manchester to be made by walking, cycling and public transport by 2040.

148. This people-centred approach to street design and road network management is needed to address the challenges that GM residents face: from not getting enough exercise - such as walking and cycling - to poor air quality and delays due to overcrowded public transport and congested roads.

149. It is important to be aware that there is not a one size fits all solution to improving Greater Manchester's streets, because they have different roles. Many of them also change in character throughout the day, across the week and along their length – at school drop off and pick up times, for example, or at times of the day when goods are being delivered to businesses.

150. Some streets need to better fulfil their role as places, in which people come together to spend time: this means creating more opportunities for people to sit, relax, play and socialize; more plants and trees and less traffic dominated streets. Other roads – such as motorways, and other strategic roads – are much more about movement and need to carry vehicles on longer journeys to ensure that the impact of motorised traffic on local streets is minimised. The illustration below shows different types of streets in Greater Manchester.

151. The biggest potential for change is for local neighbourhood trips (of 2km or less) where there are still large numbers of short car journeys which could reasonably be switched to walking or cycling. The commitments set out in Greater Manchester's emerging Streets for All Strategy,

therefore, focus on enabling these types of journeys through good urban planning and measures to make streets safer and more welcoming, as follows:

- Our streets will provide a safe and connected cycling experience;
- Our streets will enable people to benefit from an attractive and inclusive walking environment;
- Goods will reach their destinations on time, with minimal impact on local communities;

152. Our streets will facilitate a reliable, integrated and accessible public transport network, including reallocation of road space for bus priority, on-street tram routes, cycle lanes and wider footways. Where we upgrade highways, we will include improvements for pedestrians, bus users and cyclists. We will also continue to support the introduction of 20mph speed limits in residential and other built-up areas where there is local support. Such interventions will actively assist these modes by making them more reliable and safer and will help to make best use of available highways capacity by enabling more people to be moved more safely and more efficiently (see graphic below). It is important, however that the design of interventions is suitable for the function of the road, in terms of the amount of through traffic and whether it is a bus route.

153. The shared use of highway space has the potential to cause conflicts between different users there is limited space available, for example crossing points. We will design schemes to reduce these conflicts as far as possible to protect the most vulnerable road users in particular.

154. Such measures will, over time, change the look and feel of our local centres, encouraging more short trips that may be made on foot or by cycle rather than car. The role of our roads in creating more attractive local places will increasingly be recognised rather than simply viewing them as transport links that allow the rapid movement of high volumes of vehicles. Severance created by road traffic will also be reduced and the environment for local residents, businesses and their customers significantly improved.

Future role of the car

155. Greater Manchester's population is expected to reach 3 million by 2030. We need to plan for this population growth to ensure that it is not accompanied by a similar level of growth in the use of cars, which would have major negative impacts in terms of worsening congestion, road safety, air quality and carbon emissions.

156. Over the coming years, Greater Manchester will invest in, and expand, its electric vehicle charging network to support the transition to electric vehicles. Work has been undertaken to guide the future expansion of a GM electric vehicle charging infrastructure network to support the promotion of sustainable travel, re-purposes existing public sector assets and avoids the risks with on-street charging, while also providing low cost charging and reduces maintenance costs. As part of Greater Manchester's emerging Electric Vehicle Charging Infrastructure Strategy, we have set out some principles which are well aligned with this GM Transport Strategy 2040:

- Integrated
- Environmentally Responsible
- Inclusive and Customer Focused
- Well Maintained and Resilient
- Safe and Secure
- Reliable
- Healthy
- Viable

157. Even with a rapid move towards electric and low emission vehicles however, unconstrained growth in car use will not be an efficient use of our limited highways and will continue to cause congestion and conflict with vulnerable road users. We must therefore design our urban areas around the needs of people and not traffic, requiring us to think differently about the long-term role of our critical highways networks.

158. At the same time as our population is growing, attitudes to owning and using a car are also evolving. Many younger people no longer see car ownership (or indeed holding a driving licence) as essential. Growing, ageing and more affluent populations will also choose different ways to travel. The growth of car clubs, the advent of online taxi dispatch companies, and the use of social media to arrange shared transport can provide transport on demand without the costs and responsibilities of car ownership and will help to shift attitudes over time. This provides a great opportunity to develop a more integrated and flexible transport system which responds to the changing needs of Greater Manchester residents and businesses.

159. Technological innovations in vehicle design will also change the way we use and operate our roads by 2040. Smart vehicles equipped with technology that supplements the driver's actions with autonomous safety features are already available. These can detect safety hazards and obstructions, maintain lane discipline and vehicle spacing, and override the driver's control in certain situations such as when a possible collision is detected. There is potential to apply this technology to public transport. Companies are developing further stages of this technology that will take us towards fully autonomous vehicles connected to each other and to highway infrastructure, although this is some way off being proven in all road situations and there remain significant social, technological, legal and policy issues to resolve before it could be implemented. We also need to be extremely cautious about the risks associated with fully autonomous vehicles, particularly if it results in higher levels of car ownership and use, as they may make modal shift much more challenging.

160. By 2040, the widespread use of even semi-autonomous vehicles could significantly change the way in which we travel and the impacts of road transport. If deployed carefully and based on long-term strategic objectives they have the potential to reduce road casualties, to make better use of limited road capacity, to smooth traffic flows, and to cut journey times and energy use. Such benefits will only be achieved through partnership working between the public and private sector to ensure that vehicle technology development delivers Greater

Manchester's wider objectives.

Policy 16: We will set out a clear strategy for the EV charging infrastructure network required to provide greater confidence to residents and businesses to invest in electric vehicles.

161. Vehicle connectivity could be a significant future source of travel data enabling us to better manage demand and plan future needs. The technology will also support changes to models of vehicle ownership and has the potential to extend access to opportunities for the young, the elderly and those with mobility difficulties. As the technology develops, it is also likely to bring significant changes to bus operations and to the freight and logistics sectors, improving levels of service and reducing costs. We will work with partners to realise these benefits, which may be significant, but some caution will be required to ensure that this new technology is fully integrated into our transport system and does not undermine our multi-modal objectives.

The Key Route Network

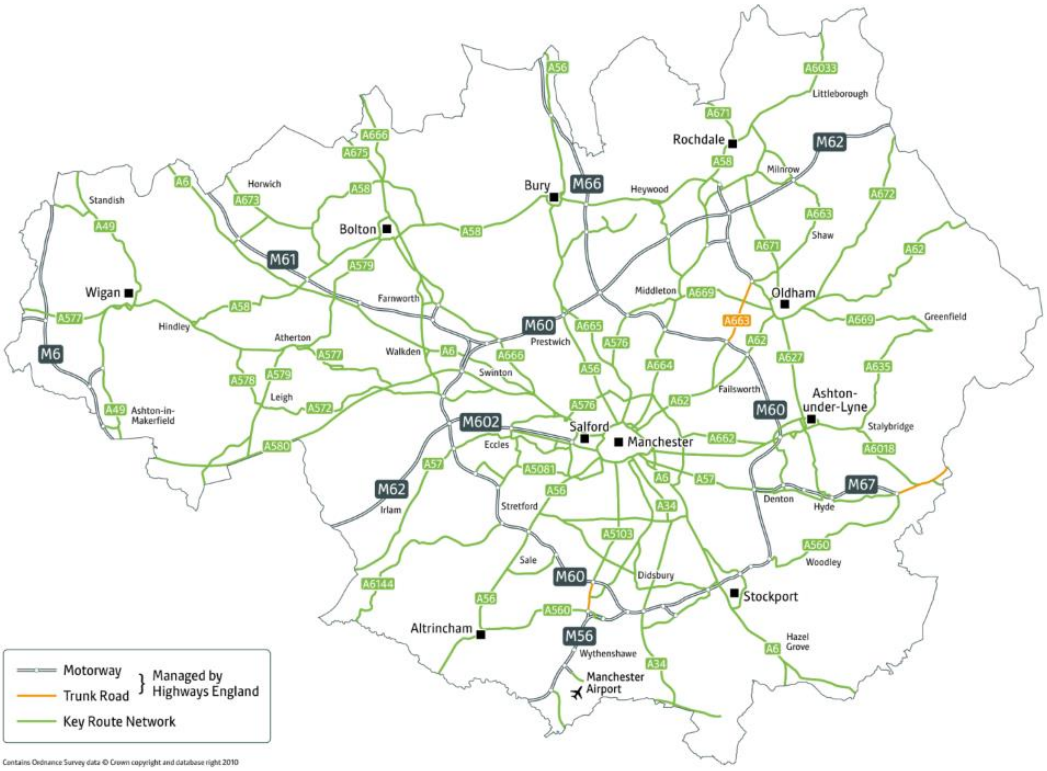
162. Greater Manchester has a network of 9,000 kilometres of local highways and 180 kilometres of Highways England routes, which brings a particularly complex set of challenges, including managing demand for local, commuter and long-distance travel; balancing the needs of all users; in making sure our streets are as safe; and mitigating the environmental impact of traffic.

Policy 17: We will provide a unified, Greater Manchester approach to managing the Key Route Network (KRN) of roads, in line with our Streets for All Strategy principles, and work with Highways England to co-ordinate this with the management of the Strategic Route Network (SRN).

163. The city-region's road network is managed by a multiple agencies: ten local highway authorities, TfGM (who manage the traffic signals), and Highways England. Through the 2014 Greater Manchester Growth Deal, the Greater Manchester highways authorities agreed to establish a Key Route Network (KRN) of local authority roads. Since April 2015, TfGM has had responsibility for monitoring the performance of the KRN at a city-region level, under the oversight of GMCA. This monitoring will inform the development of consistent policies for network management and operation, and approaches to asset management and infrastructure investment and development for the roads most critical for the city-region's economic development. The local authorities remain the Highway and Traffic Authorities for the KRN, however, with the associated duties and powers. They are also responsible for the other (non-KRN) local roads, which provide important links in, and between, neighbourhoods, centres and other destinations.

164. The KRN comprises over 600km of highways, which represent about 7% of all local authority roads by route and 48% of A and B roads in Greater Manchester. It carries around 64% of annual traffic using these A and B roads. The core of the KRN is provided by the Primary Route Network (marked in green on most road maps). To this base have been added other sections of network considered of strategic importance to Greater Manchester, including:

- Significant road links to strategic employment sites and to adjacent areas outside the Greater Manchester boundary;
- Bus priority corridors and high frequency bus routes;
- All road links serving motorway junctions; and
- Manchester Ship Canal crossings.



165. TfGM, on behalf of GMCA, promotes the KRN, alongside the HE's Strategic Road Network (SRN), to complement local rail, Metrolink and bus systems. This helps to improve network performance and supports economic growth. Consistent performance monitoring and reporting across the KRN will helps to shape integrated network management and maintenance policies that support strategic traffic movements across the KRN and SRN; safeguard the needs of adjacent communities; and promote GMCA's modal shift policies.

166. As part of the Greater Manchester Congestion Deal[3], additional measures have been implemented to improve the way congestion is managed, including a 24/7 control centre to monitor Greater Manchester's roads, investment in new traffic cameras and technology that work smartly to ease congestion and the implementation of specialist technology to keep buses running on time along the busiest corridors.

167. An integrated approach to planning whole corridors, across local authority boundaries, will enable a coordinated approach to investment, so that highway improvements will be considered in a consistent way alongside public transport improvements. This will ensure that

[3] Details of the Greater Manchester Congestion Deal can be found at: tfgm.com/congestion

our highways investment and maintenance programmes are fully aligned in support of growth objectives.

168. The non-KRN local roads will continue to be managed by the ten Local Highway Authorities to maintain and improve the efficiency, reliability and resilience of the network and balance the needs of all road users. This means ensuring communities have safe and easy access to work, healthcare, education and leisure and the impact of traffic on residential areas is minimised. The network needs to support the economies of town and district centres and accommodate the needs of new development. Our approach is based on making the best use of the existing network, and only building additional road capacity where it clearly supports economic growth.

Goods and Servicing

Our Ambition: To enhance the role that freight plays in contributing to economic growth and ensure that it becomes increasingly sustainable, minimising its impact on the environment and on communities in Greater Manchester.

169. The economy depends on the efficient movement of freight - supplying goods for manufacturing, stock for retailers and other businesses, and home deliveries to residents.

170. The industry is almost entirely owned and operated by the private sector and is highly competitive. It has a strong interest in achieving low cost, on-time deliveries, and initiatives and interventions will only be adopted if they do not impose disproportionate additional costs. Most freight is carried by road and these movements can cause congestion, carbon emissions, poor air quality and noise as well as leading to potential conflict with vulnerable road users such as cyclists. Road freight is a significant contributor to poor air quality due to the dominance of diesel fuelled vehicles. This is a problem in congested areas, as HGV emissions are markedly worse at lower speeds. The last mile of deliveries will, in many cases, need to be by road, but shifting more freight to sustainable modes would be desirable.

171. However, Greater Manchester has very few rail or water-connected distribution sites and constraints on the rail network limit rail freight growth. In the future, Northern Hub rail enhancements will increase freight capacity, enabling a tripling of freight trains to operate in Greater Manchester, should there be a demand for the available routes. In addition, the regeneration of the Manchester Ship Canal, to provide low cost access by water to Port of Liverpool (Liverpool 2), has the potential to take a proportion of freight traffic off the roads between the two cities. Port Salford incorporates a new railhead capable of handling 16 container trains per day together with a new berth capable of handling existing barge traffic from the Port of Liverpool with short sea feeder ships.

172. The structure of the Greater Manchester economy is changing towards a greater focus on high value-added manufacturing and service industries. Along with the rise of e-commerce, in particular for groceries and personal shopping, these changing trends in consumer markets have an impact on both the location of warehousing and goods handling facilities and the way goods are distributed, eg to homes and collection points as well as more traditional delivery to retail stores. The former trend has seen the rise of light commercial vehicles, rather than HGVs.

173. The challenge is particularly great in the Regional Centre where the very rapid growth in residents and workers will generate an increase in last-mile logistics. There will be a need to balance this demand for roadspace, with increasing demand from bus, Metrolink and active modes. A further issue is that increasing walking and cycling could increase the risk of collisions with freight vehicles. The timing of freight to minimise peak hour congestion needs to be balanced with the need to minimise the noise of deliveries on residents and the needs of businesses to receive goods at particular times.

174. The expansion of logistics is as an opportunity for the Greater Manchester economy and the emerging Greater Manchester Spatial Framework has identified broad areas for future distribution and warehousing growth. This will increase the number of goods vehicle journeys, placing additional demand on the strategic road, KRN and local road networks, potentially increasing the need for additional maintenance and renewal. New logistics sites should ideally be accessible by rail and/or water, but some goods cannot be transported by these modes and for others it would not be practical due to timescales, routes and other issues. A further consideration is that any increase in rail freight will have an impact on demand for rail paths, potentially reducing capacity for growing passenger services.

175. Through our Freight and Logistics Strategy we will aim to maximise freight's contribution to economic growth and competitiveness. In the period up to 2025 this will involve: improving journey times and reliability; keeping costs low; ensuring infrastructure is capable of meeting future growth and demand; increasing integration between modes and distribution centres and increasing Greater Manchester's share of the logistics market. At the same time, the Strategy aims to minimise the social and environmental impacts of the industry by reducing emissions from road transport, reducing noise, traffic disruption and congestion for residents and improving safety for cyclists. Over the longer term we will seek to encourage modal shift.

176. Better information is central to achieving our objectives. Our understanding of freight across Greater Manchester will be enhanced by working with partners such as Highways England and industry representatives. Meanwhile, we can assist the industry with operational planning through the sharing of live traffic data and encourage sustainable distribution through awareness campaigns, eg air quality, and driver training. Our understanding of the needs of the industry will be improved through speaking to the sector though the logistics forums, both electronically and at events.

177. A key intervention will be to maximise consolidation, whereby deliveries to the same location are bundled together or where goods are delivered to locations for onward distribution by smaller, low emission vehicles (including cycles or electric-assisted cycles in town and city centres) or for collection by individuals. This will reduce the numbers of large goods vehicles entering the city and town centres, reducing noise, congestion and air pollution. Supporting changes in procurement practices, such as in commercial waste collection and across the public sector will also have an effect. Proposals for freight and logistics are also discussed in Part 3 in relation to our spatial themes.

Policy 18: We will work, including through the GM logistics forums, to improve journey times and reliability for deliveries, and to reduce the environmental impact of logistics, including the promotion of modal shift.

Priorities for highways investment

178. Future investment in highways across Greater Manchester will reflect the vital role that the KRN plays in the economy and will ensure that that interventions required to maintain the reliability and safety of the network for all users – motorised and non-motorised - are brought to the fore.

179. We will continue to explore investment in next generation technological in signalling and predictive traffic management, supported by real time operational intelligence across the network, and prepare for advances in vehicle-to-vehicle and vehicle-to infrastructure communications (eg autonomous vehicles). We will also seek to invest in innovative junctions which support different modes in and around our local centres eg pedestrian count-down and pedestrian and cycle SCOOT[4].

180. Experience suggests that high growth in road traffic is not inevitable. Between 1996 to 2013, traffic growth in Greater Manchester was only moderate at 10%, and off the motorway network there was a reduction in the distance travelled by motor vehicles. Improved provision for cycling, walking and public transport is required to make using active and sustainable modes a realistic alternative While building capacity in the existing highway network. New links and/or additional highway capacity will be needed in some locations, particularly to support new development.

Role of Travel Demand Management in Reducing Highway Congestion

181. We recognise that simply increasing highway capacity to meet an ever growing demand for car travel is not sustainable or, indeed, physically or financially practical. Instead we will increasingly need to apply travel demand management measures (TDM) to make better use of the capacity that is available, particularly during peak periods. Such demand management will also be vital to controlling demand for road trips and minimising congestion during periods of disruption, eg caused by roadworks or special events.

182. We will continue to work with Highways England and with planning authorities to ensure that the impact of new development on the SRN, in terms of congestion, reliability and safety, is mitigated by ensuring appropriate measures are identified and delivered at an early stage. We will also work with partners, including operators, to identify measures which might contribute to managing demand, both short-term during planned events and works, and more permanently. Short-term measures may encourage permanent changes in behaviour, so we will monitor the effectiveness of these measures. These may include marketing and communication behaviour change campaigns, engagement with businesses to encourage

[4] SCOOT – Split Cycle Offset Optimisation Technique; Pedestrian Scoot enables the adjustment of traffic signal timings automatically to extend the green pedestrian phase when large numbers of people are waiting, allowing more people to cross the road. 'Cycle SCOOT' detects the numbers of cyclists travelling along a route. This enables the traffic signal timings to be adjusted to give more green time when there are high numbers of cyclists at key junctions during peak times. Trials of this technology are underway in London.

retiming of journeys and car-pooling/car share; improved travel information; building facilities within new development to support public transport, walking and cycling; constraints on long-stay parking in our key centres; and prioritising sustainable travel.

183. We will continue to work with the Department for Transport and Highways England to maximise the potential to use Variable Message Signs to transmit messages about travel choices (eg stations with park and ride facilities), and to identify opportunities for improving access to public transport from the SRN. We will also continue to work with partners to improve access to public transport, including enhanced park and ride provision and the evolution of park-and-ride towards multi-modal travel hubs that improve access and integration.

Policy 19: We will ensure our streets will be welcoming and safe spaces for all people, enabling more travel on foot, bike and public transport while creating better places that support local communities and business.

Bus priority and infrastructure

184. As noted earlier, the bus has a very important role to play in the movement of people in Greater Manchester. However, the potential value of buses can be reduced by traffic congestion. Providing the right conditions for buses While accommodating other demands on the road network is not straightforward. To support our aim of running a strong and reliable bus network, bus priority and infrastructure will continue to be a key focus. The movement of buses to, from and through town centres and into interchanges will be a priority as congested centres are often where buses are delayed the most. These centres also require a balancing of priorities with multiple competing demands such as parking, servicing, pedestrian- and cycle-friendly facilities, public realm and landscaping.

185. We will complete the delivery of the current programme of bus priority measures and we will continue to explore ways in which appropriate interventions such as bus lanes, adjustments to traffic signals, and changes to waiting and loading restrictions can help to free buses from congestion and improve their attractiveness to existing and new customers. We must also continue to improve our bus stops to improve the waiting environment for all passengers and to improve accessibility for those with mobility impairments.

186. 'Quality Bus Transit' is a term used to describe whole-route upgrades of busy bus corridors, with an emphasis on quality, reliability, and integration into the urban realm. In future, in Greater Manchester, it will offer similar quality of design to that of best-practice street-running light rail transit with bus priority to achieve reliable services, attractive stops and interchanges, and high-quality electric vehicles. The high-specification double-deck vehicles used on the Vantage Leigh-Salford-Manchester bus rapid transit service have been very well-received by users, and vehicles of similar quality are likely to be appropriate for Quality Bus Transit services.

187. Quality Bus Transit is particularly suitable for busy bus corridors where a high proportion of trips are short, and it is therefore particularly relevant for routes connecting town centres. Since the orbital links between adjacent town centres need particular attention, Quality Bus Transit services are a high priority within the network improvements that we aim to deliver within the next decade. These are shown in the Our Network vision launched by the Mayor of Greater Manchester in 2019.

188. Following the introduction of the Bus Services Act (2017), the GMCA asked TfGM to carry out an assessment of a bus franchising scheme. After its completion and the conclusion of an independent audit the GMCA decided to proceed to with a consultation on a proposed scheme which ran from October 2019 to January 2020. Following consideration of responses from that consultation, the Mayor will be able to use the powers provided by the Act to make a decision on whether or not to introduce the proposed franchising scheme.

189. Reforming the bus market could potentially improve bus availability, reliability and affordability. It also provides opportunities for more integration between the bus network and sustainable and active modes. This will be especially important as Greater Manchester recovers from the social and economic effects of Covid-19 and we move to rebuild a greener and more sustainable city-region.

190. Work will also continue to investigate the detail of bus routeing around and through our major centres and to identify any interventions that can improve reliability. Supporting the movement of buses in and around these centres will complement the wider investment we will continue to make in transforming interchange and bus station facilities across Greater Manchester.

Policy 20: Where feasible we will introduce appropriate bus priority measures on the highway network to improve bus reliability and will keep existing measures under review to ensure effectiveness. This will include developing proposals for "Quality Bus Transit" corridors on key routes.

Cycle infrastructure

191. Our cycling strategy is to develop and deliver a Greater Manchester-wide network of dedicated, high quality, newly built or enhanced cycle routes. The Bee Network is the longest planned walking and cycling network in the UK and when complete, it will connect every neighbourhood of Greater Manchester with continuous, high-quality infrastructure for walking and cycling. It will provide a viable and attractive alternative to driving, enabling people to leave the car at home, visit friends on foot or ride to the shops. The network is made up of three core components:

i. Protected Space on main road corridors and town centre streets with protected links, junctions and public realm improvements;

ii. Removing points of severance: crossings of busy roads or other points of severance to connect quieter streets; and

iii. Filtered neighbourhoods, where walking and cycling is prioritised

Powered two-wheel vehicles

192. Powered two-wheel vehicles (PTW) - including power-assisted cycles, motorcycles, scooters and mopeds - have an important role as part of the overall transport mix. Their efficient use of road space means that they reduce congestion and they are also a lower cost form alternative to cars. They are particularly ideal for short journeys in urban areas. Small commuter scooters and motorcycles can provide better flexibility for longer journeys, and some e-bikes can be used for longer distance commuting. PTW users face many of the same issues as cyclists, however, particularly with safety, and accident rates are high.

193. Micromobility vehicles – including as e-scooters and e-bikes – will increasingly form part of the solution to the congestion and air quality challenges our city-region faces. The use of e-scooters, in particular, has become a more common sight on our streets, although using a private e-scooter vehicle on a public road remains illegal in the UK. In 2020, Government announced that rented e-scooters would be allowed on roads and cycle lanes for a trial period. Greater Manchester is supportive of this, subject to several conditions, including that the vehicles are safe, fulfil a useful function (modal shift away from private vehicles, for example) and are subject to appropriate regulation.

194. We will continue to seek to improve the safety of PTW users through education initiatives such as Ridesafe Backsafe. We will encourage adequate and secure parking for PTW in key locations, such as our town centres, and in new developments. Conditions for PTW using our main roads will be improved through our focus on investing in maintenance and on improving the resilience of the network.

Maintenance and renewal

195. With the development of the KRN, there is an increasing awareness of the economic value of our highways, and more importantly the future implications of neglecting it. If a section of road, or a structure deteriorates there can be a significant impact on collisions, vehicle damage, network resilience, travel comfort, performance and the 'liveability' of an area. Where this deterioration is on the economically vital KRN, the effects are magnified and start to have regional and national level impacts.

196. We will work to improve and maintain the condition of our road network drawing on best practice, such as that set out within the Highways Maintenance Efficiency Programme (HMEP)[5]. We will also continue to pursue a policy of Invest to Save. Invest to Save is an approach to maintenance whereby capital investment funded through borrowing is used to renew highway infrastructure in order to overcome maintenance backlogs, arrest decline and bring the condition of the asset up to a high standard. The renewed assets then require less maintenance work in the short/medium term thereby reducing future maintenance costs. The objective is to reduce the total lifespan cost of the assets, and hence the overall unit cost per km of highway.

[5] HMEP is a £6 million, Department for Transport funded and sector led transformation programme which provides the tools and resources to generate ideas and help transform delivery of roads and services through greater efficiencies.

197. We will continue to explore opportunities to improve the efficiency of delivery in highways maintenance operations through collaborative working. This will enable unit costs to be reduced, resulting in the delivery of more maintenance work on our roads than could have been achieved for a given budget under individual local highway authority management.

Resilience of the highway network

198. A resilient network is one of our network principles. The highway network is highly sensitive to incidents and changes in demand; for example, peak hour flows can vary by 13% between summer holiday traffic and non-holiday levels. When combined with our growing economy and population, failure to make the road network resilient could result in the deterioration or failure of assets, increasing journey times and declining reliability, increased collisions and vehicle damage, and third-party costs.

Policy 21: We will work to improve and maintain the condition and resilience of our road network, drawing on best practice.

199. We will keep the vulnerability of our highway structures and road surfaces under constant review and ensure that new infrastructure is designed with in-built resilience. In recognising that climate change will have an increasing impact over the period to 2040, we will work with partners to determine the key infrastructure assets (including roads) that might be at significant risk, identify and implement appropriate mitigation and agree service levels for various tiers of road infrastructure.

200. We will continue to liaise with stakeholders to develop the highway works permit system (GMRAPS) to ensure effective coordination and to reduce the impact of works on the Highway Network.

201. To ensure our customers are kept informed on the usability of our road network and the availability of alternatives, we will continue to develop our network management and travel information systems and provide real time open data to support development of travel planning by third parties. These systems will be supported by a growing network of Variable Message Signs, passive detectors, traffic counters, ANPR[6] and CCTV cameras, monitored and controlled through our Traffic Control Centre, and by our Roadwork Permit System (GMRAPS). These systems will also allow us to monitor our progress in meeting targets for the performance of the KRN in areas such as reliability, delay and network speed.

[6] Advanced Number Plate Recognition

Developing a Comprehensive Walking and Cycling Network

Our Ambition: To create a comprehensive network of on and off-road walking and cycling routes (known as the Bee Network) that make it easy and safe for people to walk and cycle to key local destinations, such as local centres, jobs, healthcare and education, for leisure purposes and to access public transport.

202. Throughout our 2040 Strategy, we place a strong emphasis on enabling people to travel more easily and safely on foot and by bike. Achieving this will help to increase physical activity as well as reducing the significant numbers of very short car trips currently made in our towns and neighbourhoods, making them more attractive places to live, work and visit. This will, in turn, reduce harmful emissions and traffic noise.

203. This approach is strongly supported by national policy, as set out in the DfT's Cycling and Walking Investment Strategy (CWIS)[7]. In 2017, that document set out ambitions to deliver:

- Better Safety: 'A safe and reliable way to travel for short journeys';
- Better Mobility: 'More people cycling and walking- easy, normal and enjoyable'; and
- Better Streets: 'Civilised places where people come first'.

204. In July 2020, DfT updated the CWIS by publishing 'Gear Change: a bold vision for cycling and walking'[8]. The plan sets out actions required - to achieve its vision to 'make England a great walking and cycling nation' – under four broad themes:

- Better streets for cycling and people;
- Cycling and walking at the heart of decision-making;
- Empowering and encouraging local authorities;
- Enabling people to cycle and protecting them when they do.

205. The Gear Change document is supported by the introduction of a comprehensive set of national guidance for cycling infrastructure: Local Transport Note 1/20, Cycle Infrastructure Design. This document breaks new ground in UK cycle planning by adopting a set of bold principles for cycle infrastructure design which bring UK design standards in line with those used in the Netherlands.

206. National ambitions for walking and cycling are reflected in our Greater Manchester Transport Strategy 2040, with Part 3 showing the part that active travel needs to play in each of our five spatial themes: from access to public transport for longer distance journeys; to providing access to employment, education and other facilities; and, most importantly, becoming a mode of choice for short local journeys. Our Bee Network is already being constructed using a

[7] Cycling and Walking Investment Strategy, DfT: https://www.gov.uk/government/publications/cycling-and-walking-investment-strategy
[8] Gear change: a bold vision for cycling and walking, DfT: https://www.gov.uk/government/publications/cycling-and-walking-plan-for-england

set of design standards which reflects, and even stretches further, the new national guidance contained in Local Transport Note 1/20.

207. There has been significant investment in walking and cycling infrastructure in Greater Manchester in recent years, including transformational schemes such as those on the Oxford Rd/Wilmslow Rd corridor between central Manchester and Didsbury.

208. In 2017, the Greater Manchester Mayor appointed the city-region's first Cycling and Walking Commissioner, Chris Boardman. The Commissioner's, Made to Move, report detailed fifteen essential steps required for Greater Manchester to see a step-change in walking and cycling.

209. Following this, Greater Manchester's local authorities used innovative planning techniques to develop the Bee Network: a bold plan to connect all communities in Greater Manchester by the UK's first fully joined-up cycling and walking network. Importantly, the network was developed by the people who live, work and travel in Greater Manchester, with wide-ranging public consultation to refine and improve the plan.

210. At 1,800 miles in length, the Bee Network will be the country's largest walking and cycling network, taking 10 years to deliver at a total cost of £1.5 billion. When complete, it will connect every neighbourhood of Greater Manchester. With continuous, high-quality provision for walking and cycling, people will have a viable and attractive alternative to driving, enabling them to leave the car at home, visit friends on foot or ride to the shops.

211. In 2019, the GMCA approved the allocation of £160 million from the Transforming Cities Fund to deliver walking and cycling infrastructure in line with the proposals in the Bee Network infrastructure plan and the emerging Streets for All strategy. Since then, a pipeline of c£500m of cycling and walking schemes has been developed, with a prioritised programme drawn

from this pipeline currently being developed for delivery by 2022. Continued efforts to secure further funding are needed, however, to to turn the bold vision of the Bee Network into reality.

212. There is much more to do to create an environment which is truly pedestrian and cycle friendly. In order to help deliver a higher proportion of journeys made by walking and cycling, Greater Manchester's authorities will support a range of measures, including:

- Creating a cycling and walking network which is coherent, direct, safe, comfortable and attractive – the Bee Network – connecting every neighbourhood and community across Greater Manchester;
- Ensuring routes are direct, easily navigable and integrated with the highway and public transport network;
- Ensuring that pavements are easy to walk on and accessible to all, not blocked by parked cars and other obstructions;
- Making our town and city centres pedestrian-focussed, where the impact of motor traffic on streets is reduced, creating attractive places to live, work and visit;
- Creating, where needed, dedicated separate space for people cycling, with pedestrians and cyclists given priority at junctions using our new CYCLOPS (Cycle Optimised Protected Signal) junction. The first of these junctions was opened in summer 2020 in Hulme, and many more are prioritised for delivery by 2022;
- 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;
- Utilising and enhancing green infrastructure, including canals, parks and recreation grounds, to create opportunities for walking and cycling; and
- Ensuring that new developments are fully integrated into the walking and cycling network, and are planned such that walking and cycling are the principal modes of access.

213. The Bee Network will connect communities and key destinations with high-quality walking and cycling routes, suitable for use by an unsupervised competent 12-year-old cyclist, or a parent pushing a double buggy. This can be achieved through:

- Connecting existing quiet streets with new high-quality crossing points of busy roads and other sources of severance such as watercourses and railways.
- Use of traffic-free routes, such as through parks or on former rail lines;
- Providing physically protection for cycle lanes on major roads using additional kerbs or other features
- Creating low traffic active neighbourhoods through removal of through motor traffic by introducing modal filters

214. Routes should not be shared by pedestrians and cyclists adjacent to motor traffic. Where routes are shared by pedestrians and cyclists away from motor traffic, for example on

bridleways or paths through parks, the safety of both sets of users must be considered in the design. This can be a particular issue for disabled people. In designing any new routes, we will also take opportunities to enhance public realm, and we will identify opportunities to provide new cycle facilities as part of new public transport routes. Principles for the development of the Bee Network, and all streets in Greater Manchester, are set out in our Streets for All guidance. The guidance will be periodically reviewed and updated to ensure it keeps pace with this rapidly developing area of highways infrastructure.

215. Safety and security are of prime importance for pedestrians and cyclists. Our road safety programmes will continue to focus on reducing collisions involving the most vulnerable road users, which include these groups. We will also continue to introduce 20mph zones, where these have local support, including on Bee Network routes. Reduced traffic speeds will encourage more people to walk and cycle, and provide a safer catchment for the cycle network. However, 20mph speed limits alone may not be enough to reduce vehicle speed and we will seek to reduce motor vehicle volumes and speeds on residential streets through increased use of modal filters, which retain local access for all vehicles but allow only pedestrians and cyclists through access.

216. Personal security is a key consideration in the design of new walking and cycling routes and cycle parking needs to be secure, well located close to key destinations, and with good natural surveillance. We will work to ensure that every cycling journey begins and ends with a convenient, secure and high-quality cycle parking facility. We also recognise that poor air quality can deter people from walking or cycling, and will work to reduce emissions as set out throughout this document.

217. The school journey is one that can often be made on foot or by bike, and encouraging more active travel in this area is important in improving children's health, as described in section 75. We will therefore work with secondary schools and Further Education colleges to improve cycle parking and access and promote a culture of cycling in the next generation.

218. Almost all journeys involve an element of walking: to/from the station or stop or from the car park. Walking routes within our town centres need to be safe, secure and well signed. The legibility of our centres is important in making them attractive places to visit and in supporting the growing visitor economy and we will introduce wayfinding schemes accordingly.

Policy 22: We will work with partners to improve walking and cycling facilities across Greater Manchester, including development of a strategic walking and cycling network (the "Bee Network"), wayfinding and cycle parking, and supporting "Streets for All" design guidance to ensure consistently high quality standards across the network.

Public Transport Integration: Keeping Greater Manchester Moving in 2040

Our Ambition: To develop a fully integrated, customer-focused, low-emission public transport network, with simple, integrated ticketing, that provides an attractive and accessible alternative to travelling by car to key Greater Manchester destinations.

219. Improved public transport will need to play a major role in delivering Greater Manchester's sustainable growth agenda up to 2040. An attractive, efficient and well-integrated London-style public transport network is an essential element within the city-region's infrastructure and at the heart of the Our Network vision. Together with active travel, it can provide the significantly enhanced connectivity that our city-region requires for success. It can encourage growing numbers of people out of their cars for more of their journeys (helping to reduce emissions and congestion), and it can provide access to employment, education and opportunities for the third of households without access to a car. Crucially, however, our approach also opens the way for a future where car ownership is not considered to be essential, and residents can choose from a range of sustainable and efficient travel options – public transport, ride sharing, car sharing/hire, walking, cycling or taxi.

Policy 23: Working with partners, we will seek to establish and promote one integrated Greater Manchester public transport network (Our Network), making it easy for customers to plan, make and pay for their journeys using different modes and services.

220. Building on our recent investment, we will aim to deliver further transformational change in the quality, ease of use, coverage, accessibility and integration of our public transport networks to ensure we have a system fit for a modern, world-class city-region.

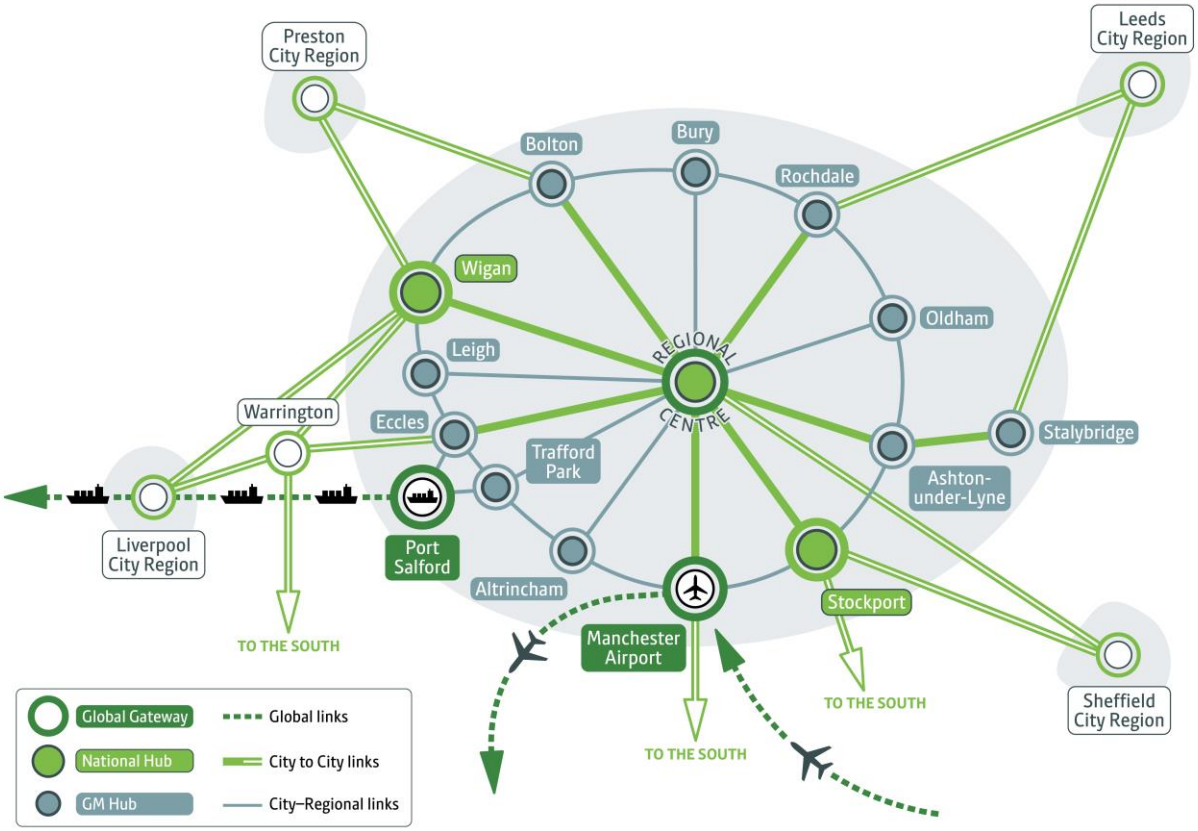
Interchange

221. In order to develop a more coherent access and interchange strategy for Greater Manchester, we have identified the most critical points of interchange on the public transport network, based not on transport mode but on the travel opportunities our interchanges facilitate. Our approach builds on the principles of our five 2040 Spatial Themes (described in Part 3) to embed our transport interchanges far more into local places using the following tiered approach:

Interchange Category	Description
1. **Global Gateway**	Manchester Airport – provides the key entrance to Greater Manchester for international travellers, providing first and last impressions of our city-region.
2. **National Hubs**	Major interchange locations providing direct, mainline city-to-city rail connections.

3.	**Greater Manchester Hubs**	Our key town centres and other strategic employment locations, that provide opportunities for interchange to facilitate both radial and orbital public transport travel across Greater Manchester.
4.	**Local Hubs**	Smaller local centres, and employment destinations, with potential for providing more local interchange
5.	**Neighbourhood Gateways**	Local points of access to our Greater Manchester public transport network, such as local Metrolink stops, rail stations and key bus stops.

222. The most strategic interchanges (Global Gateway, National Hubs and Greater Manchester Hubs) are highlighted on the map below. This also shows key radial links and the orbital connections we need to improve in order to radically improve connectivity across Greater Manchester. There is significant potential for these interchanges to support far more orbital and radial travel if other barriers are addressed.



223. We will build on the good work that has already been undertaken to ensure that our interchanges are of a consistent standard, with criteria developed for: walking and cycling (including wayfinding); parking (including drop-off for car and taxi passengers); passenger facilities; safety and security; information; and access for those with mobility impairments. Our approach will be tailored to local requirements, but will seek to provide a much more consistent and high-quality customer experience across Greater Manchester.

224. As we seek to improve the physical aspects of both local and strategic interchanges we will develop more detailed principles for each category of interchange, based on the following elements:

- **Excellent customer experience –** making it easy and stress-free to access and move through an interchange, focusing on the design of entrance points, movement within an interchange, and opportunities for commercial or community use.
- **Reinforcing a sense of place –** this means embedding the Greater Manchester transport network better within the local area by ensuring it is well connected and related to the surrounding area through high quality walking and cycling routes, appropriate car and cycle parking, and excellent wayfinding provision.
- **Inclusive and accessible** – enabling everyone to use public transport equally, confidently and independently.
- **Minimising differentiation between modes**, both physically, in terms of better integrating service patterns and information, and introducing a simple, integrated ticketing system, and in terms of perception, through consistent branding and communication.
- **Simplicity** – through provision of easy-to-use information and easy-to-navigate design. Provision should be tailored to the unfamiliar customer, for the benefit of all users.
- **Tailored** – to the needs of the customer and the local area.
- **Attractive** – ensuring that customers feel safe, secure and confident in using the interchange and that there is a pleasant atmosphere.
- **Enhancing access through park and ride, or drop-off facilities** - To be effective - and financially sustainable - park and ride needs to intercept cars before they reach congested urban roads and transfer their drivers to a fast and frequent public transport service. We will therefore identify additional park and ride and drop-off outside, or close to, the M60 on existing or future rapid transit routes.

Policy 24: We will seek to ensure a consistent standard of facilities at transport hubs, appropriate for their size and function, and will work with partners to improve access to them by all modes.

225. The characteristics of the different public transport modes mean that each has strengths which make it best suited to particular travel markets. Bus, with its frequent stops, is best suited to serving shorter distances (up to around 6 kms), in dense urban areas. It provides direct travel into city and town centres and to major employment areas as well as access to rapid transit stations and stops, via interchanges. Sometimes it might be necessary to switch between modes to make a complete trip, and we want to make this as easy and integrated as possible. Over longer distances, (6-50kms) rapid transit offers significantly faster journey times than bus, while rail, with a limited number of stops, is the best option for long distance journeys. In planning new infrastructure and services, our aim is to make the best use of public funding by prioritising the modes which best serve each market.

Our Vision for Bus

Our Ambition: To develop a modern low-emission accessible bus system, fully integrated with the wider Greater Manchester transport network on which everyone will be willing to travel regardless of their background or mobility level.

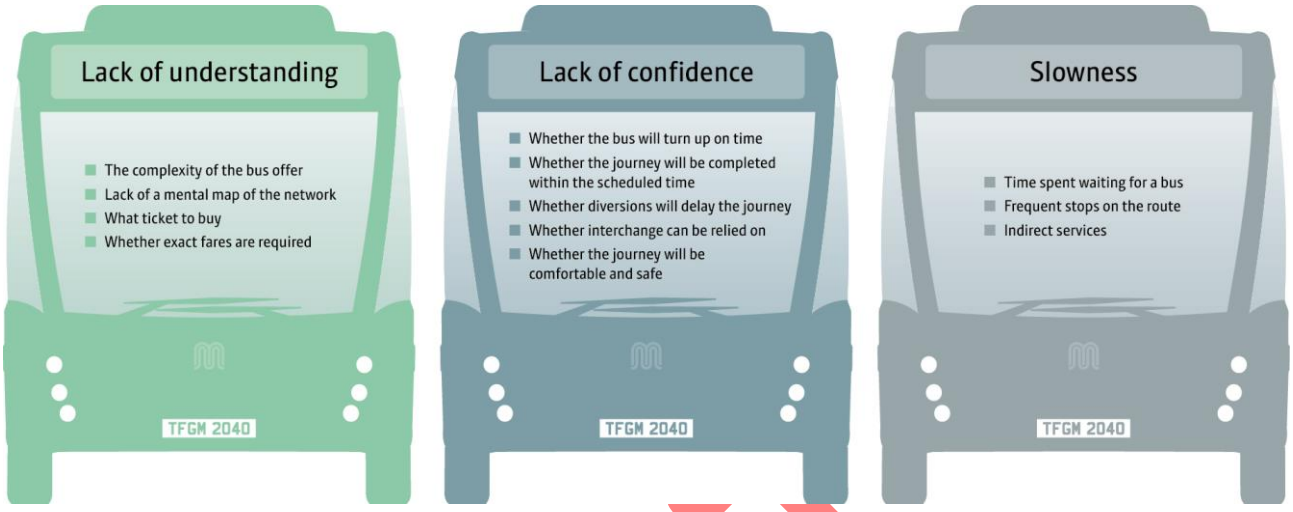
226. Bus travel currently accounts for four in every five public transport journeys in Greater Manchester. It plays a vital role in reducing congestion and improving accessibility for people who have no access to a car, but has the potential to contribute more effectively to our overall public transport strategy. In Greater Manchester, we have invested heavily in bus infrastructure and services. Modern, high quality interchanges have been built or are under construction in our main town centres, and this programme of renewal is almost complete. We have also provided extensive bus priority, through a network of Quality Bus Corridors and through the Bus Priority Package, which includes the Leigh to Ellenbrook Guided Busway.

227. Working with bus operators, we have introduced smart ticketing for multi-operator tickets and to support this we have provided smart ticketing equipment to smaller bus operators. We have also provided support for a network of socially necessary services, which would not otherwise be provided by operators on a commercial basis, and provided concessionary fares in excess of the national statutory requirements.

228. Despite considerable and long-term public investment in bus infrastructure, subsidy and service support - as well as investment by the major operators in new vehicles - patronage has dropped. This is despite significant population growth - and in sharp contrast with the growth experienced on rail and Metrolink.

229. We need bus to attract more people out of their cars and to play a full role within an integrated public transport network to ensure that growth in locations like the Regional Centre is not undermined by congestion. However, the multiplicity of operators means the bus network lacks a consistent identity and cannot be marketed either as a recognised brand, like Metrolink, or as part of a wider public transport network. Moreover, a complex and ever-changing ticketing offer, with higher fares charged for the tickets that allow passengers to use bus services provided by different operators, has done nothing to encourage passenger growth. This is in contrast with most other European cities where a simple and integrated ticketing offer is at the heart of their public transport.

230. A review of secondary evidence on the barriers to bus travel, carried out for TfGM, shows that for people who have a choice in how they travel, the main reasons for not making more use of buses are as follows:



231. Since the introduction of bus deregulation, using its powers under the Transport Act 1985 and various instruments of partnership provided by the Transport Act 2000 and Local Transport Act 2008, TfGM has worked with bus operators to improve services, particularly with regard to bus priority, reliability and punctuality, vehicle standards and fares.

232. Overcoming these barriers continues to be essential to enabling bus to fully play its part in realising the 2040 Transport Strategy. This means that it is vital to maintain investment in the bus network and improve public transport connectivity to employment and essential services, as well as improving the customer experience. To do this, demand for public transport, including bus, must grow, facilitating modal shift from car to public transport, reducing congestion and harmful emissions. To fully achieve these outcomes, evidence from other cities suggests that improved integration and investment can increase use of public transport and bring attendant benefits.

233. Our vision for bus in Greater Manchester is based on four objectives. Our first objective is **network integration** – how physically integrated the services are between themselves and with other modes. Our second objective is to deliver for passengers a **simplified and integrated fares system**, including transparency and operation across modes. For passengers, our next objective is to offer a great **customer experience**. Finally, an efficient and growing network would achieve **value for money,** enabling investment to improve services. These objectives define what is required of the bus network to enable it to fully play its part in the 2040 Transport Strategy. They were endorsed by the Greater Manchester Combined Authority in 2018. Further detail is set out below.

Network Integration

- The bus network will be dynamic, developed in response to demand for travel, particularly to and from new areas of housing, employment, and education and training. It will include the provision of bus services where current or anticipated demand might not support commercially viable services, in order to achieve important social or economic objectives.
- An integrated public transport network where services complement each other, will maximise connectivity opportunities. Buses acting as feeder services to rail and Metrolink services will extend commuting options and wider travel opportunities. This will create a clear and logical set of travel options for passengers.

- Appropriate levels of resource provided on routes will be aligned with levels of demand. Frequencies will be increased on some routes and at some times of day to better meet people's needs, particularly for access to work and training.
- Passenger convenience will be maximised, and journey times minimised, through the optimal location of interchanges, hubs and bus stops to ensure passengers can complete journeys requiring more than one trip or mode.
- Network stability will be a key feature, giving customers the confidence to rely on their bus service. Changes to the network will be carefully considered, and their effects on the network as a whole understood before being made.

234. **Simplified and Integrated Fares**

- Bus passengers will benefit from a simple, integrated ticketing system that complements and enhances the integration of the transport network. It will be easy to understand for passengers, incorporating a simplified fare bands, and will allow flexible use of tickets across different bus services and other modes. This will enable longer and multi-modal journeys to be completed without excessive cost.
- A ticketing strategy that allows the best possible demand management within and between modes will allow for best possible management of highway, rail and tram capacity.
- Passengers will benefit from easy means of transaction, and swifter boarding, through more use of new technology, including their mobile devices and bank cards. It is important to ensure that ticketing adequately reflects changing travel patterns – eg Carnet products for those not working a five day week.

Customer Experience

- The bus network will be easy to navigate for all passengers, including visitors. It will also benefit from a unified brand within an overarching identity for the wider public transport network, making the system clearer for everyone.
- The whole public transport network will be promoted effectively – travel choices will be simple to understand, and customers will be able to make informed choices, using the sophisticated travel information through digital as well as traditional methods.
- A consistent and good journey experience will be achieved through high standards for on-board facilities. The journey experience will be further enhanced through passenger waiting stops and interchanges that are accessible, convenient, clean, comfortable and safe.
- Passengers will feel confident that the bus will get them to where they want to be, on time, and that buses will turn up when they are scheduled to do so.
- Bus performance will be improved through investment in bus priority on the highways. Management of the network in real time - through technology, to minimise service disruption and maintain an even service – will be rolled out further.
- A modern, especially electric bus fleet to reduce harmful emissions to improve air quality and the customer experience.

Value for Money

- The bus network will deliver optimal value for money both from the fares paid by passengers, and the different forms of subsidy.
- By avoiding over-provision of buses on busy corridors, there will be more resources available for investment into the bus system, which could be used to deliver new services and passenger facilities.

235. Following the introduction of the Bus Services Act (2017), the GMCA asked TfGM to carry out an assessment of a bus franchising scheme. After its completion and the conclusion of an independent audit the GMCA decided to proceed to consultation on a proposed franchising scheme which ran from 14 October 2019 to 8 January 2020.

236. The Covid-19 pandemic has had a significant impact on Greater Manchester's bus market, including timetables, revenues, passenger numbers and the public's attitudes to public transport. Due to this, further work will be undertaken to assess the impact of coronavirus on the bus reform process. This work will involve further engagement and consultation with stakeholders.

Policy 25: We will seek to make best use of powers included in the Bus Services Act, as well as our existing powers, to give effect to our vision for bus.

Coaches and Taxis

237. Chartered coaches play a vital role in Greater Manchester's visitor economy, bringing people in to visit shopping centres, leisure and cultural attractions and to attend events. Visitor numbers are growing, and we will work with operators and local authorities to ensure that coaches can set down and pick up close to their destinations and that accessible coach parking locations, with appropriate facilities and hours of operation, are provided and well signed.

Policy 26: We will seek to ensure that accessible coach parking and set down/pick-up points are available at key locations.

238. Scheduled coaches provide a lower cost alternative for longer distance journeys and have traditionally been popular with students and retired people. We believe, however, that there is scope for this role to grow in importance as we deliver our Vision for Bus. We will therefore explore the feasibility and scope for coaches or express buses to provide some of the medium to long distance journeys, to places like the Airport or the Regional Centre, on corridors where rail or Metrolink would not be feasible or affordable. This would probably entail bus services operating on a limited-stop basis.

239. Taxis and private hire vehicles provide people with the flexibility of door-to-door transport on demand, without needing to use or own their own vehicle, and this role is likely to increase. They are therefore an essential component of the transport network: facilitating journeys where there is no suitable bus service, supporting the night-time economy by allowing people to leave their cars at home; providing the final leg of a journey by rail or air; and acting as a backup when a change is needed to travel arrangements. As described in section 126, the growth of on demand companies is revolutionising private hire by providing customers with greater flexibility. Greater Manchester needs a vibrant and high-quality taxi/private hire service and we will explore with the industry how new booking systems might be included in our Travel Choices offer.

240. In recognition of their role in supplementing the public transport network, hackney cabs are allowed to use 'with-flow' bus lanes in Greater Manchester (as they can be 'hailed' - so can pick up on the street). This freedom cannot be extended to private hire vehicles for a number of reasons. There is no limit on the number of PHVs that can be licensed (there are currently around 16,000 in Greater Manchester), and allowing a significant number of additional vehicles into bus lanes would erode the benefit to buses, which is their primary purpose, and create additional conflicts with pedestrians and cyclists. Also, if selective vehicle detection bus priority, such as at pre-signals, were to be introduced, the signal would turn green for buses, but a PHV in the bus lane would not activate the signal, leading to the danger of red light running.

241. Hackney cab licenses are issued by each of the ten licencing authorities, who also determine the location of taxi ranks. Each authority sets its own standards; eg the number of licenses issued, the age of vehicles and the area in which they can operate. Our long-term aim is to achieve more consistency across the conurbation, in order to provide a better, more integrated service to the customer and to ensure that taxis entering the Regional Centre and main town centres meet the highest environmental standards. We will work with the ten licensing authorities and the taxi/private hire industry to develop more consistent standards, building on best practice from elsewhere in terms of policy/regulation and operation. There

will however be a need to ensure that higher standards are not undermined by vehicles registered in neighbouring authorities operating in Greater Manchester.

Policy 27: We will work with the taxi and private hire industry to develop minimum standards for policy, regulation and operation across Greater Manchester, and work with Government to strengthen national legislation.

242. Our network of canals provides traffic-free routes through the urban area and may have potential to add to the transport offer by enabling water taxi services, which can be attractive for leisure trips. Where private sector proposals of this type are developed, we will seek to ensure integration with the wider transport network.

Our 2040 Rapid Transit strategy

Our Ambition: To extend the benefits of rapid transit to more areas of Greater Manchester and provide the capacity and reliability needed to support growth in the economy.

243. Rapid transit – which presently comprises Metrolink, suburban services on the National Rail network, and bus rapid transit – has been a critical in supporting economic growth and housing market renewal in Greater Manchester. Metrolink has proved highly popular carrying over 40 million trips per year with services that are accessible, fast, and frequent with a high degree of segregation from other traffic.

What is Rapid Transit?

We define rapid transit as a public transport service that is mainly focused- on middle-distance trips (of 6km to 40km) and which therefore needs to be significantly faster than an all-stops bus service.

Metro services are turn-up-and-go rail-based rapid transit services which provide excellent access to the network hubs that they serve. One example of this is Metrolink in Greater Manchester.

244. Building on the core Metrolink network, serving routes from Manchester City Centre to Altrincham, Bury, Eccles and MediaCityUK, further extensions have now been completed and a Second City Crossing through central Manchester opened in 2017. A further line to Trafford

Park opened in 2020, and we are investigating whether this can be extended towards Port Salford, where future development is planned.

245. The Metrolink Second City Crossing has helped to increase capacity at the heart of the Metrolink network. The Second City Crossing has also improved system flexibility and resilience in the critical core area of the Metrolink network. The potential disruption caused by future maintenance and replacement works will be mitigated by having more than one route across the city centre. System reliability and resilience will be a recurring theme for Metrolink over the period of the 2040 Transport Strategy. Further interventions will be identified and developed where they represent value for money and have clear potential to enhance the performance of the network. We will manage our Metrolink systems and assets in accordance with sustainable development principles, including their long-term financial, societal and environmental impacts. The effectiveness of TfGM's approach to delivering Metrolink services including stewardship of the assets will be measured and improvements identified. By reviewing and adjusting our approach to operations, maintenance and renewals we will ensure Metrolink network consistently delivers the required services.

246. We will aim to expand the coverage and capacity of our rapid transit network to deliver improved access to employment and other opportunities within the city-region. This will support a transformational level of growth in the conurbation, for example by connecting residents of the north of Greater Manchester with jobs in the centre and south. Further rapid transit improvements will need to both shape and respond to future development. The high cost of constructing and operating new rapid transit lines means that we must undertake detailed analysis of potential, based on future patronage and the scope for offering substantially faster journeys than could be achieved by an all-stops bus service. We will also need to significantly improve rapid transit capacity within central Manchester, to ensure that current capacity constraints do not affect Metrolink's ability to accommodate long-term growth on existing and future lines (see section 288).

Policy 28: We will seek to expand the coverage and capacity of our rapid transit network (Metrolink, Rail and Bus Rapid Transit), to deliver improved connectivity to employment and other opportunities within the city-region.

247. For rail-based rapid transit – whether Metrolink, suburban National Rail services, or other potential future types of metro - we will aim to deliver at least a 15-minute service frequency on all key corridors into the city centre throughout the day (Mondays to Saturdays, 0700-2330). We will consider the potential for converting appropriate suburban National Rail services to metro operation. That could be achieved by operating tram-train services on the National Rail network, or the introduction of other types of metro service using new infrastructure in the Regional Centre, potentially including a metro tunnel. Conventional heavy rail services on the National Rail network will remain very important, and improvements to both the capacity and connectivity of those services will be needed.

248. Over the period up to 2040, we will be taking a much broader view of rapid transit, focusing on delivering the most appropriate, integrated public transport network to meet the needs of different parts of the city-region. More detail on how rapid transit will be developed to create that network is set out in the Rapid Transit Strategy.

249. Changes in rapid transit technology and operating practices mean that the traditional boundaries between heavy and light rail and bus will become increasingly blurred. That enables us to focus on providing the right rapid transit system to meet existing and future travel markets to support significant population and economic growth.

250. In the medium term, tram-train offers the potential to deliver metro services to more areas without building new rail lines. A tram-train approach can help to improve access to the core of the city centre at peak and off-peak times, while also releasing valuable capacity on the National Rail network.

251. Where demand is not sufficiently high for rail-based rapid transit, bus rapid transit or express bus services - typically utilising a mix of segregated busways and other forms of bus priority - can offer many of the same benefits with much lower infrastructure costs. They may also serve to build up demand for rapid transit to a point where a Metrolink extension can be justified in the future.

252. The Regional Centre will continue to be the major hub for rapid transit services due to its high concentration of trip attractors, and its role as the key interchange in Greater Manchester's public transport network. As new city-to-city rail services are introduced (eg HS2 and Northern Powerhouse Rail services), the Regional Centre's role as a hub will become even more important. A key objective of the Rapid Transit Strategy is to improve connectivity with network hubs, maximising the benefits of new inter-urban rail services to Greater Manchester by fully integrating them with our existing and future public transport network.

253. In the longer-term, the growth of Manchester Airport and the Enterprise Zone means that the Airport has the potential to become a second rapid transit hub in Greater Manchester. Airport-focused rapid transit services could provide more orbital travel for Greater Manchester's

residents and visitors. We will continue to explore opportunities for delivering more orbital rapid transit services via the Airport over the coming months and years.

254. Our priorities for extending the capacity and coverage of the rapid transit network will include:

- Providing additional cross-city capacity in the Regional Centre for existing and future rail-based rapid transit services, potentially by means of tunnelling.
- Converting those suburban rail lines serving the Regional Centre which have a relatively poor financial performance to metro-style services, where there is a good financial case and the potential to attract both peak and off-peak patronage, achieved by track-sharing between light and heavy rail services.
- Providing additional capacity to accommodate growth on remaining suburban National Rail rail services to the Regional Centre. Capacity on the National Rail network will be released by converting selected suburban rail lines to create new metro services that avoid the Northern Hub rail bottleneck, but other capacity enhancements on the National Rail network will also be needed.
- Ensuring excellent local rapid transit connections with Northern Powerhouse and HS2 Rail services via a network hub at Piccadilly.
- Building new sections of rapid transit route, but only where there are opportunities to provide substantially faster journeys to major population or employment centres than could be achieved by a stopping bus service.
- Developing new bus-based rapid transit routes to serve major population and employment centres poorly served by existing rapid transit.
- Developing Manchester Airport as a second Greater Manchester rapid transit hub in support of the Airport's growth strategy, which will create opportunities for new orbital bus- or rail-based rapid transit services from other Greater Manchester network hubs, and support growth areas in GMSF.

National Rail services

Our Ambition: To develop a rail network with the capacity, reliability, speed, resilience and quality to support growth in the Northern economy and extend the benefits of HS2 and Northern Powerhouse Rail throughout Greater Manchester.

255. The National Rail network in Greater Manchester plays an important role in supporting economic growth, in particular providing quick access into the Regional Centre and main town centres and linking the conurbation to other major cities. Suburban services on the National Rail network form an important part of Greater Manchester's rapid transit network. Greater Manchester is also served by an extensive network of rail inter-urban services – both for regional trips to nearby cities and long-distance services to destinations such as London, Glasgow, and Edinburgh.

256. In recent years, there has been a significant growth in patronage, increasing by over 30% in the last decade. The rate of growth in the use of rail in the North, especially into major centres, has in fact outpaced that in the South East. Prior to Covid-19, this overall trend was continuing despite extended periods of poor performance and disruption.

257. Improving reliability will be key in continuing this role, but there is a need to address the resilience of the network. The dis-investment in the UK rail network from the 1960s through to the 1990s saw spare capacity beyond that required to operate a limited service pattern removed from the network. The renaissance in rail use since then has meant that significantly more trains are running through the same network, so that disruption is magnified and there is limited scope to avoid major incidents or seek alternative routes. We will continue to assess the key vulnerable locations on the network where additional capability could bring a step change in network recovery from such incidents, ensuring much greater resilience.

258. Lack of investment means that the capacity needed for both resilience and future growth is increasingly an issue. In addition, the quality of rolling stock and passenger facilities is inconsistent, often offering a poor experience to the public. While some of these issues have been addressed by the Northern and Transpennine rail franchises that began in April 2016 and as part of the Northern Hub package of work undertaken by Network Rail, there still exists significant opportunities to improve the network and services.

259. In 2019 the Greater Manchester Rail Prospectus set out the city-region's priorities for its rail network. These included improving infrastructure and rolling stock; increasing passenger numbers into the Regional Centre; working with rail and community partners to improve stations, increasing services to Manchester Airport and delivering local turn-up-and-go services that operate at least four trains an hour. The Prospectus also sets out the opportunities provided by rail reform and greater local control.

260. While Greater Manchester has benefitted from recent major Network Rail investment in the Northern Hub, which included the construction of the Ordsall Chord and the electrification of the North West Triangle to Liverpool and Preston via Bolton, there are still a significant number of delayed or postponed infrastructure projects. These include the delivery of

enhancements to the Castlefield corridor between Manchester Piccadilly and Oxford Road and the Transpennine Route Upgrade between Manchester and York.

261. The Northern Rail franchise, which commenced in 2016, represented a significant step towards achieving many of Greater Manchester's strategic rail priorities. It included commitments for major investment in new rolling stock for local services and a step-change in service levels on many local routes, especially during the inter-peak, evening, and weekend periods. While the franchise was terminated early in 2020 and replaced by a government run Operator of Last Resort (OLR), we will continue to lobby for these commitments to be delivered as planned.

262. The long-term sustainability of the local heavy rail network is likely to depend on continuing recent progress in reducing its need for subsidy. Some of the lines that are likely to be the weakest financially may also offer some of the best prospects for attracting additional demand via light-rail metro-style operation. This can – as seen recently with the conversion of the Oldham Loop line to Metrolink where patronage has more than tripled – attract more demand and revenue outside the travel-to-work peak periods.

Policy 29: We will continue to work with DfT, Network Rail, train operators and with other local authorities across the North of England in order to secure our strategic priorities and to deliver greater local accountability for all rail-based services.

263. The Government has recognised the need for faster journeys between the major northern cities. Local authorities and TfN are working together to agree what is needed to benefit that wider area, with the aim of developing a Northern Powerhouse Rail network. Improvements would be delivered progressively, through franchise specifications and input to ongoing railway planning processes and through supporting activities of local authorities.

264. The fact that many of Greater Manchester's rail stations offer poor customer facilities deters some users. Because rail franchises are relatively short-term, train operators have little incentive to invest and improve access as there is insufficient time to recoup that investment. We therefore believe that the interests of the customer would be best served by TfGM operating stations on a long lease instead. This would enable longer-term programmes to be developed to bring stations up to a consistent standard that align with the standard provided for other modes.

Policy 30: We will continue to work with DfT, Network Rail and Transport for the North to secure greater local control of rail stations within Greater Manchester exploring the use of any opportunities which may arise from the Williams Review of the Rail industry.

Part 3
Our 2040 Spatial Themes: Challenges and Interventions

Introduction

265. This section builds on the Greater Manchester-wide strategic principles and policies set out in Part 2. Part 3 is structured around five types of trip (called spatial themes - as introduced in our 2040 Vision) to enable an integrated set of interventions to be developed to address specific issues in different parts of the city-region and for different types of travel:

Our 2040 Spatial Themes

266. Besides local connectivity, Part 3 covers the need for better links to ports, airports and the Channel Tunnel to improve our overseas trade and tourism connectivity, alongside transformed links to other UK cities to deliver the crucial access to markets for labour and goods that our city-region needs.

267. Within Greater Manchester, the Regional Centre has a critical role as a major transport hub as well as being the largest centre for employment and a major focal point for long-term economic and residential growth, and it therefore has specific transport needs. Also important

is access to the main town centres and other employment locations as well as to facilities like hospitals and colleges. Within neighbourhoods, the short trips made from home to local centres and facilities are essential to quality of life. Access to public transport – whether to rail stations, Metrolink stops, or bus stops – also requires attractive links, especially for walking, at a neighbourhood level. The five journey-types shown in the diagram above, and the improvements we plan to make for each of them, are discussed in more detail in the following pages.

268. To reflect their specific characteristics, it is intended to add a sixth spatial theme, comprising trips between and within major town centres in Greater Manchester. That will require some further technical work. A common theme throughout Part 3 is the need to allocate roadspace efficiently on our transport networks and minimise the negative impacts of traffic on our communities, particularly as our city-region experiences economic growth over the coming decades. This will need a concerted effort to improve the attractiveness of our sustainable transport networks by providing the right infrastructure to support our growth agenda and locating new development in locations that do not depend on cars, while also carefully managing demand across our transport system.

Global Connectivity

Our Ambition is to support growth at the Airport and the adjacent Enterprise Zone by: bringing many more people within a 1hr and 2hr rail journey time; to improve the reliability of the highway network near the Airport; and to ensure that public transport services better meet the needs of Airport customers and employees. Fewer people will drive to work at the Airport, with transformed sustainable transport connectivity from across Greater Manchester and beyond.

The Atlantic Gateway corridor will be developed to maximise the sustainable movement of goods by water and rail. We support the development of the Port Salford area as a tri-modal (rail, water and road) logistics park and development zone to improve access to global markets via the Port of Liverpool.

269. In our 2040 Vision for Transport, we highlighted the importance of Greater Manchester's connectivity to global markets to enable our city-region to compete effectively on the world stage and to rebalance the UK's economy. The Greater Manchester brand is already strong around the world and we have a huge opportunity to capitalise on this by attracting further international inward investment and tourism.

270. Greater Manchester is also an important strategic location for international freight through our excellent connectivity by air, sea, road and rail. Through further targeted investment in our transport infrastructure and services, we can build on this strategic advantage to the benefit of our residents and businesses. The rest of this section focuses on how Greater Manchester can support improved global connectivity for freight and passengers via Manchester Airport and the Manchester Ship Canal. Improving access to global gateways will, of course, also depend on improved access from across Greater Manchester and to and from other city-regions, notably to London for the Channel Tunnel (see Delivering Better City-to-City Links) and to Hull and the North East Ports.

Manchester Airport and Enterprise Zone

271. Manchester Airport plays a pivotal role in providing access to international markets from Greater Manchester and across the North of England, and is therefore central in delivering a strong economy. Before the Covid-19 pandemic, it employed more than 20,000 people on site, with an estimated further 45,000 supported jobs in the wider region and a GVA contribution to the UK economy in excess of £925m. As the third busiest airport in the UK, and with c.8.9 million people living within a one hour drive-time, and nearly 22 million within a two hour drive-time, Manchester Airport is also a major asset for the whole of the UK.

272. The Airport already provides access to a range of international destinations: before the Covid-19 pandemic, over 70 airlines operated to around 200 destinations worldwide. Direct flights are operating or planned to important growth economies around the world: North America, the Emirates, Singapore, Hong Kong and mainland China. It also offers highly flexible, affordable short-haul access to European cities and attracts passengers from across the North, North Wales and parts of the Midlands. The Airport plays an important freight role handling over 117,000 tonnes of air cargo annually, much of it high value or time sensitive.

273. Manchester Airports Group (MAG) has ambitious plans to grow its passenger market from 24 million trips per annum in 2016 to 45 million, delivering over £2bn to the UK economy and providing up to 60,000 jobs in the wider region. Unlike major UK airports in the south-east, Manchester Airport has spare runway capacity and therefore has enormous potential to rapidly expand its role without the need for major investment in potentially contentious new runway capacity. MAG is delivering a transformational £1bn investment plan into its Airport facilities to maintain and enhance its world-class position and to secure further new airlines and routes into Manchester.

274. However, the full potential of Manchester Airport will only be realised if local and regional access to the gateway matches the quality of the transformed Airport. Although there has already been significant investment in connectivity to the Airport in recent years more will need to be done. In particular, we will need to improve connectivity by public transport to enable both passengers and employees to travel easily and seamlessly to the Airport without a car, coupled with demand management, to ensure that congestion does not undermine the Airport's long-term growth. Connectivity improvements and demand management will also support sustainable economic growth at the Greater Manchester Enterprise Zone (GMEZ), and at Davenport Green (which has potential for office and residential development), both adjacent to the Airport.

The Greater Manchester Enterprise Zone (GMEZ)

The GMEZ comprises a number of sites, including Airport City North,; the World Logistics Hub (with potential for 1,500 jobs); an advanced Medipark to the south of Wythenshawe Hospital; and a string of other developments, which cover areas such as Roundthorn Industrial Estate, Wythenshawe Town Centre and Atlas Business Park. Davenport Green, the proposed location of the Airport HS2 station, is another longstanding potential major development site to the west of the M56 which will require significant investment in sustainable transport.

A Gateway to the North of England

275. Global connectivity, particularly via Manchester Airport, is vital to supporting long-term economic growth in the North of England. Better rail connectivity to Manchester Airport is particularly important to allow quick and easy access from throughout the North of England to a wide range of international destinations served by the Airport.

276. HS2 and Northern Powerhouse Rail proposals will transform rail connectivity to the Airport from across the North of England and the UK, unlocking new jobs and productivity. More frequent and faster rail services will help to increase the effective population catchment area of the Airport, supporting the case for introducing new inter-continental trade routes, and thereby boosting the economic potential of the North of England.

277. Any new rail connections must be carefully planned to ensure that they integrate well with existing rail and road networks. Committed electrification and infrastructure schemes in the North West provide enhanced links to Huddersfield, Leeds, and York using faster and longer trains, while completion of the committed Northern Hub capacity improvements will permit better cross-Manchester rail links to the Airport. Supporting infrastructure improvements, such as platform lengthening at key rail stations in the North, will be necessary to maximize the benefits of these rail improvements.

278. TfGM, Transport for the North and other key transport agencies - such as Highways England and Network Rail - continue to work closely with MAG to identify opportunities to improve the quality of the entire door-to-door passenger travel experience, from providing excellent information on how to travel to the Airport (and on travel times and delays); through to seamless, integrated smart ticketing. We must make it as easy as possible for people to plan their whole journey in advance and to encourage the use of more sustainable travel wherever possible.

279. The strategic road network also plays a crucial role in accessing the airport. Reliability of journey times to the airport is particularly important. We will need to work closely with Highways England to maximise the benefits to connectivity and capacity from the A556 improvement and M56 Junctions 6-8 Smart Motorway; and to develop strategic priorities for improving airport access, better managing demand for travel by car, and dealing with existing and potential bottlenecks on our motorways.

Links to the Regional Centre

280. Excellent connectivity from the Regional Centre to Manchester Airport is vital in order to maximise global trade with Greater Manchester. Travel between the Regional Centre and the Airport must be as seamless and as customer oriented as possible to secure the greatest benefits. This must include fast, high-quality rail links, with journey times competitive with the car, and seamless interchange both at the Airport and within the Regional Centre. Public transport services should be tailored to integrate with flight times and with worker shift patterns as much as possible, which will require 24-hour a day operation on key services.

281. We will consider other potential travel options, such as express bus and coach services; new models of car club operation and car sharing; and taxi provision to provide alternatives for international travelers. All travel options must be carefully designed and marketed to make them as easy to use as possible, particularly for those unfamiliar with Greater Manchester.

Access to employment at Manchester Airport

282. If Greater Manchester is to benefit fully from access to global trade and new jobs at the Airport and Enterprise Zone, the area must be accessible from across the city-region. This will require improvements to both orbital and radial public transport, supported by appropriate ticketing and fares. This will need investment sustainable transport to attract workers out of their cars. Car sharing could also have a major role to play in improving access to employment at the Airport. Use of public transport and car sharing can be further incentivised through carefully car parking management, which will be crucial as activity in the area increases and the local highways come under further pressure.

283. Local connections from surrounding areas (such as Wythenshawe, Baguley and Benchill) are also very important to ensure good access from more deprived areas to jobs at the Airport. Improvements to walking and cycling will be high priorities.

- **Key Supporting Evidence**
- Manchester Airport Sustainable Development Plan forecasts significant long-term growth in demand for travel from Manchester Airport.
- Data on time of travel for passengers arriving and departing the airport suggests a significant peak in demand before the morning peak period (eg between 6-7am) and early to mid-afternoon.
- Vehicle flow data for M56 shows that airport traffic (staff and passenger car trips) do contribute to peak hour congestion and increasingly unpredictable journey times are forecast over the coming years on the SRN in the vicinity of the airport.
- Journey to work data for the Airport and surrounding area highlights extremely high levels of car dependence for commuter trips.
- If Manchester Airport reaches its goal of 45million passengers per year and achieves its mode share targets, there would be c.60% more car trips by airport workers than at present (the increase may be somewhat lower if airport worker productivity significantly increases). This does not include additional traffic from Airport City, A556, A6MARR, Wythenshawe Hospital and HS2.
- Public transport journey times from most of Greater Manchester (except Wythenshawe area, Manchester City Centre and Stockport Town Centre) are significantly greater than by car during off-peak periods, and from many areas are longer than most people would be prepared to spend travelling to work.

Atlantic Gateway and Port Salford

284. Port Salford is located on the western edge of Greater Manchester and is part of the Atlantic Gateway Economic Growth Corridor, which connects the Port of Liverpool with Greater

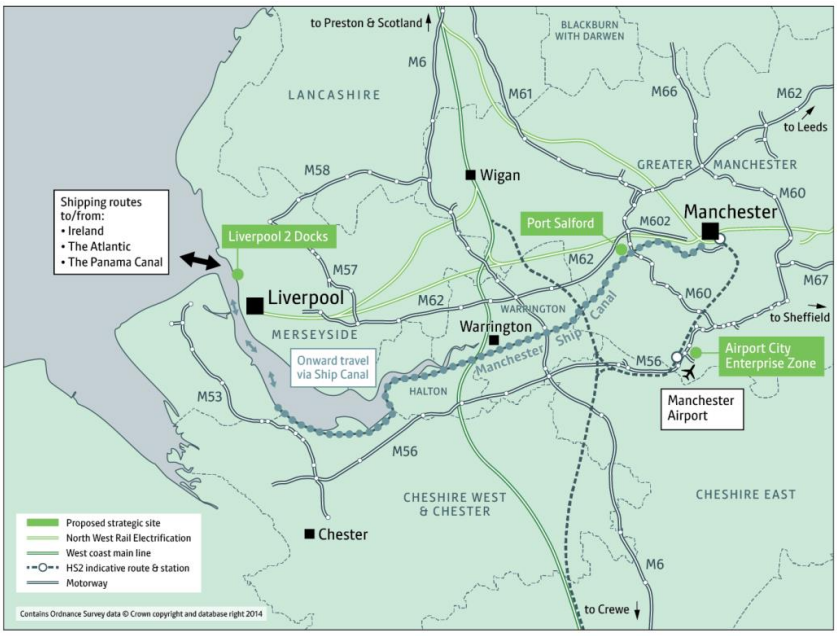
Manchester via the Manchester Ship Canal. The location has been identified as the ideal location for a tri-modal freight interchange enabling waterborne, rail and road freight access to a large-scale logistics park.

285. The development of the Liverpool 2 super container facility at the Port of Liverpool has enabled the Port to handle the much larger deeper water container vessels that operate on trans-Atlantic routes following the widening of the Panama Canal. This will enable Liverpool to establish itself as the UK's leading transatlantic port and to deliver much stronger trade connections between the North West and overseas markets. We must maximise the sustainable opportunities for onward movement of goods via the Manchester Ship Canal into Greater Manchester, to reduce the congestion and carbon impacts of freight on our highways.

286. Port Salford is served by major transport routes including the Manchester Ship Canal, the Manchester-Liverpool (Chat Moss) railway, the M62 / M602 / M60 motorways, and the A57. Port Salford will play an important role in delivering improved global connectivity due to its role as part of the infrastructure of global supply chains, with particular potential for serving European container ships.

287. Rail access improvements to the Atlantic Gateway are planned, including a link from Port Salford to the Chat Moss (Liverpool-Manchester via Newton-le-Willows) rail line. This would enable freight trains to serve regional and UK markets from Port Salford and support trans-shipment activities there.

288. The achievement of the potential of the Port Salford and the Atlantic Gateway growth area is being pursued through joint working, including developers/landowners, Salford City Council, Trafford Metropolitan Borough Council, TfGM and Highways England.



289. In addition to Port Salford, significant logistics and employment developments planned in Trafford Park, Carrington and around the M58/M6 area in Wigan will place increased pressure on already congested parts of Greater Manchester's transport network including the M62, A57 and western sections of the M60 motorway. Much more will need to be done to improve the reliability of our highways, through development of a holistic access strategy incorporating public transport, local walking and cycling and highways improvements.

290. The completion by the developer of a future Metrolink-compatible local highway crossing of the Manchester Ship Canal as part of the Western Gateway Infrastructure Scheme has helped to mitigate the impacts of the first phase of Port Salford. Further interventions to improve access to, and the performance of, our highway network in the Atlantic Gateway area, particularly around the connection between the Key Route Network and the Strategic Road Network is required. It is hoped that the M60 Northwest Quadrant Strategic Study, led by the Department for Transport and with participation from Transport for the North and Greater Manchester partners will assist in identifying the interventions that may be required to support economic growth in the Atlantic Gateway.

291. We will also need to ensure that workers can access the new jobs at Port Salford and in the Atlantic Gateway corridor without having to travel by car. We are exploring the potential to extend the completed Trafford Park Metrolink line towards the Atlantic Gateway.

292. Providing improved cycling and walking connections from surrounding areas (such as Peel Green, Patricroft and Irlam) will also be a high priority to ensure good access from more deprived areas to jobs in the Port Salford and the Atlantic Gateway area. The Port Salford Greenway provides safe traffic-free connections, and further infrastructure to complement this scheme is proposed through Greater Manchester's Bee Network.

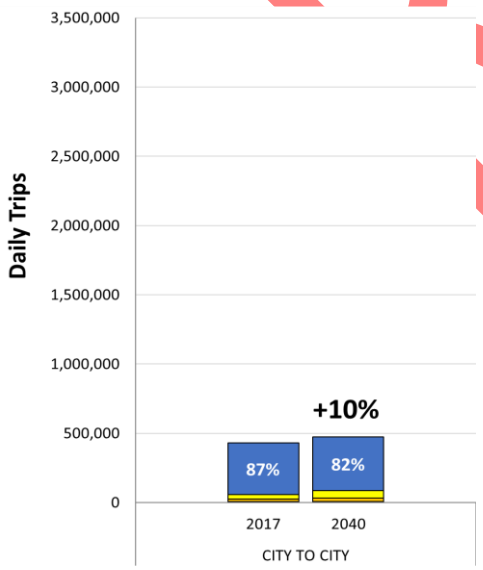
293. Proposed interventions supporting Global Connectivity are set out in Our Five-Year Transport Delivery Plan.

Delivering Better City-to-City Links

Our ambition is to see an increasingly productive, inclusive and prosperous region, supported by transformed connectivity between the major cities of the North of England, and to the Midlands, London and Scotland. There will be a step-change in quality, speed and reliability of our city-to-city rail links, allowing travel to Liverpool, Leeds and Sheffield in 30 minutes or less and to London in just over an hour. The strategic highway network will offer more reliable journey times. More freight will be moved by rail and water. Transformed infrastructure, smart ticketing and customer information will encourage more trans-northern journeys to be made by public transport.

294. The Greater Manchester city-region lies at the heart of the North, with the large conurbations of Liverpool, Leeds and Sheffield all within 45 miles of our Regional Centre. Our connections to major city-regions across the North, and to other major cities, such as Birmingham, London, Glasgow and Edinburgh are also crucial to our long-term success, supporting the critical flow of goods, skills and information that will enable the UK to boost its long-term productivity. The constrained capacity, speed and reliability of our existing city-to-city road and rail connections prevent Greater Manchester fulfilling its potential. We will continue to work closely with partners to deliver the transformational improvements to our city-to-city links we need to achieve our 2040 Transport Vision and to play a key role in delivering a strong Northern economy. However, for the benefits of these improvements to be felt across Greater Manchester, we will also need to improve connections across the city-region to enable people to access motorways and National Hub interchanges.

The Right Mix for City to City Links



295. We are targeting a **5% reduction in car mode-share for City to City trips**, achieved through improvements to inter-urban public transport. Many City to City trips include journeys that neither start nor end in a city centre, and there is little potential for these to be made by public transport. However, we expect the major proposed improvements to inter-urban public

transport to substantially reduce car use for trips that do involve travel to and from a major city centre.

Improving North-South Connectivity

High Speed 2

296. The West Coast Main Line (WCML) linking London to the North West and onwards to Scotland is the busiest mixed-use 125 mph railway in Europe. The line is under considerable stress because there is more demand for train services than there are train paths available. This limits capacity and means there are trade-offs deciding which services can run. We expect demand for rail travel to continue to grow over the coming years (both for freight and passengers) and the need for new rail infrastructure will become ever more pressing as we move towards 2040.

297. The pressure on the WCML underpins the strategic case for HS2. The current proposal is to deliver HS2 in three phases: Phase 1 from London to Birmingham, Phase 2a from the West Midlands to Crewe and Phase 2b comprising a western leg from Crewe to Manchester with an intermediate station at Manchester Airport and an eastern leg from the West Midlands to Yorkshire.

298. Alongside HS2, Northern Powerhouse Rail (NPR) - the east-west rail network across the North is also vital to boost our city-region's economy. NPR will significantly improve capacity, frequency, speed and services between the North's six main cities and Manchester Airport.

299. In 2018, we launched our growth 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 NPR network, in its Strategic Transport Plan for the North. Our 2019 Prospectus for Rail also makes the case for the full delivery of HS2 and NPR. It explains that if HS2 is not delivered, Northern Powerhouse Rail (NPR) alone will not be able to support the economic growth our city-region, the North and the country needs.

300. Without HS2 and NPR to release capacity on our current network, we won't be able to run more frequent local services. The delivery of high-speed rail and associated growth strategies at Manchester Piccadilly, Manchester Airport, Stockport and Wigan remains crucial to the successful delivery of our 2040 Transport Strategy. We are working collaboratively with Government to refine the plans for high speed rail and ensure they are funded in a way that is sustainable, equitable, and aligned with both local and national policy.

301. The Greater Manchester authorities support HS2 and NPR, and want to ensure the proposals have no detrimental impact on local services. TfN is also investigating the potential for a Manchester Airport Western link; this would serve a strategic role beyond Greater Manchester and we would look to TfN to act as the promoter for any future proposals.

302. Detailed plans for the Phase 2 route were released by HS2 Ltd in November 2016. The November 2016 plans no longer provide for a west to east link in the north west which would have allowed for trains between Manchester and Wigan and onwards to Scotland to run much faster via the HS2 route, and therefore will no longer offer the opportunity to relieve

capacity on the congested Manchester-Wigan/Bolton/Preston lines, which will instead need to be addressed by other means. A map of the current proposals is shown below.

303. The opportunities for sustained growth offered by HS2 cannot be delivered by any other alternative. However, the case for HS2 extends well beyond simple transport economics. HS2 is a strategic economic game-changer that will uplift productivity through enhanced labour market and business-to-business connectivity; increased network capacity; and improved international connections through the HS2 station at Manchester Airport. It will stimulate regeneration in areas adjacent to HS2 stations, and also establish the basis for a renaissance in engineering skills development and act as a major stimulus for a domestic supply chain, with up to 350,000 jobs being directly related to the project at its peak.

304. In February 2020, the Government announced that HS2 would proceed in full. The Oakervee rail review concluded that for Phase 2b of HS2 (the route from Birmingham to Manchester and Leeds) a Y-shaped network was the right strategic answer for the country. The review also concluded that Phase 2b needs to be considered as part of an Integrated Rail Plan (IRP) for the north and Midlands which also includes Northern Powerhouse Rail, Midlands Rail Hub, and other major Network Rail schemes to ensure these are scoped, designed, delivered, and can be operated as an integrated network.

305. HS2 is vital in increasing the capacity and connectivity of Britain's rail network. Manchester Piccadilly and Manchester Airport are the optimal locations for new HS2 stations, supplemented by a Hub location at the existing Wigan North Western station to the north of the conurbation. From Manchester, journey times to London are anticipated to be as low as 68 minutes, with three trains per hour to London and two trains per hour to Birmingham. Journey times to Wigan would also be reduced, by almost a half. We wish to see the benefits of HS2 realised as soon as possible. In the intervening years, however, we will continue to work hard to deliver improved north-south rail connectivity in and out of Greater Manchester, including identifying improvements to services on the existing WCML through future franchise specifications; and ensuring that Greater Manchester's key stations are served by HS2 classic compatible services that can run on both HS2 lines and the WCML following delivery of Phase 1 of HS2 (from London to Birmingham).

M6 Motorway

306. North-south strategic road links are provided by the M6 motorway, which runs through the west of Wigan and just to the south of Trafford. The M6 is a critical strategic highway corridor for both people and freight, and we must maintain good access to this corridor from across Greater Manchester**.** The M6 - immediately to the south of Greater Manchester – has been converted to a Smart Motorway. The link into central Manchester and Manchester Airport, via the M56, is also being upgraded through improvements to Junction 19 and work will commence on the M56 Junction 6 to 8 Smart Motorway scheme shortly. In future, the M58 link road will provide a direct link from the M58/M6 J26 to the A571. However, J25 currently has southbound access and northbound egress, and we want to make this an all movements junction, allowing the closure of J24, which would relieve congestion in Ashton-in-Makerfield.

307. The South Manchester Highway and Transport Study will look at impacts of and mitigation for HS2/GMSF/Airport growth with a focus on the M56 from J5 to J6. This is intended to cover the Local Road Network and multi-modal solutions, as well as the Strategic Road Network. The

South East Manchester Junction Improvements Study is also looking at possible improvements to M60 junctions.

.

Key Supporting Evidence

- The combined population of Northern England is 15 million (larger than London). The current combined GVA[9] of the North is £343bn, 19% of the UK total. However, the GVA per person in the North is now 18% below the UK average.
- UK Cities account for 9% of land use, but 54% of population, 59% of jobs and 61% of output. (Centre for Cities).
- 10 million people live within 40 miles of Greater Manchester (2 million of these are graduates)
- With HS2 and Northern Powerhouse Rail network lies the potential to at least close the productivity gap between the North and South, which Treasury has estimated would equate to in excess of £40 billion additional GVA by 2030.
- The Spatial Economics Research Centre found that commuting between the Greater Manchester and Leeds city-regions is about 40% lower than expected given the characteristics of the two cities and the physical distance between them.
- By road, it takes 44 minutes to travel 34 miles to Liverpool from Manchester, but 1 hour 12 minutes to travel 38 miles to Sheffield.

[10] Transport for the North's Strategic Transport Plan: https://transportforthenorth.com/wp-content/uploads/TfN-final-strategic-transport-plan-2019.pdf

Transforming Connectivity Across the North

308. Through Transport for the North, Greater Manchester has worked in close partnership with other northern local authorities and with Department for Transport, Highways England and Network Rail, to develop the Strategic Transport Plan (STP) for the North, focused on the critical investments needed to transform city-to-city connectivity with a view to delivering a Northern Powerhouse economy which is equal to or exceeds the UK's average growth rate.

Transport for the North

Transport for the North (TfN) brings together Local Authorities across the North of England to enable the North to speak with a single voice on the important transport projects needed to fully realise the region's economic potential.

In February 2019, TfN published its statutory Strategic Transport Plan (STP)[10] for the North. The Plan makes a robust case for transformational transport investment across the entire North of England, to help rebalance the UK economy.

The long-term strategic programme detailed in the Plan sets out proposals for rail, highways, freight, inter-city connectivity, and integrated transport services, designed to deliver significant benefits for commuters, businesses and the wider economy of the North.

Within the Plan, TfN identifies seven Strategic Development Corridors for the North of England. Each represents an economic area where evidence suggests the most progress towards growth could be made by bringing forward major road and rail investment.

The corridors are designed to encompass the needs of people, business, freight and logistics.

Northern Powerhouse Rail (NPR) Network

309. Excellent rail provision is essential to enable people to move quickly and easily to jobs and business destinations in our Northern city-regions, as well as supporting the efficient movement of goods by rail. Transformational rail service improvements are a key part of vision, linking Greater Manchester with the major cities in the North of England through development of a Northern Powerhouse Rail (NPR).

Transpennine Route Upgrade and Manchester Rail Task Force

The upgrade of the Trans-Pennine route to Leeds is a national priority, with up to £3bn of investment earmarked by the Secretary of State for medium-term delivery in advance of Northern Powerhouse Rail. Electrification from Manchester to Huddersfield and beyond,

[10] Transport for the North's Strategic Transport Plan: https://transportforthenorth.com/wp-content/uploads/TfN-final-strategic-transport-plan-2019.pdf

coupled with improved local train service frequency, is a priority for Greater Manchester on this route. In 2020, the scheme was allocated additional funding by Government to ease congestion and improve reliability, with an ambition for full electrification, digital signalling and additional freight capacity.

The rail network is extremely congested around central Manchester, leading to conflicts between services and unreliability both in Greater Manchester and the North of England. Previously, the solution to this problem was the full implementation of the Northern Hub proposals. Certain parts of these proposals have been constructed - such as the Ordsall Chord - but not the most critical element: the reconfiguration of Manchester Oxford Road station and new platforms 15 and 16 at Piccadilly station. The impact of this partial provision of Northern Hub planned infrastructure was evident with the implementation of the May 2018 timetable which saw an increase in trains along the Castleford Corridor (the line between Manchester Piccadilly, Oxford Road and Deansgate), but without the supporting infrastructure, and resulted in a major deterioration in train performance.

In recognition of this poor performance, the cross industry Manchester Recovery Task Force (MRTF) was set up in 2019 with a remit to examine both short and long term solutions. TfGM is a stakeholder in the task force, and continues to provide technical direction and support to the process in order to achieve a much improved level of performance in the short term, and to press for the necessary investment in additional infrastructure in the longer term.

310. Building on the Northern Hub schemes, the rolling stock and service improvements in the Northern and Trans-Pennine rail franchises, and HS2 proposals; the TfN Strategic Transport Plan envisages transformational improvements to the frequency of trains, passenger capacity and to journey times across the North.

311. To deliver these ambitious journey times and aspirations for improved frequency, options are also being explored to deliver new lines or major rail bypasses as well as making use of proposed HS2 infrastructure. It is anticipated that significant sections of new line would be needed on routes between Manchester and Leeds and Manchester and Sheffield, for example. Existing rail infrastructure would then be freed up on our current rail networks to provide express, semi-fast, local and freight services.

Rail North

Rail North is a partnership of 29 Local Transport Authorities who will, alongside DfT, manage the new Northern and TransPennine Express franchises from April 2016. The Rail North partnership agreement includes important mechanisms to enable the local authorities to make decisions on changes to their local rail services and to make investments in these franchises to drive improvements. Responsibilities for Rail North will also relate to concessionary travel, multi-modal ticketing schemes and smart transactions and to important performance management issues.

312. Delivery of a seamless public transport network across the North of England is also to be supported by a smart Northern ticketing system that makes it simple and easy to travel across the North by any mode of public transport. This will be enhanced by real-time travel

information and a simplified fare structure. We will ensure that this emerging Northern smart ticketing system is compatible with our future Greater Manchester smart ticketing and fares.

Future development of our national rail hubs

313. In Part 2, we set out our approach to improving interchange on our public transport system, highlighting different categories of interchange which are needed to support a seamless Greater Manchester transport network. Our Global Gateway at Manchester Airport, and Greater Manchester National Hubs, are critical in supporting excellent city-to-city links and we will develop proposals to improve interchanges at these locations to ensure that national rail services are well integrated into our city-region transport network.

314. With the introduction of HS2 and Northern Powerhouse Rail services, Manchester Piccadilly will become the most intensive strategic transport interchange in the North. An integrated approach is needed, as set out in the HS2 and NPR growth strategy The Stops are just the Start[11] - to ensure that these connectivity benefits are spread across the city-region and, critically, that the immediate area around the station delivers on its potential. We want to see the stations and the surrounding area transformed in time for the start of HS2 Phase 1 operations in 2026, so as to maximise early city-to-city connectivity benefits and accelerate regeneration. The adjacent Piccadilly and Mayfield areas have the potential for commercial development that could secure up to 30,000 additional jobs, alongside scope for more housing and regeneration.

315. There are other interchanges in Greater Manchester that are vital for the successful implementation of improved city-to-city rail links, including Manchester Airport, Wigan and Stockport. Investment in high quality access and interchange at these hubs will be critical to ensure that travellers from across Greater Manchester have excellent access to city-to-city rail services, that are well integrated into our city-region transport system.

City-to-city highways connectivity

316. City-to-city links by road are provided primarily by the Strategic Road Network of motorways, supported by the nationally designated Major Roads Network and Greater Manchester's Key Route Network of locally important roads. The Strategic Road Network is operated by Highways England and in Greater Manchester comprises some 180km of motorways and all-purpose trunk roads.

[11] The Stops are Just the Start: https://tfgm.com/press-release/hs2-npr-growth-strategy

Partnership with Highways England

Highways England and TfGM have signed a Memorandum of Understanding (MOU) which provides a unique opportunity to establish complementary network management and development arrangements. The MOU aligns the management of the Greater Manchester Key Route Network with that of the Strategic Road Network to deliver the most efficient management of the highway network; and provides a partnership approach to investment to ensure it supports local and national economic growth priorities. We are working closely with Highways England to develop strategic priorities, better manage demand for travel by car, more closely integrate the operation of the Strategic Road and Key Route Networks, and deal with existing and potential bottlenecks on key highway links.

317. The Strategic Road Network that links Greater Manchester to other northern cities contains some of the busiest and least reliable roads in the country. The M60, for example, which plays a vital part in the life of Greater Manchester, is ranked second only to the M25 in England with respect to congestion. The strategic highway network around Greater Manchester is particularly critical to the delivery of a more reliable northern highways network that can support the future movement of people and goods across the North of England.

318. There has been significant investment in Greater Manchester's strategic road network in recent years, primarily through the Government's first Road Investment Strategy (RIS1). RIS1 covered the period 2015 to 2020, and contained a number of improvements to the strategic road network to improve its performance and reliability. This included rolling out Smart Motorways on key sections of the M60 and M62. The second Road Investment Strategy (RIS2, 2020-2025) will continue this roll-out, with Smart Motorway schemes on the M6 and M56 and on the trans-Pennine section of the M62. RIS2 will also see delivery of improvements at Junction 18 of the M60 (Simister Island); and delivery of the Mottram Moor Link Road and the adjacent A57(T) to A57 Link.

319. We will work with our partners to help develop the Government's investment plans over the longer-term and define the content of future Road Investment Strategies, through continuing work on major strategic studies of the Northwest Quadrant of the M60 and the Trans-Pennine Tunnel and the South Manchester Highways and Transport Study and M60 South-East Junction studies (announced in RIS2), and through Route Strategies to inform RIS3. In doing so we will seek to ensure that SRN schemes do not impact adversely on the local road network. We will also work with partners to identify the potential of travel demand management , including park and ride, to reduce congestion on the motorway network and KRN.

320. The Major Road Network (MRN) was designated by the Government following a consultation in 2018. It incorporates the country's busiest and most economically important local authority A-Roads and forms a middle tier sitting between the SRN and the rest of the local road network. The MRN has five central objectives which build on the commitments made by Government in the Transport Investment Strategy. Those objectives are to reduce congestion; to support economic growth and rebalancing; to support housing delivery; to support all road users, including cyclists, pedestrians and disabled people; and to support the Strategic Road Network. For Greater Manchester, the MRN includes important A-roads connecting key

centres to the SRN and providing cross boundary links, including, for example, the A6, A34, A58, A580 and A666. Substantial sections of the Inner Relief Route also form part of the MRN.

321. A specific new funding stream was dedicated to improvements on MRN roads. As with the RIS for the SRN, this is allocated in five year blocks and draws on the National Roads Fund. The schemes to be funded in the first five-years of the MRN (subject to completion of business cases) were announced in 2019, drawing on Regional Evidence Bases (REB) created by the sub-regional transport bodies such as Transport for the North. In Greater Manchester, two schemes were included in this first tranche – the A34 Cheadle-Handforth Improvement Plan Phase 1 in Stockport and the Wigan East-West Strategic Route, the latter being designated a Large Local Major (LLM). We will work with our key partners to help bring these schemes to fruition and to shape and develop both the structure of the MRN and further schemes and investment plans over the longer-term.

What are Smart Motorways?

Smart Motorways use increasingly sophisticated technology-driven techniques to increase capacity and reduce delays on our motorway network by using variable speed limits, 'all lane running', and variable message signing to smooth traffic flows, provide more reliable journey times, provide better information to drivers, reduce collisions , and reduce noise and vehicle emissions. These techniques enable us to get much more capacity out of our existing highways infrastructure and improve journeys for drivers.

City to City Freight Movement

322. Freight and logistics have a significant role to play in the economic growth of the region and present an emerging Northern golden triangle of warehousing and logistics activity. Greater Manchester lies at the heart of this golden triangle, with the Manchester Ship Canal providing a strategic western gateway to Greater Manchester and the Northern Powerhouse. Port Salford and other logistics developments in areas such as Trafford Park, Carrington and Heywood, will be a major asset in achieving the freight and logistics objectives of Transport for the North's Strategic Transport Plan.

323. The strategic resilience of the motorway network, with a major focus on delivering transformational improvements the M60, will be critical to supporting the reliable movement of goods. Improvements to our city to city rail connectivity are also becoming increasingly urgent, not just to support movement of people, but to help transport more freight by rail rather than road.

324. Furthermore, Airport City and the World Logistics Hub will create significant opportunities for freight and distribution linked to the Airport, and there is potential for other new and enlarged sites across Greater Manchester, as identified in the GMSF.

325. Transport for Greater Manchester, alongside partners, will continue to cooperate on development and delivery of inter-urban freight strategies which look at all aspects of this complex sector and seek to deliver any interventions identified to improve connections between our city-regions for the sustainable movement of goods.

326. Proposed interventions supporting improved City-to-City links are set out in Our Five Year Transport Delivery Plan (2020-2025).

Travel To and Within Our Regional Centre

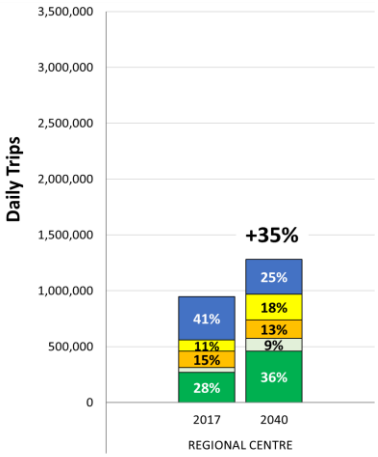
Our ambition is for a well-connected, zero-carbon Regional Centre at the heart of the North (served by HS2 and Northern Powerhouse Rail Services), offering residents, employees and visitors a great place to live, work and visit. To support our Right Mix vision, we are aiming for 90% of morning peak trips into the city centre to be made on foot, by bicycle or public transport before 2040. This means fewer cars in the Regional Centre so we can give more space for people to walk and cycle and to create more liveable, cleaner and greener places. Freight and servicing will also be better managed to minimise the negative impacts of commercial vehicles on the Regional Centre.

327. The Regional Centre (which comprises Manchester City Centre and the adjacent areas of The Quays to the west, the Oxford Road Corridor to the south, and the Etihad Campus/Manchester Life to the east) is, and will continue to be, a major driver of economic growth in Greater Manchester. Over recent decades this area has been transformed from a prosperous core, surrounded by an area of poor urban quality and neglected former industrial areas, to a much larger and thriving focal point for knowledge-based and creative industries; retail and leisure; and education and healthcare. The number of people living here has grown exponentially over the past two decades, transforming it into an important residential, as well as employment and leisure, location. Further planned growth will mean that this area will increasingly function as a single major economic driver at the core of the conurbation, and our transport strategy needs to help support this.

328. The City Centre is also the major hub for our Greater Manchester transport network, and many of our public transport networks converge there, providing excellent connectivity from across the city-region and beyond.

329. The rapid growth in housing and employment experienced in recent years is set to continue over the period to 2040. From a transport perspective, concentrating high levels of compact development in such an accessible and well-connected part of Greater Manchester is welcomed, but there are significant challenges ahead in terms of managing traffic congestion, ensuring excellent connectivity across our Regional Centre, and ensuring a high quality of life for residents, visitors and workers.

The Right Mix for travel to and within our Regional Centre



330. We are targeting a 35% increase in the number of Regional Centre trips, with an increase in the mode share of walk, cycle, and rail transport, including Metrolink. **Bus travel to the Regional Centre is also targeted to increase**, despite a reduction in its mode share. We expect to achieve that in part through more people living in the Regional Centre, many of whom will also work there, leading to more active travel, encouraged by a better environment for walking and cycling. Also needed will be a step-change in the capacity and connectivity of rail-based rapid transit, potentially achieved by a Regional Centre metro tunnel. Increased priority will be needed for buses, including new terminus facilities. An increase in the number of cross-city bus services will improve bus access to the Regional Centre.

Key Supporting Evidence

- c.70,000 people live in Manchester City Centre.
- There could be 50,000 more homes there by 2040
- Over 200,000 people work in Manchester City Centre, with a total of 290,000 in the Regional Centre as a whole.
- By 2040, more than 400,000 people are expected to be working in the Regional Centre
- In 2019, 79% of morning peak inbound trips into the City Centre were by public transport, cycling or walking. This equated to nearly 100,000 inbound trips by these modes over a two hour period.
- By 2040 Salford Quays could have 15,000 additional jobs and 15,000 more homes
- The Right Mix target for the Regional Centre anticipates an increase in walk, cycle, and public transport trips from 560,000 per day in 2017 to 970,000 per day in 2040, with car trips reduced from 390,000 per day to 310,000 per day.

Regional Centre themes

331. Our transport strategy for the Regional Centre is focused around three key themes (sustainable long-term economic growth, transformed connectivity and improved liveability), to ensure improvements are targeted towards meeting wider aspirations for the area, as set out below.

Transport for a 2040 Regional Centre Economy

Supporting a Northern Powerhouse Economy

332. For Greater Manchester to play its full part in the levelling up agenda, and the delivery of a Northern Powerhouse economy over the period to 2040, improved connectivity between our northern city centres is critical. The arrival of High Speed 2 (HS2) and Northern Powerhouse Rail services into the Piccadilly Hub will support transformational growth of our Greater Manchester economy and further boost the attractiveness of our Regional Centre as a focus for investment. Improved city-to-city connectivity, particularly by rail, will support growth of the Regional Centre's knowledge-based economy, enabling more rapid exchange of knowledge and ideas, improving access to skills and labour, and supporting greater levels of productivity and innovation in our great Northern towns and city-regions.

333. We are already planning how we can fully integrate these transformational infrastructure improvements with our wider local and regional transport networks to maximise the benefits for Greater Manchester. While Manchester City Centre is well connected, regionally, nationally and internationally (via its rail link to the Airport), there will be a need to ensure The Quays, home to the BBC and ITV, has the connections its businesses need.

Transformation of Piccadilly Hub

Piccadilly Station will be transformed into a world-class interchange, and gateway into the city centre. There is more work to do to assess the role that rail is likely to play in the future shape of the city centre, and work with the rail industry to improve the rail offering where it

does not currently meet the needs of the area. A major new transport hub at Piccadilly Station will encompass:

- a new HS2 station and access arrangements for Northern Powerhouse Rail and other heavy rail services;
- rapid transit access strategy, encompassing Metrolink, tram-train and potential rail tunnel proposals;
- transformed public realm and walking and cycling connectivity;
- improved bus and coach access; and
- highways and vehicular access arrangements for servicing, taxis and cars.

334. Our Regional Centre transport hubs will need to expand their role as key gateways to Greater Manchester, creating a crucial first impression of our city-region. They must be designed to meet rapidly evolving customer service and experience expectations. Our transport hubs must also allow seamless interchange between transport services and be well integrated with surrounding areas, particularly through local pedestrian and cycling connections. In addition to Piccadilly Hub; Victoria, Oxford Road Salford Central and Salford Crescent stations will all be important Regional Centre gateways, providing access to national, regional and local transport services, and will be major focal points for growth and regeneration in their own right over the period to 2040. The sheer growth in passenger numbers flowing into, through and out of these interchanges will require a step-change improvement in capacity, quality and legibility of provision, for pedestrians in particular.

Accommodating growth in commuter travel

335. By 2040, the City Centre is expected to have an additional 50,000 homes over and above what exists today. There could also be 100,000 more jobs in the City Centre by this date. At The Quays, MediaCityUK will be double its current size. Our transport systems will therefore need to accommodate a dramatic increase in commuter trips into and across the Regional Centre. We must plan now for this growth to avoid the Regional Centre becoming more congested with traffic.

336. In a constrained urban environment, there is only limited opportunity to provide significant additional transport capacity on our road and rail networks. Hence, much of the additional capacity will need to be provided by making more efficient use of the transport networks we already have, to maximise the movement of people into and across the area.

337. In the City Centre, our aim is to deliver the desired economic growth without any further growth in peak period car traffic. We recognise that this is a major challenge, particularly as we estimate that we will need to accommodate around 68,000 additional commuter trips in the morning peak period by 2040. Car commuting to The Quays is currently much higher than in the City Centre, reflecting the sparser public transport network. Here, our aim is to reduce significantly the proportion of trips made by car. Our focus is on improving the quality and capacity of our public transport and walking and cycling networks to encourage as many people as possible to travel to the Regional Centre by these modes. We must also ensure that

our streets can cope with the huge increase in public transport passengers who will be walking or cycling from interchanges to their final destination.

338. We have undertaken a detailed review of the role of our Regional Centre highways network - with a particular focus on the relationship between our key orbital highways systems - Manchester and Salford Inner Relief Route (MSIRR), the intermediate ring road, and the M60 - to understand how we can make best use of the capacity that we already have and how we can minimise the negative impacts of roads and traffic on the quality of life within the Regional Centre. The highway network around The Quays is congested at peak times, with Trafford Road the only north-south route across the Manchester Ship Canal and Regent Road the main link between the City Centre, The Quays and the M602. Tackling congestion on corridors into and across our Regional Centre will be a major priority through a range of demand management measures, and measures to encourage modal shift, including park and ride provision, better walking and cycling infrastructure, and bus priority.

339. We have also undertaken detailed analysis of the role of our rapid transit networks (including heavy rail, Metrolink and bus rapid transit) in delivering the additional capacity we need, and to complement proposed improvements to HS2 and Northern Powerhouse Rail services. The work we have done to-date has concluded that, by 2040, we will need significant additional cross-city capacity. This capacity may best be delivered through the construction of new rail tunnels beneath the city centre to enable us to deliver the excellent connectivity and faster journey times we need without taking up valuable land or creating further severance by building new lines at street level.

340. We have identified a phased approach to enhancing our Regional Centre rapid transit networks to meet the long-term needs of our rapidly growing economy as follows:

i. **Short-term (to mid-2020s):** Completion of Northern Hub works and introduction of enhanced, higher-capacity heavy rail services; and increased capacity on the busiest Metrolink lines by running more double-unit vehicles;

ii. **Medium-term (to 2030):** Develop and deliver tram-train to improve rapid transit connectivity into and across the Regional Centre and develop potential cross-city metro proposals; develop proposals for our suburban rail network to complement Northern Powerhouse Rail network; and

iii. **Long-term (from mid-2030s):** Implement cross-city rapid transit capacity enhancements, potentially through tunnelled metro services, and deliver suburban rail enhancements to complement Northern Powerhouse Rail.

341. Buses will also need to play a much bigger role in accommodating the growth in trips into and across the Regional Centre. While bus is ideally suited to shorter journeys, it needs to play an increased role on corridors where there is no rapid transit, especially for journeys of up to 10 km. We need to transform buses into a mode of transport that all travellers are happy to use (as is the case in London), through provision of high quality, reliable services and clean, comfortable vehicles, supported by simple, integrated, affordable and smart ticketing. At the same time, we need to ensure buses are providing the links between deprived communities close to, but currently poorly connected with, the new jobs.

342. Walking and cycling are both critical to the success of our Regional Centre. Investment in quality provision for pedestrians and cyclists is relatively low-cost, enables the movement of high volumes of people in a constrained urban environment, and will help to create a healthier and cleaner city-region. We will continue to invest in high-capacity and high-quality walking and cycle routes into and across the City Centre to enable higher proportions of trips to be made. Easy movement around the City Centre on foot is also important for those arriving by public transport or by car and this will bring economic benefits by improving access to key attractions and improving the image of the city. In the Quays, the Manchester Ship Canal acts as a barrier to pedestrian and cycle movement and better links across it will be needed, both to provide links with adjacent communities and to maximise the benefits of the Trafford Park Metrolink extension, which provides additional commuter capacity.

343. We will also need to carefully manage demand for travel, to encourage people to think about how and when they travel into the Regional Centre. Smart, tailored customer information will be a crucial part of this, as will managing the availability and cost of car parking. We will also have to make difficult decisions on how we make best use of the limited highways capacity we have within the Regional Centre to maximise the efficiency of our transport networks. Without carefully targeted demand management (see section 133), we will simply not achieve the levels of growth that we aspire to, and the Regional Centre will become choked by congestion and pollution. We are also developing detailed plans to determine when and how freight and servicing vehicles access the Regional Centre, to minimise negative impacts on congestion and quality of life.

Supporting the night-time and weekend economy

344. Our Regional Centre already has a vibrant 24/7 economy; and leisure, retail and tourism activities are critical to the future economic success of Greater Manchester. Different parts of the Regional Centre have their own unique characteristics from a leisure and tourism perspective. The Etihad Campus area of East Manchester has established itself as a major sporting complex of international reputation. The Quays is one of the main tourism destinations in Greater Manchester, with The Lowry theatre, galleries and shopping centre, Imperial War Museum North, MediaCityUK , and the adjacent Old Trafford stadium and museum attracting significant numbers of visitors. The City Centre itself has a variety of major retail, entertainment and leisure attractions.

345. The transport network must be carefully designed to support this economy, focusing on the needs of different markets at different times of the day and the week, and ensuring that the transport offer is as integrated and easy to understand as possible, particularly for visitors who are less familiar with the Regional Centre. As well as providing public transport services that operate for all or much of the night, travel by all modes of transport must be safe and secure, and we must make the right provision, available, for example the allocation of pick up/drop off zones and parking/waiting areas, for supporting transport services, such as chartered coaches, hackney cabs and private hire vehicles. A carefully designed car parking management strategy will also be critical to the success of our night-time and weekend economy.

Embracing innovation

346. In delivering our aspirations for the Regional Centre, there is a significant opportunity to embrace the latest thinking in transport innovation and technology to improve customer experience and to maximise the performance, resilience and safety of our transport networks. We want Greater Manchester to be recognised as a world leader in transport innovation, and the size of the Regional Centre provides the scope to use new technology to maximise the capacity, efficiency, resilience and safety of our transport networks and to deliver transformational change to customers through improvements to travel information, ticketing and payment and wayfinding. We will also explore technologies that support more efficient use of kerbside space and improve the management of deliveries and servicing within the Regional Centre.

347. In 2020, changes were made to the Road Traffic Act and other regulations to enable e-scooter hire trials. As Greater Manchester recovered from the Covid-19 pandemic, e-scooters were of particular interest because they provided a flexible means of travel while maintaining social-distancing. E-scooters can also improve first/last mile and intermodal connectivity, and act as a catalyst to encourage active travel. We will continue to explore the role of e-scooters in improving connectivity into and within the Regional Centre, through the implementation of trials and by carefully monitoring and evaluating their use over time.

348. We also want to ensure that the use of digital communication is widely adopted and that we utilise live information and data to monitor and respond to periods of peak demand and feedback on network performance and reliability. People will be able to access real-time information about their journeys so they can make informed choices on their travel options into and within the city centre.

Connectivity within a rapidly growing Regional Centre

349. High levels of well-designed new development will be accommodated in this highly accessible and sustainable location, prioritising the use of previously developed land. Raising the quality of these places will depend on tackling issues such as congestion and air quality, which are typically more severe than in many other parts of the city-region.

350. We will continue to support the transformation of brownfield sites on the periphery of the City Centre, many of which are currently used for low-cost, informal car parks, into high-quality and high-density development. The loss of informal parking provision will be a major catalyst in

reducing the attractiveness of car travel to the Regional Centre, but will need to be supported by provision of alternative travel options.

351. There are regeneration frameworks already in place for many of these sites, containing ambitious plans for a variety of mixed-use developments, including significant volumes of new housing. As more peripheral Regional Centre sites are developed, we must ensure that they are carefully stitched into the fabric of the surrounding urban area and ensure excellent connectivity to our major city centre transport interchanges. We will fully embed sustainable travel into new developments by ensuring that excellent walking and cycling facilities are provided; developing tailored parking and servicing management strategies; engaging with occupiers to encourage sustainable travel behaviour from the outset; and providing other supporting interventions, such as car clubs.

352. We will also continue to focus on improving connectivity between the City Centre and both The Quays and the Etihad Campus area. The relatively short distances involved provide an excellent opportunity to promote higher levels of walking and cycling, through ongoing investment in pedestrian and cycle networks, including exploiting the potential of our waterways by providing better facilities along the River Irwell and our extensive canal network. This investment will be supported by comprehensive and consistent on-street and digital wayfinding infrastructure.

353. We are considering a range of potential improvements to rapid transit connections from our major city centre interchanges to key destinations across the Regional Centre, including Salford Quays, MediaCityUK and Old Trafford; and the Etihad Campus and Manchester Life areas of East Manchester. These will be further bolstered by increased bus coverage within the Regional Centre, which we will target towards areas with increasing residential populations such as the areas around Salford Central and Greengate.

354. Streets leading to the city centre require significant improvement for people using public transport and cycling in particular. Greater Manchester's emerging City Centre Transport Strategy, and Our Five Year Transport Delivery Plan, set out plans to improve these radial routes.

355. The rapidly expanding City Centre will quickly extend beyond the confines of our existing major transport infrastructure, and particularly the MSIRR, which comprises the Mancunian Way, Miller Street, Great Ancoats Street and Trinity Way and which in some areas creates a significant barrier to movement between the City Centre and the wider Regional Centre. As this expansion occurs, we will continue to review the role and function of major highways, such as the MSIRR, and will seek to minimise the severance effects of such barriers for people moving into and out of the city centre on foot or by bike.

A Liveable Regional Centre

356. The economic success of our Regional Centre is closely linked to the quality of the urban environment. If we want it to be an attractive place to live and invest in, we must ensure that the urban realm is attractive and clean; that the city is not choked with traffic; and that we offer a safe and secure environment at all times. A Regional Centre which offers a high quality of life will enable us to attract and retain the skills and talent that our city-region needs to fulfil

its long-term potential. It will also help to build on Greater Manchester's existing role as a major visitor attraction, by creating a strong, positive first impression to those visiting the city for business or leisure.

357. As well as an attractive built environment, we must provide the right supporting green and blue infrastructure and open spaces, which enable the city to breathe and provide a welcome escape from the hustle and bustle of urban living. Such infrastructure will also provide active travel opportunities, enabling people to move easily and directly through the city on direct and traffic free corridors. This urban environment must be as inclusive as possible, to enable those of all ages and with a range of mobility impairments to enjoy the opportunities and facilities offered within our Regional Centre. All transport improvements must therefore be designed with inclusivity and accessibility in mind.

358. Creating a more liveable Regional Centre will also require concerted action to tackle our existing Air Quality problems and, over time, we want all vehicles entering the city centre core to be ultra-low emission vehicles (ULEVs).

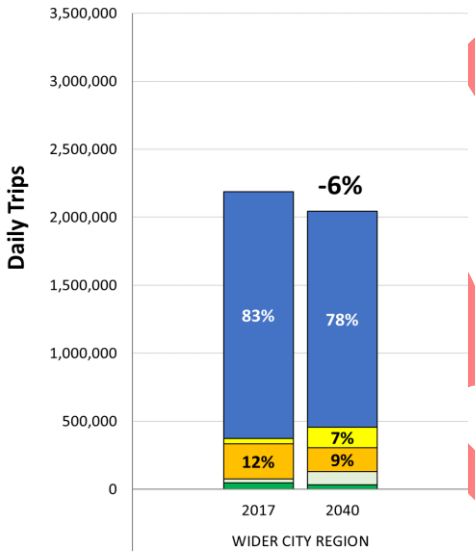
359. Proposed interventions supporting travel to and within our Regional Centre are set out, in detail, in Our Five Year Transport Delivery Plan.

Travel Across the Wider City-region

Our ambition is that our regenerated town centres are easy to get to, particularly by sustainable modes, and pleasant to walk around and spend time in. Journeys across the area, between centres or to other major destinations will be made easier through improved orbital public transport and cycle connections and less congested roads. Road collisions will fall, year on year, moving towards our goal of reducing deaths and serious injuries as close as possible to zero. The significant new development expected in Greater Manchester will be accessible by sustainable modes of transport, so that the impact of the extra trips on the road network is minimised.

360. Beyond the Regional Centre, Greater Manchester is polycentric, with a diverse mix of town centres, employment areas, major hospitals, educational establishments and visitor attractions, which generate highly complex commuting, business, logistics and leisure travel patterns across the city-region and to and from neighbouring areas.

The Right Mix for travel across the Wider City-region



361. We are targeting **an overall reduction in the number of trips across the Wider City-region, with rapid transit taking an 8% mode-share and cycling taking a 5% mode share.** An important driver of the overall reduction in wider city-region trips will be an increase in the number of neighbourhood trips, in part due to more people living in high-density locations such as town centres. At present, car is the dominant mode of travel for wider city-region trips, with car and taxi accounting for an estimated 83% of them in 2017. We expect to achieve the targeted changes in mode of travel through transformational cycling policies and a step-change in the capacity and connectivity of rapid transit, so that rapid transit modes are used for longer wider city-region trips that are at present made by car via the M60.

362. In future, we expect to adopt different targets for wider city-region trips to and from town centres, to support the Mayor's vision in Town Centre Challenge, that "*We need to build a new future for those towns through higher density mixed and affordable housing, with local retail*

and leisure facilities and supported by transport and digital connectivity." Defining Right Mix targets for town centre trips will require further work.

The patterns of movement across the Wider city-region

363. There are specific and dense commuting flows to the centre of the conurbation, with 38% of employment located inside the M60. However, there are increasingly important local flows between adjacent local authority areas, with all parts of the conurbation becoming less self-contained than in the past and more reliant on flows of people and goods to and from other parts of Greater Manchester. Specialisation in the provision of healthcare and education/training across the conurbation has further emphasised the importance of mobility across traditional municipal boundaries. The diagram below shows commuting flows between Greater Manchester local authority areas, and from neighbouring authorities into Greater Manchester, in 2011.

364. The range of work and business opportunities in Greater Manchester means that there are significant further flows to and from neighbouring areas to the south, west and north in particular; flows into the east are more limited, with the Pennines reducing connectivity. Increasingly, business and commuter travel patterns will also be influenced by strategic developments: the growth potential of the Atlantic Gateway in the west; the growth of Manchester Airport and the arrival of HS2 in the south; the potential of the West Coast Main Line to boost the economy of the north west, via its link to HS2; and the potential for the east to develop in relation to Leeds and Sheffield as a result of Northern Powerhouse connectivity. Improving travel across the city-region is therefore an integral part of improving city-to-city links and links to global gateways.

365. In addition, the leisure economy of Greater Manchester has continued to grow, establishing parts of the conurbation as major sporting, entertainment, heritage, retail and other event destinations with new patterns of leisure traffic both within and into the conurbation. This growth has started to blur distinctions between traditional peak and off-peak periods of demand for travel in some of the city-region's most important corridors.

366. Our 2040 Vision identified the need for effective connections to make it easier to reach key destinations by public transport, to improve journey times on the busiest local roads and to make walking and cycling more attractive for short trips. It also highlighted the importance of supporting the economies of town centres through high quality public transport links and attractive walk and cycle routes, since these centres play a vital role in providing local services as well as well as acting as transport hubs.

Supporting Vital and Vibrant Town Centres

367. The eight main town centres (Altrincham, Ashton-under-Lyne, Bolton, Bury, Oldham, Rochdale, Stockport and Wigan) provide a critical mass of facilities and services and are the hubs of local public transport networks, making them highly sustainable locations. Significant investment has been made, or is planned, in improved public transport infrastructure and services in the form of new interchanges and Metrolink extensions. They are now facing a fundamental challenge due to changes in the retail sector (particularly the growth of online shopping).

368. All the centres have regeneration strategies aimed at widening their appeal through a better quality offer, broadening the range of uses by including housing, recreational and community facilities and so increasing footfall to the retail areas. Transport has an important role to play in supporting this regeneration through provision of good quality public transport infrastructure and services, safe cycle and pedestrian routes, secure and convenient car parking, and access for servicing and deliveries. In addition, a more pleasant environment can be created for visitors by reducing the dominance of the car in and improving pedestrian routes.

369. Each centre faces different challenges, and each is responding by creating a more distinct role. Oldham is investing in a comprehensive regeneration initiative, the 'Creating a Better Place' vision, to improve and diversify the town centre through investment in the leisure, retail and cultural offer, with housing as the catalyst. Major investment in the eastern gateway will bring new retail and residential development, and will need to be supported by an improved transport interchange.

370. Rochdale has developed a riverside, heritage-based offer with tourism potential, along with major re-development, while Ashton-under-Lyne is delivering its 'Vision Tameside' strategy, focussing on serving its primary catchment area and providing a focus for shopping, access to transport, education and skills through the re-location of the college into the central area. There is a need to improve the public realm and unite different parts of the centres, making it easier for pedestrians to move between retail areas, car parks, public transport interchanges, cultural and educational facilities.

371. Bury has become a very successful retail centre, attracting visitors from across Greater Manchester but with a catchment extending into East Lancashire. Parts of the expanded retail area are not well linked to the Interchange, and there is an opportunity to regenerate the surrounding area as well as redeveloping the Interchange to provide the higher standard facilities now available in other centres, and to improve access to the Metrolink platforms. Improvements to connectivity across the centre are also needed to help maintain its competitive position. In addition, pinch points at Bury Bridge and Rochdale Road/Heap Bridge lead to congestion on the approaches to the centre.

372. Bolton and Stockport both have potential to be the focus for office and commercial growth in the north and south of the conurbation respectively and this will need to be supported by an improved transport offer. Both require improved public transport interchange, and links from the interchanges into the town centre. Stockport also needs improved connectivity across the centre, principally by taking traffic off the A6 and giving more priority to pedestrians, cyclists and public transport. In Altrincham, the emphasis is on developing a role as a modern market town, and capitalising on the strong demand for town centre housing. For this there is a need to continue to improve access and movement around the town centre, linking new development to the existing retail core.

373. Wigan has suffered less from competition, due to its more isolated position, and is considered to be less at risk from retail trends than other key centres. However, to maintain its position it needs to attract customers from adjacent parts of Lancashire and Merseyside. As well as better road links there is a need to improve integration between its two rail stations and to improve links across the centre to support regeneration.

374. 

Key Supporting Evidence

- The eight main town centres provide over 10% of jobs in Greater Manchester
- Over 155,000 people travel into Greater Manchester each day to work, with around 130,000 travelling outwards. Greater Manchester is a net importer in terms of commuting
- The largest cross boundary flows are with Cheshire East, with over 23,000 people commuting in, are around 16,000 travelling in the opposite direction.
- The second largest cross boundary flows are with Warrington which sees 16,000 Greater Manchester residents travelling outbound, and 13,000 commuting in.

Access to Employment, Services and Leisure

375. Although Greater Manchester has an extensive public transport network, there are many locations where access to employment, services and leisure facilities is difficult without a car. Major out-of-town employment areas are often difficult to serve by bus, especially where shift working or 24/7 operation are prevalent, which makes the demand too dispersed for viable services. Affordability is also an issue for many people, as referenced in section 70.

376. While major employment sites have good access from a local town centre, or from the Regional entre, they can be difficult to reach from many communities, particularly where orbital public transport links are unattractive**.** Jobs in the major employment concentrations of Trafford Park/Trafford Centre, Salford Quays, the Airport/Enterprise Zone and the future Port Salford are difficult to reach by non- car modes, particularly from the north and east of

the conurbation, but also more locally where public transport may not easily connect disadvantaged communities to these locations. Other significant employment areas such as Logistics North in Bolton, Heywood Distribution Park and Kingsway Business Park in Rochdale, Ashton Moss in Tameside and Hollinwood in Oldham, as well as smaller sites across the conurbation, have similar problems. There is a need to improve access to existing and any future additional large scale out-of-centre employment areas by public transport, active travel links and measures such as car club /cycle hire as well as using behaviour change interventions to make people aware of their travel options.

377. The re-organisation and centralisation of public services also presents people with access problems, leading to longer and more complex journeys to reach hospitals and colleges. Colleges too are consolidating and becoming more specialised, leading to more travel. There is significant cross- border travel by students, eg from Lancashire to Salford and Manchester Universities, or from the Wigan area to colleges such as Myerscough.

378. The Peak District National Park, which extends into Oldham, is a natural and recreational resource of both local and national importance and a significant trip attractor. Chew Brook Vale (Robert Fletchers) in Greenfield has been identified as a location in the GMSF for mixed use development that will support tourism and leisure facilities connected to its gateway location to the Peak District National Park. Leisure trips add to localised congestion in communities on the eastern fringe of the conurbation, where the roads also form part of vital trans-Pennine routes. Pressure on the road network in this area is increasing as incidents on the motorway cause motorists to seek alternatives. There is also a need to improve access for leisure without causing damage to the environment, and improved evening and weekend public transport services would be beneficial.

Providing Attractive Alternatives to Car Travel

379. Greater Manchester's public transport network is effective in linking people with the main town and city centres, and has been enhanced by recent investment in Metrolink. However this is not the case for many of the more orbital movements: between centres, or to out-of-town locations. Bus services may not exist, due to low demand, or may be unattractive: because congestion results in long or unreliable journeys; or because the lack of integration between public transport services and modes makes people unwilling to interchange. Cross-border journeys can also be a problem because of differing ticketing and fares. This is a significant issue for communities living close to the Greater Manchester boundary, such as in the Pennine areas of Oldham, where people wish to access towns such as Huddersfield. Part 2 has set out our vision for integrated ticketing and a bus network that supports our economy and communities, as well as our approach to improving facilities at five classes of interchange.

380. As a result of these issues, travel to work at locations such as Trafford Park, the Airport and many smaller business parks and industrial estates, is dominated by the car and people who do not have access to one are often unable to consider working there. This contributes to high levels of car use and congestion as well as creating a barrier to opportunity. There is no single solution to the problem, and we will need to identify the best way to improve orbital journeys on a case-by-case basis. Where there is a high demand and a fast route can be identified linking to a very major trip attractor (ie Manchester city centre or, in the future, Manchester Airport) it may be possible to develop new rapid transit routes, using either Metrolink, tram-train (see section 196) or bus rapid transit.

381. However, given the very high cost, rapid transit is most likely to be justified where it serves existing concentrations of middle-distance trips: in such cases, rapid transit may be able to support significant new development. A number of routes have been identified as having potential for tram-train or other metro-type services, for example: Manchester to Marple; Manchester to Glossop; Manchester to Wigan via Atherton; and Stockport to Altrincham. Work has recently been carried out to identify the potential to provide rapid transit between Oldham/Ashton and Stockport, which is a national/regional transport hub.

382. On corridors where there are high volumes of mostly short-distance trips, Quality Bus Transit can provide a step-change in the public transport offer, especially for travel between adjacent town centres and intermediate locations. As described earlier in this document, Quality Bus Transit comprises whole-route upgrades of busy bus corridors, with the emphasis on quality, reliability, and integration into the urban realm. It will offer similar quality of design to that of best-practice street-running light rail, with bus priority to achieve reliable services, attractive stops and interchanges, and high-quality vehicles.

383. We therefore need to make sure that bus priority and other bus infrastructure is in place throughout Greater Manchester to support existing and future jobs in the town centres and key employment areas and to give easier access to interchanges for onward travel. Bus Corridor Upgrades – focused on achieving faster and more reliable bus services - are proposed on several sections of busy highway where Quality Bus Transit is not feasible due to the need to accommodate high volumes of general traffic. In some places it may be possible to introduce short sections of segregated route to bypass congestion. Bus priority will also benefit middle- distance trips by bus to/from areas outside Greater Manchester such as East Lancashire, for which there is no viable rail alternative.

384. We will also need to work with the rail industry to improve rail services for local journeys, bearing in mind the fact that limited capacity often means that a choice has to be made between improving local stopping services and long distance ones. In the future, additional capacity may be released following the arrival of HS2. Improvements to rail services have the potential to relieve the road network for middle- and long-distance journeys both within Greater Manchester and to neighbouring areas. Increased capacity and speed on the line to Warrington central would make rail more attractive for journeys to the Birchwood and Omega employment areas, while improvements to the Clitheroe-Manchester rail line would benefit both commuters and students. The Preston-Bolton-Manchester line will become increasingly important for commuters with the growth of the Buckshaw Village major mixed use development near Chorley, while the proposed Skelmersdale rail link and station will reduce car traffic in the west of Wigan. Our Prospectus for Rail contains proposed interventions for improving the offer for rail-based transport, both on the National Rail network and the Metrolink network.

385. Interchanges in the major town centres function as Greater Manchester Hubs, facilitating travel across the conurbation, and we will continue to make sure that these provide high quality facilities. We will also identify locations such as local towns and large employment or service sites (eg major hospitals) that can increase their role as Local Hubs, making interchange easier for a range of day-to-day journeys. Improvements to the rail stations and Metrolink stops that act as Neighbourhood Gateways are also vital in encouraging public transport use (see section 167).

386. Cycling can provide a healthy, low-cost alternative to car travel. However, cycle routes are often fragmented and while strategic routes have been developed inside the M60, investment elsewhere has been more piecemeal. This is now being remedied through the Bee Network, which will deliver a Greater Manchester-wide network of dedicated, high quality, newly built or enhanced cycle routes. The Bee Network is the longest planned walking and cycling network in the UK and when complete, it will connect every neighbourhood of Greater Manchester.

387. Improvements to infrastructure and services alone will not be enough to achieve a significant modal shift. Travel choices interventions will be needed, particularly to persuade people that journeys involving interchange have become easier. Our programmes will include: working with businesses and their employees to encourage them to use sustainable modes; informing jobseekers about how they could travel to jobs, and providing support; promoting the use of new transport infrastructure and services; working with key healthcare and education sites and tourism venues to promote sustainable travel; and promoting sustainable transport to major new developments.

Delivering a More Reliable Highway Network

388. The Strategic Road Network around Greater Manchester performs a vital role in supporting movement across the city-region as well as providing regional and national links. It is at capacity in peak periods in key areas and its use for many local journeys reduces its availability for longer distance trips. Problems are particularly acute in Salford, which is at the confluence of motorways approaching the Regional Centre. An increase in traffic volumes has had a disproportionate impact on journey times in Salford West, and this will be exacerbated by planned developments in the area. Congestion is also a serious problem on the M60 through Stockport town centre and around Denton Interchange, around Sharston on the M56, and on the M66 past Bury town centre and Heywood Distribution Park to its intersection with the M60 and M62 at Simister Island. The limited number of crossings over the Manchester Ship Canal also has the effect of increasing traffic flows and congestion on the M60 around Barton High Level Bridge. The resulting congestion in these areas reduces connectivity across the conurbation and with neighbouring areas including Warrington, Cheshire East and East Lancashire, and leads to overflow onto local roads, with adverse effects on local communities.

389. There are also congestion hotspots and slow peak journey times on the local road network throughout the conurbation, particularly on the approaches to town centres, Manchester city centre and the Trafford Centre, and on routes leading to the motorway network. Traffic accessing motorway junctions results in congestion in adjacent communities eg Milnrow in relation to M62 junction 21. Commuter and through traffic is a major problem in some areas, particularly in the Longdendale area of Tameside where traffic from Glossop is added to longer distance traffic from the A57 Snake Pass route from Sheffield and A628 Woodhead Pass route from Barnsley, and on major routes through Stockport and Trafford, particularly the A34, which carry commuter traffic from Cheshire East and High Peak. The capacity issues across our road network give rise to issues of congestion, safety for vulnerable road users, poor air quality, high carbon emissions and unreliable bus journey times.

390. In addition, the nature of the road network is an issue in some areas. In Wigan the major roads wind through many small centres, resulting in slow journey times, while in the Pennine foothills the roads become rural in nature and many are unsuited to the volume of traffic they are now carrying. The lack of good quality alternative routes puts additional pressure on the M62, adding to congestion on that road. However major improvements, or new infrastructure, could have a damaging impact on the environment of the National Park through which these routes run. A further issue is that of resilience, with adverse weather conditions leading to the closure of Pennine routes in the winter. Roads in the Pennine fringe areas have particular maintenance problems due to the topography and the weather, with structures such as dry stone walls and gullies essential to keeping key arteries open. As climate change continues, adverse weather is likely to become a more frequent and widespread issue.

391. The pressure to move increasing volumes of road traffic efficiently across the city-region as the population and economy grows must be balanced with protecting local communities and maintaining the viability and accessibility of local centres along key routes, ensuring that they are places for people and not just for traffic. Our priority is to make the best use of the existing road network through a combination of using technology to better manage traffic flows and travel demand management to encourage people to travel at different times, on different routes or to switch to public transport or cycling or walking. However, in some cases highway improvements will be needed to relieve congestion hotspots, improve safety on key freight routes, to facilitate new development or to mitigate the impact of traffic on local communities. We will need to ensure that environmental issues arising from new or improved highways are mitigated, particularly in terms of air quality and carbon emissions.

392. As our economy expands, the growth in the logistics sector, through major new distribution sites across Greater Manchester and through growth in areas such as internet shopping, will potentially add to congestion on the network. We will work with businesses to develop re-timing strategies to support freight deliveries outside of peak hours and also consider pilots for

different types of Urban Distribution Centre. Both measures will reduce congestion and improve air quality in town centres.

Supporting New Development

393. Greater Manchester's Plan for Homes, Jobs and the Environment (2020) – The Greater Manchester Spatial Framework (GMSF) – has set out a blueprint for the scale and distribution of housing and employment development through to 2037. The GMSF Spatial Strategy sets out policies across the following areas:

- Core Growth Area: central Manchester, south-east Salford, and north Trafford
- Inner Area Regeneration: surrounding inner parts of Manchester, Salford and Trafford
- Boost Northern Competitiveness: Bolton, Bury, Oldham, Rochdale, Tameside, Wigan, and west Salford
- Sustain Southern Competitiveness: Stockport, most of Trafford, and south Manchester

394. A significant proportion of housing and employment growth is proposed within the Regional Centre combined with housing and employment development to boost competitiveness in northern areas of Greater Manchester and to sustain the competitiveness of the south.

395. The provision of attractive public transport and active travel alternatives, supported by behaviour change measures, to reduce the need to travel by car, will be crucial if we are to fulfill Greater Manchester's growth potential in a way that makes the conurbation a highly desirable place to live. In the case of employment development, it will also be vital to provide non-car access for workers, in order to spread the benefits of economic growth throughout the conurbation.

396. Some major development areas could potentially be served by new rapid transit links (including bus rapid transit), subject to the development of a good business case. In most cases, the key to improved public transport connectivity will be to improve access via interchange points, not only in the Regional Centre but increasingly through a network of Greater Manchester Hubs, served by better integrated services, including orbital services. Manchester Airport will have an increasingly important role in enabling improved public transport links across the south of the conurbation. Public transport, walking and cycling links to local stations close to development areas will also be important in extending the reach of the rail network.

397. The provision of attractive cycle routes linking into existing networks will also have an important role to play in providing an alternative to car travel. As well as reducing car trips, cycling can offer a low-cost and flexible alternative for access to work, particularly where a low level of demand means that there is no public transport.

398. While some additional road infrastructure, such as access roads or bypasses, will inevitably be required to serve very large-scale developments, improvements to the performance and resilience of our highways will not be achieved simply through road building. Appropriate

demand management will also be needed to manage traffic flows, particularly during peak periods.

399. The levels of development anticipated across Greater Manchester over the period to 2040 will inevitably generate significant amounts of construction traffic and could potentially impact on the operation of our transport networks. For example, the levels and nature of road traffic generated could add to congestion and impact on the safety of vulnerable road users. We will work with partners to minimise impacts and safeguard the operation of our networks during construction works through, for example, the creation of Construction Management Plans for new developments.

400. The draft Greater Manchester Spatial Framework (GMSF) has identified development locations and corridors that are strategically significant in terms of their economic importance and role in meeting future development needs. Four of these: Manchester City Centre, The Quays, Port Salford, and Airport Gateway, have been discussed in previous chapters, however other areas have also been identified as strategic locations for development, as detailed below:

The Main Town Centres

401. The draft Greater Manchester Spatial Framework (GMSF) states that the role of the main town centres as local economic drivers will continue to be developed, providing the primary focus for office, retail, leisure and cultural activity in their surrounding areas and providing complementary residential development. Future transport investment to support the role of town centres will therefore focus not only on improving access to the centre, in terms of public transport, car parking, loading/unloading facilities, cycle routes and signage, but creating a high quality environment for visitors, workers and residents to enjoy. This may include urban realm enhancements to improve the quality of pedestrian links and public spaces, or traffic management measures to reduce the impact of motorised vehicles in key areas.

North-East Growth Corridor

402. The North-East Growth Corridor which extends eastwards from junction 18 of the M62 will deliver a nationally-significant area of economic activity and growth which will be supported by a significant increase in the residential offer in this location, including in terms of type, quality and mix, thereby delivering truly inclusive growth over the lifetime of the GMSF. Its location on strategic transport corridors, east-west to Liverpool, Leeds and Hull and north to Lancashire, will make it an attractive location for new and growing employment sectors such as advanced manufacturing and logistics. Significant investment in the transport network will be needed to support the scale of development proposed: to improve the reliability of the M60/M62, improve the operation of Simister Island, improve access to/from motorway junctions (particularly at J3 of the M66, and J19 of the M60), and create new sustainable transport links to connect the area in to adjacent residential areas and town centres as well as to the wider public transport network.

403. There is also considered to be a potential opportunity for further expansion of the economic offer in the eastern most part of this key gateway location where the GMSF Key Diagram identifies the High Crompton Broad Location which has the potential to diversify further the

employment and housing offer in Oldham by ensuring truly inclusive growth could be achieved which would help to reduce further the levels of deprivation and poverty.

Wigan-Bolton Growth Corridor

404. The Wigan – Bolton Growth Corridor will deliver a regionally-significant area of economic and residential development. The majority of new development in the corridor will be on previously-developed land, within the urban area. However, in order to meet the overall spatial strategy, the GMSF also allocates five sites within the area, and supports development at Royal Bolton Hospital.

405. Proposed new highway infrastructure will connect junction 26 of the M6 and junction 5 and will improve public transport connections. Measures to improve the provision of bus services along the corridor and to increase the use of rail lines will be implemented, potentially including a Wigan to Bolton Quality Bus Transit corridor, conversion of the Atherton line to allow for metro/tram-train services, and the electrification of the Bolton to Wigan line.

New Carrington

406. New Carrington provides a significant opportunity to deliver a transformational mixed-use development. This location in the western part of Trafford enables the redevelopment of the extensive former Shell Carrington industrial estate, support the regeneration of neighbouring Partington and Sale West. The creation of a significant mixed-use development fully integrated with the existing communities of Carrington, Partington and Sale West will require major investment in active travel, public transport and highways infrastructure.

407. The former railway line that runs through the site has considerable potential; offering the opportunity to deliver a sustainable transport corridor through the site to Timperley / Altrincham in the east and also extending through to Irlam / Cadishead in Salford to enable better movement across the Manchester Ship Canal. Major improvements in highway access will also be required, including the proposed Carrington Relief Road as well as upgrades to the Carrington Spur and Junction 8 of the M60 which connect into the development area.

Other Locations

408. In addition, there are other locations across Greater Manchester where new transport infrastructure will be required, either to open up the site or to provide sustainable transport alternatives to reduce the number of car trips generated. In some cases new infrastructure may also provide a benefit to the wider area. We will identify suitable measures and seek developer contributions as appropriate.

Neighbouring Areas

409. The Greater Manchester transport network will also be affected by planned growth in neighbouring areas. There are also major and growing employment centres just across the Greater Manchester boundary: in Cheshire East, where an additional 6,000 jobs are expected by 2030 (including in the North East Cheshire Science Corridor, encompassing Alderley Park and Daresbury), at Birchwood and Omega/Lingley Mere in Warrington; and around the M65 in East Lancashire.

410. Existing commuter movements will be increased by major residential development in Cheshire East, in the Buxton and Chapel-en-le-Frith areas of High Peak, at Buckshaw Village in Lancashire and in Warrington. We are working with neighbouring authorities to provide high quality, high capacity sustainable transport alternatives in order to relieve pressure on the highway network.

411. Proposed interventions supporting travel across the Wider City-region are set out, in detail, in Our Five Year Transport Delivery Plan.

Connected Neighbourhoods

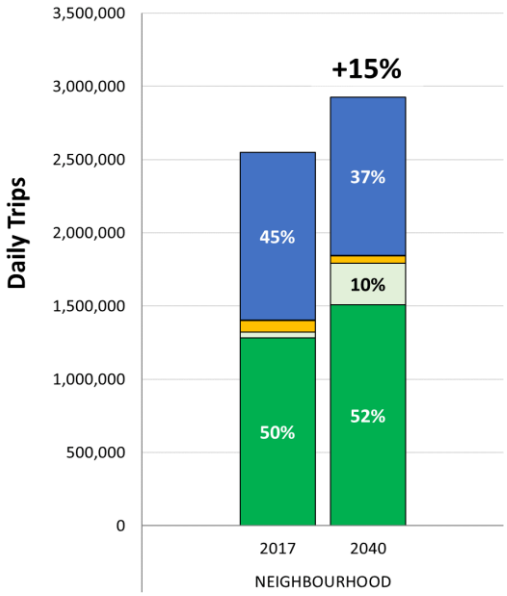
Our ambition is for local neighbourhoods to be safer and more pleasant to walk and cycle around, with the impact of traffic on local roads reduced and a year-on-year reduction in collisions. To achieve our Right Mix vision, we want to make walking and cycling the natural choice for short journeys.

Ensuring that our town centres are attractive and well connected - and that interchanges are easier to access - will increase the proportion of journeys made by public transport and encourage people to use local shops and other facilities.

412. The places we live have a major influence on our overall quality of life. Neighbourhoods need to be places where people can be safe, healthy, interact with their neighbours and have easy access to facilities like shops, schools, healthcare, recreation and a range of jobs. Perhaps most importantly they need to be inclusive, so that all residents can participate in community life and access the facilities they need. Attractive living environments also play a role in the economy, by attracting and retaining the diverse labour market that is needed to support economic growth.

413. Neighbourhoods are also the starting point for many of our journeys, whether long or short, and local connectivity can have a major influence on our choice of mode. If local public transport is poor, or pedestrian/cycle routes are unattractive, longer journeys may well need to be made by car.

The Right Mix for Connected Neighbourhoods



414. We are targeting a 15% increase in the number of Neighbourhood trips, with walk and cycle taking a higher share of that larger total. In 2040, we are targeting a 10% cycle mode-share of Neighbourhood trips, with a mode-share of more than 50% for walk. We plan to achieve the increase in the number of Neighbourhood trips through more people living in high-density housing with excellent access to local facilities, such as in town centres. Neighbourhood-focused policies, including Streets for All and the Bee Network, will both increase the attractiveness of living in connected neighbourhoods, and increase the mode-share of active travel.

415. While motorised transport will play a role in our future transport network, supporting people to make journeys that cannot be made by foot, bike or public transport, its impact on our local neighbourhoods needs to be carefully managed to improve safety and reduce noise, air pollution, CO_2 emissions and severance. We know that that more active lifestyles lead to better health outcomes and day-to-day activities like walking or cycling to school or the station can be as effective as going to the gym. As well as improving physical health, moderate activity can help to combat depression, particularly if it takes place in a pleasant environment. Active travel can also provide a low-cost option for people on low incomes.

416. The way transport is managed in our local neighbourhoods is therefore central to our quality of life. The challenges and opportunities described above have informed the development of Greater Manchester's Streets for All approach, which aims to make our streets easier to get around and more pleasant to be in, while achieving our ambition for 50% of all journeys in Greater Manchester to be made by walking, cycling and public transport by 2040. One of the areas with the biggest potential for change is people's travel in local neighbourhoods.

Active Neighbourhoods

417. Areas that are easy for people to walk and cycle around also tend to be good places to live, with low traffic speeds, safe links to places like shopping centres, schools, parks, countryside and with interesting public spaces. Neighbourhoods that are designed to enable more active

travel provide more opportunities for social interaction and can improve a sense of security through the presence of other people.

418. While bus or car are the best option for some people and some trips, if more journeys can be made on foot or by bike, the number of car journeys can be reduced, leading to fewer collisions, lower emissions and improved health. Most journeys are short, at five miles or less, a distance that can easily be walked or cycled by many people. Even the longer commuting journeys can start with a short walk, cycle or bus ride to a station or stop. However, for more journeys to be made in this way, we need to create the right environment for people to do this safely, conveniently and enjoyably through a combination of good urban planning, behaviour change campaigns and measures to make streets safer and more welcoming.

419. First and foremost, people need to feel that it is safe to walk or cycle. This is particularly important for parents deciding whether to allow a child to walk or cycle to school. Barriers to walking and cycling were clearly articulated by Greater Manchester's first Cycling and Walking Commissioner in his Made to Move report and include road safety concerns, poor maintenance and unpleasant walking environments. People can also underestimate the time that a car journey will take, walking or cycling can often be quicker in urban areas.

420. The Bee Network proposal for a joined-up cycling and walking network that connects all of the communities in Greater Manchester, and the long-term Cycling and Walking Infrastructure Plan have key roles to play in encouraging cycling and walking, especially for short, daily trips. They aim to enable healthy lifestyles, by making walking and cycling attractive, convenient and safe for everyone.

421. The Bee Network proposes a Greater Manchester-wide network of local cycle networks that will use a combination of quiet streets, on-highway cycle lanes (segregated from traffic where required) and off-road routes, along with the provision of secure parking, will help to make cycling a natural choice. As well as parking at key destinations, space is needed in or close to homes for secure cycle storage.

422. For pedestrians, an extensive network of footways and Rights of Way already exists, but safe crossings and improvement of footway space are essential, particularly in local centres and where residential areas are separated from local shops, schools and other facilities by busy roads. Our Streets for All approach, that focuses on how we design streets for people, rather than just vehicles, is important. More attractive streets, public spaces and parks, with good natural surveillance, will encourage more people to walk. For both pedestrians and cyclists, maintenance is important in ensuring that facilities are safe and remain useable in all weathers.

423. Combining benefits for people who walk, cycle and live on our local streets, we will work to deliver a network of active neighbourhoods across Greater Manchester, that will create low traffic streets, that support and encourage people to spend more time in their streets and make journeys by foot and bike. This will be delivered through techniques such as closure of residential streets that have high flows of traffic, speed reduction interventions, and measures to make our neighbourhoods more attractive and enjoyable places to spend time in, such as introducing planting, artwork and seating.

424. Traffic speed is a major factor in whether people feel safe to walk or cycle and lower speeds reduce the severity of casualties. There is evidence that where 20 mph zones have been introduced there can be an increase in walking and cycling. On many roads in Greater Manchester 20mph speed limits have been implemented, and are legally enforceable by Greater Manchester Police. We will continue to implement speed reduction measures where these are supported by local residents, prioritising: residential areas; areas around schools; areas adjacent to the local or strategic cycle network, where this will help to create a wider network of safer routes; and areas identified as having a high collision risk for vulnerable road users.

425. Where major roads border or pass through residential areas, the needs of through traffic clearly need to be accommodated but we will seek to mitigate the impact of that through traffic and ensure the safety of vulnerable road users, for example by providing safe crossings and segregated cycle lanes as well as trixi mirrors at key junctions to give HGV drivers greater visibility of cyclists, where appropriate and feasible.

Environmental Quality

426. In addition to safety concerns, the pollution and noise from motorised traffic can impact on the quality of life in residential areas and deter people from walking and cycling.

427. The city-region is one of a several areas across the UK where mean nitrogen dioxide (NO_2) concentrations exceed statutory limits. Road transport is responsible for 80% of NO_2 pollution at the roadside, where it is most damaging to health. The youngest, the oldest, those living in areas of deprivation, and those living with existing respiratory or cardiovascular disease are most likely to be affected by exposure to air pollution. Government has set out a strictly defined process with extremely challenging deadlines for such areas to reduce NO_2 levels to safe limits, and 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.

428. The Department of Environment, Food and Rural Affairs (Defra) has identified areas in all the major cities where noise is a problem, and although electric vehicles will reduce this problem in the medium term, we need to take opportunities to reduce noise through design (including the use of noise-reducing surfacing) or traffic management (smoothing traffic flow) where possible.

429. 'Green infrastructure' such as parks and roadside trees not only help to create much more pleasant places to live, but bring important environmental benefits through reducing temperatures, noise and pollution as well as absorbing run-off. Blue infrastructure also contributes to our quality of life, and our canals and rivers can provide attractive, traffic-free routes for walking and cycling.

430. Most of our urban environments are already in existence, and improvements will need to be made over time as opportunities arise and as funding allows. However, new developments offer an opportunity to create environments where walking and cycling can become second nature for many people because the streets and public spaces have been designed with active travel in mind. Section 65 has described the principles that we believe should be followed for new development, and how we will work with developers to achieve this.

Improving Access

Access to local facilities

431. While for many people the daily commute is the journey they are most concerned about, the majority of journeys in Greater Manchester are not to work but for shopping, education, leisure, or to local services like healthcare. Everyone needs easy access to these facilities to meet their day-to-day needs.

432. Many of these needs are met within local town centres, which are also hubs of the public transport network. Travel across the wider city-region highlighted how transport can help the main centres to remain competitive by improving access to and around them, including for deliveries, while at the same time reducing the dominance of the car to provide a pleasant environment for visitors. The same principles apply to our smaller local centres and making them more attractive and easier for shoppers and visitors to get around on foot is vital. Our aim is to achieve centres that are walkable, with pedestrian-friendly spaces, which accommodate access by bike and by public transport but are still accessible by car and are viable for business.

433. Reduced traffic volumes and speeds can greatly add to the vitality of centres, enabling people to walk in a leisurely way, or stop at pavement cafes. Despite the fears often expressed by retailers, studies in London show that the spending power of pedestrians, cyclists and public

transport users is at least as great as for car users and improvements in the quality of street design, including the reduction of clutter can also increase both retail rents and residential prices. The benefits of traffic-free streets must be balanced with the need to maintain access for cars, buses and servicing. Many local centres are bisected by major roads, which create noise, pollution and severance as well as presenting a danger for cyclists and pedestrians, particularly children, disabled and older people. While the movement of traffic needs to be accommodated, greater emphasis must be given to the needs of 'the place', prioritising pedestrians, cyclists and bus passengers through crossing facilities, improved links and signage from interchanges and car parks, and improved parking for cycles and motorcycles. Access is also needed for the servicing of shops and other businesses. This can add to congestion at peak times or in locations where there are no off-highway loading bays (as is often the case in older centres). We will promote the adoption of Delivery and Servicing Plans to mitigate these issues.

434. The school journey can have a significant impact on local traffic and transporting children to school by car also contributes to reduced levels of fitness and increasing obesity. For journeys to primary school, a switch to more walking or cycling would both reduce traffic in residential areas and improve the health of our young people. Journeys to secondary school are generally longer, but many could still be made on foot or by bike if safer routes and cycle parking were provided. To encourage more school pupils to walk or cycle to school we need to: work with the health sector to promote active travel to schools, including the development of school travel plans; continue to provide Bikeability training to primary school pupils, as funding allows; and work with secondary schools that are located close to local cycle networks to encourage cycling, including the provision of secure cycle parking.

435. Many secondary school journeys are made by public transport, particularly bus. Local authorities have a statutory obligation to provide free school transport for journeys over a certain length but in addition, fare-paying, dedicated school bus services are also provided to some schools by TfGM. In view of the rising cost of this provision, these journeys should be integrated as much as possible into the local bus network, with shorter journeys made by cycling or walking where possible.

436. The location of services can affect people's ability to reach them without a car. The reorganisation of healthcare has led to more services being provided at the local level – including at 'super surgeries' rather than traditional GP surgeries. Good access is vital, as missed appointments can lead to poorer health, and for the rising proportion of people in their eighties, regular check-ups may prevent the need for a hospital stay.

437. For education, the recent growth in the under-fives population is feeding through into an increased demand for school places in some areas. In the past, falling school rolls resulted in school sites being re-developed, and there will now be a need to identify suitable replacements within easy reach of residential areas, either on foot/by bike, or with good public transport access.

Access to public transport

438. Access to public transport is vital to the quality of life for those who do not have access to a car. Various studies have shown that lack of transport can be a barrier to taking up work, while transport problems can lead to missed health appointments. At the same time, good access to public transport is also essential if we are to reduce traffic in neighbourhoods.

439. Most people in Greater Manchester are within walking distance of public transport. However, in an ageing society, an increasing number of people may have difficulty in walking to a station or stop. This also applies to people of all ages with disabilities. The quality and safety of the route and the waiting environment also affect people's willingness to use the services on offer. Many local stations are therefore not used to their full potential. We need to make them more appealing as waiting environments, with a consistent standard of facilities and information provision, including signing from the highway and locations such as town centres. In addition,

making them more effective as interchanges, through provision of cycle parking, bus links and, where appropriate, car parking will increase usage. However, our stations are so much more than a gateway to the transport network and offer significant potential to improve local areas. We will continue to explore how stations, as community assets, can generate wealth and wellbeing, learning from best practice internationally where many stations have been developed to support local economic and social development.

440. The development of station travel plans can maximise access by sustainable modes and raise awareness of the station locally. The work of Community Rail Partnerships and Friends of Stations groups is also important in this respect and greatly valued.

441. Park and ride facilities need to be carefully located, as they can lead to people driving further before they start their public transport journey. Small station car parks can, however, be important locally if on-street parking would cause a problem and can improve access for disabled people.

442. Our policies for the bus network are described in Part 2. Given financial constraints, we must recognise that it will never be possible to provide all the services that people would like and will need to maximise the potential of local self-help and innovative solutions. In Greater Manchester, Local Link shared minibuses and Ring and Ride accessible transport services are available for people who find it difficult to use public transport. Some parts of Greater Manchester have more local community transport schemes offering group transport in communities where deprivation can limit access to transport. There are two broad types of operation: group mini-bus hire schemes aimed at charities, elderly or disabled groups, sports clubs etc. or; voluntary car schemes which use volunteers' cars to transport people to hospital etc. These schemes are usually part funded locally although are reliant on volunteer drivers and office staff and charitable contributions. In the future, the growth of smart technology will make it easier for groups of people to come together to provide their own transport through crowdsourcing.

Inclusive Neighbourhoods

443. Truly connected neighbourhoods enable everyone to access work, local facilities and recreation and to interact with other people in a pleasant environment. Designing new infrastructure and services to improve accessibility for people with mobility problems will have the additional benefit of future-proofing the transport network to meet the needs of an ageing society. Our specific policies on improving accessibility are set out in Part 2, however we also need to make sure that other schemes do not disadvantage people with mobility problems and that they make the most of opportunities to improve accessibility. TfGM already works with the Disability Design Reference Group to do this in relation to public transport infrastructure. Measures that need to be considered as part of transport schemes include the provision of tactile paving and raised bus stop kerbs, extended crossing times at signals, provision of seating (including informal seating opportunities such as low walls), toilets and dementia-friendly design such as clear signage and provision of distinctive landmarks to aid navigation. If 'shared space' schemes are introduced to give greater pedestrian priority in centres, these must be made safe for visually impaired people to navigate safely, by including or retaining tactile features.

444. People living in rural areas also experience specific transport problems. They generally must travel further to reach key services and therefore may have less potential to walk or cycle. Public transport provision is limited due to the low demand, which means that these areas are more car dependent. At the same time, their importance as locations for recreation or their position on strategic routes can lead to high traffic volumes on unsuitable roads. To improve access in rural areas we need to: improve interchange between rail and bus at rural stations; maintain Rights of Way and Bridleways as funding allows; support proposals for speed reduction, including 'quiet lanes' where this will provide safer walking and cycling links to local facilities such as schools and stations; and infill gaps in long distance walking and cycling routes that improve access to the countryside.

445. Our policies for achieving better connected neighbourhoods will make it easier for people to travel by sustainable modes, particularly walking and cycling. However, improvements in infrastructure and services need to be complemented by behaviour change measures that encourage people to choose active travel for short journeys, including journeys to school, encouraging the use of local stations, promoting sustainable travel in new developments and promoting the use of new transport infrastructure.

446. Proposed interventions supporting better travel at local neighborhood level are set out, in detail, in Our Five-Year Transport Delivery Plan and in the ten Local Implementation Plans (LIPs) covering the period 2020 to 2025. Each of the ten councils that make up Greater Manchester has its own LIP. The LIPs are designed to complement the GM Transport Strategy 2040 and Our Five Year Transport Delivery Plan, providing details of how their outcomes will be achieved locally in each council area, focusing particularly on supporting local trips within neighbourhoods and to local centres. TfGM is also committed to supporting the development of Neighbourhood Plans when it comes to addressing transport challenges faced by communities.

Part 4
Strategy Delivery

Introduction

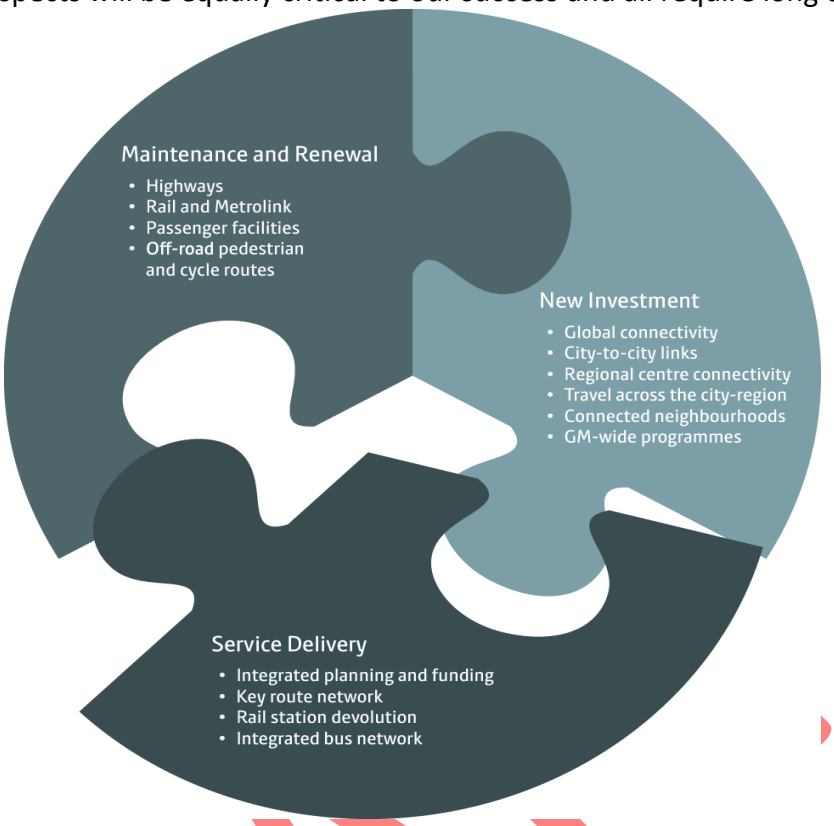
447. Realising our ambitions for 2040 will involve a range of partners. TfGM, the ten Greater Manchester local authorities and the GMLEP will continue to work together with the Department for Transport, Highways England, Network Rail, train and bus operators, as well as private developers, to deliver the interventions needed. This will be particularly important in ensuring that the transport network can support the growth identified through the Greater Manchester's Plan for Homes, Jobs, and the Environment (the spatial framework).

448. We recognise that the information and policies contained in this document are at a high level. In some cases, more detailed sub-strategies will be published to provide more detailed guidance. Ongoing strategy development of this kind will be reflected in the Delivery Plans that underpin this Strategy.

449. An effective transport system for Greater Manchester will require:

- the delivery of a strong pipeline of transport schemes, rigorously prioritised to support our local strategic objectives and delivered to the highest standard, building on our excellent capital programme track record;
- the establishment of best-in-class maintenance and renewal standards that ensure maintenance failings- from potholes to public transport breakdowns- are managed down and eradicated in the interests of a reliable network and productive economy; and
- world-class customer service standards across our entire transport system, offering effective and attractive travel choices that support modern lifestyles and businesses throughout the week.

450. These three aspects will be equally critical to our success and all require long term funding:



Prioritisation

451. Greater Manchester has a strong track record in prioritising investment in those transport initiatives that can most directly support the city-region's wider strategic objectives. Through our experience in co-designing transport and economic strategies, we have a clear understanding of the role of effective and reliable transport networks in connecting businesses with their supply chains, their customers, and their labour markets; and in controlling costs, promoting competition and spreading opportunity.

452. This well-developed approach ensures that investment is prioritised in a manner that supports the economic performance of the city-region first and foremost, while also ensuring that at a programme level, we are able to address the city-region's wider environmental and well-being issues.

453. As the discussion of policy drivers, set out earlier in this document, demonstrates it will be critical for this clear and consistent approach to prioritisation to be maintained. This will enable Greater Manchester to achieve its objectives of raising prosperity for all, while establishing a sustainable growth path for the city-region.

454. The Greater Manchester Infrastructure Programme (GMIP) enables infrastructure to be developed in a comprehensive, placed-based manner, looking both at local schemes and the strategic programmes that support them at a city-region level. The aim is for full integration of the process that links planning, prioritisation and then funding and delivery. GMIP is based on the following key themes:

- A place-based approach: integration of transport, housing and regeneration to give place-based investment packages/interventions;
- GM-wide strategic investment packages: delivering at scale, supported by integrated procurement, and strong integration with national agencies, infrastructure providers and utilities; and
- Strong governance: over ten years' experience of robust governance and delivery, and an ability to manage and deliver investment with flexibility and hence more quickly.

455. GMIP is accountable to an official-led Delivery Executive chaired by the GMCA Chief Executive and attended by external partners such as United Utilities and the Infrastructure and Projects Authority. This regularly reports to the Combined Authority, chaired by the Mayor.

New Investment

456. Significant new investment is either underway or planned. Current programmes include: the expansion of the Metrolink network; a bus priority programme; new transport interchanges; extensive walking and cycling programmes and several highway schemes to tackle critical bottlenecks and relieve communities and town centres from through traffic. The widespread use of mobile technology and broadband are transforming the way travellers search for and receive information as well as the management of our networks. At the same time, comprehensive travel choices programmes are encouraging higher levels of active and sustainable travel across Greater Manchester.

457. Notwithstanding the levels of committed investment, this strategy document has demonstrated that further interventions will be needed over the period to 2040 if we are to achieve our vision of 'world class connections that support long-term, sustainable economic growth and access to opportunity for all'. We will work with partners to maximise the funding available to Greater Manchester and bring forward specific schemes in our five-year Delivery Plans accordingly.

Maintenance and Renewal

458. Maintenance and renewal are vital to the safe and efficient functioning of our highways and we recognise that the significant ongoing investment in new infrastructure also increases the requirement for spending on maintenance. We need to:

- address a substantial maintenance backlog on the highway network;
- renew key structures such as bridges, retaining walls and culverts; and
- make all our networks more resilient to the effects of climate change.

To achieve this, it is even more essential that we both increase the level of funding for maintenance and increase the efficiency of maintenance operations.

459. This will require new funding arrangements, combining local and national funding sources to establish a consistent, long-term spending platform. In addition, it will require Greater Manchester to ensure that we manage the costs of maintenance and achieve economies of scale through collaborative working between the ten local authorities, TfGM and Highways England, at a city-region level. The highways reform measures in the Greater Manchester Devolution Agreement support this approach. We will also continue to develop our delivery systems to ensure that Greater Manchester is established as a national centre of best practice for highways network maintenance and resilience.

460. Equally critical is a robust and resilient public transport network. We will establish a whole lifecycle planning and delivery process for the tram, train and bus networks that:

- ensures that timely and funded track/infrastructure renewal plans are built into our investment plans; and
- establishes a robust funding and delivery plan for vehicle renewal and fleet expansion across public transport to ensure that life-expired vehicles are replaced before they become a threat to the performance or attractiveness of our transport system.

Service Delivery

461. We are committed to transforming customer quality across the transport system. The transport governance and delivery reforms within this strategy and the Greater Manchester Devolution Agreement, alongside our investment programmes, will better enable us to target that investment towards our policy priorities and achieve greater efficiency in the use of resources. GMCA is continuing to increase the integration of planning and funding across economic development, public health, health provision, land use planning and transport.

462. The Greater Manchester Agreement in 2014 announced the first phase of significant devolution to Greater Manchester, including in-principle agreement on three areas of transport: highways, rail and bus. Collectively, supported by the long-term funding settlements, these reforms will allow GMCA to oversee the delivery of the integrated transport network at the heart of this strategy.

463. On the highway network, the creation of GMCA meant that TfGM was granted initial co-ordination functions to enable an efficient and co-ordinated approach in several areas, such as urban traffic control, cycling and road safety. Agreement has also been reached for TfGM to co-ordinate management of a Key Route Network of the strategically important local roads, which carry the critical mass of daily commuting and logistics movements. The aim of this is to: develop and promote one consistent highways investment pipeline; increase the reliability and consistency of service delivery and improve communication with, and information for, all road users. Building on this co-ordinated approach, a Memorandum of Understanding between TfGM and Highways England aims to ensure co-operation in terms of operational and tactical planning across the two networks as well as the development of future strategy. This reflects

not only the importance of the SRN to our economy, but the need to integrate the planning and management of the whole road network, given that conditions on the SRN affect the local network and vice versa. We will need to work closely with both Highways England and Transport for the North to identify future investment needs across the SRN and ensure that the opportunities for shared investment in infrastructure, to improve access to the SRN and between and across the northern city-regions, are fully realised.

464. On the rail network, we believe that the existing stations in Greater Manchester represent a significant opportunity for customers, communities and the taxpayer. The lack of a guiding mind for stations and absence of evidence-based decision making has led to poor investment choices and stalled the potential to create meaningful step change in the quality of the experience at stations. The relatively short-term nature of rail franchises means that operators tend to focus on investments which provide a commercial return within these timescales rather than taking a longer-term view of the needs of customers and community served by that station. Work is now underway - with rail partners - to test working in partnership with operators and other industry stakeholders at many Greater Manchester rail stations. We are also exerting greater influence over the rail network by working with neighbouring regions through Transport for the North and Rail North.

Policies and Interventions

Policies

465. Our policies are set out in Part 2 and summarised below.

Policy 1: We will work with partners to ensure that modes of transport such as taxis, private hire vehicles and other demand responsive services - as well as shared mobility solutions, including car clubs, cycle hire and other forms of shared transport - are available and fully integrated into the Greater Manchester transport network.
Policy 2: Working with partners, we will seek to deliver integrated pricing and payment systems across the transport network, including smart ticketing for public transport, to encourage use of public transport in line with the GM Transport Strategy 2040.
Policy 3: We will maintain a conurbation-wide programme of interventions designed to encourage people to make sustainable journeys, supported by journey planning tools and information; to encourage travel behaviour change and mode shift, in order to make the most efficient use of available capacity, particularly during peak periods.
Policy 4: We will work with developers to ensure that new developments are accessible by sustainable modes, and to reduce transport emissions and impacts on the highway network.
Policy 5: We will work with public transport operators and Network Rail to ensure that all transport infrastructure, vehicles and information are as accessible as possible for all our customers, regardless of their age and mobility.
Policy 6: We will work with partners to better integrate accessible travel services across Greater Manchester, to increase availability and convenience for customers.
Policy 7: As we plan our transport network, we will support the creation of a more inclusive economy for GM by considering how best to improve the prospects of people living in deprived communities - including by ensuring that more people can access jobs, education, skills training and childcare.
Policy 8: We will work with partners to deliver transport interventions that improve the health of Greater Manchester residents, including: mitigating against pollution from motor vehicles; increasing levels of physical activity; improving access to healthcare; and reducing social isolation
Policy 9: We will work with partners and key stakeholders to bring nitrogen dioxide (NO_2) levels on local roads within legal limits, and to reduce levels of particulate matter - both of which are emitted from internal combustion engines.
Policy 10: We will play our part in delivering carbon neutrality, including by: implementing measures that will mitigate against climate change, improving air quality, encouraging responsible consumerism, ensuring net environmental gain wherever possible and making sure our future built environment is resilient to the impacts of climate change.
Policy 11: We will work with partners, including the Canals and Rivers Trust, to enhance green and blue infrastructure to provide a safe and attractive environment for walking and cycling.
Policy 12: We will aim to minimise the impact of transport on the built and natural environment - including townscape, the historic environment, cultural heritage,

landscape, habitats and biodiversity, geodiversity, water quality, pollution, flood risk and use of resource - and will seek to deliver environmental enhancements and biodiversity net gain where possible.
Policy 13: We will continue to deliver measures, and put in place appropriate management systems, to improve the reliability of the transport network.
Policy 14: Working with partners; including through the Safer Roads Partnership, we will deliver initiatives aimed at improving safety on the highway network, with a particular focus on the most vulnerable road users.
Policy 15: Working through Safer Roads Greater Manchester (SRGM), we will facilitate the delivery of interventions to address road safety issues, with a particular focus on supporting those who are walking and cycling.
Policy 16: We will set out a clear strategy for the EV charging infrastructure network required to provide greater confidence to residents and businesses to invest in electric vehicles.
Policy 17: We will provide a unified, Greater Manchester approach to managing the Key Route Network (KRN) of roads, in line with our Streets for All Strategy principles, and work with Highways England to co-ordinate this with the management of the Strategic Route Network (SRN).
Policy 18: We will work, including through the GM logistics forums, to improve journey times and reliability for deliveries, and to reduce the environmental impact of logistics, including the promotion of mode shift.
Policy 19: We will ensure our streets will be welcoming and safe spaces for all people, enabling more travel on foot, bike and public transport while creating better places that support local communities and business.
Policy 20: Where feasible we will introduce appropriate bus priority measures on the highway network to improve bus reliability and will keep existing measures under review to ensure effectiveness. This will include developing proposals for "Quality Bus Transit" corridors on key routes.
Policy 21: We will work to improve and maintain the condition and resilience of our road network, drawing on best practice.
Policy 22: We will work with partners to improve walking and cycling facilities across Greater Manchester, including development of a strategic walking and cycling network (the "Bee Network"), wayfinding and cycle parking, and supporting "Streets for All" design guidance to ensure consistently high quality standards across the network.
Policy 23: Working with partners, we will seek to establish and promote one integrated Greater Manchester public transport network ("Our Network"), making it easy for customers to plan, make and pay for their journeys using different modes and services
Policy 24: We will seek to ensure a consistent standard of facilities at transport hubs, appropriate for their size and function, and will work with partners to improve access to them by all modes.
Policy 25: We will seek to make best use of powers included in the Bus Services Act, as well as our existing powers, to give effect to our Vision for Bus.
Policy 26: We will seek to ensure that accessible coach parking and set down/pick-up points are available at key locations.
Policy 27: We will work with the taxi and private hire industry to develop minimum standards for policy/regulation and operation across Greater Manchester, and work with Government to strengthen national legislation.

Policy 28: We will seek to expand the coverage and capacity of our rapid transit network (Metrolink, Rail and Bus Rapid Transit), to deliver improved connectivity to employment and other opportunities within the city-region.
Policy 29: We will continue to work with DfT, Network Rail, train operators and with other local authorities across the North of England in order to secure our strategic priorities and to deliver greater local accountability for all rail-based services.
Policy 30: We will continue to work with DfT, Network Rail and Transport for the North to secure greater local control of rail stations within Greater Manchester exploring the use of any opportunities arising from the Williams Review of the Rail industry.

Funding Mechanisms and New Ways of Working

Funding Mechanisms

466. The main source of funding for transport is from central government and in 2014 Greater Manchester was awarded funding from the Local Growth Fund (LGF) of £314 million for major schemes (costing more than £5 million) and £15.2 million for small schemes (costing less than £5 million) for the period 2015/16 to 2020/21. With this funding assured, an initial investment programme was developed, covering several major schemes and a programme of minor works for 2015/16 and 2016/17. This is set out in the Greater Manchester Capital Programme 2015/16-2020/21 (http://www.tfgm.com/ltp3/Pages/Capital-Programme.aspx). As part of the Greater Manchester Devolution Deal we have secured Government commitment to establishing a multi-year transport settlement for the medium-term that reflects the growth potential of the conurbation. This will enable us to plan ahead and use resources more effectively than is possible with short-term funding streams.

401. A further source of Government funding is via funding competitions targeted at specific policy objectives. In the past we have been successful in obtaining funding from a number of these, eg Local Sustainable Transport Fund, Cycle City Ambition Grant, Pinch Points, the Green Bus Fund and the Pothole Fund. We will continue to put forward strong investment cases for this type of funding, alongside additional future Local Growth Fund resources. The Referendum decision for the UK to leave the European Union will clearly impact on funding, given that Greater Manchester has previously benefitted from several European programmes. We will work with the Government to identify alternative means of funding for strategically significant projects.

    In recognition of the contribution of transport to the wider Greater Manchester Strategy, particularly in terms of economic growth, urban regeneration and improved health, we have developed mechanisms to use local resources to lever in additional funding. The Greater Manchester Transport Fund (GMTF), which was established in 2009, demonstrated this by committing almost £800 million of local borrowing as part of a £1.5 billion fund targeted at schemes that will contribute to economic growth. This is continuing to fund a bus priority programme, new town centre transport interchanges, additional park and ride facilities and targeted highway network enhancements.

402. As part of the 2012 City Deal, GMCA agreed the principle of an Earn Back model with Government, which builds on the GMTF approach of increasing our self-sufficiency in

delivering infrastructure investment. The Earn Back model uses a formula to provide a long-term revenue stream to support further long-term investment, subject to additional GVA being created as a result of our primary GMTF commitments. This has funded the A6 to Manchester Airport Relief Road and Trafford Park Metrolink line.

403. Funding for specific projects may also be sought from partners where they meet a shared objective – for example the health sector has contributed to the introduction of 20mph zones. Developer contributions will also be sought for access improvements or measures to mitigate the impact of traffic associated with new developments.

404. The scale of growth envisaged for Greater Manchester means that major new development sites will be brought forward and we will work with Government to develop funding packages to bring forward the key infrastructure required. Private sector contributions will also be required, e.g. through the pooling of contributions from Community Infrastructure Levy or other planning obligations.

New Ways of Working

405. The Greater Manchester authorities have a long history of joint working, but the creation of GMCA in 2011 has provided a framework within which all ten local authorities can work together at the strategic level to achieve shared objectives, as set out in the Greater Manchester Strategy. This is leading to changes in the way we work. Increasingly authorities are working together to provide shared services, where this brings efficiency savings, and some functions are being delivered at the Greater Manchester level to ensure both efficiency and consistent standards. This approach also ensures that major investment is targeted where it will bring the greatest benefit, and new scheme proposals are rigorously assessed to ensure that they are helping to achieve shared objectives and providing good value for money.

406. The first Greater Manchester mayoral election was held on 4 May 2017. Andy Burnham was elected as the inaugural Mayor of Greater Manchester and chairs the GMCA. This governance model will oversee the further development of this Transport Strategy, alongside the statutory spatial plan for the city-region, and the wider public sector reform programme.

Measuring Performance

407. We need to know whether our policies and measures are having the desired effect and are helping to deliver our strategy.

408. In Part 1 we identified several challenges that we face in achieving our vision and for each of these challenges there is a particular outcome that we would like to see. We will measure the extent to which we are achieving these outcomes through a number of key performance indicators. These challenges, outcomes and indicators are summarised in the table overleaf. More detail about these indicators, including the current values against which we will measure performance, can be found in the Delivery Plan.

409. The information from these indicators will allow adjustments to be made to the strategy if it is not working as well as we hoped. Our progress in relation to each of these indicators will be reported in each annual update of our Delivery Plan.

Performance Indicators

Vision	Challenge (from Part 1)	Desired Outcome	KPI
Supporting sustainable economic growth	Growth could result in increased congestion	Reduced congestion	Journey speed by mode
	Growing economy requires access to wide pool of labour	Better access to skills & markets	Sustainable transport catchment population of the Regional Centre *& other major employment locations*
	Businesses require reliable journey times for deliveries and workers	More reliable journey times	Journey reliability by mode
	Networks need to cope with adverse weather, ageing infrastructure and increased demand	Resilient and well maintained network	Satisfaction with road maintenance
	Developing a transport system that compares well to that of leading European cities	People see GM as a good place to visit & invest	Perceptions of GM as a place to live, visit, do business
Improving quality of life	Good access is needed to jobs and training so that transport is not a barrier to opportunity.	Better access to jobs/training	*Sustainable transport catchment population for key locations - employment / colleges*]
	Centralisation of services and changes in retailing can make it harder for some people to access education, healthcare, shopping etc	Better access to services	*Sustainable transport catchment population for key locations -town centres/hospitals]*

Vision	Challenge (from Part 1)	Desired Outcome	KPI
	Encouraging people to improve their health through greater levels of activity	More people travelling actively	No. of walking & cycling trips
	Reducing the number of serious casualties on the roads and the amount of crime and anti-social behaviour on the transport network.	Improved safety and personal security	KSIs split by vulnerable groups, Perception of personal security by mode
Protecting the environment	Increasing the use of sustainable transport to reduce the negative impacts of car use.	More people travelling by non- car modes	Mode split
	Economic and population growth will increase the demand for travel, and increase harmful emissions	Reduced emissions of CO_2, NO_2	CO_2 emissions, NO_2 emissions
	Making the best use of existing infrastructure to help reduce environmental impacts.	Accessible locations prioritised for new development	% of new homes having >level 4 accessibility to the public transport network[12]
	Protecting the natural and built environment from the impacts of transport.	Infrastructure designed and maintained to minimise environmental impact	N/A – assurance is via approved Project Management Procedures

[12] Based on Greater Manchester Accessibility Levels (GMAL) in the AM Peak period. See http://www.gmtu.gov.uk/gmbusroute/GMAL%20Calculation%20Guide.pdf for further information.

Final Conclusions and Next Steps

410. This strategy document sets out how investment in new transport infrastructure, delivery of services and maintenance of existing assets will be focussed to support growth in the widest sense, recognising that improving access to jobs and training and improving the health of the population are essential aspects of improving productivity, while improving the quality of many of our urban areas will be a pre-requisite for attracting investment. The innovative focus of the strategy on the requirements of different types of journey, rather than the needs of different modes, means that we have been able to take an holistic view of the investment needed: to improve connectivity to global markets; transform journey times to other major cities; capitalise on the potential of a rapidly growing Regional Centre, create better linkage between jobs and homes across the wider city-region and provide 'first and last mile' connections within neighbourhoods that will make sustainable travel an attractive option.

411. Our Five-Year Transport Delivery Plan, which sits alongside this document, provides the detail of the schemes to be delivered in the period 2020-2025. As additional funding is secured in the future, subsequent updates of the Delivery Plan will identify the schemes that provide the detail for the interventions identified in this Strategy document.

Appendix - GMSF Transport Study Technical Note

GM Transport Strategy 2040 Right Mix

GMSF Publication Version 1: October 2020

Transport Strategy

Version	Author	Description	Issued	Reviewer
0	JL	Base report in the 2019 Draft Transport Strategy Evidence.		
1	JL	GMSF evidence version	05/10/20	JP/NK

Contents

Greater Manchester Transport Strategy 2040 – 'Right Mix' Technical Note

Introduction

1. 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 ten Local Authorities, 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.

2. The Plan focuses on making the most of Greater Manchester's brownfield sites, prioritising redevelopment of town centres and other sustainable locations. The Plan is required to demonstrate that Greater Manchester has enough land to deliver the homes and jobs people require up until 2037, and whilst there is an expectation that the focus of development will be on brownfield sites in the early years, it is recognised that some land will need to be released from the green belt to fully meet Greater Manchester's housing and employment requirement.

3. The comments from the Draft GMSF 2019, highlighted respondents' concerns about the ability of the transport network to accommodate growth in Greater Manchester. This note explains Greater Manchester's current pathway to achieving the 'Right Mix' transport vision to reduce car's share of trips to no more than 50%, with the remaining 50% made by public transport, walking and cycling. This will mean approximately one million more trips each day using sustainable transport modes in Greater Manchester by 2040.

Background

4. We recognise that the world around us is likely to change significantly over the next twenty years, in ways that we cannot always predict. For example, the spread of COVID-19 throughout 2020 has had a profound impact on people's lives and wellbeing in a way that would have been difficult to imagine previously. While it is rare for an external event to have such a huge impact on people's everyday lives - and travel behaviours (people stopped travelling or changed the way they get around) - there is always the potential for our plans to be knocked off course by external events.

5. That is one of the reasons why Greater Manchester has adopted an adaptive, vision-led approach to transport planning. This means that the steps needed to achieve our 'Right Mix' transport vision will be continually monitored, and adjusted if needed, to achieve our goals. The 'Right Mix' transport vision involves creating a better transport system for Greater Manchester, so that we can reduce car's share of trips to no more than 50%, with the remaining 50% made by public transport, walking and cycling.

6. Although it is intended that this overall Right Mix vision will remain the same, changes in the way we achieve the Right Mix - necessitated by external events such as COVID-19, but also factors such as population growth – will lead to changes to the type of interventions set out in Greater Manchester's transport plans. This is one of the reasons we update our Greater Manchester Transport Strategy 2040 suite of documents on a regular basis.

7. This Right Mix Technical Note sets out adjustable steps – a 'pathway' – to achieving the Right Mix transport vision, in a way that supports existing worldwide trends that are being seen in Greater Manchester, including: the increased preference for high-density urban living, the growth of major city centres and the increased popularity of travelling by bike, rapid transit and inter-urban rail.

Relationship to Other GMSF Evidence

8. This document is a supporting document for both the Greater Manchester Transport Strategy 2040 and the GMSF. For the GMSF it is part of a suite of documents that examine the implications of the GMSF on transport in GM. The other documents include:

   - GM Transport Strategy 2040 and supporting 5 Year Delivery Plan. These documents together set out our strategic aspirations for transport in GM and articulate our plan for delivery.

   - An Existing Land Supply and Transport Technical Note: This note examines the spatial distribution of the Existing Land Supply and the transport interventions highlighted in the 5-Year Delivery Plan that will support key clusters of growth.

- A series of Allocation Locality Assessments. These assessments examine the likely local impact of Allocations development on the transport network and identifies where mitigation may be needed.
- GMSF Allocations Strategic Modelling Technical Note. This provides analysis of the potential strategic impact of growth on our transport network in a "policy-off" scenario.

9. Together these documents examine the local and strategic implications of growth. This Right Mix technical note underpins the GM Transport Strategy 2040 by outlining our adaptive vision-led approach to transport planning.

10. The Locality Assessments focus on identifying the local and strategic interventions necessary to deliver each of the individual allocations, while the Existing Land Supply note highlights the transport interventions needed to support the delivery of the Existing Land Supply.

11. Finally, we test a worse-case "policy-off" forecast in the Strategic Modelling Technical Note so that we can understand the degree to which the GMSF allocations affect the network if we were to take no further steps to achieving the 'Right Mix'. The strategic modelling forecast assumes that only committed / funded schemes and those schemes directly associated with the allocations proceed – but policy changes such as bus reform, integrated ticketing or behavioural change initiatives, and longer-term interventions such as Quality Bus Transit, Tram-train, or Metrolink extensions are omitted.

12. For the avoidance of doubt, the Right Mix vision is not in any sense a 'rival' to that forecast. The Right Mix is a transport vision for achieving policy objectives, not a forecast. Unlike the "policy-off" forecast for the Greater Manchester Spatial Framework, there is no prediction that a specific set of interventions will lead to a specific set of outcomes in the future. Instead, there is a pathway comprising a set of targets for changes in travel behaviour that will be modified in the light of monitoring of progress to achieving the vision for 2040.

Our transport vision for 2040

13. Our 'Right Mix' vision for 2040 was first set out in January 2019 in the draft Greater Manchester Transport Strategy 2040: Delivery Plan (2020-2025). The proposed pathway to the Right Mix was published at the same time in the Evidence-Base Update of the 2040 Transport Strategy.

14. It was noted at the time that the steps in the pathway will be reviewed in the light of monitoring progress towards achieving the Right Mix. It is too soon to get any results from monitoring, but some changes to the pathway have already been made. These result from:

    - Changes to population projections for Greater Manchester
    - Improvements and adjustments to baseline data which forms our understanding of the present situation
    - Changes and additions to some of the steps to better reflect the potential for achieving changes in mode share.

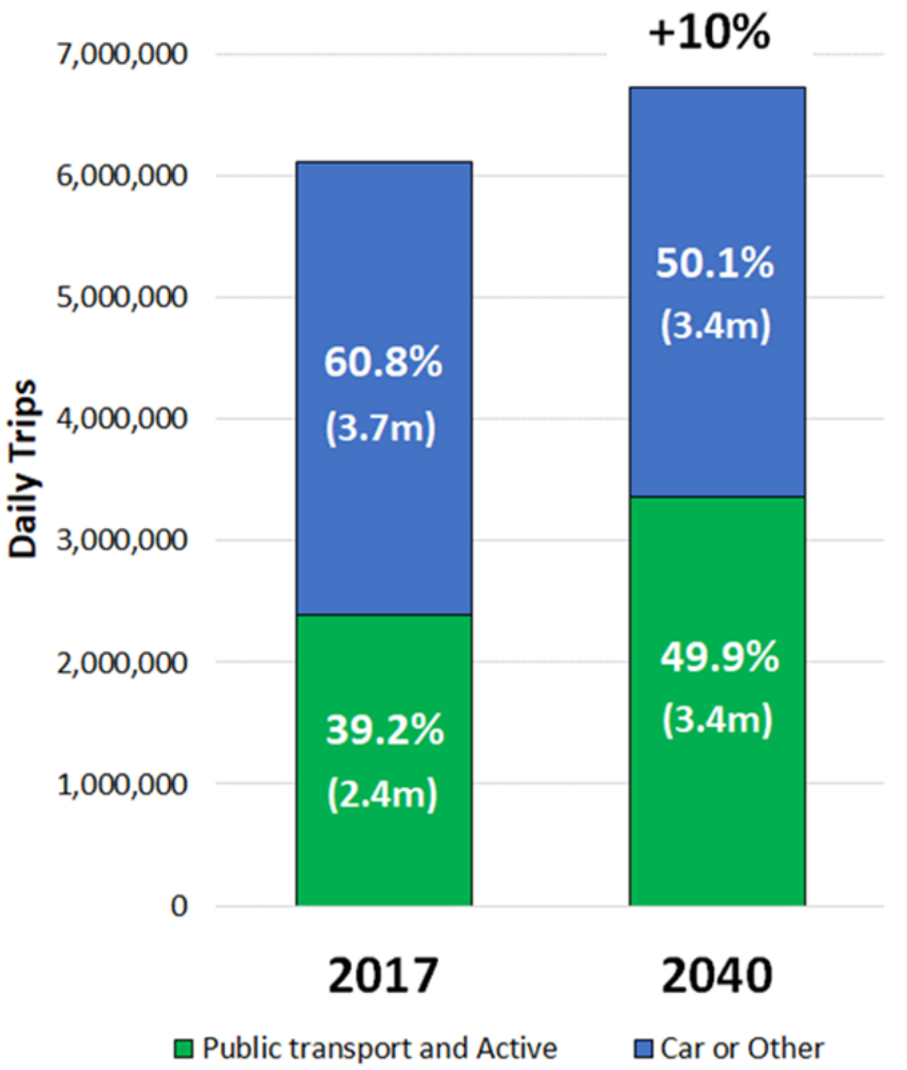
15. The Right Mix vision itself is unchanged - to improve our transport system so that we can reduce car use to no more than 50% of daily trips, with the remaining 50% made by public transport, walking and cycling. This will mean approximately one million more trips each day using sustainable transport modes in Greater Manchester by 2040 – see Figure V1, which contains some changes to the numbers that underlie the vision compared with the 2019 version.

16. Our analysis 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.

17. The vision of no net increase in motor-vehicle traffic includes trips by Greater Manchester residents, as well as trips by non-residents and goods vehicle movements, which will also be influenced by our transport and land-use interventions - but less so. We expect no net increase in motor-vehicle traffic to be achieved by a net reduction in residents' traffic (the great majority of motor vehicle-km in Greater Manchester); an increase in light goods vehicle movements; and – potentially, but not necessarily – some net increase in car-travel by non-residents.

18. The analysis is based on "TRADS" data which is Greater Manchester's household travel diary survey, in which a representative sample of Greater Manchester residents are interviewed about their recent trips. It is the Greater Manchester equivalent to the DfT's National Travel Survey, although there are some differences in survey methodology.

Figure V1: The Right Mix vision for 2040:



A pathway for achieving the "Right Mix"

19. In this section of the report, 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 steps to assist explanation. It incorporates the changes referred to above.

20. The steps in the pathway will be reviewed in the light of monitoring progress towards achieving the Right Mix. It is expected that the pathway will change in response to the results of monitoring. The changes could comprise changes in the interventions needed to achieve particular steps within the pathway, or changes to the steps themselves. To take one example of how this "adaptive planning" approach will work, there is presently little understanding of how "Future Mobility" – which can be broadly defined as disruptive technological and social change facilitating new and improved transport services – will affect travel behaviour. There is also much uncertainty about any longer-term effects on travel behaviour of the Covid-19 pandemic of 2020. As those effects become apparent, changes will be made to the proposed pathway to the Right Mix.

Spatial themes

21. 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.

22. The spatial themes have been represented within the Greater Manchester TRADS Years 3-5 (2014-2016) person-trip dataset through the application of the following criteria (Table V1).

23. Note: The spatial theme, 'A Globally Connected City' (i.e. non-work trips to Manchester Airport) has been excluded from the analysis. TRADS surveys cannot accurately pick up these trips since residents making trips to Manchester Airport will likely be outside Greater Manchester (e.g. on holiday abroad) at the time at which surveys would be carried out. The number of 'A Globally Connected City' trips is likely to be very small compared to the other spatial themes, so this is not considered to have a material impact on the results.

24. **Figure V2** and V3 show the change in volume of trips by mode for ‘Now’ and ‘2040’ within each spatial theme in the Right Mix vision.

Table V1: Allocation of trips to the spatial themes defined in the 2040 Transport Strategy

Spatial Theme	Includes	Except
Neighbourhood	Trips less than 2km (straight line) with at least one end within Greater Manchester	• Trips with a non-work attraction end at Manchester Airport and surrounding developments • Trips with an end within the Regional Centre
Wider City Region	Trips with at least one end in Greater Manchester, and both ends no more than 10km outside the Greater Manchester boundary	• Trips with a non-work attraction end at Manchester Airport and surrounding developments • Trips with an end within the Regional Centre • Trips under 2km
Regional Centre	Trips with an end in the Regional Centre	• Trips with a non-work attraction end at Manchester Airport and surrounding developments • Trips with an end more than 10km outside the Greater Manchester boundary
City to City	Trips with one end in Greater Manchester, and the other more than 10km outside the Greater Manchester boundary	• Trips with a non-work attraction end at Manchester Airport and surrounding developments

25. Note: The spatial theme, 'A Globally Connected City' (i.e. non-work trips to Manchester Airport) has been excluded from the analysis. TRADS surveys cannot accurately pick up these trips since residents making trips to Manchester Airport will likely be outside Greater Manchester (e.g. on holiday abroad) at the time at which surveys would be carried out. The number of 'A Globally Connected City' trips is likely to be very small compared to the other spatial themes, so this is not considered to have a material impact on the results.

Figure V2: "Right Mix Vision" change in volume of trips by mode for 'Now' and '2040', by spatial theme

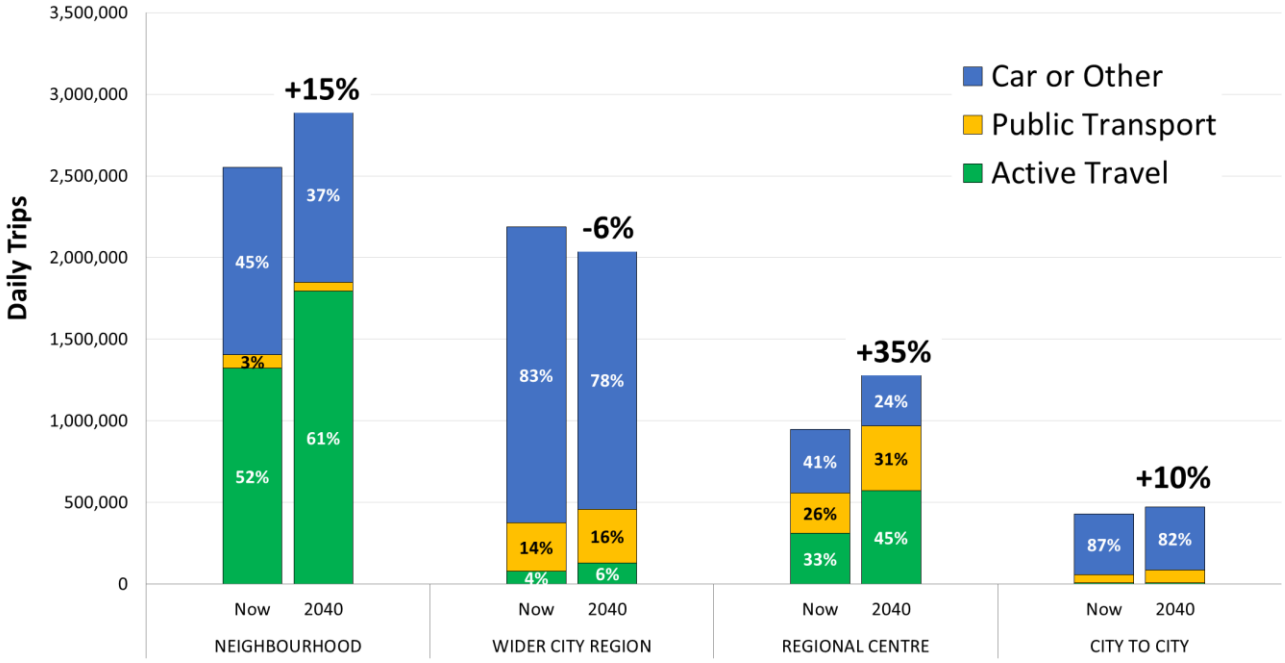
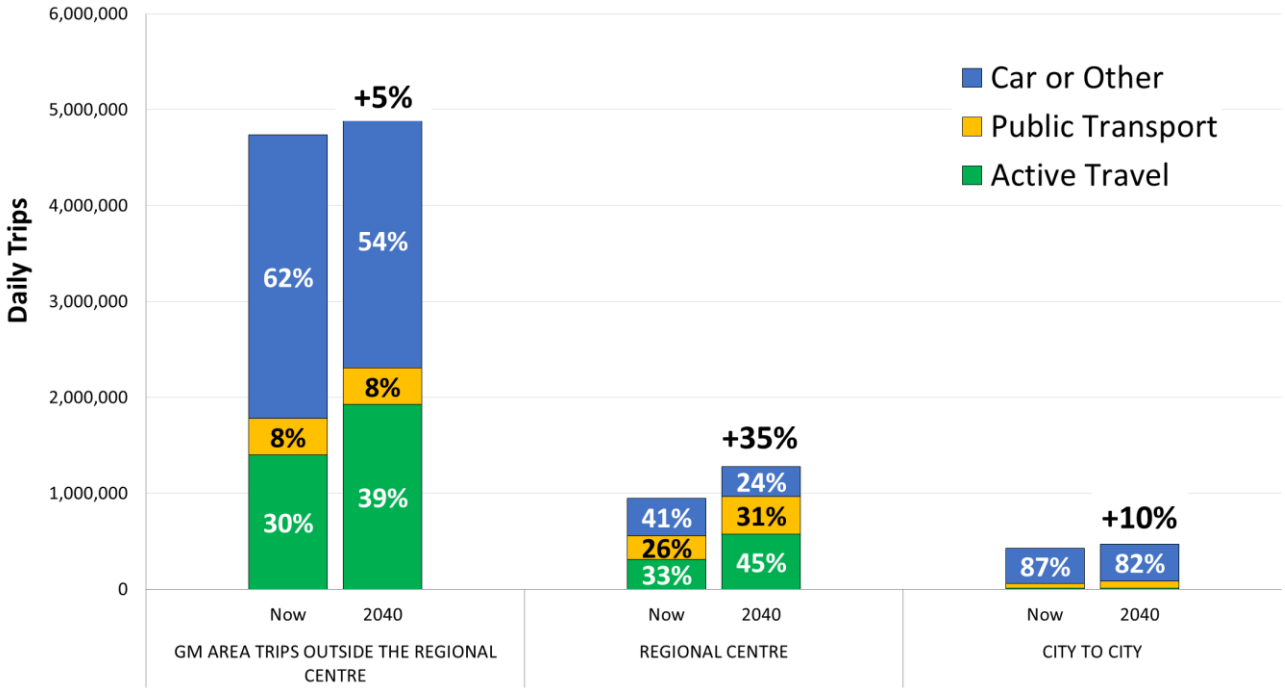


Figure V3: "Right Mix Vision" change in volume of trips by mode for 'Now' and '2040', by spatial theme, with Neighbourhood and Wider city-region trips combined



Comparing Table V2 with Table V3, it can be seen that, outside the Regional Centre, a reduction in Wider city-region trips is expected to be outweighed by an increase in Neighbourhood trips.

The steps to achieve the "Right Mix"

26. The steps in the pathway to achieve the Right Mix are as follows. Steps that have changed – or been added - since January 2019 are preceded by a '*'.

- *Step 1: 10% population growth leads to 10% 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, suburban rail, and bus rapid transit services, plus complementary policies, cause these rapid transit modes to increase their mode-share, taking 8% 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.
- *Step 8: Improved inter-urban public transport leads to a 5% reduction in car mode-share for city-to-city trips.

27. Each of the steps in the pathway to the Right Mix is described below, together with the evidence behind them. The changes in travel behaviour that they represent comprise a set of adjustable targets which will be reviewed and modified within the adaptive planning approach outlined in paragraph 6 above.

Step 1: 10% population growth leads to 10% growth in trips (and trip-kilometrage) by all modes

28. Step 1 assumes that the expected 10% growth in Greater Manchester population between 2017 and 2040 leads to a 10% increase in the number of trips – i.e. that trip-rate per person remains constant. In the early years of this century, trip-rates per person – both across England (see Figure V3) and in Greater Manchester (see Figure V4) - declined sharply, possibly as a result of the growth of the digital economy. There are some signs that the decline has levelled-off in recent years.

29. It is not expected that Greater Manchester's transport and land-use interventions will have much effect on trip-rates per person, and that factors outside Greater Manchester's influence will be the main driver of any changes in trip-rates.

30. Note that in the January 2019 version of the Right Mix, population growth to 2040 was expected to be 15%: the change reflects revised population projections.

Figure V3: Trend in trip rates, miles travelled per person and hours per person spent travelling: England 1972/73-2017, National Travel Survey (NTS0101)

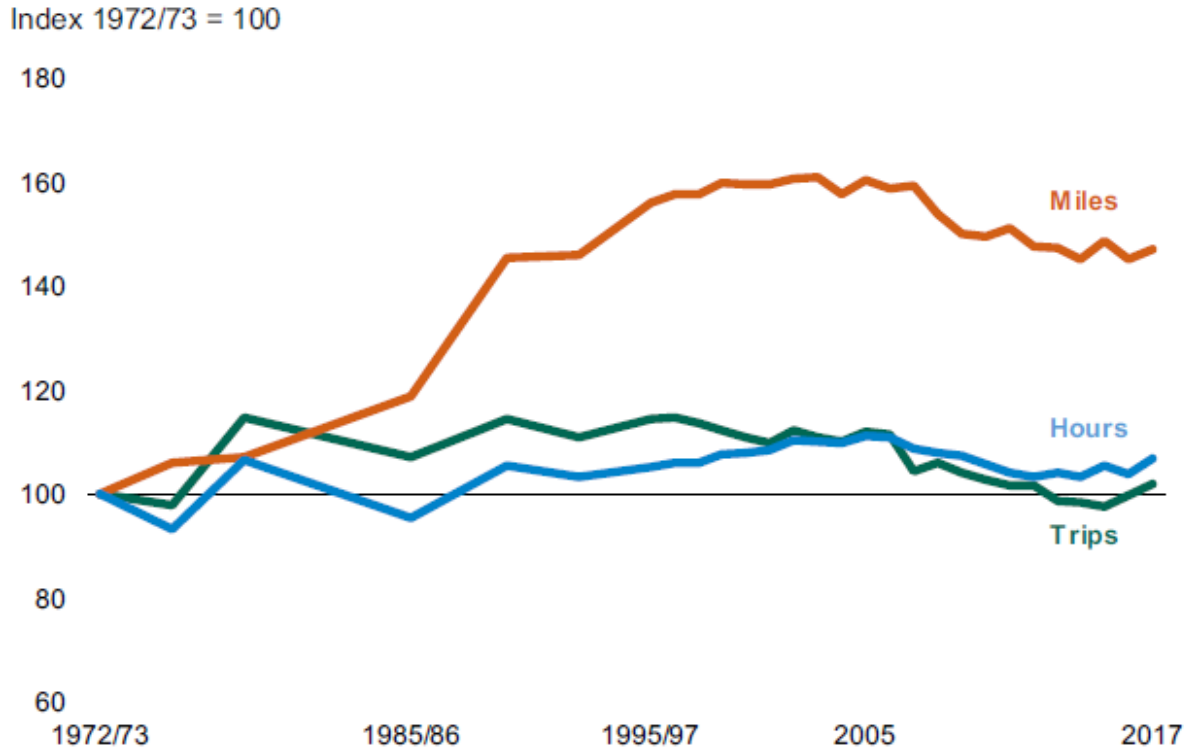
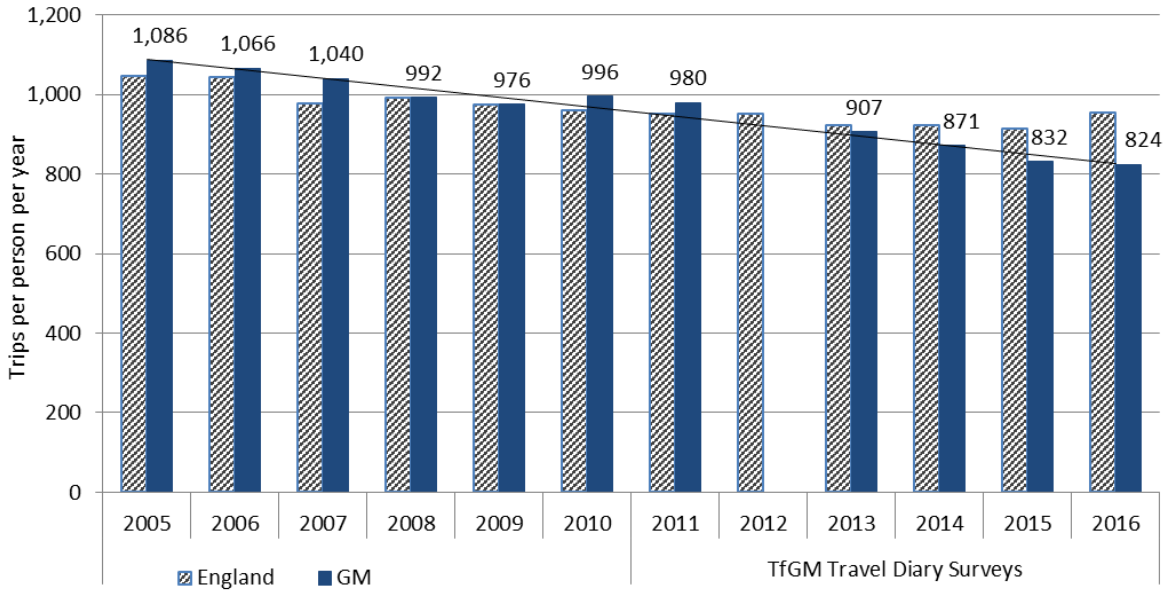


Figure V4: Trips per person per year 2005 – 2016 Greater Manchester



31. The table above is based on TfGM analysis of the Department for Transport National Travel Survey (2005 – 2016) and TfGM Travel Diary Surveys (2011 – 2016). N.B. DfT have recently changed the method for recording short walks – amended values for the trend for trips in England excluding short walks are reported in the Greater Manchester Transport Strategy 2040 Evidence Base - Travel in Greater Manchester section.

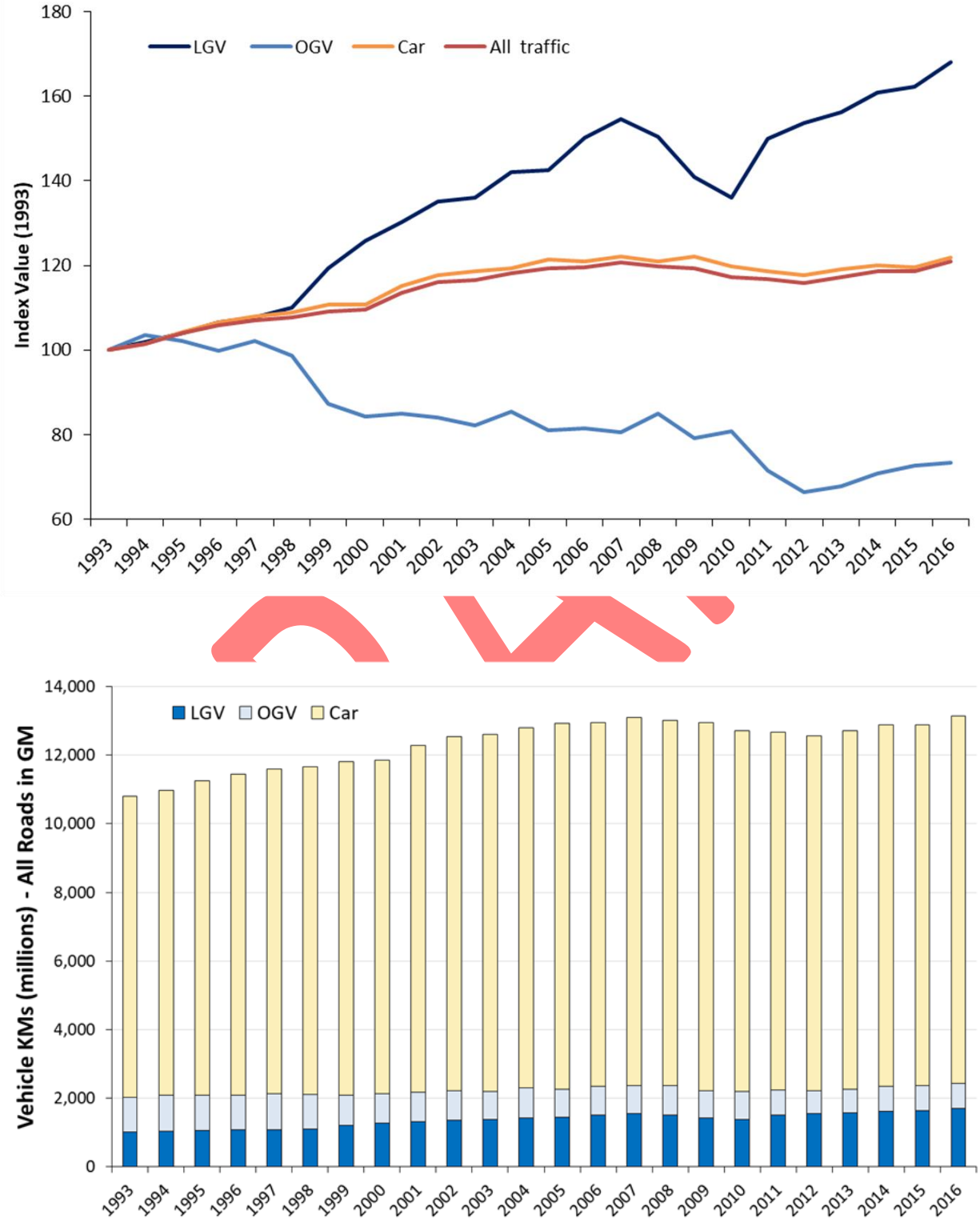
32. In recent years, the effect of falling trip-rates on motor-vehicle traffic has been at least partly offset by an increase in light-van movements, with an important cause being the growth of the digital economy leading to replacement of shopping-trips by movements of delivery vehicles. The growth of light-van movements has not been explicitly allowed for in this analysis, and the assumption that trip-rates will not continue their recent decline provides a balancing element of caution in estimating how externally-driven factors will affect volumes of motor-vehicle traffic in 2040.

33. Figure V5 shows that between 1993 and 2016 traffic in Greater Manchester increased by around 21% whereas LGV kilometrage on Greater Manchester roads increased by around 68% in the same period. LGVs now account for c. 1.7 billion kilometres on Greater Manchester roads, representing 13% of all traffic (up from 9% in 1993).

34. It is important to note that the majority of this growth in LGV traffic has taken place on motorways, where the total distance travelled by LGVs has more than doubled between 1993 and 2016. In comparison, A roads have seen a 27% increase, and B roads a 21% increase over the same period. In 2016, motorways accounted for 56% of total Greater Manchester LGV kilometres travelled, up from 41% in 1993.

Figure V5: Growth in Light Goods Vehicle traffic on Greater Manchester roads

Source: TfGM Highways Forecasting and Analytical Services: Report 1912 Transport Statistics 2016 Road Traffic Section.



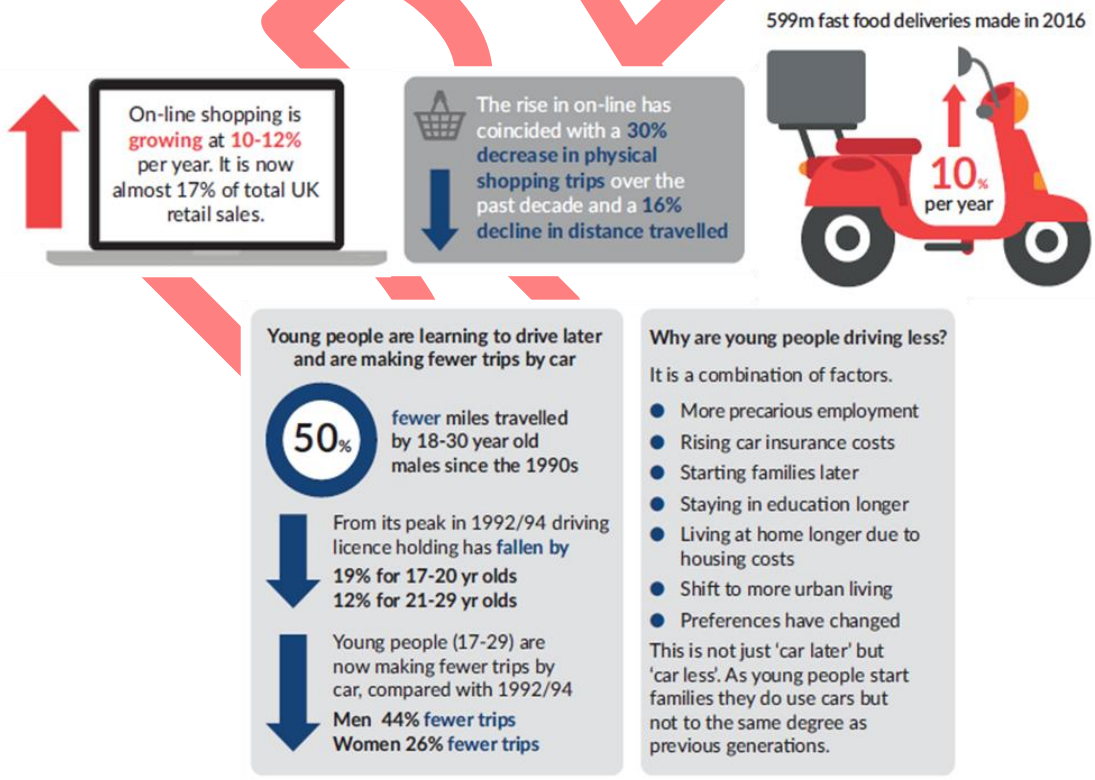
Step 2: Land-use and transport policies (plus changes in individual preferences) lead to a redistribution of 5% of trips from Wider City Region to Neighbourhood

35. There is a growing body of evidence that highly skilled young professionals want to live in attractive walkable urban environments. For example, in a recent survey of millennials aged 18-34 in ten major US cities, three in four said it is likely they will live in a place where they do not need a car to get around (Source: Transportation for America (2014), Survey: To recruit and keep millennials, give them walkable places with good transit and other options. Available from: http://t4america.org/2014/04/22/survey-to-recruit-and-keep-millennials-give-them-walkable-places-with-good-transit-and-other-options/

36. We anticipate that these preferences will translate into more Neighbourhood trips. Processes by which that might occur include (as reflected further by Figure V6):

- Trips to the supermarket being replaced by online delivery plus trips to the local convenience stores for top-up shopping.
- More walk-friendly neighbourhoods causing travel to local restaurants to replace travel to more distant eating venues.
- Reduced car-ownership among younger age-cohorts leading to a switch to neighbourhood trips that are more suitable for other modes of transport.

Figure V6: Evidence from 'All Change?' (Commission on Travel Demand)

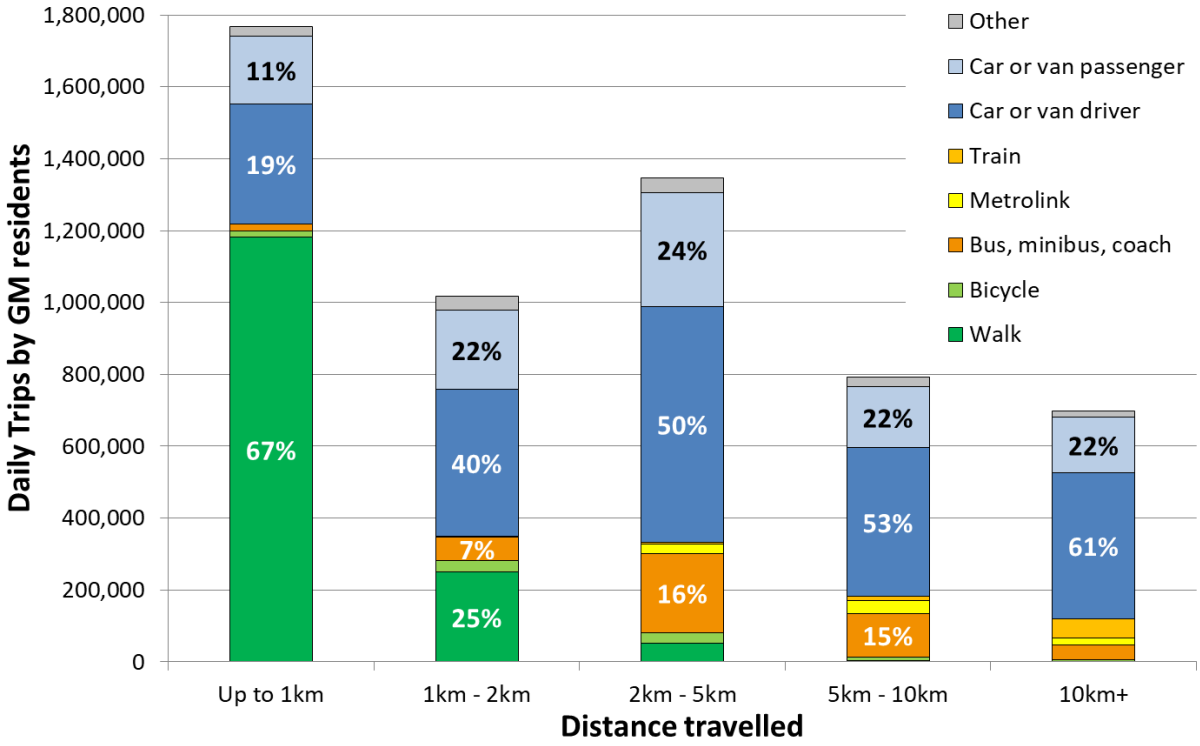


Source: Commission on Travel Demand (2018), All Change? The future of travel demand and the implications for policy and planning. Available from: http://www.demand.ac.uk/commission-on-travel-demand/

37. The targeted regeneration of town centres (including - but not confined to - the eight largest town centres in Greater Manchester – Altrincham, Stockport, Ashton-under-Lyne, Oldham, Rochdale, Bury, Bolton and Wigan.) will reinforce this preference and increase the potential for Neighbourhood trips. More residents in town centres will lead to more demand for local services, which will result in more people being employed to provide those services.

38. Many of these local trips will be made by walking. Figure V7 shows that the vast majority of walking trips made by Greater Manchester residents are under 2km in length.

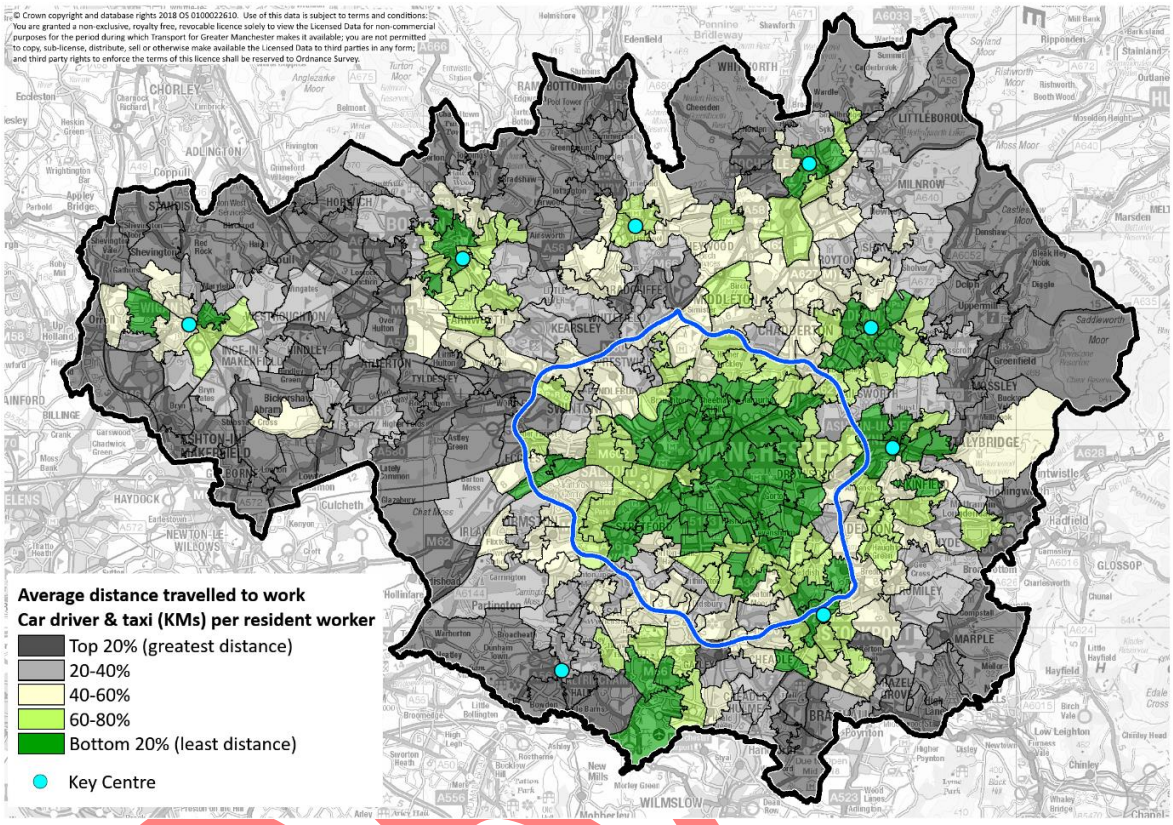
Figure V7: Main mode and distance travelled, Greater Manchester TRADS Years 3-5 (2014-2016)



39. The Mayor's Town Centre Challenge will provide a new and concerted effort to support Greater Manchester's local authorities to realise the potential in town centres, with a particular emphasis on achieving sustainable communities featuring thriving housing markets. These sustainable communities will provide their residents with greater scope to adopt non-car lifestyles by increasing the likelihood of being able to access the majority of what they need (across the full spectrum of journey purposes) without needing to travel further than 2km.

40. Figure V8 highlights the existing potential of the eight largest town centres and the urban area within the M60 for delivering beneficial travel outcomes by showing that residents within these areas tend to travel less distance (measured by car-driver-km per head) to travel to work (when compared to areas on the periphery of Greater Manchester).

Figure V8: Average distance travelled to work (km) as car-driver per resident worker, Census 2011



41. Note that this map shows average car-driver-km to work across all workers in each zone, including those who don't travel by car

42. To support the 2040 Transport Strategy, Greater Manchester is planning to implement "Streets for All". Streets for All is Greater Manchester's new way of thinking about the role of streets in creating sustainable, healthy and resilient places. It focuses on balancing the movement of people and goods alongside the creation of more people-friendly and less polluted streets and places. Specific Streets for All investments will depend on the specific needs of each locality, but they are likely to reflect a greater emphasis on "place" in densely populated residential areas, thereby encouraging the development of walkable communities which generate Neighbourhood trips.

43. Figure V9 shows the tendency within Greater Manchester for densely-populated areas to hold above-average (in comparison to Greater Manchester as a whole) concentrations of no-car households. This is complemented by Figure V10 which shows how these densely-populated areas are also generally characterised as having above-average (in comparison to Greater Manchester as a whole) levels of public transport accessibility.

44. In Figure V10, public transport accessibility is measured by GMAL (Greater Manchester Accessibility Levels), which is 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. GMAL gives particular emphasis to bus accessibility and are not affected by the higher speeds offered by National Rail or Metrolink services.

Figure V9: Total Cars & Vans per head and Resident Population Density, Census 2011

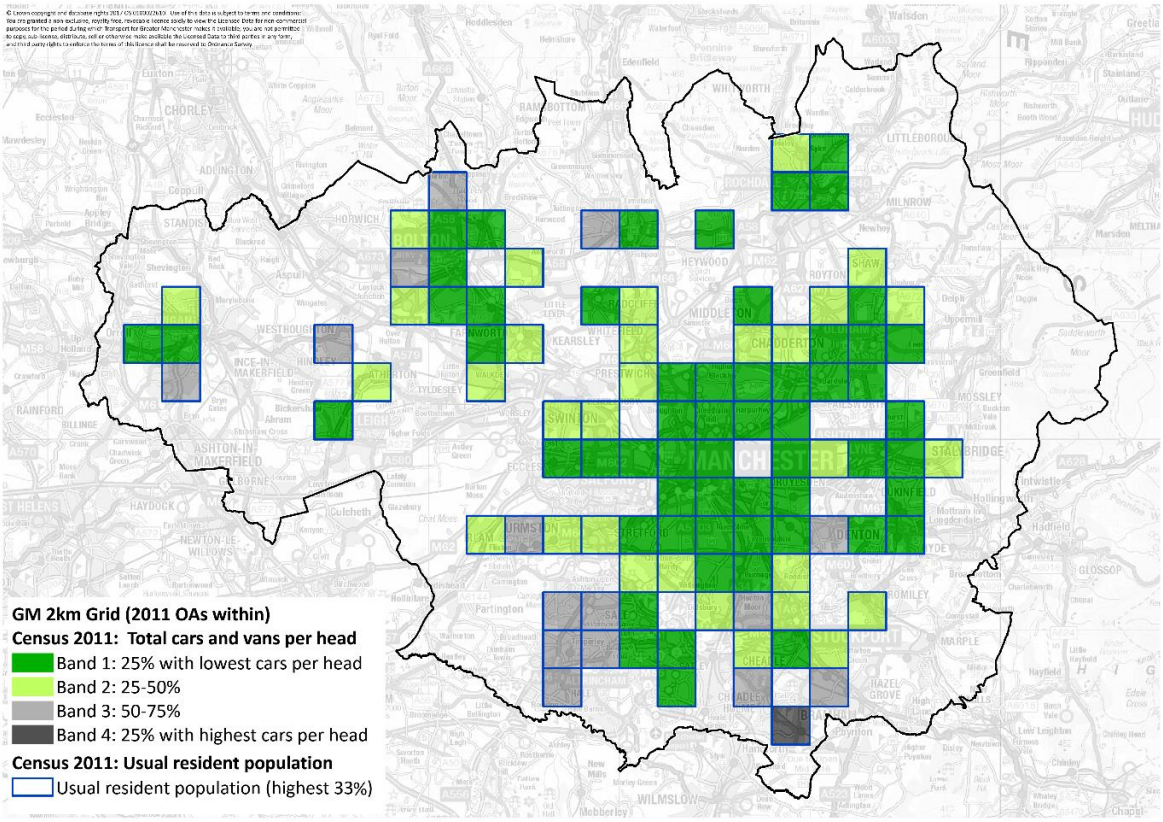
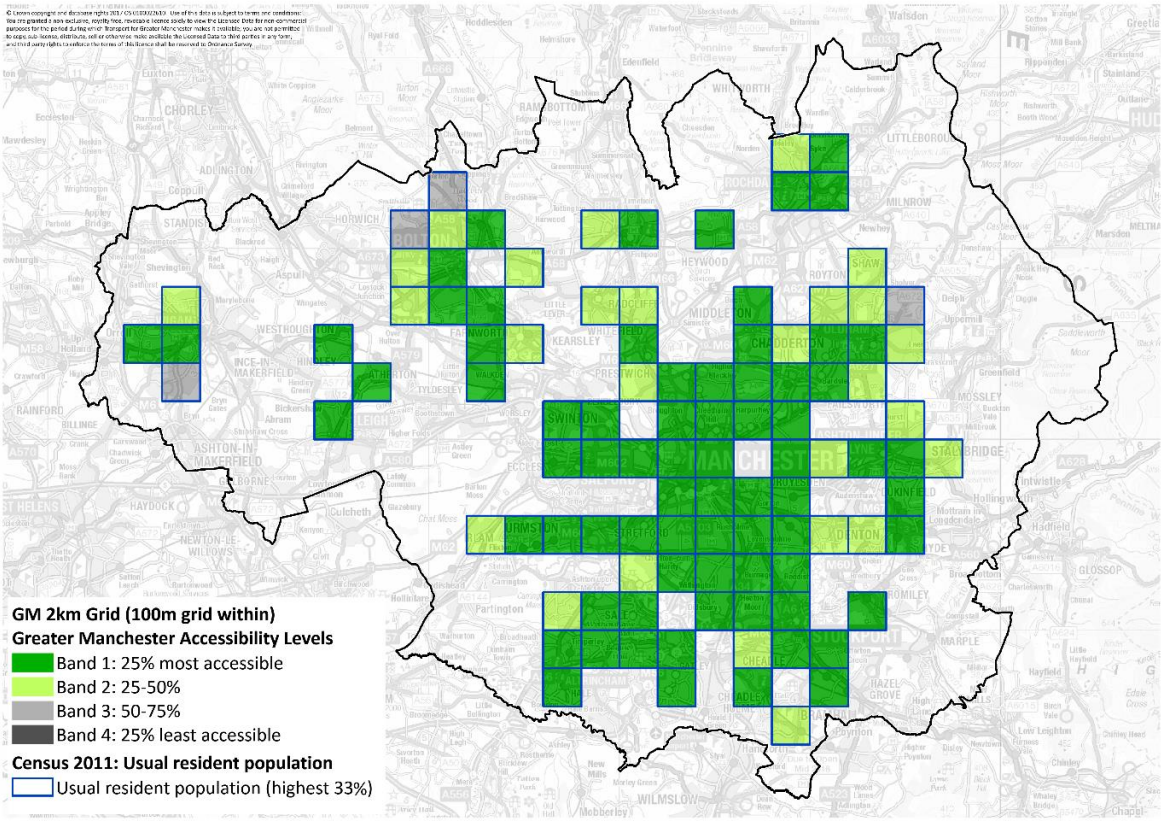
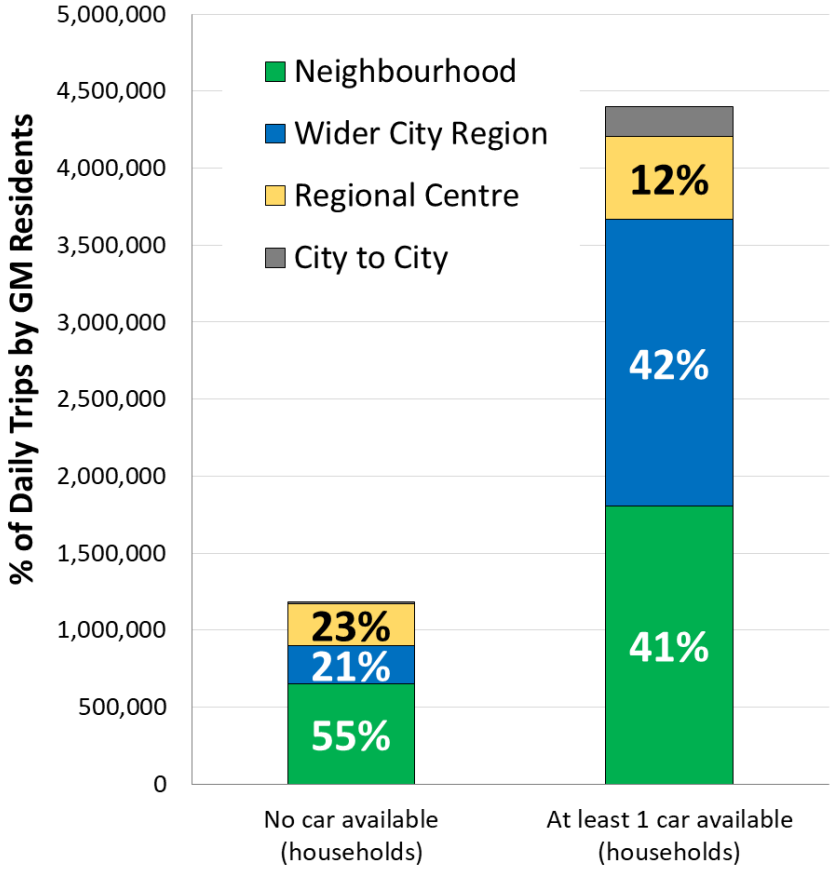


Figure V10: GMAL (October 2017) and Resident Population Density, Census 2011



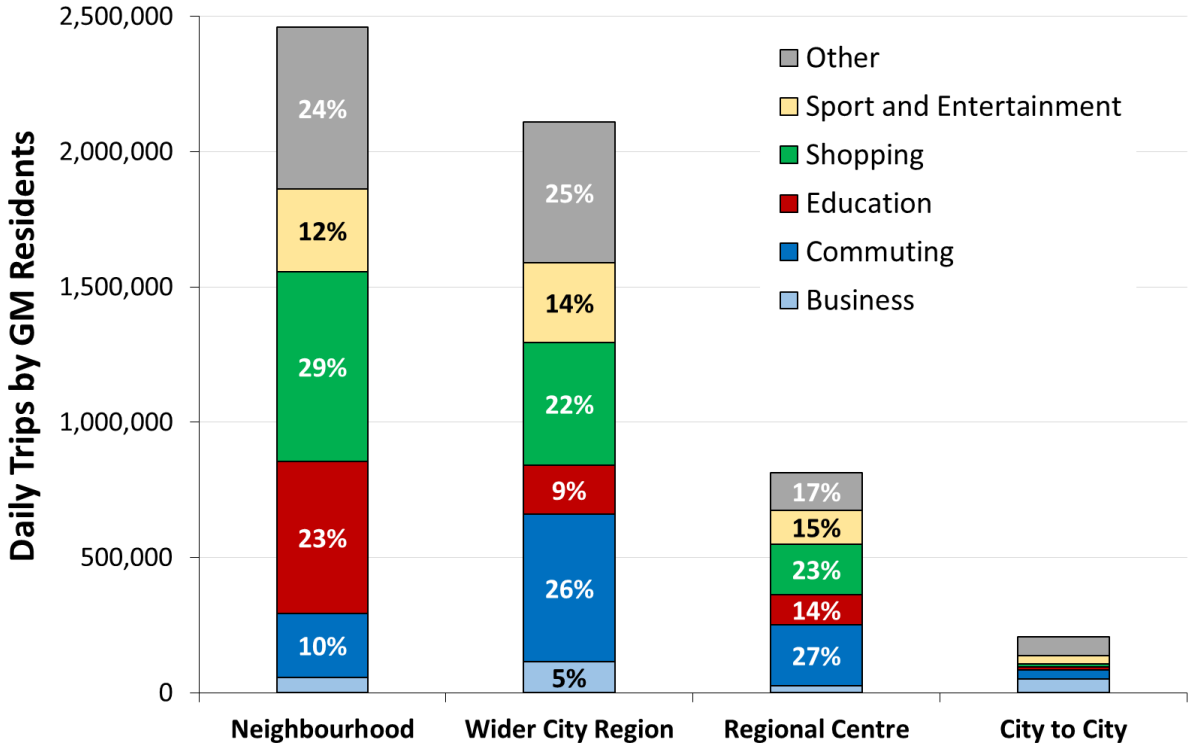
45. Together, Figure V9 and Figure V10 highlight the importance of attractive and frequent bus services in facilitating non-car-dependent lifestyles. Investment in bus priority will be important in facilitating those attractive and frequent bus services. Figure V11 shows that people who don't own cars are likely to make more Neighbourhood trips.

Figure V11: Daily Trips by Spatial Theme: No car households vs. Car available households, Greater Manchester TRADS Years 3-5 (2014-2016)



46. Figure V12 shows journey purpose by spatial theme. This analysis highlights the dominant role of education and shopping within the Neighbourhood spatial theme, when compared to the Wider City Region and Regional Centre spatial themes where there is a much greater emphasis on commuting.

Figure V12: Journey Purpose by Spatial Theme (Daily Trips by GM residents, GM TRADS 2014-16)



47. There are some counteracting forces against a move to more Neighbourhood trips: for example, increased choice for both primary and secondary education and increased centralisation of healthcare facilities. There are also major employment growth areas in locations such as Manchester Airport and M62 North-East Corridor, which will attract most of their workers from outside the immediate neighbourhood. Interventions to minimise any growth in motor-vehicle traffic resulting from developments such as these are detailed in Our Five Year Transport Delivery Plan

48. In sum, with land-use and transport policies which reinforce strong changes in individual preferences, we consider a net redistribution of 5% of Wider City-Region trips to Neighbourhood trips by 2040 to be a realistic target.

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

49. Step 2 represented how land-use and transport policies will combine to promote sustainable travel outcomes that will be focused upon the regeneration of existing urban areas outside of the Regional Centre. Step 3 accounts for the opportunities provided by the intensification of both the residential and employment markets within the Regional Centre.

50. The draft Greater Manchester Spatial Framework anticipates a major growth in jobs in the Regional Centre. For example, the GMSF, 'Greater Manchester's Plan for Homes, Jobs, and the Environment', notes that baseline economic trends suggest the majority of employment growth would be in Salford, Manchester, and Trafford.

51. It is expected that more jobs in the Regional Centre will lead to more Regional Centre trips, not just for work, but for other purposes, for reasons that include:

- Regional Centre workers will take trip-chaining opportunities to visit Regional Centre shopping and leisure attractions (i.e. combining several activities through linked trips – e.g. city-centre shopping on the way home from work).
- More jobs in the Regional Centre will cause an increase in population density in locations well-located for travel to the Regional Centre, which will have a relatively high propensity to travel to the Regional Centre for other purposes. This will be an additional effect to the increase in Regional Centre walk-trips resulting from more residents within the Regional Centre considered in Section 4 below.
- The developments that create the additional jobs in the Regional Centre will themselves attract trips for other purposes.

52. As will be seen from Figure V3, the net result of the Right Mix trip targets is that Greater Manchester area trips wholly outside the Regional Centre are expected to increase, but by less than Regional Centre trips.

53. The growth of Regional Centre trips is expected to take place without any net growth in car trips, reflecting the constraints on the highway network and an increased focus on "place" in allocating highway space. Annual counts of movements crossing the MSIRR inbound show that car volumes crossing the MSIRR cordon inbound have fallen substantially over the past fifteen years, both in the AM peak (see Figure V14) and inter-peak periods.

54. The growth of Regional Centre trips will place substantial demands on the public transport network. More details of public transport capacity requirements are given under Step 6 below.

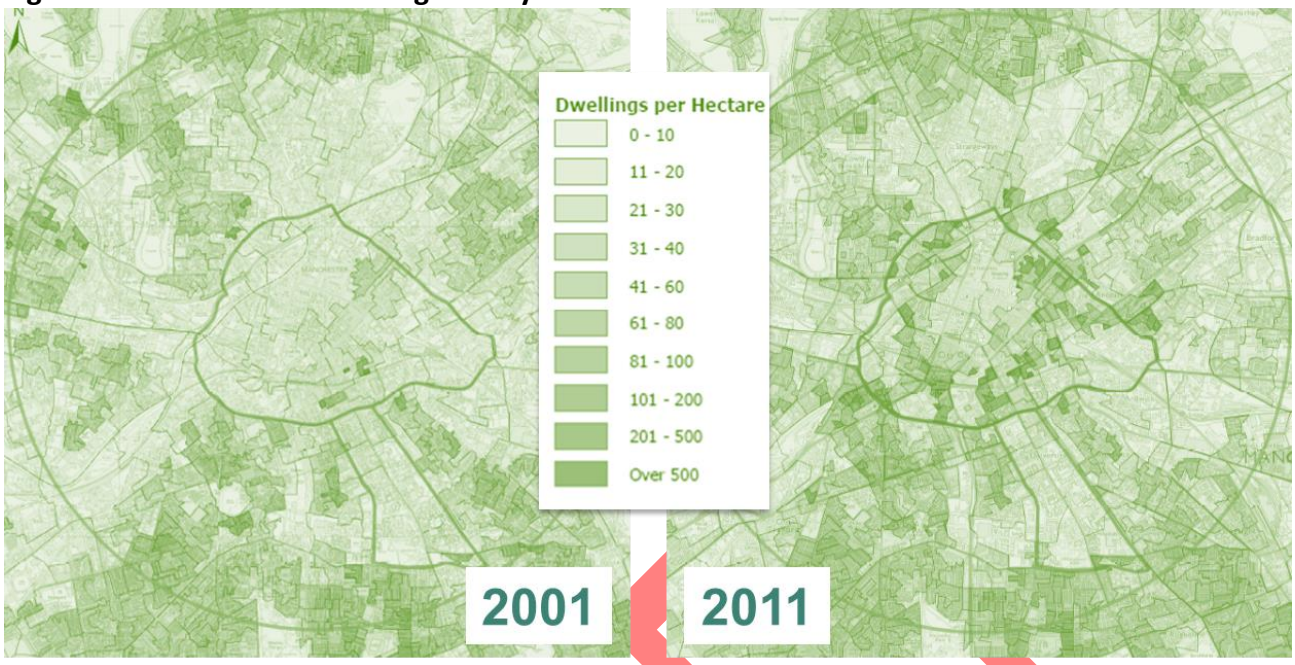
Step 4: Land use change and transport interventions lead to a higher mode share for walking for Regional Centre and Neighbourhood trips

55. The population of the Regional Centre is expected to roughly double by 2040, which is expected to lead to an increase in the proportion of Regional Centre trips made by walking. A cautious allowance has been made for this by increasing the walk mode share of Regional Centre trips from 30% in 2017 to 38% in 2040 (an increase of approximately 25%) and reducing the mode share of other Regional Centre trips by the same proportion. Note that in the January 2019 pathway to the Right Mix, the share of walking for Regional Centre trips in 2017 was only 24%. That has now been revised upwards after adjusting for under-recording of trips by residents of Regional Centre apartments.

56. Greater Manchester's Streets for All approach will reflect a greater emphasis on "place" at the local street level, thereby encouraging the development of walkable communities. This is estimated, at a high level, to support an increase in walk mode-share for Neighbourhood trips from 50% to 55% (the effect of interventions to improve cycling is allowed for under Step 5, "Transformational Cycling Policies" below). As noted under Step 2, attractive bus services – and hence investment in bus priority – will be important in increasing walk-trips.

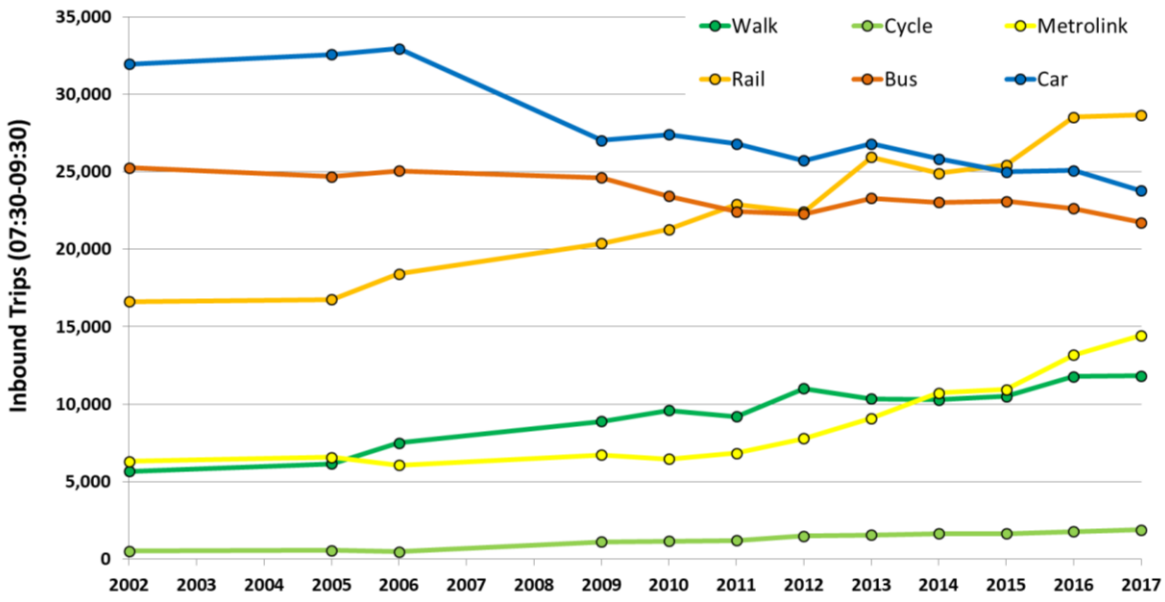
57. Figure V13 and Figure V14 indicate how the increase in dwelling density in the vicinity of the MSIRR (located in close proximity to the extensive range of facilities offered within the city centre) between 2001 and 2011, coincided with a rapid increase in the volume of inbound walk movements across the City Centre cordon during the AM Peak. In interpreting Figure V14, it is important to note that the walk movements across the MSIRR include walk-egress legs of car trips, by which motorists park outside the MSIRR and walk across it to their city-centre destinations. It is believed that the number of such walk-egress legs of car trips has reduced over time, and so the increase in walk trips across the MSIRR by local residents is probably greater than the overall observed increase in walk movements.

Figure V13: Residential dwelling density around the MSIRR



Source: TfGM analysis of Census 2001 and 2011 data

Figure V14: Inbound Trips by Mode across the City Centre cordon (AM Peak)



Source: TfGM Highways Forecasting and Analytical Services

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

58. The adjustable targets for cycle mode shares for Greater Manchester in 2040 are set out below.

- Neighbourhood: 10%
- Wider City Region: 5%
- Regional Centre: 10%.

59. These cycle mode shares targeted in Step 5 represent Greater Manchester's ambitious aims for growing levels of cycling, in line with current policies.

Greater Manchester's current ambitions for cycling

60. Greater Manchester's ambitious vision for cycling is set out in the 'Made to Move' report, by Greater Manchester Cycling and Walking Commissioner Chris Boardman. Among other actions, it calls for a ring-fenced, 10 year, £1.5 billion infrastructure fund, starting with a short-term Mayor's Challenge Fund to kick-start delivery for walking and cycling (now committed through the Transforming Cities Fund, totalling £160m). The goal of the Made to Move report is described as follows:

> "To double and then double again cycling in Greater Manchester and make walking the natural choice for as many short trips as possible."

61. If this goal is aligned with the suggested 10-year fund, that would mean a 300% increase in cycling levels by 2028. Based on the current Greater Manchester cycling mode share (from TRADS) of 1.7%, a 300% increase (equivalent to doubling and then doubling again) would equal a 6.8% mode share across all spatial themes. This suggests that the adjustable targets for mode shares above should be achievable by 2040, if current policies are fully delivered.

62. Interventions needed to achieve these adjustable targets for cycle mode share in Greater Manchester will include:

- Reallocation of road space towards cycling in appropriate locations as part of Greater Manchester's Streets for All approach.
- Implementation of the Cycling and Walking Commissioner's proposed Bee Network.
- Increases in capacity of the cycle network, especially in and around the Regional Centre and areas of high cycle demand elsewhere in Greater Manchester.
- Provision of cycle parking.

Evidence from other city regions

63. Benchmark evidence from other city regions also suggests that rapid growth in cycling levels is possible. For example:

- The central aim of the Mayor of London's Transport Strategy is to achieve an 80% mode share for sustainable (non-car) modes by 2041. Cycle mode share in London was approximately 3% in 2018. Current projections prepared by TfL to support the Strategy range from a 6% mode share for cycling in the 2041 'Core reference case', through to a 15% mode share by 2041 in the most aspirational scenario. The Greater London Authority (2018), Mayor's Transport Strategy 2018 is available from: https://www.london.gov.uk/what-we-do/transport/our-vision-transport/mayors-transport-strategy-2018

- In Seville, cycle mode shares were negligible in 2006 but rose to 5.6% by 2011 following the implementation of a cycle investment programme. Research by Marques, R., Hernandez-Herrador, V. and Calvo-Salazar, M. (2014) entitled "Seville: a successful experience of bicycle promotion in a Mediterranean context" within The Sustainable City, Volume 1, pages 769-781. Available at: https://www.witpress.com/Secure/elibrary/papers/SC14/SC14065FU1.pdf?_sm_nck=1

- In Dublin, less than 2.3% of people travelled into the city centre by bike, in 2006, but by 2015 this figure had more than doubled to 5.4%. Research from Dublin City Council. (2016). Dublin City Council Transport Study. Available at: https://consultation.dublincity.ie/traffic...transport/traffic.../Dublin%20City%20Centre

Abstraction of trips from other modes

64. DfT's meta-analysis of studies of abstraction, which has informed DfT's Active Mode Appraisal toolkit (Department for Transport (2018), TAG data book table A.5.4.7. Available from: https://www.gov.uk/government/publications/tag-data-book) – has been used as the basis for estimating how cycle trips are abstracted from other modes. It has however been necessary to substantially modify the source-mode shares reported in that analysis in order to allow for variations in baseline mode shares by spatial theme.

65. The abstraction from rail-based modes is very high in the DfT meta-analysis, which suggests that it is based on metropolitan areas with higher shares for rail-based modes than Greater Manchester. Since (developed-world) cities with high rail-based mode shares typically have relatively low car mode-shares, there is reason to believe that the use of the DfT's values without adjustment would understate the reduction in car trips resulting from transformational cycling policies.

Table V2: Estimated breakdown of additional cycle trips by mode

Mode	Wider City-Region: % breakdown of cycle trips abstracted	Neighbourhood: % breakdown of cycle trips abstracted	Regional Centre: % breakdown of cycle trips abstracted
Bus	25	5	23
Car/taxi	56	41	23
Rail	7	0	17
Metro	8	3	14
Walk	4	51	24
Total	100	100	100

66. The values in Table V2 – which represent a change from the January 2019 pathway to the Right Mix – assume that improved cycling facilities do not affect the overall trip-rate. The changes in mode of travel resulting from improved cycling facilities will partly take place through redistribution of trips towards those more suited to cycling. That will lead to a reduction in total person-kilometrage because cycle trips within most of the spatial themes (although not Neighbourhood) are shorter than average.

Step 6: Improved metro, suburban rail, and bus rapid transit services, plus complementary policies, cause these rapid transit modes to increase their mode-share, with their share of Wider City Region trips increasing to 8%

67. At present in Greater Manchester, approximately 60% of metro and suburban rail trips have an end in the Regional Centre. Although the Regional Centre will always be a very important trip attractor for rapid transit, Greater Manchester aims that rail-based rapid transit (meaning metro and suburban rail) should in the future serve a wider range of trip-origins and destinations, thus greatly extending the benefits of these rapid transit modes. For example, there is a need to provide better rapid transit connections for residents of the north of Greater Manchester to reach job opportunities in the southern half of the city-region, in locations that include Manchester Airport and Trafford Park. Traffic congestion on the highway network and slow public transport links mean that many of these trips are at present difficult, especially at peak times.

68. The present limited focus of metro and suburban rail on the Regional Centre reflects:

- Limited peak capacity has in the past prevented offering attractive metro fares to cross-city trips serving a wider range of trip-origins and destinations. These trips will be more fare-sensitive because alternative modes to metro are typically more attractive than for travel to Manchester City Centre – e.g. car-parking is much cheaper outside Manchester City Centre.
- Journey-times through the city centre are slow on the street-running section of Metrolink, and cross-city connections for suburban rail are often difficult.
- Fares for mixed-mode trips are high: many non-Regional-Centre trips require travel on more than one mode if made by public transport.

69. At present, Greater Manchester TRADS data shows that about 2% of Wider City Region trips use metro or National Rail services, a majority of which will comprise short trips within corridors. To attract as many as 8% of Wider City Region trips to rapid transit modes, it would be necessary to attract demand from a much wider base than just intra-corridor trips served by metro, bus rapid transit, or National Rail lines. Instead it would need to attract the middle-distance trips – especially longer middle-distance trips – for which rapid transit can compete with car. These are mostly trips that would route via the M60 if using car, and would route via the Regional Centre if using rapid transit.

70. Therefore Step 6, together with Step 3 above (redistribution of 10% of Wider City Region trips to Regional Centre without any increase in Regional Centre car trips) will have substantial implications for public transport capacity and service-levels on rapid transit services to and through Manchester City Centre. Several considerations indicate that only a major increase in metro capacity in the city centre - probably through a Regional Centre metro tunnel - would create a sufficient step-change to achieve these adjustable targets. This was the rationale in the January 2019 pathway to the Right Mix of focusing the target specifically on metro services. However, reflecting the potential to increase usage of National Rail and bus rapid transit services, Step 6 now applies also to these forms of rapid transit.

71. A step-change in metro capacity in Manchester City Centre would enable shorter-distance-focused suburban rail services to be converted to metro, releasing capacity on the National Rail network to accommodate demand growth on remaining National Rail services, which would remain a very important part of the overall rapid transit service-offer.

72. Besides providing a step-change in metro capacity, a Regional Centre metro tunnel would also reduce the journey-times of cross-city trips by avoiding the city-centre street-running of the existing Metrolink system, whilst retaining its high service-frequencies. That will be very important in achieving the target of 8% of Wider City-Region trips using metro or National Rail.

73. To achieve 8% Wider City-Region trips using metro or National Rail, these networks would need to be supported by better access to stops and stations, since many Wider City-Region trips have at least one end located outside easy walking-distance to a rapid transit service. Future Mobility has great potential to improve access to the "first and last mile" of rapid transit journeys. Finally, integrated fares between public transport modes will be important in increasing the use of rapid transit, and especially for Wider City-Region trips.

74. The greatest capacity requirements in achieving the targets in Step 3 and Step 6 will be placed on metro. Initial analysis by TfGM suggests that a Regional Centre metro tunnel accommodating 24 trains per hour in each direction using trains of 150m length would be sufficient to meet the adjustable targets in Step 3 and Step 6. That would mean using trains that are more than twice as long as a present Metrolink double unit (two vehicles coupled together).

75. National Rail services would also need to accommodate substantial demand growth. As noted above, a step-change in metro capacity in Manchester City Centre would release capacity on the National Rail network to accommodate demand growth. There is also considerable scope for increasing National Rail network capacity in Greater Manchester by running longer trains.

76. Buses are expected to make a substantial contribution to accommodating the growth of travel demand to the Regional Centre. However, the growth in the metro network – as discussed above – would abstract demand from bus. Integrated fares between bus and metro would also reduce bus travel into the city centre by increasing use of buses as feeders to metro, rather than as a mode for travelling all the way into the city centre.

77. Despite the above negative factors, a net increase in bus travel to the city centre is nonetheless expected to be necessary to achieve the targets in the Right Mix.

78. Bus capacity constraints are more flexible than for rail-based transport, in that they can be overcome by allocating more roadspace to bus, and there is potential to introduce such measures in response to demand growth. Bus terminus capacity in Manchester City Centre is another constraint which will need to be resolved: plans for accommodating buses in the city centre are contained within the City Centre Transport Strategy.

Step 7: Transport policies (including travel demand management) lead to a 5% reduction in trip-length of Wider City Region car-trips

79. Trip redistribution – leading to either longer or shorter trips – is the main driver of long-term change in travel behaviour. For example, the roughly ten-fold increase in car travel in the UK since 1950 is almost entirely due to trip redistribution, with short trips by walk and bus being replaced by much longer car trips. Trip redistribution also caused average car trip-length to increase during the second half of the twentieth century.

80. Trip redistribution effects are allowed for in Steps 2 to 5 above, represented by Wider City Region trips redistributing to Neighbourhood (Step 2) and Regional Centre (Step 3). Steps 4 and 5 allow for a shortening of Neighbourhood and Regional Centre trips due to greater use of active modes.

81. Step 7 allows for a shortening of average car trip-length in the Wider City-Region category, due to roadspace reallocation to improve "place" and prioritisation of modes that make most efficient use of limited roadspace through Greater Manchester's Streets for All approach.

Step 8: Improved inter-urban public transport leads to a 5% reduction in car mode-share for city-to-city trips

82. City-to-city trips (see Figure V2) show a very high car mode-share, which reflects the fact that most of these trips are not between city centres, for which the public transport mode share is much higher than the average for this spatial theme (see the definition of "City to City" under "Spatial Themes" at the start of this chapter).

83. Major rail projects – notably HS2 and Northern Powerhouse Rail – can be expected to increase already-high rail mode share for travel between city centres. They can also be expected to redistribute trips, leading to an increase in the proportion of city-centre-to-city-centre trips within city-to-city trips. The land-use changes and other policies and interventions referred to in Step 3 can also be expected to increase rail mode-share to the Regional Centre for longer-distance commuting trips – from locations such as Blackpool and Chester, which are included within the city-to-city spatial theme.

84. A reduction in car mode-share by five percentage points has therefore been targeted: this spatial theme is expected to remain dominated by long car trips dispersed across a very wide range of trip origin-destination combinations. The targeted public transport mode-share represents an increase of approximately 50% in trip-volumes from the present.

Conclusion: the achievability of the 2040 Right Mix

85. Greater Manchester has many possible pathways available to achieving its Right Mix vision for 2040. Following an adaptive approach facilitates changes in policies and interventions to respond to the many uncertainties that lie ahead, avoiding the risks inherent in an inflexible plan. The pathway set out in this report aims to enhance existing trends that support the achievement of the Right Mix, including the increased preference for high-density urban living (Steps 2 and 4, facilitated by interventions that will support Step 7); the growth of major city centres (Step 3); and the increased popularity of travelling by cycle, rapid transit, and inter-urban rail (Steps 5, 6, and 8).

Transport for Greater Manchester

GMCA GREATER MANCHESTER COMBINED AUTHORITY

Greater Manchester Local Enterprise Partnership

tfgm.com/strategy