

# New Carrington Outline Transport Strategy

September 2023

**Trafford Council, working in partnership with  
Transport for Greater Manchester and the One  
Trafford Partnership**



## Executive Summary

### Introduction

The New Carrington Transport Strategy supports the proposed new housing and employment allocation at New Carrington, Trafford, Greater Manchester, which will entail the substantial development of around 5,000 homes and 350,000 sqm of commercial, industrial and warehouse sites over a 20+ year period.

The aims of the Transport Strategy are to:

- Build upon previous transport and development planning for New Carrington.
- Provide a strategic case for transport investment.
- Shape the longer-term package of transport investments.
- Enable preparation of a scheme appraisal specification, a transport modelling method, a business case scope, and an investment funding strategy.
- Recommend further iterative work in support of the Transport Strategy and set overarching transport principles for the detailed New Carrington Masterplan/ future planning applications.

### New Carrington and the Study Area

The proposed New Carrington PfE allocation is located in west Trafford, south of the River Mersey and east of the Manchester Ship Canal. The allocation includes a large area of brownfield land from the former Shell Carrington industrial site and other industrial areas, as well as greenfield land which extends towards Sale to the east and Warburton to the south. The existing communities which are adjacent to New Carrington - Carrington, Partington and Sale West - are relatively isolated with poor, congested highway links, as well as poor access to public transport.

The New Carrington allocation is a key component of the Places for Everyone (PfE), Greater Manchester Joint Development Plan Document (DPD). PfE is the strategic spatial plan for nine of the ten boroughs within Greater Manchester (GM), including Trafford, and it sets out the strategic planning policy framework. The allocation has been identified for significant residential and employment development and is of sufficient scale to create a new community.

PfE Policy JPA33 New Carrington sets the overarching requirements for the development, which include a clear intention to develop the site in a sustainable manner. Further guidance will be provided on developer contributions, delivery of infrastructure, development management policy (such as maximum car parking standards), and land use as part of a detailed Masterplan, which is a requirement of Policy JPA33. The Transport Strategy considers a number of connectivity interventions, including: internal and external walk and cycle links; land use; bus services; and local and strategic highway interventions.

### Vision and Objectives

The overall goal is to create a new sustainable community in the Carrington area (Carrington, Partington and Sale West), with high levels of internal walk and cycle connectivity, provision of internal facilities and good public transport connections, including to the wider Greater Manchester network. This Transport Strategy, which includes the provision of new transport infrastructure, is intended to help inform the sustainable delivery of the proposed New Carrington allocation and the regeneration and redevelopment of the existing brownfield site, contributing to the creation of new jobs and the development of new homes in a sustainable way.

## Transport Strategy Scenarios

To assess the uncertain impact of the development in terms of transport, a range of three future scenarios have been developed, which represent different trajectories and outcomes in terms of policy, travel behaviour and sustainability. These three scenarios are:

- **Scenario 1**, bottom (unsustainable, high cost, highway focussed):
  - ✦ Scenario 1 has a non-car mode share of 21%.
- **Scenario 2**, (Midpoint):
  - ✦ Indicative Scenario 2 has a non-car mode share of 26%
- **Scenario 3**, top (sustainable mode share, very high cost):
  - ✦ Scenario 3 has a non-car mode share of 46% (aligning with the TfGM Right Mix target for wider Trafford)

## Sustainable Transport Oriented Development (STOD)

The Transport Strategy has also given consideration to the form of development and identified that Sustainable Transport Oriented Development, or STOD, (otherwise known as Transit Oriented Development, or TOD, outside the UK) principles could be considered in the masterplanning of the site to help achieve greater sustainable movement across the allocation. STOD is a type of urban development that seeks to maximise the amount of residential, business and leisure space within walking distance of public transport services. A variation of the checklist/scoring approach recommended by the Institute for Transport Development and Policy has been used to test the three scenarios, set out within this Transport Strategy, see section 5.3.

## Risk

Progression of a large development, such as New Carrington, depends upon a sustainable Masterplan and appropriate transport investment, which this Transport Strategy will help to inform. Without an overarching Strategy there is a risk of creating unsustainable car dependency, leading to unacceptable levels of traffic and high levels of carbon emissions. This is a particular risk here, considering the undeveloped nature of much of the site and the need to link it to the existing transport network as well as providing new transport infrastructure. The highway links to the west are limited and much of the traffic generated will use the M60, potentially adding to existing congestion. The Transport Strategy sets out, using three scenarios, how investment in sustainable transport can mitigate this unacceptable situation. This will inform the ongoing process of planning the development and associated infrastructure.

## Conclusions

There is a shared ambition to establish New Carrington and adjoining neighbourhoods as sustainable communities with excellent active travel and public transport provision, but given the current context of New Carrington there are challenges to achieving this.

An assessment of three transport strategy scenarios has provided a better understanding of the transport challenges and uncertainties. The analytical work undertaken will support further appraisal and business case development as well as underpinning transport modelling. The Transport Strategy reports a sensible range of uncertain outcomes for the development of New Carrington, in terms of sustainability and feasibility, extending from a worst-case Scenario 1, (unsustainable, high cost), to a best case Scenario 3, (sustainable mode share, very high cost). Most importantly, it shows that a midpoint Scenario 2 is both realistic and achievable.

Securing a suitable balance in Scenario 2, between transport sustainability, satisfactory performance and affordability, is essential. The indicative Scenario 2 will undergo further iterative work to resolve intervention options, travel patterns, (especially trip distribution), impacts, costs, funding, land use arrangements, and approvals.

### **Next steps**

There are four next steps identified for the Transport Strategy, which are interlinked, namely:

- Undertake transport modelling work in accordance with the Transport Strategy to inform the design of the Carrington Relief Road Scheme, and continue the iterative process of developing Scenario 2;
- Produce a detailed Masterplan for the allocation, which is in accordance with PfE and local planning policies, particularly PfE Policy JPA33. This will include a detailed development and infrastructure phasing plan for the whole site, as well as identification of key transport schemes required to support the development.
- Develop a funding strategy for the Carrington Relief Road, as well as the wider New Carrington allocation. This will be a key component of the Masterplan Phase 1 which will identify the overarching infrastructure requirements and identify a proportionate contribution which development across the allocation will need to provide; and
- Prepare a business case for the first phase of transport interventions (including CRR, and associated sustainable transport complementary measures).

The New Carrington Transport Strategy 2023 is a snapshot in time and it will be subject to further refinement and amendment as part of the iterative process of developing the New Carrington Masterplan and infrastructure proposals for the site.

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## 1. Introduction

This report sets out a Transport Strategy focused on the connectivity improvements required to support proposals for the development of a new, sustainable and well-connected community in New Carrington, Trafford. The New Carrington development is a key part of the Greater Manchester (GM) Joint Development Plan, 'Places for Everyone'. The proposed PfE allocation comprises a total of around 5,000 new homes and 350,000 square metres of employment space, including completed and imminent planning commitments, built in phases over a 20+ year period.

The purpose of the Transport Strategy is to build on previous transport and development planning for New Carrington, provide a strategic case for transport investment and shape the longer-term package of transport investments. It will enable scheme appraisal specification, transport modelling and business case preparation to commence, and it recommends further work to confirm the likely scope and outcomes from the most realistic development scenario.

This strategy forms part of the business case for key elements of the transport intervention package, as well as feeding into the wider investment programme across Greater Manchester. It supports both the business case and the various funding bids required to deliver the intervention packages, both within the New Carrington allocation and the wider Carrington / Partington area. The approach also informs the Appraisal Specification Report relating to the local interventions.

### 1.1. New Carrington – a New Sustainable Community

The New Carrington allocation provides an opportunity to deliver significant public transport improvements, enhance the active travel network and provide strategic highway improvements to support the creation of a much more sustainable community.

Previous large-scale developments of this sort have tended to be very car-dependent, necessitating car trips for employment and most facilities and services and encouraging multi-car owning households. This is unsustainable in terms of the imperative to decarbonise the economy, as well as its impact on the surrounding highway network in terms of congestion and pollution. This approach, known as 'predict and provide' leads to pressure to upgrade the surrounding highway network, leading to further increases in demand and an unsustainable cycle of increased demand, traffic growth and more public sector highway investment.

For New Carrington to be successful, in terms of sustainability, connectivity and inclusivity, these issues of isolation and car dependency must be addressed by providing improved connectivity as well as ensuring that the developments themselves contain key facilities which will reduce the demand to travel outside of the area for employment, education, shopping, leisure and healthcare. Achieving this sustainability for the new developments in New Carrington will benefit the existing communities within the wider area, improving their long-term sustainability and ensuring that people without access to private cars can still participate fully.

The housing / employment allocations and the connectivity improvements are inextricably linked:

- Without the physical access provided by new road links, the homes and employment sites could not be built.
- Unless suitable walking and cycle routes and bus facilities are also provided, the new developments will have a high car-dependency, for even short trips.

However, even if the above connectivity improvements are delivered, the overall goal of a well-connected and sustainable community at New Carrington will not be met. Achieving this requires:

- The construction of the homes, employment and the provision of internal facilities (shops, schools, healthcare facilities and leisure amenities), reducing the need for external trips;
- Developments which are designed to support the use of active mode for short journeys, including permeability and walk/cycle facilities within the developments themselves;
- Local bus services which provide links to local destinations and further afield through connections with tram and rail stations to provide good regional connectivity via the region-wide tram and rail network; and
- Safe, attractive and direct active mode facilities, through an expanded walk and cycle network, in and around neighbouring areas (e.g. Partington and Sale) to ensure that end-to-end active mode trips can be made to nearby destinations, including those accessing regional rail/tram stations.

This report sets out the synergies and relationships between the connectivity improvements and the development of the New Carrington community as a whole. It demonstrates how the proposed connectivity improvements will work alongside a broader set of interventions to bring about the required goal of a well-connected and sustainable community in Carrington.

## 1.2. Approach to Transport Strategy

This Transport Strategy considers a number of connectivity connections, including: local and strategic highway connections; internal and external walk, cycle and wheeling links; bus services (including bus priority). The transport interventions under consideration are covered in more detail in Section 6.

The Business Case for the Carrington Relief Road will contain a Strategic Case, one of the five cases along with the Economic Case (value for money), Financial Case (affordability and funding), Commercial Case (procurement) and Management Case (delivery, including governance). This Strategic Case will focus on establishing a case for change in the context of the strategic imperatives (referencing key national, regional and local policies and strategies) and a preferred way forward in terms of the strategic options.

This Transport Strategy will support the development of the Strategic Case for the CRR, as well as the wider New Carrington Masterplan by:

- Establishing the current conditions baseline in relation to connectivity and outline projections for the future without the PfE developments in Carrington and under ‘policy off’ and ‘policy on’ scenarios.
- Using principles of ‘sustainable transport oriented development’ (STOD), to determine the level of public transport and active mode connectivity under a variety of scenarios.
- Setting out the objectives and overarching vision for the area in the context of PfE and other relevant strategies.
- Identifying the expected transport demand characteristics stemming from the proposed developments, in terms of trip distribution and mode share – again under ‘policy off’ and ‘policy on’ scenarios.
- Identifying potential transport interventions under ‘policy off’ conditions (i.e. largely highway interventions) and ‘policy on’ conditions (with emphasis on public transport and active mode investment).
- Setting out a balanced and affordable transport package, which will support the vision and objectives, incorporating appropriate elements of both ‘policy off’ and ‘policy on’ interventions.



- Together with the detailed Masterplan, consider the phasing of investment to best meet the development phasing with regard to encouraging travel behaviour consistent with the vision and objectives.
- Setting out the next steps in terms of refining the approach, modelling the impacts and developing the Business Case.

## 2. Study Area Context

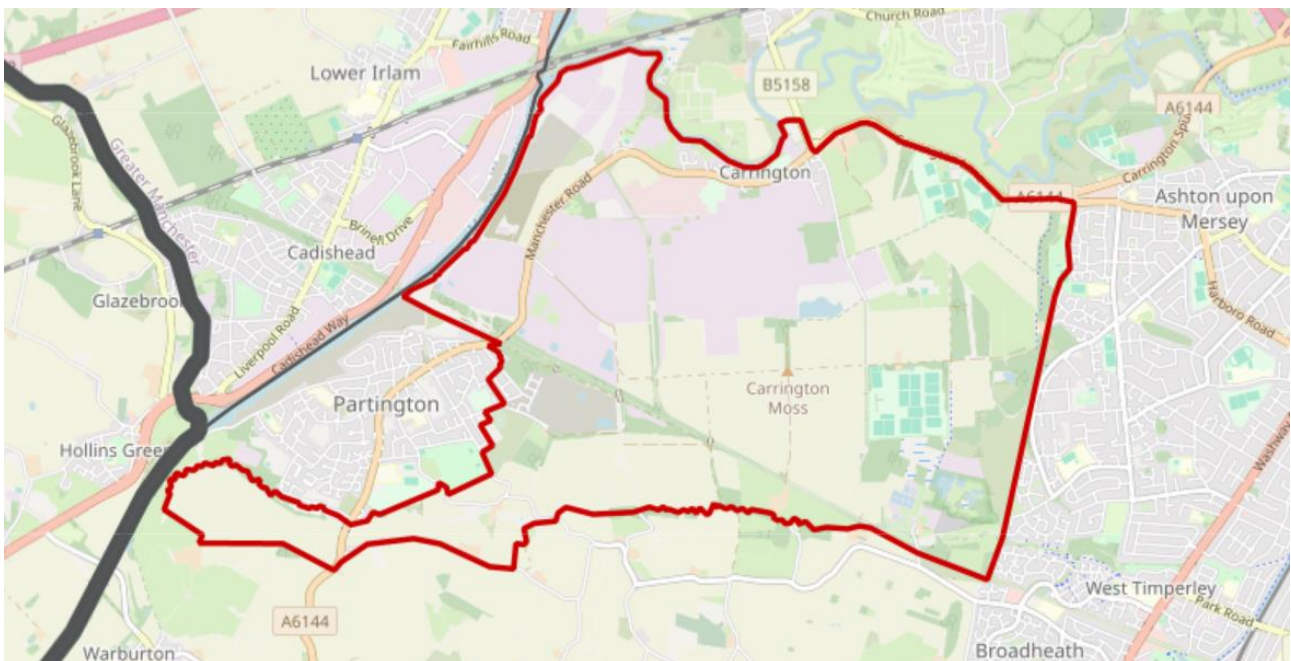
### 2.1. Definition of Study Area

The proposed New Carrington PfE allocation is located in west Trafford, south of the River Mersey, as shown in Figure 1. The site has been identified for significant residential and employment development and is of sufficient scale to create a new sustainable community. The allocation includes the former Shell Carrington industrial estate (established in the mid-late 20<sup>th</sup> century) and other industrial / former industrial areas. LyondellBasell Industries (a plastics, chemicals and refining company) occupy a large area of brownfield land. The allocation also includes greenfield land which extends to the south and east of Partington to Warburton, and along to the Sale West boundary.

In the wider area, the Mersey Valley, Flixton and Urmston are to the north of the allocation and to the east is Sale, including the existing Sale West residential area. To the west is the Manchester Ship Canal which presents a barrier to movement in this direction.

Section 3.1 provides more detail on the current land use and transportation conditions, whilst Sections 5.1 provides further information on the development proposals for the allocation.

*Figure 1 - New Carrington Location: GM Places for Everyone Allocation JPA 33*



## 2.2. Policy Context

### Introduction

Investment in transport infrastructure in the Northwest is now firmly at the top of the UK political agenda and underpins TFGM's 2040 vision for Greater Manchester and the associated linkage with the creation of a Northern Powerhouse. The common key theme in all national, regional and local policies and strategies is the enabling of growth in housing and employment – there are ambitious growth plans for Greater Manchester up to 2040 and beyond.

The city region plan - Places for Everyone Plan (PfE, formerly Greater Manchester Spatial Framework) - identifies the 'New Carrington' allocation (PfE JPA 33), which encompasses the existing Carrington Strategic Location (Trafford Core Strategy Policy SL5) and expands the site boundary to the south, around Partington and east, to Sale West.

### National Planning Policy Framework

The National Planning Policy Framework (NPPF) was first published in 2012, and has been revised several times since, with the latest update in December 2023. It sets out how planning authorities are expected to enable sustainable development. In order to achieve this, it sets out an overarching presumption in favour of sustainable development, taking account of the three dimensions of:

- An economic role relating to building a strong, responsive and competitive economy. In relation to the planning system this is fundamentally about ensuring that sufficient land is available to enable job creation, together with the infrastructure to support this.
- A social role in supporting strong, vibrant and healthy communities, with an emphasis on the provision of housing in the context of high-quality built environment and access to local services.
- An environmental role in terms of protecting and enhancing the local environment and helping mitigate and adapt to climate change.

Transport and connectivity play a key role in all three of these dimensions and the NPPF (Section 9) outlines this and sets out a number of key requirements in terms of planning and decision-making by local planning authorities. Much of this is about limiting the impacts of developments and improving their long-term sustainability. In relation to this project, this includes:

- The use of technology and the balancing of land use to reduce the need to travel and minimise journey lengths (e.g. walking to school and working from homes or local hubs).
- Balancing the transport system in favour of sustainable models for the movement of goods and people, including priority to pedestrian and cycle movements and access to high quality public transport.
- Creating safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter.
- Encouraging the reduction of congestion and of greenhouse gas emissions.
- The effective use of tools including Transport Statements (TS), Transport Assessments (TA) and Travel Plans (TP).
- Protection of sites and routes which could be critical in developing infrastructure to widen transport choice.
- Inclusivity, including meeting the needs of disabled people and other groups.

This should be seen in the context of the imperatives for economic growth as set out in the emerging Places for Everyone, Greater Manchester Strategy (Strategic Economic Plan) and the Greater Manchester Combined Authority Growth Deal.

### **Greater Manchester Transport Strategy 2040**

The Transport Strategy 2040 (and associated Delivery Plans) constitute Greater Manchester's Local Transport Plan.

The overarching vision for Greater Manchester is to have 'World class connections that support long-term, sustainable economic growth and access to opportunity for all' with four key elements:

- Supporting sustainable economic growth.
- Projecting our environment.
- Improving quality of life for all.
- Developing an innovative city region.

Although the proposed New Carrington investments have some relationship with the first three elements, the primary contribution is to the first – especially in relation to:

- Meeting the demand for at least 227,000 new homes by 2040.
- Supporting the anticipated growth in population to above 3m by 2040 (around 12% growth from 2011 base).
- Supplying homes for those attracted to the nearly 200,000 new jobs expected by 2040.

The GM Transport Strategy 2040 makes specific reference to the developments at New Carrington, in terms of the housing and employment growth which this investment is designed to support, as well as its strategic location as part of the Western Gateway.

At city region level the Greater Manchester Transport Strategy 2040 (GMTS 2040) sets out its ambition for the 'Right Mix' of transport modes, which is for 50% of all journeys in GM to be made by sustainable modes, with no increase in motor vehicle traffic by 2040. Five Year Transport Delivery Plans (current 2021-2026) and Local Implementation Plans set out the evidence base for this work. For the New Carrington area, this includes the following schemes:

- Carrington Relief Road – including sustainable transport measures, such as new / improved bus infrastructure, cycling and walking links along the route and connecting to surrounding areas.
- Creation of comprehensive bus network connecting Partington, Carrington and Sale West.
- New Carrington sustainable transport corridor – scheme which utilises the dis-used rail line through Carrington linking across the Manchester Ship Canal to Irlam. This will initially be an active travel corridor but with long term potential for other sustainable transport modes.
- Irlam access for all improvements and Improvements to the Warrington Railway line –opportunity to provide sustainable transport links to this route at Flixton and Irlam.
- Metrolink capacity improvements on the Bury – Altrincham line – of benefit to Carrington area via improved bus links to Sale for interchange on to Metrolink.

- S4A and bus corridor upgrade (A56 Manchester – Altrincham) – of benefit to Carrington area via improved bus links between Altrincham and Manchester.
- M60 Junction 8 and Carrington Spur improvements.

### **Places for Everyone (formerly Greater Manchester Spatial Framework) 2023**

The Places for Everyone (PfE) Joint Development Plan is the strategic spatial plan for nine of the ten boroughs within GM. The Plan has the following strategic objectives:

- Objective 1: Meet our housing need.
- Objective 2: Create neighbourhoods of choice.
- Objective 3: Playing our part in ensuring a thriving and productive economy in all parts of Greater Manchester.
- Objective 4: Maximise the potential arising from our national and international assets.
- Objective 5: Reduce inequalities and improve prosperity.
- Objective 6: Promote the sustainable movement of people, goods and information.
- Objective 7: Playing our part in ensuring that Greater Manchester is a more resilient and carbon neutral city-region.
- Objective 8: Improve the quality of our natural environment and access to green spaces.
- Objective 9: Ensure access to physical and social infrastructure.
- Objective 10: Promote the health and wellbeing of communities.

The PfE sets the housing and employment land requirements for each Local Authority within the plan area. It also provides the overarching strategic spatial context for the detailed policies of the forthcoming Trafford Local Plan. The Plan outlines significant growth in jobs and housing - approximately 175,000 homes, 2,000,000 sqm of new office floorspace and 3,500,000 sqm of industrial and warehousing floorspace over the plan period (2022-2039).

One of the strategic policies of PfE is focussed on a sustainable and integrated transport network (Policy JP-Strat 14) and identifies that new development will have a significant role in delivering our future sustainable and integrated transport network in order to reduce car dependency and increase levels of walking, cycling and public transport.

Policy JP-Strat9: Southern Areas includes a strong emphasis on making as much use as possible of suitable previously developed (brownfield) land and promoting the roles of the areas' town centres and its other key assets, including education and training facilities enabling people to gain access to employment opportunities.

JP-Strat 11 relates specifically to New Carrington and reflect the importance of the allocation to the overall PfE Spatial Strategy. The policy states that new development will be fully integrated with the existing communities of Carrington, Partington and Sale West. Furthermore, major investment in active travel, public transport and highway infrastructure, such as the Carrington Relief Road, improvements to Junction 8 of the M60 and public transport corridors will be delivered to support the development of New Carrington, ensuring it is well-connected to the rest of Greater Manchester.

Policy JPA33 is the New Carrington allocation policy which identified the site for major housing and employment development. The allocation covers an area of 1,153 ha and is a mixture of brownfield and greenfield land. It is proposed for around 5,000 dwellings and 350,000 sqm of employment floorspace. A new local centre and neighbourhood centres will be delivered, with a range of facilities such as convenience shopping facilities, alongside community infrastructure, school places and health facilities. Significant transport infrastructure, including provision for new and improved sustainable transport and highways infrastructure will be required to support the housing and employment growth. Development will be required to make a proportionate contribution to infrastructure and the requirements will be set out in the detailed Masterplan, which is a requirement of Policy JPA33. The necessary interventions are discussed in more detail in Section 6.

PfE also contains specific policies which relate to Transport in the 'Connected Places' chapter. These policies link to the 2040 Strategy and overarching 'right mix' aims and will apply to development within the plan area – including New Carrington.

Policy JP-C1 seeks to deliver an accessible, low carbon Greater Manchester with world-class connectivity and promotes a pattern of development that minimises both the need to travel and the distance travelled by unsustainable modes, and ensuring development considers the needs of all people and follows the hierarchy.

JP-C7 requires new development to be located and designed to enable and encourage walking, cycling and public transport use, to reduce the negative effects of car dependency, and help deliver high quality, attractive, liveable and sustainable environments, and this policy sets out criteria on how it will be achieved.

### **Current Trafford Local Plan**

The current Trafford Local Plan consists of the Core Strategy (2012) and saved policies from the UDP (2006).

Core Strategy Policy SL5, identifies Carrington as a Strategic Location for a major mixed-use development at Carrington, providing a new residential community of 1,560 dwellings, together with 75 ha of employment land, along with educational, health and recreational facilities. The policy supports new road infrastructure to relieve congestion on the existing A6144 and significant improvements to public transport infrastructure by improving access to Partington, the Regional Centre and Altrincham with links to the Metrolink system. Much of the development identified in the SL5 area is already underway and includes schemes at Carrington Village, Heath Farm Lane and Voltage Park.

This Transport Strategy will contribute to achieving the sustainable delivery of the major mixed-use development identified by Core Strategy Policy SL5, as well as a range of both the 'place' objectives and the overarching strategic objectives identified in the Local Plan, such as maximising the re-use of brownfield land, reducing the physical isolation of Carrington, and securing improvements to all transport modes. The delivery of the sustainable community and associated connectivity will enhance the sustainability of the area.

Currently the maximum parking standards<sup>1</sup> in Trafford are set out in SPD3: Parking Standards and Design (2012), as shown in Table 1. Maximum levels of car parking are used as part of a package of measures to promote sustainable transport choices, (Core Strategy Policy L4.14).

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<sup>1</sup> Except in relation to standards for disabled people, motor cycles and cycles, which are set out as minimum standards.

Table 1 - Parking Standards (proposed)

Dwelling houses	Car Parking Standards (maximum)	Bicycles (minimum) Cycle parking need not be provided if garages are available.
1 bedroom	0.5 – 1	1 (allocated) 1 (communal)
2 to 3 bedrooms	1.5 – 2	2 (allocated) 1 (communal)
4 + bedrooms	2 – 3	4 (allocated) 2 (communal)

Emerging policy and guidance (including Trafford’s Local Plan, Trafford’s Design Guide) refers to sustainable modes of travel and active travel priorities, and which seeks to reduce parking standards on provision of alternative sustainable modes of transport.

### 3. Study Area

#### 3.1. Current conditions (Land use and Transportation)

This section sets out the current conditions which exist in the Carrington area, including nearby Partington and relationships with the surrounding areas of Sale, Altrincham, Flixton and Urmston, as well as wider relationships within Trafford and the Greater Manchester conurbation.

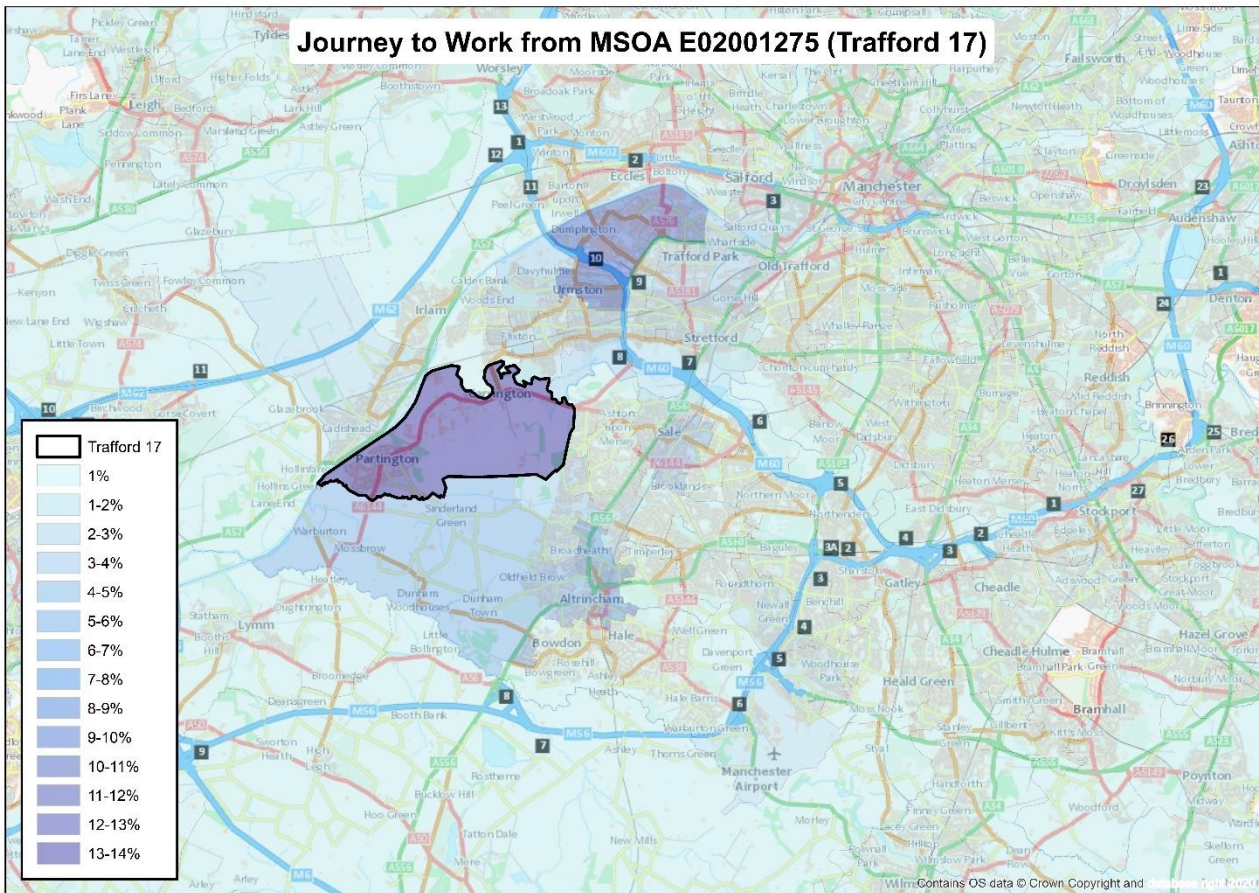
Carrington itself, as well as neighbouring Partington, are relatively isolated, separated to the North and West by the Manchester Ship Canal and River Mersey, to the South and East by Green Belt and rural areas with minor roads. The A6144 connects Partington with Carrington and Sale, along with the Carrington Spur linking to M60 J8. The B5158 runs north off the A6144 towards Flixton (with a small rail station park and ride) and onward to Urmston, the Trafford Centre and M60 J9 and 10. Sinderland Lane runs East-West to the South of Partington and links to Altrincham.

Principle bus services in the area include 247 (from Altrincham, via Sinderland Lane/Moss Lane and Partington, then via A6144 Manchester Road to Sale, every 30 mins), 255 (from Partington via A6144 Manchester Road and Flixton to Piccadilly Gardens, Manchester City Centre, every 30 mins) and 280 (Altrincham, via Sinderland Lane and Dunham Massey (Dunham Road) to Partington, then on via A6144 to Sale, hourly).

Although there are no rail stations in Partington or Carrington, rail and tram services can be accessed at Flixton (Manchester Oxford Road-Warrington/Liverpool, every 30 mins each way), Sale (Metrolink) and Altrincham (Metrolink and mainline rail towards Stockport and Chester).

The isolation of the area tends to lead to relatively narrow trip horizons, for example, most work trips from Carrington and Partington are local or focused on the Trafford Centre, which is relatively accessible (see Figure 2). Locations such as Sale, which have much better connectivity, show broader trip distributions, with many more trips going to Central Manchester.

Figure 2 - Journey to Work from Carrington/Partington (2011 Census)



Outputs from the 2017 GM models are shown in Table 2, including daily and AM peak travel patterns for car, public transport and for active travel (inferred from TfGM Right Mix evidence, 2021). Analysis of trips from the GM model shows that, for combined outbound and inbound daily trips from and to Carrington and Partington, around 6% of trips made by car and 7% of trips by Public Transport (PT) are wholly internal to Carrington/Partington, indicating a high level of external trips (around 94% for car and 93% for PT).

The GM Transport Model (2017) shows for highway and public transport (and inferred for active modes using 'Right Mix' data) that the main destinations and origins, for combined outbound and inbound daily trips from and to Carrington and Partington, are as follows:

- Sale West / Altrincham West / Dunham (26% of car trips, 24% of bus trips, 17% of active trips inferred).
- Cadishead / Urmston (7% of car trips, 24% of bus trips, 11% of active trips inferred).
- Internal movements within Carrington / Partington (5% of car trips, 7% of bus trips, 54% of active trips inferred).
- External movements travelling less than 10km 'Inside Greater Manchester' (40% of car trips, 44% of bus trips, 15% of active trips inferred).
- External movements travelling less than 10km 'Outside Greater Manchester' / Lymm (6% of car trips, 1% of bus trips, 0% of active trips inferred).
- Travelling further afield in GM and UK (11% of car trips, 1% of bus trips, 2% of active trips inferred).

The inference from the Census is that the majority of trips less than 10km inside GM are to and from Trafford Park/Trafford Centre.

By contrast, the equivalent mode share in 2017 for Carrington, Partington and adjacent zones in Trafford only is less car-dependent, with 59% of daily trips made by car, 5% by PT and 36% by active mode (inferred), although the number of trips is small. While the model does not provide adequate granularity to show where trips within Greater Manchester are going, the Census Journey to Work plot in Figure 2 implies that the majority are to Trafford Park.

The spread of combined outbound and inbound daily trips from and to Carrington, Partington amongst other sectors in the 2017 GM model is shown in Table 2.

*Table 2 – Distribution of Combined Outbound and Inbound Daily Trips From and To Carrington and Partington*

GM Model Sector	% of Combined Outbound & Inbound Trips From & To Carrington & Partington		
	Car	Public Transport	Active Mode (Inferred)
Core Carrington & Partington	5%	7%	24%
Cadishead	2%	0%	9%
Urmston	5%	24%	25%
Sale West	7%	1%	30%
Dunham	2%	0%	0%
Lymm	4%	0%	1%
Altrincham West	18%	23%	3%
10K - Inside GM	40%	44%	7%
10K - Outside GM	6%	0%	0%
Rest of GM	5%	0%	1%
Rest of UK	6%	0%	0%

The GM Transport Model (2017) outputs in Table 2, show that the main destinations and origins, for combined outbound and inbound daily trips from and to Carrington and Partington, are:

- Internal movements within Carrington / Partington (5% of car trips and 7% of bus trips).
- Cadishead / Urmston (7% of car trips and 23% of bus trips).
- Sale West / Altrincham West / Dunham (26% of car trips and 24% of bus trips).
- External movements travelling less than 10km 'Inside Greater Manchester' (40% of car trips and 44% of bus trips).



- External movements travelling less than 10km 'Outside Greater Manchester' / Lymm (11% of car trips and 1% of bus trips).
- Trips travelling further afield (11% of car trips and 1% of bus trips).

Although the travel mode share represented by active mode walk and cycle trips in Table 2 is reliable, the trip distribution is not represented in the GM 2017 model and cannot be verified.

### 3.2. Future Year Reference Case (Land use and Transportation)

A single future year of 2040 has been used to demonstrate wider area reference case conditions across GM, in which committed developments are completed but 'Places for Everyone' developments are not. Two reference case outcomes in 2040 are considered as follows:

- Policy Off, wherein the range of policy interventions proposed in the Greater Manchester area are not enacted and transport supply remains much as it is now.
- Policy On, wherein the transport interventions identified in GM Transport Strategy 2040 are implemented, which influence the modal split of future travel demand, as predicted in the GM 'Right Mix' aspirations.

#### Future Year 2040 Reference Case – Policy Off

A 2040 reference case Policy Off travel demand forecast, without Places for Everyone development trips, or Transport 2040 investment has been developed by taking the GM model trip distribution for 2017, then applying future growth in 'background' trips to 2040, as projected at census MSOA level in NTEM 8.0 / TEMPro 8.0.

Since New Carrington development is not considered in the Policy Off reference case, the modal shares and overall combined mode trip distribution in 2040 are all identical to those in the 2017 baseline, as described in Section 3.1.

This 2040 Policy Off reference case has been used to assess the future trip distribution by mode with New Carrington land use development included, in a Policy Off scenario, by adding in predicted trip departures and arrivals, by mode, and then adjusting for the expected proportion of internalised movements.

#### Future Year 2040 Reference Case – Policy On

An alternative 2040 reference case Policy On travel demand forecast, without Places for Everyone development trips, but with Transport 2040 investment has been developed, in a similar way, by taking the GM model trip distribution for 2017, and applying future 'background' growth to 2040, from NTEM 8.0 / TEMPro 8.0, but by then adjusting for changes in modal share consistent with the GM 'Right Mix' aspirations, by locality.

Since modal share in the 2040 Policy On reference case is different from the 2040 Policy Off reference case, the overall combined mode trip distribution is also different.

This 2040 Policy On reference case has been used to assess the future trip distribution by mode with New Carrington land use development included, in a Policy On scenario, by adding in predicted trip departures and arrivals, by mode, and then adjusting for the expected proportion of internalised movements.

### 3.3. Challenges and Opportunities around Land Use and Travel

It is clear that developing New Carrington on any scale requires that the relative isolation be addressed, otherwise the area will be extremely car-dependent and will generate significant numbers of external car trips. This will make the development unsustainable and will jeopardise the broader strategic targets for

decarbonisation and sustainable access across Greater Manchester. It will directly impact on already stressed points on the network, including the M60 and, unless this is mitigated, it is likely that National Highways will object to the planned developments at New Carrington.

Whilst a 'clean sheet' development such as New Carrington provides opportunities to build in sustainability from the outset, the following imperatives must be met in order to deliver sustainable growth in the area:

- Delivery of the infrastructure set out in Transport 2040, in the local area and across Greater Manchester. More details can be found in Section 6;
- New housing must be accompanied by the provision of internal facilities such as school places, shops, healthcare and leisure.
- Where external facilities must be accessed (e.g. secondary education) there must be adequate active travel or public transport links available to avoid the need for car travel.
- Employment provision in the area should offer a wide range of employment types. Whilst this will reduce the need for external journey to work trips, the nature of modern employment will not eliminate this.
- Good internal walk and cycle links need to be provided, enabling internal trips to be made without the need to use cars and these links must extend to key external locations and public transport hubs for onward travel.
- Developments must be planned to reduce car dependency, including the provision of the above walk/cycle links as well as constraints on parking.
- Effective public transport must be provided, including local bus services and access to the wider GM network, including Metrolink and rail. The existing bus services can be supplemented and linked to the new housing and employment locations. At least some of the buses currently using A6144 should be diverted onto the Carrington Relief Road; and
- Highway capacity improvements should be focused on providing bus priority, enabling physical access to developments and addressing any points of network stress following full mitigation as above.

These imperatives are developed in Section 4 and Section 5, and the concepts of sustainable transport oriented development (STOD) and their importance for New Carrington are explored.

## 4. Study Area Vision and Objectives

### 4.1. Introduction

The overall goal is to develop a new sustainable community in New Carrington, with high levels of internal walk and cycle connectivity, provision of internal facilities and good public transport connections, including to the wider Greater Manchester network. As set out within Section 2.2: Policy Context, the common key theme in all of the national, regional and local policies and strategies is the enabling of growth in housing and employment.

## 4.2. Over-arching objectives and Vision

Using the strategic context and the imperatives set out in PfE, in collaboration with stakeholders a vision for a sustainable community encompassing New Carrington, Partington and Sale West has been established. Based on this vision, a set of objectives has been agreed, as set out in Table .

*Table 3 – New Carrington Transport Strategy Objectives*

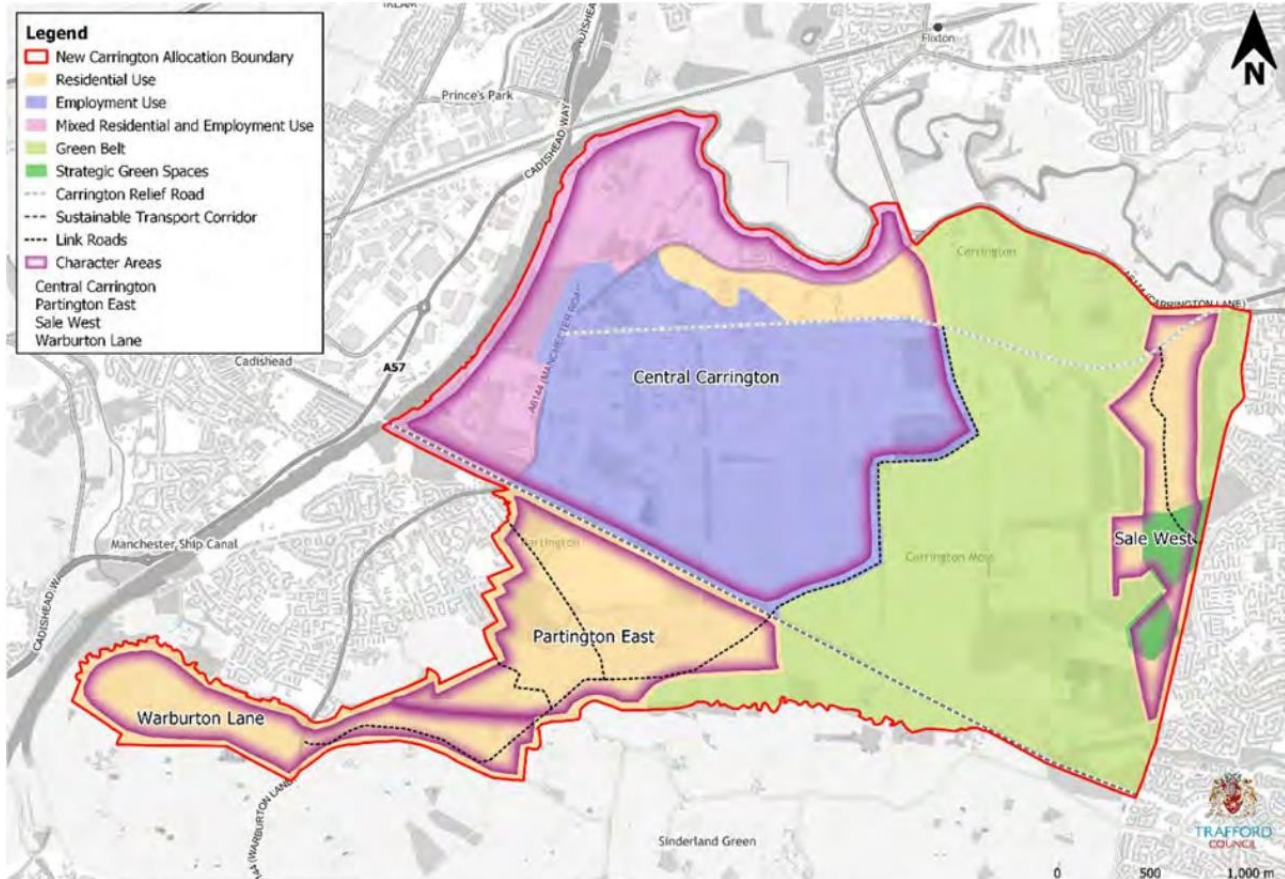
<b>Objectives</b>	<b>Details</b>
Create a New, Sustainable Community in Carrington	Support development of the PfE New Carrington allocation, by applying a 'Decide and Provide' approach to rejuvenating land uses, reconfiguring transport infrastructure, influencing travel behaviour, and setting the foundations for a sustainable Greater Manchester
Enable and Encourage Active Travel in Carrington	Facilitate walk, cycle and wheeling movements in and around New Carrington, to increase sustainable travel.
Expand and Improve Public Transport in Carrington	Expand bus operations for New Carrington, and connections to wider public transport.
Reconfigure Road Transport in Carrington	Enable essential motor vehicle access, to connect and unlock New Carrington, but contain development-related traffic growth, by prompting changes to transport infrastructure, travel patterns and road safety
Reduce Carbon Emissions and Safeguard Environment	Realign transport and travel patterns, to reduce carbon, and protect / enhance the environment in New Carrington
Support Communities	Ensure shared access to opportunities in New Carrington, and a fair spread of development impacts
Improve Freight Access	Provide a vital channel for road freight movements, to supply New Carrington businesses, and to ship outputs, safely, efficiently, and cost-effectively, avoiding conflicts with other travel modes

## 5. Study Area Development Proposals and Impacts on Transport

### 5.1. Quantum, Distribution and Phasing of Development

PfE Policy JPA33 New Carrington includes an Indicative Allocation Plan (figure 3) showing the indicative character areas, land use, and key infrastructure links.

Figure 3 - New Carrington Indicative Allocation Plan, PfE 2021



An initial high level masterplan was prepared for New Carrington in 2020, this assessed the existing site constraints and identified indicative development parcels for residential and employment development which has informed the overall development quantum. It helped to inform PfE Policy JPA33: New Carrington which sets a series of development requirements for the allocation. This includes a requirement for the development to be in accordance with a detailed Masterplan that has been prepared in consultation with the local community and other stakeholders and approved by the local planning authority. It must also include a Delivery Strategy to ensure the whole allocation is planned and delivered in a coordinated and comprehensive manner with proportionate contributions to fund necessary infrastructure. The detailed Masterplan will build on the work of the initial high level Masterplan that was prepared in 2020.

Policy JPA33 ‘New Carrington’ includes the following land use requirements which are of relevance to the overarching Transport Strategy, and which will help to shape the detailed Masterplan:

#### Housing / employment development:

- Deliver approximately 5,000 homes.
- Average density across the site of 35dph, with opportunities for slightly higher densities (55dph) in the local / neighbourhood centres.

- Deliver approximately 350,000 sqm employment floorspace.

### **Local / Neighbourhood Centres**

- A new Local Centre located within the development parcels to the east of Partington, comprising a range of small shops and services at a scale to serve the needs of the community.
- New Neighbourhood Centres at Carrington Village and Sale West, to provide local services and community facilities.
- These centres will be hubs for community infrastructure.
- The development will also support existing local / neighbourhood centres in the surrounding area, such as Partington Local Centre.

### **Health**

- Development will need to provide new / improved health facilities, such as GP surgeries.
- The location will be determined through the Masterplan / planning applications, but they are likely to be within the local / neighbourhood centres.

### **Education**

- There is a need for approximately 680 primary school places.
- This need could be accommodated through extensions to existing schools or via a new primary school located within the development site. This will be considered further as part of the detailed masterplan.
- There is a need for approximately 490 secondary school places.
- This will be accommodated at the following schools which have available capacity - Broadoak Academy, Partington and Wellacre Boys Academy, Flixton. There may also be a need to extend existing secondary schools in Sale West.

### **Transport**

- Development will be required to make provision for new and improved sustainable transport and highways infrastructure. A series of required and supporting schemes are identified in PfE Appendix D and this should be the starting point.
- A network of multi-modal access routes is required to access and link to the development parcels and existing communities at Carrington, Partington and Sale West to successfully integrate development – including improvements to the Trans Penning Trail.
- Provision of an east/west strategic sustainable transport corridor across the site from the Manchester Ship Canal to Sale, linking with the wider ‘Carrington Greenway’ scheme.
- The Carrington Greenway is identified as an active travel corridor in the short term, with the potential for bus (or other sustainable modes) in the long term.
- Development will be required to contribute to new/enhanced bus services and deliver bus priority infrastructure.
- Facilitate delivery of the Carrington Relief Road

A high level, indicative phasing plan has been developed which separates New Carrington into distinctive character areas and demonstrates the deliverability of the strategic allocation site. The detailed content of Appendix A: includes a series of phasing maps, which illustrate the percentage completed at each development parcel at the end of a given time period. This will be reviewed as part of the detailed New Carrington Masterplan. A summary of the proposed phasing of new residential and employment sites is shown in Table.

Table 4 - Housing and Employment Phasing by Character Area

Housing & Employment Delivery	2022-2027	2027-2032	2032-2037	2037-2042	All Years
Carrington Central residential development (No. units)	340	257	0	0	597
Sale West residential development (No. units)	79	527	654	183	1,443
Partington East residential development (No. units)	183	560	1477	362	2,582
Warburton Lane residential development (No. units)	0	156	95	170	421
<b>New Carrington residential development (Total No. units)</b>	<b>602</b>	<b>1500</b>	<b>2226</b>	<b>715</b>	<b>5,043</b>
<b>New Carrington employment development (Gross floorspace, sqm)</b>	<b>184,343</b>	<b>101,784</b>	<b>57,600</b>	<b>34,245</b>	<b>377,972</b>

Development of the New Carrington site will be phased alongside the necessary infrastructure to ensure a successful, sustainable development. This will be set out in the detailed masterplan for the whole allocation. In order to meet the 'Right Mix' target and provide well-connected, sustainable neighbourhoods, there is a focus on Active Travel and public transport improvements for the New Carrington allocation.

## 5.2. Scenarios to Reflect Uncertain Outcomes

To assess the transport impacts of the New Carrington proposals, three future development scenarios have been captured, which represent a range of trajectories and uncertain outcomes in terms of policy, travel behaviour and sustainability. The land use and transport planning resource 'TRICS' (Trip Rate Information Computer System) and its guidance on Decide and Provide<sup>2</sup> recommends that at least three scenarios be developed in order to take account of variables and uncertainty. The three future scenarios developed for New Carrington are as follows:

### Scenario 1 (S1) - worst case

- S1 represents the least sustainable outcome, with GM Policy Off transport provision and travel choices, and with high cost highway focussed interventions.

<sup>2</sup> [https://www.trics.org/img/trics%20dp%20guidance\\_web.pdf](https://www.trics.org/img/trics%20dp%20guidance_web.pdf)

- Based on highway focussed PfE Locality Assessment, with ‘conventional’ hourly trip rates, deduced from Trafford Park Metrolink study.
- Proportion of internal journeys, remaining wholly within New Carrington, is 6%, taken from 2017 GM transport model base year outputs.
- Travel mode share for internal journeys is taken from Census 2021 Journeys to Work <10km distance (excluding working from home), for 10 MSOA in and around Partington and Carrington.
- Travel mode share for external trips is taken from PfE Locality Assessment trip rates (Trafford Park Metrolink).
- Overall travel mode shares are 79% car, 21% non-car, including 4% PT, and 17% active.
- Wider region ‘Core’ growth trend, for future year trips, to be adopted from NTEM, as assessed for PfE (assumed to be applied in GM model, using NTEM v8.0 update).
- S1 transport intervention package (see Section 6) prioritises highway-focussed local schemes, to satisfy conventional land use and travel demands, and support short term, cost-effective travel.
- Minimal GM 2040 Transport Strategy PT and walk / cycle implementation (Policy Off), supporting 7-8 new buses.
- No cost attributed to S1 essential highway investment (e.g. M60 upgrade).

#### **Illustrative TRICS ‘Historic Trend’ Scenario**

- Evidence of declining residential vehicle-trip rate over time, extrapolated forwards, from ‘conventional’ TRICS sites (GB metropolitan districts, including London).
- Historic trend analysis does not provide sufficiently robust trip-rate information to calculate detailed trip rates for New Carrington, so the principle has been used to underpin the evolving Scenario 2 below.

#### **Scenario 2 (S2) – mid point**

- S2 represents a reasonably sustainable outcome, with a realistic balance of GM partial Policy Off / Policy On transport provision and travel choices, as a credible base from which to encourage and enable improved sustainability of land use and travel in future, wherever possible.
- From initial assessment, S2 is realistic and achievable:
- Based on S1 PfE trip rates, adjusted to include credible non-vehicle mode share from comparable ‘benchmark’ sites in Filton / Stoke Gifford / Bradley Stoke / Patchway, South Gloucestershire, on the northern edge of Bristol, where the site distance from the regional centre, the transport provision and the mix and timing of regeneration, (part historic community, part newly built, and part proposed), resemble the proposals for Partington and Carrington.
- Proportion of internal journeys, remaining wholly within New Carrington, is 17%, derived from Greater Cambridge Local Plan target for a comparable benchmark site in Waterbeach, located 10km north of Cambridge.
- Includes uplift from S1 internal trip proportion, with increased non-vehicle mode share for internal trips, to reflect co-ordinated and phased land use spatial strategy, 20-minute ‘Active Neighbourhoods’, and optimal provision of local active travel facilities, consistent with ‘Streets for All’ guidelines.

- Travel mode share for internal journeys is taken from Census 2021 Journeys to Work <10km distance (excluding working from home), for 9 MSOA in and around Filton, Stoke Gifford and Bradley Stoke.
- Travel mode share for external trips is taken from TEMPro v8.0 2021 average daily trip ends by mode (departing and arriving), for 9 MSOA in and around Filton, Stoke Gifford and Bradley Stoke.
- Includes uplift from S1 non-vehicle mode share for external trips, to reflect realistic, but constrained, provision of wider public transport interventions and absence of vehicle demand management, (e.g. through air quality regulation, car park provision and pricing, and road user congestion charging).
- Overall travel mode shares are 74% car, 26% non-car, including 8% PT, and 18% active.
- Wider region 'Behavioural Change' growth trend, for future year trips, to be adopted from NTEM, with reduced frequency of trip-making, (assumed to be applied in GM model, using NTEM v8.0 update).
- Target proportion of internal journeys remaining wholly within New Carrington, set at 17%, to replicate case study evidence for Waterbeach planned sustainable development allocation northeast of Cambridge.
- S2 Transport intervention package contains realistic local, sustainable, interventions, sifted from S3 to retain schemes which are achievable and financially viable, but which support sustainably planned development.
- Realistically moderate GM 2040 Transport Strategy PT and walk / cycle implementation (part Policy Off/On), supporting 15-16 new buses.
- This indicative, 'most-deliverable', S2 is currently being refined towards an ultimate objective, using iterative assessment of transport interventions, their viability and their likely impacts.

There is potential to improve the indicative S2 results, in the following ways:

- Replace imperfect 2021 Census and TEMPro8 data, by using further evidence from benchmark Mobile Network Data (MND) and socio-economic profiling (Experian Mosaic data) for non-car mode share and trip distribution, and accessibility mapping (Basemap TRACC tool) for trip internalisation and active travel movements.
- Selectively improve S2 package of transport interventions.
- Use improved S2 to inform detailed Masterplan and developer contributions.
- Commit to ensuring sustainable transport oriented development, (initially touching TOD 'Bronze' standard and ultimately aiming for TOD 'Silver'; the TOD 'Gold' standard would only be achievable in a regional centre).

### **Scenario 3 (S3) – best case**

- S3 represents the most sustainable outcome, with GM Policy On transport provision and travel choices, and with sustainable mode share but very high cost interventions.
- Based on S1 PfE trip rates, adjusted to include aspirational ('Right Mix') non-vehicle mode share.
- Proportion of internal journeys, remaining wholly within New Carrington, is 25%.
- Travel mode share for internal journeys is taken from GM 'Right Mix' 2040 target for 'Neighbourhood' area.



- Travel mode share for external trips is taken from GM 'Right Mix' 2040 target for 'Wider Trafford' area.
- Overall travel mode shares are 54% car, 46% non-car, including 14% PT, and 32% active.
- Wider 'Regional' growth trend, for future year trips, to be adopted from NTEM, with increased trip-making outside southeast England, (assumed to be applied in GM model, using NTEM v8.0 update).
- S3 transport intervention package contains ambitious local, sustainable, interventions, to support sustainably planned development, long term sustainable travel and GM Right Mix targets for Trafford district.
- Maximal GM 2040 Transport Strategy PT and walk / cycle implementation (Policy On), supporting 25-26 new buses.
- Elements of the S3 investment programme are unfunded and potentially unaffordable.

### **20-Minute Neighbourhood Accessibility in Best Case Scenario 3**

The accessibility of adjacent facilities from various sites within the New Carrington development area has been assessed in terms of 20-minute walking and cycling isochrones around selected locations. This analysis is shown in Appendix C.

### **5.3. Sustainable Transport Oriented Development (STOD)**

Sustainable Transport Oriented Development (STOD) is form of built environment, in which the mix and configuration of land use and infrastructure are planned to be durable, environmentally enlightened and supportive of local communities. STOD maximises the amount of residential, business and leisure space within walking distance of public transport, and it prioritises safe and easy access to and from sites for pedestrians and cyclists. Overall, STOD encourages a higher proportion of journeys to be shorter distance, by active modes, and to remain within a local, ('20 minute'), neighbourhood, thereby reducing vehicle fuel consumption and emissions (especially carbon).

Many of the principles of STOD are reflected in the Transport Strategy 2040 and PfE policies, particularly the Connected Places policies. Using the STOD principles and the PfE policies in the New Carrington Masterplan will help to deliver a pattern of development that minimises both the need to travel and the distance travelled by unsustainable modes to jobs, housing and other key services, including healthcare, education, retail, recreation and leisure facilities, green space and green. These principles, alongside the delivery of improved active travel and public transport infrastructure, will support the delivery of sustainable development at New Carrington which is integrated and linked with to existing communities.

Various guidelines alluding to STOD have been published to assess existing and planned developments. Initially, an established checklist/scoring approach, which was devised by the Institute for Transport Development and Policy (ITDP), and which is known internationally as the 'Transit Oriented Development (TOD) Standard', has been used as a proxy for assessing the STOD credentials of the New Carrington land use and transport scenarios.

As the masterplanning process proceeds, this approach will be refined. However at this stage, an initial STOD analysis, using criteria in the 'TOD Standard', has been undertaken as shown in Table 1.

Table 1 - Initial Sustainable Transport Oriented Development Assessment (Using TOD Standard Indicative Scores)

Sustainable Transport Oriented Development Objective	Measurement	Trafford New Carrington Assessment	Indicative TOD Score
<b>Category – Walk</b>			
Footways	Percentage of footway segments with complete, all-accessible footways	This will be delivered as part of the development and will help facilitate journeys by active modes. The Masterplan will also have regard to the latest Streets for All guidance.	Possible 3/3 points achievable, based on UK design standards
Pedestrian Crossings	Percentage of intersections with safe, all-accessible crosswalks in all directions	This will be delivered as part of the development and will help facilitate journeys by active modes. The Masterplan will also have regard to the latest Streets for All guidance.	Possible 3/3 points as pedestrian crossing facilities will be provided at all road junctions where they are required under UK design standards
Visually Active Frontage	Percentage of walkway segments with visual connection to interior building activity	Should be possible as part of the development and the principle could be established as part of the Masterplan.	In relevant cases, possibly scored around 4/6
Physically Permeable Frontage	Average number of shops, building entrances, and other pedestrian access per 100 metres of block frontage	A significant proportion of the New Carrington allocation is residential which will mean this is not possible on parts of the site. However, this could be prioritised in more 'active' areas such as the local / neighbourhood centres and the employment development.	Possible 0/2 points
Shade & Shelter	Percentage of walkway segments that incorporate adequate shade and shelter amenities	Street trees would provide some shelter.	Possible 0/1 points
<b>Category – Cycle</b>			
Cycle Network	Access to a safe cycling street and path network	Will be delivered as part of the development and will help facilitate journeys by active modes. The Masterplan will also have regard to the latest Streets for All guidance.	Possibly 2/2

Sustainable Transport Oriented Development Objective	Measurement	Trafford New Carrington Assessment	Indicative TOD Score
Cycle Parking at Transit Stations	Percentage of buildings that provide ample, secure cycle parking	Will be delivered as part of the development and will help facilitate journeys by active modes. The Masterplan will also have regard to the latest Streets for All guidance.	Possibly 1/1 at Sale Metrolink (and Urmston/Flixton Stations)
Cycle Parking at Buildings	Percentage of buildings that provide ample, secure cycle parking	Will be delivered as part of the development and will help facilitate journeys by active modes. The Masterplan will also have regard to the latest Streets for All guidance.	Possibly 1/1 through Planning conditions)
Cycle Access in Buildings	Buildings allow interior access and storage within tenant-controlled spaces for cycling	Will be required as part of the development and will help support journeys by active modes	Possibly 0/1 as seldom legally required or available
<b>Category - Connect</b>			
Small Blocks	Length of longest pedestrian block	Will be part of Masterplanning process	Possibly 2/10
Prioritized Connectivity	Ratio of pedestrian intersections to motor vehicle intersections	This is likely to be relevant only in District Centres	Possibly 0/5, but 5/5 achievable in relevant areas
<b>Category – Transit</b>			
Walking Distance to Transit	Walking distance to the nearest transit station	No rail / Metrolink services are currently proposed directly into the site, however a significantly improved and expanded bus network is a development requirement. There will also be improved links to Metrolink stops and railway stations in the surrounding area.	Dependent on frequency of bus services to Metrolink & rail stations. NB – pass/fail
<b>Category - Mix</b>			
Complimentary Uses	Residential and non-residential uses combined with the same or adjacent blocks	The employment land at New Carrington is for industry and warehousing and it would therefore not be appropriate to intersperse this with residential uses.  However, there will be opportunities for linking the two areas by sustainable modes.	Possibly 5/8 with good connections between residential and non-residential

Sustainable Transport Oriented Development Objective	Measurement	Trafford New Carrington Assessment	Indicative TOD Score
Access to Local Services	Percentage of buildings that are within walking distance of an elementary or primary school, a healthcare service or pharmacy, and a source of fresh food	A new Local Centre and Neighbourhood Centres are required by the development. There is also a requirement to link to existing centres in surrounding communities. The majority of the development should therefore be within 500-1000m of these facilities. Ensuring good sustainable access to these services as part of the wider sustainable transport network will be an integral part of the New Carrington Masterplan.	Possibly 3/3 with good connections to services
Access to Parks and Playgrounds	Percentage of buildings located within a 500 metre walking distance of a park or playground	Significant areas of open and publicly accessible greenspace is a policy requirement, alongside a range of types and sizes of formal open space. Detail to be set out in the Masterplan / planning applications.	Possibly 1/1 with good connections to facilities
Affordable Housing	Percentage of total residential units provided as affordable housing	PfE Policy JPA33 requires a minimum of 15% affordable housing across the allocation and some areas are expected to deliver significantly in excess of this, subject to viability.	Possibly 2/8 points
Housing Preservation	Percentage of households living on site before the project that are maintained or relocated within walking distance	It is not anticipated that any households on the site will be required to relocate. This will also be considered at detailed plan application stage.	Possibly 3/3 points
Business and Services Preservation	Percentage of pre-existing local resident-serving businesses and services on the project site that are maintained on site or relocated within walking distance	It is not anticipated that any existing local resident serving businesses and/or services will need to be relocated.	Possibly 2/2 points
<b>Category – Densify</b>			

Sustainable Transport Oriented Development Objective	Measurement	Trafford New Carrington Assessment	Indicative TOD Score
Non-residential Density	Non-residential density in comparison with the best practice in similar projects or station catchment areas	The employment land will be developed at an average density for similar types of uses.	Possibly 3/7, given the statement regarding average density, as all premises should be within 500m walking distance of a bus stop
Residential Density	Residential density in comparison with best practice in similar projects or station catchment areas	Average development density across the site of 35dph, with opportunities for slightly higher densities (55dph) in the local / neighbourhood centres	Possibly 4/8
<b>Category – Compact</b>			
Urban Site	Number of sides of the development that adjoin existing built-up sites	The New Carrington allocation will link to / adjoin existing communities to the west (Partington), north (Flixton) and east (Sale West).	Possibly 8/8 if x4 boundary constraints are considered to be MSC / River Mersey to N and W, Green Belt protected land to S, and Sale community / Green Belt to E Otherwise, 4/8 if Green Belt is considered undeveloped land
Transit Options	Number of different transit options that are accessible within walking distance	New and improved bus routes across the allocation, with bus priority infrastructure, improved bus stops and improved frequencies.	Possibly ½
<b>Category – Shift</b>			
Off-Street Parking	Total off-street area dedicated to parking as a percentage of the development area	To be determined through the detailed Masterplan / planning applications.	Possibly 5/8, if <25%
Driveway Density	Average number of driveways per 100 metres of block frontage	To be determined through the detailed Masterplan / planning applications.	Possibly 0/1, since more than 2 driveways/100m seems likely

Sustainable Transport Oriented Development Objective	Measurement	Trafford New Carrington Assessment	Indicative TOD Score
Roadway Area	Total roadbed area used for motor vehicle travel and on-street parking as percentage of total development area	To be determined through the detailed Masterplan / planning applications.	Possibly 3/6 on the basis of less than 20% of site area
<b>Summary – All Categories</b>			
All TOD Objectives			Possible Overall TOD Score 56/100

A reliable picture of STOD performance outcomes for New Carrington will form part of the masterplanning process, as well as an iterative refinement of a realistic Scenario 2, which will give further clarity around the land use configuration and transport provision. Given the urban bias of the TOD process, it is likely that a TOD ‘Gold’ standard (86 – 100 / 100) would be unachievable for an outer suburban site like New Carrington. However comparing the three scenarios with the TOD scores suggests:

- Scenario 1 has a non-car mode share of 21% and fails against TOD criteria.
- Indicative Scenario 2 has a non-car mode share of 26%, but could realistically achieve a TOD ‘bronze’ standard with further iterative improvement, with the intention of lifting this towards TOD ‘silver’ in the long-term, if supporting regional transport investments and sustainable internal links are brought forward.
- Scenario 3 has a non-car mode share of 46% (aligning with the TfGM Right Mix target for wider Trafford) and could achieve a TOD ‘silver’ standard.
- The overall GM ‘Right Mix’ target of 50% non-vehicle trips by 2040, is only likely to be achieved in more dense inner urban areas of GM (unlike New Carrington), where the form of land use aligns with a TOD ‘Gold’ standard.

There are various principles from the initial STOD assessment which will be taken forward into the detailed Masterplan which will help to improve the sustainability of the site and enable more journeys by sustainable transport modes.

#### 5.4. Development Management Policies and Site Travel Characteristics

The following list sets out some of the development management policy areas, which could influence the likelihood of Scenarios 1, 2 or 3 arising and which should be considered through the detailed Masterplanning process:

- Consideration of Car Parking Standards for the allocation
- Sustainable Transport Oriented Developments principles
- Walk and Cycle Facilities throughout the allocation and linking to surrounding areas, helping to ensure development is permeable
- Provision and location of internal facilities within / close to the development areas

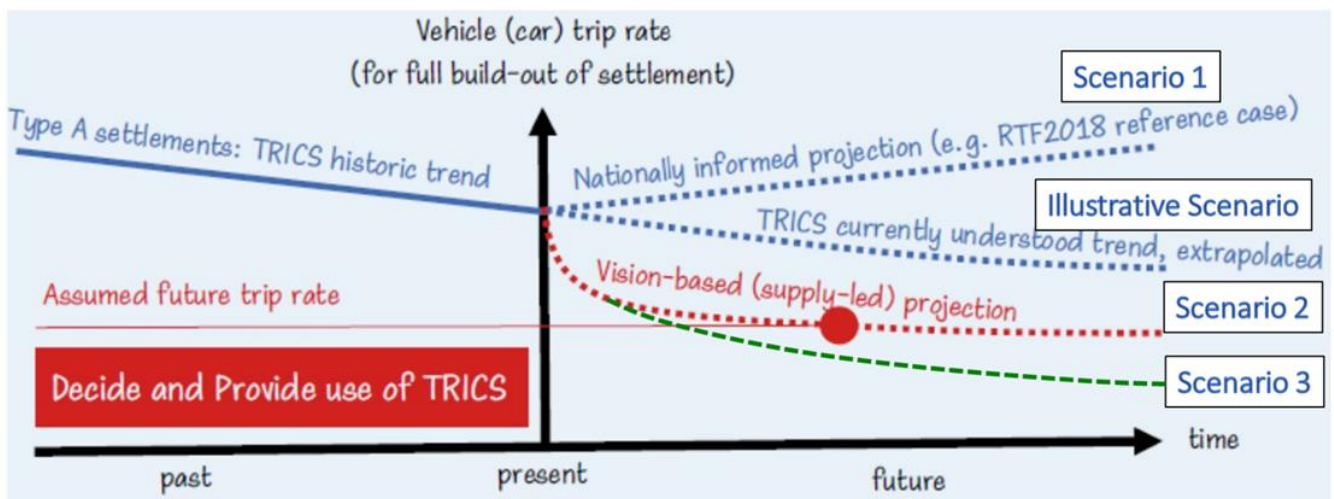
- Establish an appropriate Developer Contribution towards infrastructure and bus operation costs
- Opportunities in relation to the delivery of the wider Bee Network across Greater Manchester.

### 5.5. Estimated Site Travel Characteristics and Trip Generation

Indicative travel characteristics have been estimated for Scenarios 1, 2 and 3, in a ‘first pass’ assessment of trip rates, modal shares, trip lengths and proportion of internalised journeys, under varying assumptions around land use form, phasing and occupancy, car ownership, parking provision, and transport intervention, and under GM Policy Off and Policy On conditions. Resolution of Scenario 2, which is the ultimate end point of this Transport Strategy, and the one which represents a ‘balanced and affordable transport package’, will ultimately be achieved through an on-going iterative process, whereby scheme options are sifted, plans are advanced, investment funds are secured, impacts are assessed, and a final package of phased transport interventions is approved.

Figure 4 below shows in diagrammatic form the trajectories associated with the four scenarios, showing especially how the ‘Policy On’ scenarios 2 and 3 are expected to have a marked impact on car trips from the outset.

Figure 4 - Future Travel Movement Scenarios



In terms of developing the Transport Strategy, Scenarios 1 and 3 have been used to frame the distinction between ‘Policy Off’ and ‘Policy On’ conditions, wherein the Policy On scenario contains an ambitious infrastructure investment programme as set out in 7. Scenario 2, rather than being an extrapolation of the TRICS trend, will involve an infrastructure programme less ambitious than in Scenario 3, but will include all key transport improvements identified in PfE. Scenario 2 will represent the ‘balanced and affordable’ transport package set out in Section 7, which will be derived later as an iterative process based on modelling and investment planning.

Taking account of the new development quantum and phasing, in Table, plus additional ‘land supply’ sites where there is completed or committed development or development under construction, the numbers of jobs and homes have been calculated as shown in Appendix E. This development quantum has been used to calculate the levels of trips forecast in 2040, in each of Scenarios 1, 2 and 3. Trips have been calculated for both weekdays AM Peak and 12-hour weekday, based on trip rates from the PfE Locality Assessment in all scenarios, but with variations between scenarios in modal shares and proportion of localised internal trips, as described in Section 5.2.

## Calculating Numbers of Trips and Jobs

There is a detailed summary of the expected phasing of new land use units, between 2022 and 2042, in Table 3, in Appendix E1. However, the Scenario assessments of the transport dimensions and associated trip characteristics are based on a single forecast year of 2040.

### Number of Trips

TRICS guidance and the trip rates used for New Carrington sites (from PfE) relate home-based trips to the number of dwellings (trips per dwelling) and relate work-based trips to gross floor area (trips per 100 sqm GFA).

The breakdown of residential land uses currently predicted for New Carrington comprises the following (the reference numbers relate to the indicative development parcels in the New Carrington Masterplan 2020):

- Proposed 3,847 new homes, corresponding with site SR2A-D, PR3A-G, PR4A-F, and Local Centre.
- Committed Land Supply of 2,013 homes, corresponding with sites CR1A-B, PR4A-F, and PR3E-G, plus planning commitments around Partington and Sale.

Summing the above gives a total of 5,860 homes.

The breakdown of employment land uses comprises the following:

- Proposed new employment area of 103,365 sqm GFA, corresponding with site CE3A,
- Committed Land Supply employment area of 274,041 sqm GFA, corresponding with sites CE1A, CE1B, CE2A, CE2B, CE2C

Summing the above gives a total of 377,406 sqm GFA of employment floorspace.

Based upon applying PfE trip rates to the planning assumptions above, it is estimated that the New Carrington area will generate 65,633 person trips per day in 2040, in each of Scenarios 1, 2 and 3 respectively, combining both trip departures and arrivals, and taking all travel modes together. Of these trips:

- 46,338 person trips will be associated with home departures and arrivals.
- 19,295 person trips will be associated with work arrivals and departures.
- A proportion of the total trips will be internalised within New Carrington and therefore will be double counted home and work trips, but the number of these trips will vary between Scenarios 1, 2 and 3 as discussed in subsequent sections.

The proportionate split of these trips between travel modes and between external and internal journeys will vary, depending upon the underlying assumptions in each of Scenarios 1, 2 and 3.

### Number of Jobs

Trafford Council's approach to predicting numbers of jobs has been amended to achieve consistency between the number of employment trips and number of jobs predicted in the New Carrington scenarios, and entails the following steps.



To estimate the number of jobs associated with the New Carrington development, appropriate employment sqm per job ratios have been adopted from Homes and Communities Agency 'Employment Density Guide 3rd edition', November 2015.

Applying these sqm per job ratios to the developable employment floor area (192,477 sqm), after proportioning it amongst the respective employment types, gives an estimated 7,870 new jobs.

Calculating the ratio of daily person trips per job, from the above assumptions, equates to  $(19,295 / 7,821) = 2.5$  person trips per day per job, which seems a reasonable number, matching the benchmark figure of one inbound employment journey from home to work, plus one outbound employment journey from work to home, plus a proportion of employees making an extra trip during the day.

### **Scenario 1 – Trip Volumes and Mode Share Under “Policy Off” Conditions**

This Policy Off scenario uses the development quanta set out in Table 3, in Appendix E1, without much of the infrastructure programme set out in the Greater Manchester Transport Strategy 2040. Bus service provision, under this scenario, is assumed to be broadly as now (see Section 3.1). Highway investment would be provided, though the active travel and bus infrastructure would not be. More details of the infrastructure list associated with Scenario 1 can be found in Section 6. In Scenario 1, it is assumed that new policies relating to parking provision and active mode provision within and between developments will not be in place. In summary, Scenario 1 involves:

- Least sustainable, GM Policy Off transport provision and travel choices.
  - ✦ 'Conventional' hourly trip rate, deduced from highway focussed PfE Locality Assessment (based on Trafford Park Metrolink).
  - ✦ Wider region 'Core' trend for future trip pattern from NTEM, as assessed for PfE (assumed to be applied in GM model, using NTEM v8.0 update).
  - ✦ Proportion of internal journeys remaining wholly within New Carrington, taken from 2017 GM transport model base year outputs.

Table 6 - Scenario 1 (Policy Off) Forecast 2040 Trip Rates - Weekday AM Peak

Scenario 1 Trips - Weekday (AM Peak 8am-9am)		External Trip Departures	External Trip Arrivals	% Mode Share of External Trips	Total Internal Trips	% Mode Share of Internal Trips	% Internal Trips	Total External + Internal Trips	% Mode Share of Total Trips
Total Vehicles		2,567	1,954		266		5.6%	4,788	
People	Vehicle Occupants	3,380	2,573	79.9%	316	71.3%	5.0%	6,270	79.4%
	PT Passengers	153	191	4.6%	50	11.2%	12.6%	394	5.0%
	Cyclists	144	87	3.1%	23	5.3%	9.2%	255	3.2%
	Pedestrians	575	350	12.4%	54	12.3%	5.6%	980	12.4%
Total People		4,252	3,202	100.0%	444	100.0%	5.6%	7,898	100.0%
Total People	Adjusted to remove double counted internal O&D				332			7,786	

Table 7 - Scenario 1 (Policy Off) Forecast 2040 Trip Rates - Weekday All Day

Scenario 1 Trips - Weekday (All Day 7am-7pm)		External Trip Departures	External Trip Arrivals	% Mode Share of External Trips	Total Internal Trips	% Mode Share of Internal Trips	% Internal Trips	Total External + Internal Trips	% Mode Share of Total Trips
Total Vehicles		18,501	17,710		2,132		5.6%	38,344	
People	Vehicle Occupants	25,197	24,120	79.6%	2,637	72.3%	5.1%	51,954	79.2%
	PT Passengers	1,100	1,066	3.5%	363	9.9%	14.3%	2,529	3.9%
	Cyclists	1,074	1,025	3.4%	195	5.3%	8.5%	2,295	3.5%
	Pedestrians	4,298	4,102	13.6%	455	12.5%	5.1%	8,855	13.5%
Total People		31,669	30,314	100.0%	3,650	100.0%	5.6%	65,633	100.0%
Total People	Adjusted to remove double counted internal O&D				2,759			64,742	

- ✦ Transport intervention package prioritises highway-focussed local schemes, to satisfy conventional land use and travel demands, and support short term, cost-effective travel.

The figures in Table 6 and Table 7 show the forecast total trips, for residential and employment combined, and mode share, for AM Peak and Weekday Daytime under Scenario 1.

In Scenario 1, during the weekday AM peak hour, there are predicted to be a total of around 4,800 vehicle trips 2-way, departing and arriving at the New Carrington sites, with committed and proposed development.

There will be around 7,900 total person trips in the AM peak hour Scenario 1, of which, 79% will be vehicle occupants and 21% will be non-vehicle users. The non-vehicle users will include 12% pedestrians, 3% cyclists and 5% bus users. After adjustment to remove the duplication of internalised home-based work person trips, (where each residential trip departure and each employment trip arrival, and vice versa, are double counted as four journeys in the trip rate calculations, but are actually two journeys), the total number of AM peak person trips in Scenario 1 is 7,800.

In Scenario 1, during a 12-hour weekday, there are predicted to be a total of around 38,350 vehicle trips 2-way, departing and arriving at the New Carrington sites, with committed and proposed development.

There will be around 65,650 total person trips during a typical weekday in Scenario 1, of which, 79% will be vehicle occupants and 21% will be non-vehicle users. The non-vehicle users will include 13% pedestrians, 4% cyclists and 4% bus users. After adjustment to remove the duplication of internalised home-based work person trips, the total number of weekday person trips in Scenario 1 is 64,750.

### **Scenario 1 – Internal Versus External Trips**

A further distinction between Scenario 1 and Scenario 3 assumes that in Scenario 1, many of the facilities used by residents (such as schools, shops, healthcare and leisure facilities) will lie outside of the Carrington/Partington area, requiring a relatively high level of external trips to access these facilities. Under Scenario 1, it is also assumed that a large proportion of employment trips will be external, reflecting a relatively low level of employment diversity.

The external/internal trip ratio has been assumed to be that reflected the GM model 2017 base data for combined origin and destination trips in the Carrington and Partington sectors, together (car plus PT trips). This indicates that trips are split:

- 6% daily internal trips; and
- 94% daily external trips.

It should be noted that the modal split of Scenario 1 internal trips is different from that for external trips, and both differ from the overall mode share for all trips combined. In Scenario 1, the modal split of internal journeys is taken from Census 2021 data for trips <10km distance across Trafford district MSOA adjacent to New Carrington (Trafford 005, 007, 009, 010, 012, 013, 016, 017, 019 and 025). The modal split for external journeys is taken from the PfE locality assessment trip rates by mode, applied to the New Carrington development quantum.

The predicted weekday split of trips between travel modes in Scenario 1 is therefore as follows:

- Internal trips: 72% vehicle; 10% PT; 18% active.
- External trips: 80% vehicle; 3% PT; 17% active.
- All trips: 79% vehicle; 4% PT; 17% active.

## Scenario 2 Indicative Trip Volumes and Mode Share Under Partial Policy Off / On Conditions

TRICS Decide and Provide guidance indicates that a Scenario 2 should reflect an extrapolation of the historic trend. In considering the development of Carrington, this is not considered an especially helpful approach and it is more appropriate if we develop a Scenario 2 based on:

- Scenario 2 Reasonably sustainable, realistic GM partial Policy Off / Policy On transport provision and travel choices, as a credible base from which to encourage and enable improved sustainability of land use and travel in future, wherever possible.
  - ⌘ Trip rates taken from a comparable location, on brownfield land, in South Gloucestershire, including areas of Stoke Gifford, Bradley Stoke, Patchway and Filton, on the northern edge of Bristol, where the site distance from the regional centre, the transport provision and the mix and timing of regeneration, (part historic community, part newly built, and part proposed), resemble the proposals for Partington and Carrington.
  - ⌘ Wider region 'Behavioural Change' trend for future trip pattern from NTEM, with reduced trip-making, (assumed to be applied in GM model, using NTEM v8.0 update).
  - ⌘ Target proportion of internal journeys remaining wholly within New Carrington, set at 17%, to replicate case study evidence for Waterbeach planned sustainable development allocation northeast of Cambridge.
  - ⌘ Uplift to S1 internal trip proportion, and increased non-vehicle mode share for internal trips, to reflect co-ordinated and phased land use spatial strategy, 20-minute 'Active Neighbourhoods', and optimal provision of local active travel facilities, consistent with 'Streets for All' guidelines.
  - ⌘ Uplift to S1 non-vehicle mode share for external trips, to reflect realistic, but constrained, provision of wider public transport interventions and absence of vehicle demand management, (e.g. through air quality regulation, car park provision and pricing, and road user congestion charging).
  - ⌘ Transport intervention package contains realistic local, sustainable, interventions, sifted from S3 to retain schemes which are achievable and financially viable, but which support sustainably planned development.
  - ⌘ Note that this ultimate, 'most-deliverable', S2 is currently being refined using iterative assessment of transport interventions, their viability and their likely impacts.

The development of Scenario 2, which is the ultimate end point of this Transport Strategy, and the one which represents a 'balanced and affordable transport package', will involve an iterative process which follows from the consideration of the feasibility of Scenario 3, primarily in terms of the anticipated cost of the infrastructure developments identified within the Greater Manchester Transport Strategy 2040.

The figures in Table 8 and Table 9 show the forecast total trips, for residential and employment combined, and mode share, for AM Peak and Weekday Daytime under Scenario 2.

Table 8 - Scenario 2 (Partial Policy On / Policy Off) Forecast 2040 Trip Rates - Weekday AM Peak

Scenario 2 Trips - Weekday (AM Peak 8am-9am)		External Trip Departures	External Trip Arrivals	% Mode Share of External Trips	Total Internal Trips	% Mode Share of Internal Trips	% Internal Trips	Total External + Internal Trips	% Mode Share of Total Trips
Total Vehicles		2,103	1,583		755		17.0%	4,441	
People	Vehicle Occupants	2,769	2,085	74.1%	978	72.9%	16.8%	5,832	73.9%
	PT Passengers	313	236	8.4%	123	9.1%	18.3%	671	8.5%
	Cyclists	197	148	5.3%	72	5.4%	17.3%	417	5.3%
	Pedestrians	459	346	12.3%	169	12.6%	17.3%	973	12.3%
	Total People		3,737	2,814	100.0%	1,342	100.0%	17.0%	7,893
Total People	Adjusted to remove double counted internal O&D				1,001			7,553	

Table 9 - Scenario 2 (Partial Policy On / Policy Off) - Weekday (All Day 07:00-19:00)

Scenario 2 Trips - Weekday (All Day 7am-7pm)		External Trip Departures	External Trip Arrivals	% Mode Share of External Trips	Total Internal Trips	% Mode Share of Internal Trips	% Internal Trips	Total External + Internal Trips	% Mode Share of Total Trips
Total Vehicles		15,142	14,494		6,070		17.0%	35,707	
People	Vehicle Occupants	20,621	19,738	74.1%	8,135	72.9%	16.8%	48,494	73.9%
	PT Passengers	2,330	2,230	8.4%	1,019	9.1%	18.3%	5,579	8.5%
	Cyclists	1,465	1,402	5.3%	601	5.4%	17.3%	3,469	5.3%
	Pedestrians	3,419	3,272	12.3%	1,403	12.6%	17.3%	8,094	12.3%
	Total People		27,835	26,643	100.0%	11,158	100.0%	17.0%	65,636
Total People	Adjusted to remove double counted internal O&D				8,435			62,912	

In Scenario 2, during the weekday AM peak hour, there are predicted to be a total of around 4,450 vehicle trips 2-way, departing and arriving at the New Carrington sites, with committed and proposed development. This represents an increase of about 900 vehicles per hour in the AM peak (or +25%), compared with Scenario 3, but a decrease of about 350 vehicles per hour (or -7%), compared with Scenario 1.

There will be around 7,900 total person trips in the AM peak hour Scenario 3, of which, 74% will be vehicle occupants and 26% will be non-vehicle users. The non-vehicle users will include 12% pedestrians, 5% cyclists and 9% bus users. After adjustment to remove the duplication of internalised home-based work person trips, (where each residential trip departure and each employment trip arrival, and vice versa, are double counted as four journeys in the trip rate calculations, but are actually two journeys), the total number of AM peak person trips in Scenario 2 is 7,550.

In Scenario 2, during a 12-hour weekday, there are predicted to be a total of around 35,700 vehicle trips 2-way, departing and arriving at the New Carrington sites, with committed and proposed development. This represents an increase of about 7,100 vehicles per day (or +25%), compared with Scenario 3, but a decrease of about 2,600 vehicles per day (or -7%), compared with Scenario 1.

There will be around 65,650 total person trips during a typical weekday in Scenario 2, of which, 74% will be vehicle occupants and 26% will be non-vehicle users. The non-vehicle users will include 12% pedestrians, 5% cyclists and 9% bus users.

### **Scenario 2 – Indicative Internal Versus External Trips**

In Scenario 2, a realistic proportion of the facilities used by residents (such as schools, shops, healthcare and leisure facilities) are expected to be within the New Carrington allocation, but fewer than in Scenario 3, thereby being accessible by short active mode or bus journeys. This will enable a modest number of trips to be made internally, but fewer than in Scenario 3. Under Scenario 2, it is also assumed that employment within the Carrington area will be fairly diverse, enabling a realistic number of people to access suitable employment locally, thereby making some employment trips internal, but fewer than in Scenario 3.

The external/internal trip ratio under Scenario 2 has been explored using benchmark examples, based on the forecasts used for the Greater Cambridge Local Plan development at Waterbeach, near Cambridge. A conservative approach has been taken using this example, which entails a high level of external public transport provision (e.g. rail connections), and which will tend to raise the level of external non-car employment trips. Further exploration may justify a higher level of internal trips for Carrington. The conservative assessment indicates that trips are split:

- 17% daily internal trips; and
- 83% daily external trips.

It should be noted that the modal split of Scenario 2 internal trips is different from that for external trips, and both are an approximation, which differs from the overall mode share for all trips combined. In Scenario 2, the modal split of internal journeys is taken from Census 2021 Journey to Work MSOA data for trips <10km, for a comparable location in South Gloucestershire, on the northern edge of Bristol, (excluding people working from home and 'others', which were predominant during the COVID-19 pandemic, and which would otherwise distort the Census results). The modal split for external journeys is taken from TEMPro v8.0 forecast daily trip ends for the same MSOA in South Gloucestershire in 2021, including all journey purposes. The Scenario 2 respective travel mode shares for internal trips (from Census 2021 JTW), and for external trips (from TEMPro8), are almost identical.

The predicted weekday split of trips between travel modes in Scenario 3 is therefore as follows:

- Internal trips: 73% vehicle; 9% PT; 18% active.
- External trips: 74% vehicle; 8% PT; 18% active.
- All trips: 74% vehicle; 8% PT; 18% active.

### Scenario 3 – Trip Volumes and Mode Share Under Policy On Conditions

Scenario 3 uses the same quanta of development but assumes that the infrastructure provision in the Greater Manchester Transport Strategy 2040 is delivered in its entirety. More details of these investment plans can be found in Section 6. In addition, emerging policy and guidance (including PfE, Trafford’s Local Plan, Trafford’s Design Code) refers to sustainable modes of travel and active travel priorities and which seeks to reduce parking standards on provision of alternative sustainable modes of transport. These policies are also assumed to be ‘on’ in Scenario 3. In summary, Scenario 3 involves:

- Most sustainable, GM Policy On transport provision and travel choices.
  - ⌘ Benchmark aspirational non-vehicle mode share, applied to S1 trip rates, and calculated from GM ‘Right Mix’ mode share targets for wider Trafford and GM outside regional centre; (this mode share now replaces an earlier alternative split, which was derived from TRICS outer London sites, filtered to remove sites with exceptionally low car ownership and, or car parking, but which indicated unusually high trip rates per unit of land use compared with northern England).
  - ⌘ Wider region ‘Regional’ trend for future trip pattern from NTEM, with increased trip-making outside southeast England, (assumed to be applied in GM model, using NTEM v8.0 update).
  - ⌘ Target proportion of internal journeys remaining wholly within New Carrington, set at an ‘aspirational’ 25%.
  - ⌘ Transport intervention package contains ambitious local, sustainable, interventions, (including Trafford Greenway, walk and cycle facilities, and improved bus services), to support sustainably planned development, long term sustainable travel and GM Right Mix targets for Trafford district.
  - ⌘ S1 person trips, by mode, are adjusted to match aspirational modal share in 2040, inferred from GM ‘Right Mix’ targets.
  - ⌘ S3 vehicle trips are calculated by factoring new S3 vehicle occupant trips (above), in ratio of: S1 vehicle trips (by mode) to S1 total vehicle occupants.

The figures in Table 10 and Table 11 show the forecast total trips, for residential and employment combined, and mode share, for AM Peak and Weekday Daytime under Scenario 3.

Table 10 - Scenario 3 (Policy On) Forecast 2040 Trip Rates - Weekday AM Peak

Scenario 3 Trips - Weekday (AM Peak 8am-9am)		External Trip Departures	External Trip Arrivals	% Mode Share of External Trips	Total Internal Trips	% Mode Share of Internal Trips	% Internal Trips	Total External + Internal Trips	% Mode Share of Total Trips
Total Vehicles		1,518	1,143		887		25.0%	3,548	
People	Vehicle Occupants	1,999	1,505	59.2%	730	37.0%	17.2%	4,234	53.6%
	PT Passengers	619	466	18.3%	39	2.0%	3.5%	1,124	14.2%
	Cyclists	228	172	6.7%	361	18.3%	47.5%	760	9.6%
	Pedestrians	531	400	15.7%	843	42.7%	47.5%	1,774	22.5%
Total People		3,377	2,543	100.0%	1,973	100.0%	25.0%	7,893	100.0%
Total People	Adjusted to remove double counted internal O&D				1,472			7,392	

Table 11 - Scenario 3 (Policy On) Forecast 2040 Trip Rates - Weekday (All Day 07:00-19:00)

Scenario 3 Trips - Weekday (All Day 7am-7pm)		External Trip Departures	External Trip Arrivals	% Mode Share of External Trips	Total Internal Trips	% Mode Share of Internal Trips	% Internal Trips	Total External + Internal Trips	% Mode Share of Total Trips
Total Vehicles		10,932	10,464		7,132		25.0%	28,529	
People	Vehicle Occupants	14,887	14,250	59.2%	6,071	37.0%	17.2%	35,208	53.6%
	PT Passengers	4,609	4,412	18.3%	328	2.0%	3.5%	9,349	14.2%
	Cyclists	1,696	1,624	6.7%	3,003	18.3%	47.5%	6,323	9.6%
	Pedestrians	3,958	3,789	15.7%	7,006	42.7%	47.5%	14,753	22.5%
Total People		25,151	24,074	100.0%	16,408	100.0%	25.0%	65,633	100.0%
Total People	Adjusted to remove double counted internal O&D				12,404			61,629	



In Scenario 3, during the weekday AM peak hour, there are predicted to be a total of around 3,550 vehicle trips 2-way, departing and arriving at the New Carrington sites, with committed and proposed development. This represents a reduction of about 1,250 vehicles per hour in the AM peak (or -26%), compared with Scenario 1.

There will be around 7,900 total person trips in the AM peak hour Scenario 3, of which, 54% will be vehicle occupants and 46% will be non-vehicle users. The non-vehicle users will include 22% pedestrians, 10% cyclists and 14% bus users. After adjustment to remove the duplication of internalised home-based work person trips, (where each residential trip departure and each employment trip arrival, and vice versa, are double counted as four journeys in the trip rate calculations, but are actually two journeys), the total number of AM peak person trips in Scenario 3 is 7,400.

In Scenario 3, during a 12-hour weekday, there are predicted to be a total of around 28,550 vehicle trips 2-way, departing and arriving at the New Carrington sites, with committed and proposed development. This represents a reduction of about 9,800 vehicles per day (or -26%), compared with Scenario 1.

There will be around 65,650 total person trips during a typical weekday in Scenario 3, of which, 54% will be vehicle occupants and 46% will be non-vehicle users. The non-vehicle users will include 22% pedestrians, 10% cyclists and 14% bus users. After adjustment to remove the duplication of internalised home-based work person trips, the total number of weekday person trips in Scenario 3 is 61,650.

### **Scenario 3 – Internal Versus External Trips**

In Scenario 3, the majority of the facilities used by residents (such as schools, shops, healthcare and leisure facilities) will lie within the New Carrington allocation, thereby being accessible by short active mode or bus journeys. This will enable more trips to be made internally. Under Scenario 3, it is also assumed that employment within the Carrington area will be relatively diverse, enabling more people to access suitable employment locally, thereby making more employment trips internal, rather than external.

The external/internal trip ratio under Scenario 3 has been explored using benchmark examples, based on TRICS data for similar developments in Outer London. An aspirational vision has been applied to Scenario 3, in which trips are split:

- 25% daily internal trips; and
- 75% daily external trips.

It should be noted that the modal split of Scenario 3 internal trips is different from that for external trips, and both are an approximation, which differs from the overall mode share for all trips combined. In Scenario 3, the modal split of internal journeys is taken from GM Right Mix 2040 target for 'Neighbourhood' areas. The modal split for external journeys is taken from GM Right Mix 2040 target for the 'Wider Trafford' area, with the proportions of PT and active mode trips derived as an average of those for 'Neighbourhood' and 'Wider City Region'.

The predicted weekday split of trips between travel modes in Scenario 3 is therefore as follows:

- Internal trips: 37% vehicle; 2% PT; 61% active.
- External trips: 59% vehicle; 18% PT; 23% active.
- All trips: 54% vehicle; 14% PT; 32% active.

### Trip Distribution under Scenarios 1, 2 and 3

There is currently no reliable basis on which to calculate the detailed trip distribution associated with New Carrington development under Scenarios 1, 3, or 2. The baseline conditions set out in Section 3.1 relate to the current isolated community, with employment trips focused on the immediate area and Trafford Park/Trafford Centre. It is most unlikely that the large incoming community of New Carrington would share these journey patterns. Potentially, under Scenario 1, the residents of New Carrington will target jobs throughout Greater Manchester and beyond – and with the limited public transport provision, the vast majority these trips would be by car, putting considerable stress on the highway network, including the M60. Scenarios 2 and 3 could mitigate these impacts – but this can only be established through the use of the GM Transport Model with both demand and supply tailored to the development types and the transport supply.

Notwithstanding the current uncertainties around trip distribution, an indicative assessment has been made of the potential proportions of journeys departing from New Carrington sites to surrounding destinations and originating from those areas and arriving in New Carrington, during a typical weekday. The analysis is largely based on trip patterns established in the 2017 GM base year transport model (representing highway and public transport), but projected to 2040 in Scenarios, 1, 2, and 3 using appropriate adjustments to future travel mode shares and to the proportion of internalised journeys.

An indicative future year 2040 distribution of trip movements has been derived, by adding Scenario 1, 2 and 3 development trips, by travel mode, on to a synthesised GM model 2040 forecast of ‘background’ travel demand, (projected from the 2017 GM model base year trips under Policy Off or Policy On assumptions, as indicated in section 3.2), and adjusting for predicted mode share and proportion of internalised journeys for New Carrington trips within each scenario. Details of the trip distribution outcomes for trips to and from New Carrington in Scenarios 1, 2 and 3 are provided in Appendix E4. The results are summarised in Table 12 for Scenario 1 (with 29% non-vehicle mode share and 6% internalised journeys), in Table 13 for Scenario 2 (with 26% non-vehicle mode share and 17% internalised journeys), and in Table 14 for Scenario 3 (with 46% non-vehicle mode share and 25% internalised journeys).

- The individual sector with the highest proportion of trips (by all modes combined) which depart from, plus arrive at, New Carrington is the group of zones within the ‘10km distance inside GM’ category: 38% in S1; 34% in S2; and 32% in S3; this sector covers all of Trafford district, not immediately adjacent to New Carrington, plus Salford district and small parts of Manchester and Bolton districts; it includes key work and other destinations for home-based trips from New Carrington such as Trafford Centre, Trafford Park, Salford Quays and Manchester City Centre.
- The proportion of trips (by all modes combined) which depart from, plus arrive at, New Carrington, to and from all zones except ‘rest of GM’, and ‘10km distance outside GM’ categories, is: 85% in S1; 87% in S2; and 87% in S3; these zones includes the western half of Trafford district, including zones immediately adjacent to New Carrington, plus the sector above.
- The proportion of trips (by all modes combined) which depart from, plus arrive at, New Carrington, to and from all zones within and adjacent to Carrington and Partington (including Cadishead, Urmston, Sale West, Dunham, Lymm and Altrincham West) is: 47% in S1; 53% in S2; and 56% in S3; this sector excludes most of Trafford and Salford districts as well as the rest of GM and surrounding areas.
- The proportion of trips (by all modes combined) which depart from, plus arrive at, New Carrington, to and from all zones within and immediately adjacent to Carrington and Partington (including Cadishead, Urmston and Sale West, only) is: 25% in S1; 33% in S2; and 37% in S3; this sector includes only a small segment of Trafford district and Cadishead in Salford district.

- The proportion of trips (by all modes combined) which depart from, plus arrive at, New Carrington only, and which are therefore wholly internal to Carrington and Partington, is: 8% in S1; 17% in S2 and 25% in S3.

*Table 12 - Scenario 1 (Policy Off) – Weekday Trip Distribution: % of All Trips From and To Carrington and Partington by Travel Mode*

<b>% All Trips From and To Carrington and Partington by Mode</b>	<b>Car</b>	<b>PT</b>	<b>Active</b>	<b>All Modes</b>
% Internal Trips Within Carrington and Partington Combined	5.3%	10.8%	20.5%	7.5%
% To Cadishead	1.3%	0.0%	2.9%	1.4%
% From Cadishead	1.0%	0.0%	2.4%	1.2%
% To Urmston	2.1%	17.9%	7.6%	3.5%
% From Urmston	2.4%	4.9%	6.5%	3.1%
% To Sale West	4.8%	0.7%	11.2%	5.5%
% From Sale West	2.2%	0.7%	5.3%	2.6%
% To Dunham	0.8%	0.1%	0.5%	0.7%
% From Dunham	0.7%	0.3%	0.5%	0.7%
% To Lymm	2.5%	0.0%	1.5%	2.3%
% From Lymm	1.7%	0.0%	1.0%	1.5%
% To Altrincham West	10.9%	7.2%	6.7%	10.2%
% From Altrincham West	6.9%	14.8%	4.8%	6.9%
% To 10K - Inside GM	20.9%	32.3%	13.6%	20.4%
% From 10K - Inside GM	19.1%	9.7%	11.9%	17.7%
% To 10K - Outside GM	3.4%	0.0%	0.0%	2.8%
% from 10K - Outside GM	3.1%	0.0%	0.0%	2.6%
% To Rest of GM	1.4%	0.1%	0.8%	1.3%
% From Rest of GM	3.6%	0.1%	2.2%	3.2%
% To Rest of UK	3.3%	0.2%	0.0%	2.8%
% From Rest of UK	2.6%	0.1%	0.0%	2.2%
% To All Destinations From Carrington & Partington	54.0%	63.9%	55.1%	54.6%
% From All Origins To Carrington & Partington	46.0%	36.1%	44.9%	45.4%

*Table 13 - Scenario 2 (Part Policy Off/On) – Weekday Trip Distribution: % of All Trips From and To Carrington and Partington by Travel Mode*

<b>% All Trips From and To Carrington and Partington by Mode</b>	<b>Car</b>	<b>PT</b>	<b>Active</b>	<b>All Modes</b>
% Internal Trips Within Carrington and Partington Combined	16.9%	17.5%	17.2%	17.0%
% To Cadishead	1.0%	0.8%	3.6%	1.4%

<b>% All Trips From and To Carrington and Partington by Mode</b>	<b>Car</b>	<b>PT</b>	<b>Active</b>	<b>All Modes</b>
% From Cadishead	0.8%	0.7%	2.9%	1.1%
% To Urmston	2.4%	2.1%	8.8%	3.3%
% From Urmston	2.1%	1.8%	7.7%	2.9%
% To Sale West	3.8%	3.2%	13.9%	5.2%
% From Sale West	1.7%	1.5%	6.4%	2.4%
% To Dunham	0.7%	0.7%	0.4%	0.6%
% From Dunham	0.6%	0.6%	0.4%	0.6%
% To Lymm	2.1%	2.2%	1.4%	2.0%
% From Lymm	1.4%	1.5%	0.9%	1.4%
% To Altrincham West	9.5%	9.7%	6.2%	9.0%
% From Altrincham West	6.5%	6.6%	4.2%	6.1%
% To 10K - Inside GM	19.1%	19.4%	12.4%	18.1%
% From 10K - Inside GM	16.5%	16.9%	10.8%	15.7%
% To 10K - Outside GM	2.9%	2.8%	0.0%	2.5%
% from 10K - Outside GM	2.7%	2.6%	0.0%	2.3%
% To Rest of GM	1.2%	1.2%	0.8%	1.1%
% From Rest of GM	3.0%	3.1%	2.0%	2.9%
% To Rest of UK	2.9%	2.8%	0.0%	2.4%
% From Rest of UK	2.3%	2.2%	0.0%	1.9%
% To All Destinations From Carrington & Partington	53.9%	53.8%	56.1%	54.2%
% From All Origins To Carrington & Partington	46.1%	46.2%	43.9%	45.8%

*Table 14 - Scenario 3 (Policy On) – Weekday Trip Distribution: % of All Trips From and To Carrington and Partington by Travel Mode*

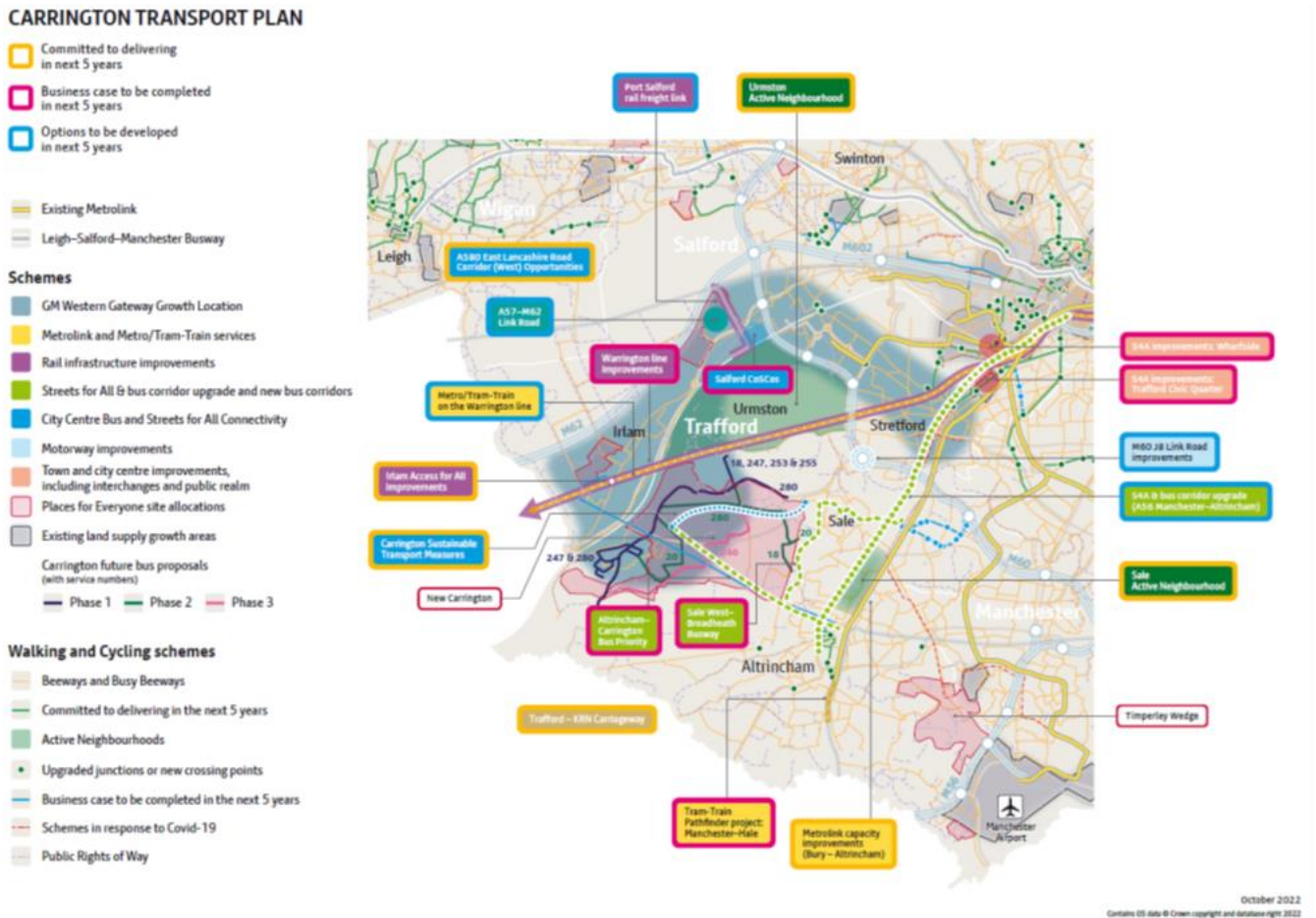
<b>% All Trips From and To Carrington and Partington by Mode</b>	<b>Car</b>	<b>PT</b>	<b>Active</b>	<b>All Modes</b>
% Internal Trips Within Carrington and Partington Combined	20.9%	13.4%	37.6%	25.0%
% To Cadishead	0.7%	0.2%	2.0%	1.0%
% From Cadishead	0.6%	0.1%	1.6%	0.8%
% To Urmston	1.7%	0.4%	4.9%	2.5%
% From Urmston	1.5%	0.3%	4.3%	2.2%
% To Sale West	2.7%	0.6%	7.7%	3.9%
% From Sale West	1.2%	0.3%	3.6%	1.8%
% To Dunham	0.6%	0.8%	0.4%	0.6%
% From Dunham	0.6%	0.8%	0.4%	0.6%

<b>% All Trips From and To Carrington and Partington by Mode</b>	<b>Car</b>	<b>PT</b>	<b>Active</b>	<b>All Modes</b>
% To Lymm	2.0%	2.5%	1.3%	1.9%
% From Lymm	1.4%	1.7%	0.9%	1.3%
% To Altrincham West	9.0%	11.4%	6.0%	8.4%
% From Altrincham West	6.1%	7.8%	4.1%	5.7%
% To 10K - Inside GM	18.0%	22.9%	12.0%	16.9%
% From 10K - Inside GM	15.7%	19.8%	10.4%	14.6%
% To 10K - Outside GM	3.6%	3.2%	0.0%	2.4%
% from 10K - Outside GM	3.3%	3.0%	0.0%	2.2%
% To Rest of GM	1.1%	1.4%	0.8%	1.1%
% From Rest of GM	2.9%	3.6%	1.9%	2.7%
% To Rest of UK	3.6%	3.2%	0.0%	2.4%
% From Rest of UK	2.8%	2.6%	0.0%	1.9%
% To All Destinations From Carrington & Partington	53.5%	53.3%	54.0%	53.6%
% From All Origins To Carrington & Partington	46.5%	46.7%	46.0%	46.4%

## 6. Study Area Transport Schemes and Scenarios

At this stage, it is assumed that in Scenario 1, only the highway schemes would be funded, which broadly represents a ‘predict and provide’ approach emphasising car travel. Scenario 3 includes a much more comprehensive investment programme, representing a ‘decide and provide’ approach with the implementation of the infrastructure programme in the Greater Manchester Transport Strategy 2040 (as illustrated in Figure 5).

Figure 5 – GM Transport Strategy 2040 Potential Interventions within New Carrington Area of Influence



### 6.1. Phased Transport Interventions under Policy Off and Policy On Conditions

In Table 15 and Table 16 there is a breakdown of identified transport interventions which are proposed under Scenarios 1, 2 and 3 respectively, with details of their policy context. A colour coding of green indicates infrastructure which will be fully implemented under each scenario, red represents elements which will be sparsely implemented or absent, and orange indicates items which will be implemented as far as is realistically achievable.

Table 15 – Provisional Infrastructure Programme - Scenarios 1, 3 and 2

Transport Interventions / Area of Development	Provision in Scenario 1 (Policy Off)	Provision in Scenario 2 (Part Policy Off/ On)	Provision in Scenario 3 (Policy On)	Transport Strategy 2040 – Five Year Transport Delivery Plan (2021 – 2026)	Transport Strategy 2040 – Trafford Local Implementation Plan (LIP)	Places for Everyone (Pfe) Policy JPA33 New Carrington	Places For Everyone Plan Composite Version (Sep 2023), Appendix D: Indicative Transport Mitigation (Main modifications to the original Pfe plan, after examination)
Carrington Greenway (Bee Network, between Partington and Cadishead, on disused railway line and bridge across Manchester Ship Canal, initial phase of wider 'Trafford Greenway' scheme) Greenway (cycle and footway) link to Sale to contribute to the Bee Network.	✓	✓	✓	✓	✓	✓	✓
Trafford Greenway (Bee Network extension of 'Carrington Greenway' to link Altrincham and Irlam, on disused railway line, supplementary to initial Carrington Greenway scheme)	✓	✓	✓	✓	✓	✓	✓
Public Rights Of Way improvements	✓	✓	✓			✓	✓
Controlled pedestrian crossings at A56 Dunham Road / Park Road / Charcoal Road junction	✓	✓	✓				✓

Transport Interventions / Area of Development	Provision in Scenario 1 (Policy Off)	Provision in Scenario 2 (Part Policy Off/ On)	Provision in Scenario 3 (Policy On)	Transport Strategy 2040 – Five Year Transport Delivery Plan (2021 – 2026)	Transport Strategy 2040 – Trafford Local Implementation Plan (LIP)	Places for Everyone (Pfe) Policy JPA33 New Carrington	Places For Everyone Plan Composite Version (Sep 2023), Appendix D: Indicative Transport Mitigation (Main modifications to the original Pfe plan, after examination)
Access to Altrincham Package (new bus stops at Waitrose & Trafford college, and junction improvements at A56 / Stamford Brook Road)	✓	✓	✓	✓	✓	✓	✓
Access to Sale Package (junction improvements, enhanced bus stops and bus shelters)	✓	✓	✓	✓	✓	✓	✓
Access to Stretford Package (Carrington to Stretford, via Urmston, corridor, junction improvements, bus service and bus stop improvements)	✓	✓	✓		✓	✓	✓
Trafford Bus Priority Schemes (SOBC July 2022). Supersedes Bus Opportunities (February 2020) Package Option 3 (Upgrading and extension of the existing bus services – including bus priority measures, real time information etc).		✓	✓				



Transport Interventions / Area of Development	Provision in Scenario 1 (Policy Off)	Provision in Scenario 2 (Part Policy Off/ On)	Provision in Scenario 3 (Policy On)	Transport Strategy 2040 – Five Year Transport Delivery Plan (2021 – 2026)	Transport Strategy 2040 – Trafford Local Implementation Plan (LIP)	Places for Everyone (Pfe) Policy JPA33 New Carrington	Places For Everyone Plan Composite Version (Sep 2023), Appendix D: Indicative Transport Mitigation (Main modifications to the original Pfe plan, after examination)
Partington and Carrington Bus Service Improvements: Retention of existing bus routes, (18, 19, 245, 247, 253/255, 280, Cat5), with some increased service frequencies and re-routing, (on services 247, 253, 18A), for Carrington, Partington and Sale West, plus some new bus services to and from the allocation (20, 21/21A, 246), and new vehicles (x8 in S1, x26 in S3, x16 in S2).	✓	✓	✓			✓	✓
Upgrading and extension of the existing bus services – including bus priority measures, real time information etc.	✓	✓	✓				✓
A1 Link Road (Carrington Relief Road) construction, single carriageway from A6144 Manchester Road to Isherwood Road	✓	✓	✓	✓		✓	✓
A1 Link Road (Carrington Relief Road), widening between the Isherwood Road junction and the Carrington Spur, Phases 1 and 2, subject to detailed local modelling	✓	✓	✓				✓

Transport Interventions / Area of Development	Provision in Scenario 1 (Policy Off)	Provision in Scenario 2 (Part Policy Off/ On)	Provision in Scenario 3 (Policy On)	Transport Strategy 2040 – Five Year Transport Delivery Plan (2021 – 2026)	Transport Strategy 2040 – Trafford Local Implementation Plan (LIP)	Places for Everyone (Pfe) Policy JPA33 New Carrington	Places For Everyone Plan Composite Version (Sep 2023), Appendix D: Indicative Transport Mitigation (Main modifications to the original Pfe plan, after examination)
Upgrade of the Isherwood Road route (part of the Eastern Link).	✓	✓	✓				✓
Roads within the allocation linking to development parcels – Southern Link Road construction (approximately 2km).	✓	✓	✓				✓
Roads within the allocation linking to development parcels – Eastern Link Road construction (approximately 1.8km).	✓	✓	✓				✓
Roads within the allocation linking to development parcels – Sale West Link Road construction (approximately 1km).	✓	✓	✓				✓
A56 Junction / Manchester Road / Barrington Road, (upgrade of signal equipment)	✓	✓					✓
Altrincham A56 Dunham Road / Highgate Road (realignment of Highgate Road)	✓	✓					✓
Heatley Paddock Lane / Bent Lane junction improvements (widen turn radii)	✓	✓					✓

Transport Interventions / Area of Development	Provision in Scenario 1 (Policy Off)	Provision in Scenario 2 (Part Policy Off/ On)	Provision in Scenario 3 (Policy On)	Transport Strategy 2040 – Five Year Transport Delivery Plan (2021 – 2026)	Transport Strategy 2040 – Trafford Local Implementation Plan (LIP)	Places for Everyone (Pfe) Policy JPA33 New Carrington	Places For Everyone Plan Composite Version (Sep 2023), Appendix D: Indicative Transport Mitigation (Main modifications to the original Pfe plan, after examination)
Carrington Spur widening on eastbound approach to M60 J8	✓	✓	✓				✓
B5158 Flixton Road / A6144 Carrington Lane / Isherwood Road signalised junction upgrade with lane widening on approaches (Phases 1 & 2)	✓	✓	✓				✓
Carrington Link / Carrington Spur / Banky Lane (junction upgrade with signal stage/sequence upgrade and lane widening on approaches, Phases 1 & 2)	✓	✓	✓				✓
M56 J7 Bowdon Roundabout (circulatory widening)	✓	✓					✓
M60 J8 improvement (strategic improvement)	✓	✓		✓			✓
Western Gateway Infrastructure Scheme – WGIS (associated with Port Salford development)	✓	✓	✓	✓			✓
A57 Liverpool Road link with new junction on M62, west of Eccles Interchange, likely to be required in combination with revised WGIS infrastructure (major strategic junction improvements)	✓	✓	✓				✓

Transport Interventions / Area of Development	Provision in Scenario 1 (Policy Off)	Provision in Scenario 2 (Part Policy Off/ On)	Provision in Scenario 3 (Policy On)	Transport Strategy 2040 – Five Year Transport Delivery Plan (2021 – 2026)	Transport Strategy 2040 – Trafford Local Implementation Plan (LIP)	Places for Everyone (Pfe) Policy JPA33 New Carrington	Places For Everyone Plan Composite Version (Sep 2023), Appendix D: Indicative Transport Mitigation (Main modifications to the original Pfe plan, after examination)
Metrolink capacity improvements – Altrincham – Bury line		✓	✓	✓			
Manchester – Warrington – Liverpool rail line (Cheshire Lines Committee) Tram-Train, low-cost option		✓	✓	✓			✓
Key to infrastructure provision and transport scheme interventions	✓ No / Minor Intervention			✓ Realistic / Partial Provision		✓ Full / Sustainable Provision	

The proposed locations, phases and local details of transport interventions, to support the sustainable development of New Carrington, in Scenario 3, are provided in Appendix A.

**6.2. Other Sustainable Transport Elements under Policy Off / On Conditions**

*Table 16 - Other Sustainable Interventions (Policy On & Policy Off)*

<b>Transport Interventions / Area of Development</b>	<b>Scenario 1 (Policy Off)</b>	<b>Scenario 2 (Part Policy Off/On)</b>	<b>Scenario 3 (Policy On)</b>
Car Parking Constraints	Residential & employment maximum provision (as now)	Significant reduction in provision	Substantial reduction in provision
Sustainable Transport Oriented Developments	Little regard to links to bus stops or provision of bus routes	Realistically achievable walk links to stops; bus routes reasonably accessible	Good walk links to stops; bus routes easily accessible
Walk and Cycle Facilities – Permeable Developments	Car-oriented designs	Reasonably permeable designs with essential connecting links	Highly permeable designs with multiple connecting links
Internal Facilities Provided	Only provided where unavailable within 10-15 min car journey	Schools, food retail recreation & healthcare	Schools, shops, food retail, recreation, healthcare, local jobs
Developer Contributions towards infrastructure and bus operation costs	Minimal	Moderate	Substantial
Bee Network (Franchising of Bus Services)	Franchising of existing bus services	Franchising of existing and some new bus services	Franchising of existing and multiple new bus services
Key to scheme interventions	No / Minor Intervention	Realistic / Moderate Intervention	Full / Major Intervention

**6.3. Phasing and Cost of Proposed Transport Interventions**

The potential transport interventions to support and enable the developments in New Carrington are detailed in Table 7. Further analysis of these schemes will be required, given the scale of the investment and the need to demonstrate value for money for each scheme individually. Other potential schemes, which are not referred to under PfE JPA33, but which could contribute to more sustainable travel patterns,

are shown by intervention phases in Appendix A:. In order to develop a balanced and affordable transport package (see Section 7) more work will need to be done, arriving at the recommended approach.

Schemes marked with ‘\*’ are specifically identified in PFE Appendix D for New Carrington and are directly related to the development proposals set out in PFE Policy JPA33. Some of the schemes identified in Table 17 also reflect the ongoing work on developing options for transport infrastructure improvements and there may therefore be some duplication / cross over between schemes and this will be considered further through the New Carrington Masterplan.

Table 17 - Proposed Transport Interventions

Transport Interventions / Area of Development	Indicative Delivery Phase			
	2022 - 2027	2027- 2032	2032- 2037	2037- 2042
Carrington Greenway				
Greenway (cycle and footway) link to Sale to contribute to the Bee Network				
PROW improvements*				
Controlled pedestrian crossings at the A56 Dunham Road – Park Road – Charcoal Road*				
Access to Altrincham Package*: New bus stops (Waitrose & Trafford college) and junction improvements (A56 - Stamford Brook Road)				
Access to Sale Package*: Junction improvements, enhanced bus stop and bus shelters				
Access to Stretford Package/Carrington to Stretford (via Urmston) corridor*: Junction improvements, bus stop improvements, extend/reroute 260/280 and increase frequency				
A56 Junction – Manchester Road – Barrington Road. Upgrade of signal equipment*				
Altrincham – A56 Dunham Road – Highgate Road. Realignment of Highgate Road*				
Heatley – Paddock Lane – Bent Lane junction improvements*				
Carrington Spur widening on eastbound approach to M60 Junction 8*				

Transport Interventions / Area of Development	Indicative Delivery Phase			
	2022 - 2027	2027- 2032	2032- 2037	2037- 2042
Flixton Road signalised junction upgrade with lane widening on approaches. (Phases 1 & 2) *				
Carrington Link / Carrington Spur / Banky Lane - Junction widening Phase 1 upgrade and approach widening (Phases 1 & 2) *				
Upgrade of the Isherwood Road route (part of the Eastern Link) *				
Southern Link Road construction (approximately 2km). Eastern Link Road construction (approximately 1.8km) *				
Sale West Link Road construction (approximately 1km) *				
Trafford Bus Priority Schemes (SOBC July 2022) * Supersedes Bus Opportunities (February 2020) Package Option 3 (Upgrading and extension of the existing bus services – including bus priority measures, real time information etc).				
Scenario 1 New Bus Services (Annual Operating Cost £0.225m/bus x 8 new buses)				
Scenario 2 New Bus Services (Annual Operating Cost £0.225m/bus x 16 new buses)				
Scenario 3 New Bus Services (Annual Operating Cost £0.225m/bus x 26 new buses)				
Carrington Relief Road construction – Single carriageway from A6144 Manchester Road to Isherwood Road*				
New Carrington Relief Road – Widening between the Isherwood Road junction and the Carrington Spur, subject to detailed local modelling*				
M56 Bowden Roundabout – Circulatory Widening*				
Western Gateway Infrastructure Scheme (WGIS)				
Warrington Line Tram-Train (Low-cost option)				

## 7. A Balanced, Affordable Transport Package

### 7.1. Introduction

The infrastructure list shown Table 17 indicates which of the transport improvements for the New Carrington PfE allocation JPA33 are required under the latest PfE publication: 'Places For Everyone Plan Composite Version', Appendix D Indicative Transport Mitigation, (issued in September 2023, and documenting main modifications to the original PfE plan, after examination). The details of the interventions which are local to the development are also shown diagrammatically in Appendix B.

However, not all of the wider area schemes identified in the Greater Manchester Transport Strategy 2040, are committed or funded schemes, or are proven to be economically viable. Consequently, the most sustainable outcome in Scenario 3, in which all these schemes are delivered, cannot be assumed. Each individual intervention will be subject to a business case, demonstrating strategic fit, value for money, affordability and deliverability. It is likely that some of these schemes will be delayed or not delivered at all.

Therefore, a more realistic Scenario 2 is being established by identifying an affordable and deliverable transport strategy and recalculating the resulting trip patterns from this. There are a number of practical issues to be overcome in order to develop this scenario and its implications:

- There is currently no supply-side Policy On model for Greater Manchester, nor any means of using the model to determine the impact, on people's travel patterns and their choice of mode and destination, of removing one or more schemes from the Greater Manchester Transport Strategy 2040 infrastructure list.
- Although New Carrington contains employment, it is not clear whether people moving into the new houses will target these jobs – or whether they will be travelling to work across the wider Greater Manchester area and beyond.
- Unlike the Waterbeach development used as a benchmark, New Carrington does not have readily accessible rail or tram connections. Trains at Irlam are inaccessible due to the Ship Canal and rail services at both Flixton and Urmston are infrequent and often full. While the GM Transport Strategy 2040 5-year Delivery Plan does include plans to improve access for these PT networks, providing walk/cycle access via the proposed Greenway will cost around £17m (2022 prices) and improving the rail line (tram-train) would cost between £500m and £1bn (dependent on option).
- Providing walk/cycle access to the tram via the proposed Greenway at Sale would cost around £19.5m. Enhanced bus services would also provide interchange opportunity at Sale or Altrincham. Improved bus service frequencies to Trafford Park/Trafford Centre and towards Manchester City Centre may attract users. However, it is not clear whether these links would be sufficiently attractive to encourage people not to use cars for work or other external trips.
- Transport models tend to be unreliable for representing local trips, or the decision mechanism for walking and cycling. However, it is important that short internal trips to/from local facilities are forecast, based on the development control and transport infrastructure intervention scenarios. Accessibility analysis, using tools such as TRACC, will be more appropriate.
- The affordability of the Scenario 2 transport interventions can only be determined with the detailed Masterplan, through which the rationale and formula for securing developer contributions will be defined.

Addressing these issues and developing a rational approach to an affordable and balanced package of transport interventions and development management policies requires an on-going iterative approach, which is not yet finished, supported by a range of modelling tools.



In the interim, a feasible Scenario 2 has been predicted by:

- Interpreting daily travel mode shares (74% vehicle / 26% non-vehicle) from evidence of comparable brownfield development sites in South Gloucestershire, including areas of Stoke Gifford, Bradley Stoke, Patchway and Filton, on the northern edge of Bristol.
- Adopting a daily internal trip proportion (17%) from assessment of proposed development in Waterbeach, Cambridgeshire, and extracting an internal mode share from Census 2021 journey to work data for trips <10km.

### **Bus Services**

Patronage levels for bus services have been calculated from the Scenario 1, 2 and 3 trip rates and mode shares. An approximate level of viable bus provision has been determined, for each scenario, using the annual cost of operating a bus in Greater Manchester (£225k), the average net passenger revenue per trip (£1), and the cost recovery percentage (50%).

Appendix E5 contains the spreadsheets used to calculate the feasible levels of bus provision. The viable number of buses available in each scenario are as follows:

- Scenario 1 (Policy Off), 7-8 buses.
- Scenario 2 (Partial Policy Off / Policy On, 15-16 buses.
- Scenario 3 (Policy On), 25-26 buses.

Scenario 2 will need to include a level of bus services to provide good connectivity to a range of destinations, with reliable and frequent links to Metrolink at Sale or Stretford.

## **7.2. Refining the Initial Scenario 2**

The intention is to refine the initial Scenario 2 to include a combination of land-use and transport supply interventions:

- Elements of the Transport Strategy which are within Trafford/TfGM's control (e.g. walk, cycle and PT improvements, plus the A1 link road and its associated sustainable transport features). Developer contributions could be assigned to all or any of these.
- Consideration of STOD principles, which will enable a high internal trip rate and high use of walk, cycle and short bus trips.
- Given the poor likelihood of the Warrington Line intervention (at least in the mid-term), Scenario 2 must include a bus service with a 30-minute headway, or less, on the proposed routes which provide links from Partington, Carrington and Sale West to Metrolink at Stretford and Sale.

Further variants of Scenario 2 can be developed in the future to reflect various land-use / STOD and transport investment scenarios, at different investment price-points to reflect movement towards the Scenario 3. These escalating scenarios could include different levels of STOD implementation, as well as more ambitious investments, such as the upgraded Warrington line.

## **7.3. Land Use Considerations in Scenario 2**

Scenario 2 must include elements of land use, especially the location of facilities within the development or the local area, how these will be connected by walk/cycle links and bus services, as well as how regional transit services will be accessed.

TfGM has recommended the adoption of STOD principles, using international TOD standards set out by ITDP. Site performance against the TOD Standard is assigned a ‘Gold’, ‘Silver’ or ‘Bronze’ score, reflecting the level of sustainable development which is achieved. However, the ITDP/TOD standards are somewhat American-oriented and some further work to make these relevant to Carrington would be justified, especially in relation to the role of buses. This will be done as Scenario 2 is developed further.

Initial scoring of the known characteristics of New Carrington Scenario 2, using ITDP/TOD suggests that the land use and transport masterplan could achieve a mode share of 26% non-vehicle trips and a TOD score of 56 /100, which equates to ‘Bronze’ TOD standard (56 – 70).

To ensure that the initial Scenario 2 meets TOD Bronze standard in the shorter term and a Silver standard in the longer-term, requires that Trafford Council develops a comprehensive visualisation of New Carrington, including internal facilities and links and the relationship to regional connectivity. This would be linked to the commitments expected of developers, in terms of financial contributions and layouts. The adoption of a TOD (or similar) standard will assist in this.

**7.4. Bus Service Provision**

The Transport Strategy includes an analysis of the proposals for a phased introduction of enhanced bus services as the development and the new connections to enable bus access are delivered. In parallel with this, the STOD analysis and its associated mode share estimates have been used to calculate an approximate level of ridership. This has been used to estimate the farebox revenue and associated revenue recovery rate. Basing the recovery rate as a minimum of 50% of operating cost and an annual cost of operation of £225,000 per year, this provides an approximate level of bus service provision.

There is a requirement for further, more comprehensive modelling of the proposed network and the patronage/revenue it is likely to generate. However, the TfGM bus operations team has identified some feasible options for improving bus service provision with the New Carrington development, under a worst case Scenario 1 outcome, which could support 7 – 8 new buses (shown in Table 18 and Figure 6), and under a more realistic Scenario 2 outcome, which could support 15 – 16 new buses (shown in Table19 and Figure 7). The findings are summarised below.

Please note that the Bus Service Options are indicative and the information below summarises the initial work which has been undertaken on potential improvements to bus services for the New Carrington allocation. This will be assessed further as part of the ongoing development of the Transport Strategy, alongside the detailed New Carrington Masterplan.

**Scenario 1 Bus Service Options with 7 – 8 New Buses**

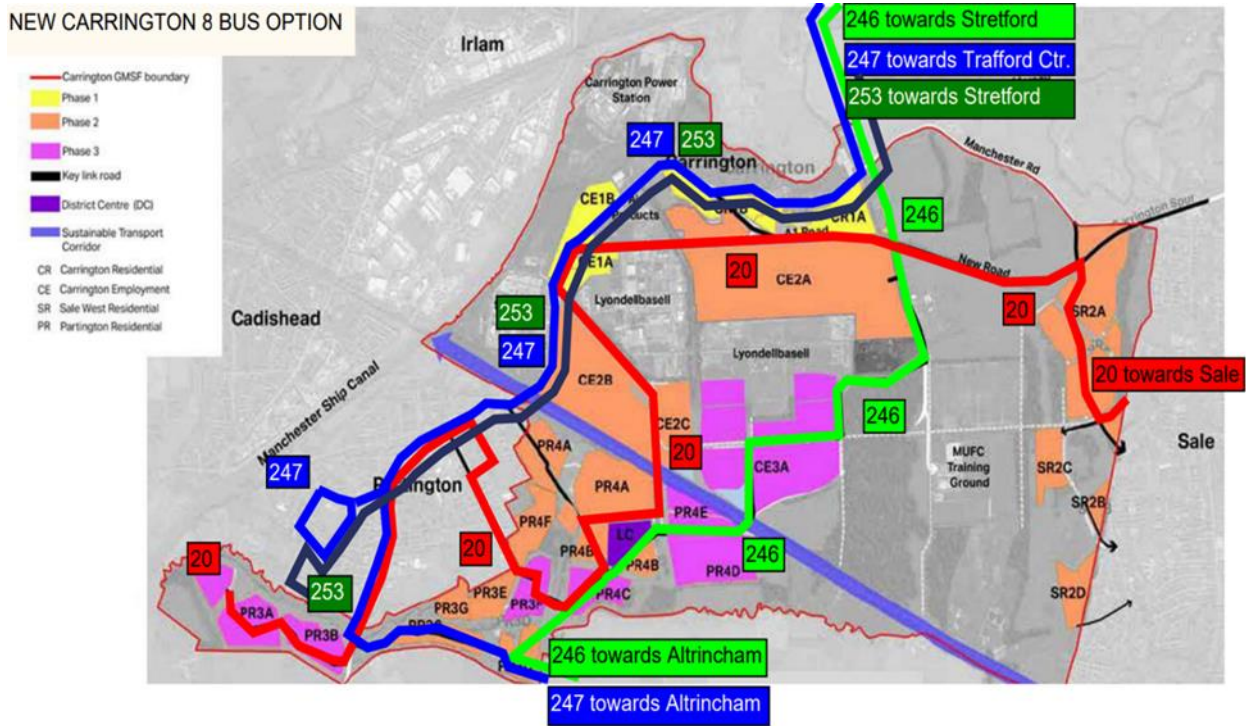
*Table 18 - Scenario 1 identified Bus Service Improvements (addition of 7 – 8 new buses)*

<b>Service 20 (PVR 3 buses, running every 30 minutes)</b>	
Links: Partington south, New Carrington, Sale West, Sale Town Centre	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Links new employment (CE1/CE2) and residential areas (PR3/PR4/SR2).</li> <li>• Improved links to Bus &amp; Metrolink (Sale)</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Increased service through and new links from/to Ashton on Mersey (currently only served by service 19)</li> </ul>

<b>Service 246 (PVR 3 buses, running every 30 minutes)</b>	
Links: Altrincham, Partington south, Urmston, Stretford Metrolink	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Links new employment (CE2/CE3) and residential sites (CR1/PR3/PR4) to Altrincham, Urmston &amp; Stretford</li> <li>• Links to Rail (Urmston &amp; Altrincham)</li> <li>• Links to Metrolink (Stretford)</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Interwork with service 247 between Altrincham and South Partington.</li> <li>• Provides more direct links for some existing (247) passengers.</li> <li>• Restores daytime service along Church Road, Flixton.</li> </ul>
<b>Service 247 (PVR +2 buses, frequency improved)</b>	
Links: Altrincham, Partington, Urmston, Flixton, Trafford Centre	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Improved service for employees (CE1A) and residents (CR1B)</li> <li>• Improved links to Rail (Flixton &amp; Altrincham)</li> <li>• Improved links to Metrolink (Trafford Centre &amp; Altrincham)</li> <li>• Improve frequency to every 30 minutes early to late, 7 days a week.</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Increased services to Trafford Centre, Trafford General Hospital and Altrincham</li> </ul>
<b>Service 253 weekday peak only (PVR – use existing resource)</b>	
<b>Route revised to run between Partington and Stretford Metrolink Stop.</b>	
Links: Partington, Stretford Arndale (bus links) and Metrolink Stop	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Improved service for employees (CE1A) and residents (CR1B)</li> <li>• Improved links to Metrolink (Stretford)</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Faster link between Partington and Stretford for bus or tram connections</li> </ul>

<ul style="list-style-type: none"> <li>Use existing resource (AM Peak) and school resource (PM Peak)</li> </ul>	
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Figure 6 – Scenario 1 identified Bus Service Improvements (enhancement of 4 bus routes)



**Scenario 2 Bus Service Options with 15 – 16 New Buses**

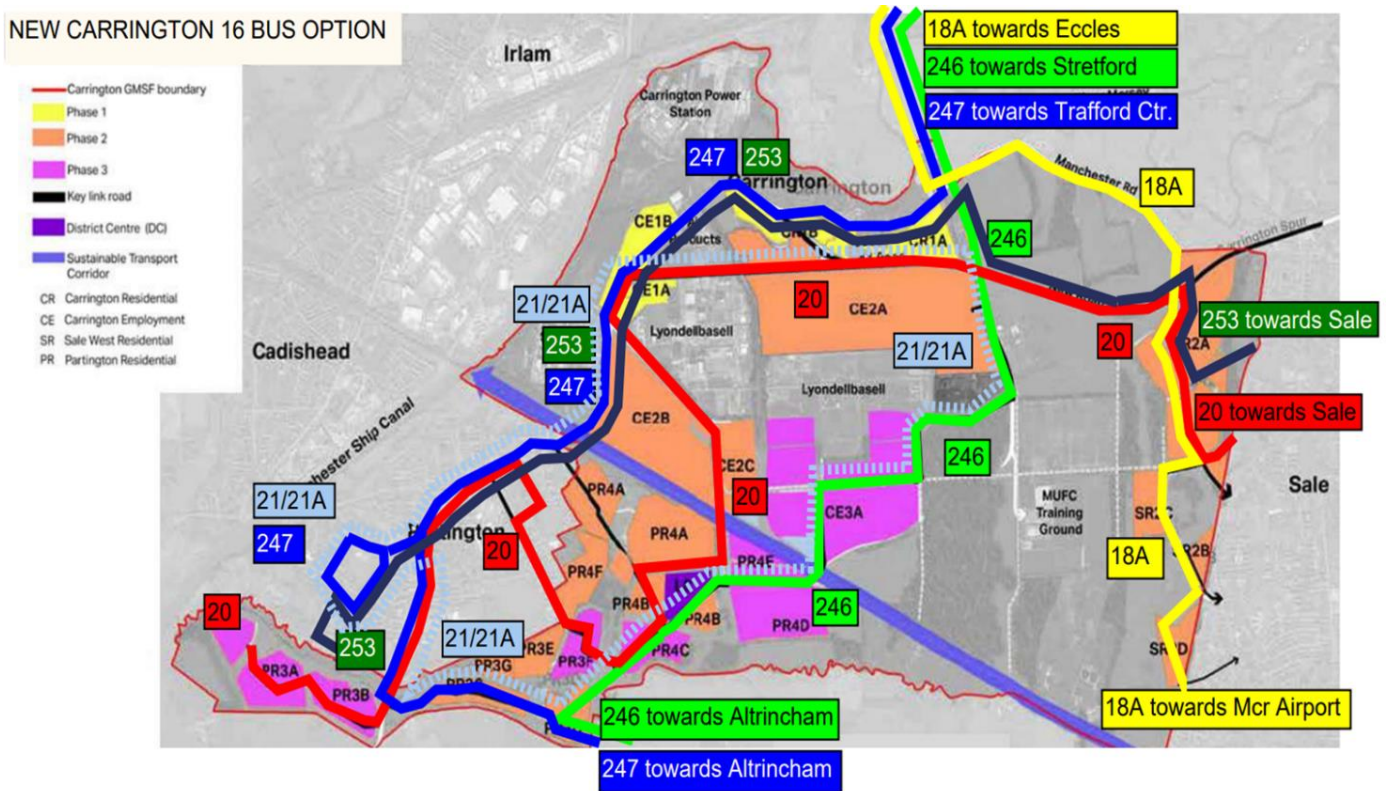
Table 19 - Scenario 2 identified Bus Service Improvements (addition of 15 – 16 new buses)

<p><b>Service 18A (PVR 4 buses, running every 60 minutes)</b></p> <p><b>Combines with service 18 between Eccles and Urmston, following an alternative route via Sale West and Altrincham.</b></p>	
<p>Links: Eccles, Trafford Park, Urmston, Flixton, New Carrington (North) and Sale West housing development, Altrincham, Manchester Airport</p>	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>Uses relief road to serve northern section of phase 2 employment area</li> <li>Links new Sale West housing development (SR2) to Trafford Park, Trafford Centre, Urmston, Carrington (North), Altrincham &amp; Manchester Airport</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>Increased service through and new links from/to Ashton on Mersey.</li> <li>Improves links to employment opportunities at Trafford Park, Trafford Centre and Manchester Airport.</li> </ul>

<ul style="list-style-type: none"> <li>• Links to Rail (Flixton/Urmston) and Metrolink (Altrincham &amp; Trafford Centre)</li> </ul>	
<p><b>Service 20 (PVR 3 buses, running every 30 minutes)</b></p>	
<p>Links: Partington south, New Carrington, Sale West, Sale Town Centre</p>	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Links new employment (CE1/CE2) and residential areas (PR3/PR4/SR2).</li> <li>• Improved links to Bus &amp; Metrolink (Sale)</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Increased service through and new links from/to Ashton on Mersey (currently only served by service 19)</li> </ul>
<p><b>Services 21/21A (PVR 1 bus, each running hourly)</b></p>	
<p>Links: Partington with New Carrington</p>	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Links area of high unemployment (Partington) with employment opportunities in New Carrington (CE1, CE2, CE3)</li> <li>• Improved local links with new residential areas (PR3/PR4)</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Provides local benefits, enabling other services to concentrate on longer distance links.</li> </ul>
<p><b>Service 246 (PVR 3 buses, running every 30 minutes)</b></p>	
<p>Links: Altrincham, Partington south, Urmston, Stretford Metrolink</p>	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Links new employment (CE2/CE3) and residential sites (CR1/PR3/PR4) to Altrincham, Urmston &amp; Stretford</li> <li>• Links to Rail (Urmston &amp; Altrincham)</li> <li>• Links to Metrolink (Stretford)</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Interwork with service 247 between Altrincham and South Partington.</li> <li>• Provides more direct links for some existing (247) passengers.</li> <li>• Restores daytime service along Church Road, Flixton.</li> </ul>
<p><b>Service 247 (PVR +2 buses, frequency improved)</b></p>	

Links: Altrincham, Partington, Urmston, Flixton, Trafford Centre	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Improved service for employees (CE1A) and residents (CR1B)</li> <li>• Improved links to Rail (Flixton &amp; Altrincham)</li> <li>• Improved links to Metrolink (Trafford Centre &amp; Altrincham)</li> <li>• Improve frequency to every 30 minutes early to late, 7 days a week.</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Increased services to Trafford Centre, Trafford General Hospital and Altrincham</li> </ul>
<p><b>Service 253 (PVR +3 buses, all day service introduced)</b></p> <p><b><i>Note: different to 8 bus option to avoid excessive bus provision through Urmston (246 option)</i></b></p> <p><b><i>Route revised to run between Partington and Sale Metrolink Stop.</i></b></p>	
Links: Partington, Sale Centre (bus links) and Metrolink Stop	
<p>Carrington Requirements:</p> <ul style="list-style-type: none"> <li>• Improved service for employees (CE1A) and residents (CR1B)</li> <li>• Improved links to Metrolink (Sale)</li> <li>• Improve service to run all day, every 30 minutes.</li> </ul>	<p>Wider network Benefits:</p> <ul style="list-style-type: none"> <li>• Faster link between Partington and Sale for bus or tram connections</li> </ul>

Figure 7 – Scenario 2 identified Bus Service Improvements (enhancement of 6 bus routes)



The Scenario 2 improvements fall short of the currently unachievable addition of around 25 – 30 new buses which would be required for a fully sustainable Scenario 3, and which would enable a reasonably comprehensive network, along with 15 minute headway service to both Stretford and Sale Metrolink stations. It is assumed that Scenario 3 would need substantial pump-prime developer contributions and potentially long-term revenue support funding.

More analysis of this will be required:

- Using the farebox yield associated with the land use development under alternate TOD assumptions to scale the public transport interventions using affordability/VfM considerations.
- Iterate through the land use/transport interaction process to confirm an optimised (but affordable/credible) package of scenario 2 transport interventions.

Further development of this will require collaboration with the TfGM Bus Network team to develop a comprehensive bus services model, linked to the developing masterplanning.

### 7.5. Summary of Initial Scenario 2

A cautious initial assessment of the scope and outcomes of Scenario 2 suggests that it will contain the following:

- The Carrington Relief Road to provide physical access to the New Carrington developments, including for freight traffic.
- The walk, cycle and bus links which accompany the delivery of the Carrington Relief Road, including improvements on the A6144.
- Associated walk and cycle links to key locations in Partington, Sale and elsewhere in the local area.

- Physical bus links to enable the development of a comprehensive bus service (this includes the CRR).
- The delivery of bus services around the area and key destinations, including the addition of 16 new buses to serve the development, incorporating pump-prime developer funding.
- Bus services linking the new developments with Stretford and Sale Metrolink Stations, as well as less frequent links to other destinations (including Flixton Station).
- The Carrington Greenway, providing walk and cycle links to the east and west over the Ship Canal towards Irlam Rail Station.
- Sustainable transport oriented development, matching the TOD/ITDP bronze standard, including mobility hubs, with an anticipated overall non-car mode share of around 26%.
- Good walk and cycle links and highly permeable housing and employment developments.
- A high level of provision of internal facilities, including primary schools, retail, leisure and healthcare, as well as good walk, cycle and bus links to nearby facilities, such as the secondary school at Partington.

## 7.6. Testing the Assumptions and Determining Demand and Trip Distribution

Testing, and if possible enhancing this initial Scenario 2, to ensure its effectiveness in reducing car trips, both locally and on the wider Greater Manchester highway network, requires the following elements:

- Providing more detail on the patterns of development, types of homes, likely incomes of residents, car parking standards and the provision of permeability and connectivity by walk, cycle and short bus journeys. Using STOD principles and similar benchmarks, Trafford will take responsibility for this element.
- More information on developer contribution formulae and how this will be used to fund transport and other facilities. This will be linked to the Viability Assessment for New Carrington.
- Determining trip patterns, trip length distribution and a partial assessment of mode share based on benchmark locations elsewhere (see more detail below) and the above land use parameters.
- Using TRACC accessibility mapping software to model the internal and local trips and the degree of connectivity to the wider GM networks (e.g. at Stretford Metrolink).
- Working with the TfGM Bus Network team to model effective, affordable bus networks, including the use of developer funding to support services.

### Trip Rate Benchmarks

Benchmarking with similar types of recent development is proposed, wherein new communities have been built up. Initial suggestions are: Horwich (GM); Manvers (SY); Normanton (WY); Tipner West (Portsmouth) and Patchway / Bradley Stoke / Cribbs Causeway (S Gloucestershire).

This will be linked to the use of Mosaic (socio-economic Personas) to explore the New Carrington 'equivalence' of these benchmarks, and then use MND (from CitiLogik) to determine the trip rates, trip lengths (relative to the size, scale and spacing of surrounding opportunities), destinations and mode, and also use Basemap accessibility mapping tools to establish likely internalisation of journeys, and then finally apply this to the future New Carrington.

Once the trip rates (internal and external), trip distribution and mode share are established, this can be used within the GM transport model to assess the wider highway impacts.



### 7.7. Developing a Growth-Based Business Case

The overarching goal is the delivery of the homes and jobs in New Carrington to meet the commitments in Places for Everyone. Although the transport impacts are important, this should be couched within an economic/land use context, based on Land Value Uplift. This will require advice and support from a specialist to assess land value uplift in relation to sustainable growth, coupled with a Dependent Development assessment.

### 7.8. Further Development of Scenario 2

This requires more consideration in the light of the process set out above. This includes:

- Developing the case for investment in the wider transport network (public transport and highway) in the light of the demand from Carrington and the wider GM area.
- Developing the TOD standards to better reflect the New Carrington example.
- Early engagement with National Highways to establish the approach towards highway investment under different intervention scenarios (i.e. higher-level Scenario 2).

## 8. Next Steps

### 8.1. Investment Programme and Public Transport

The potential phased investment programme set out in Table 7 will require programme-level appraisal, as well as the development of business cases for each scheme or package of schemes. Although Trafford Council and other bodies may be the sponsoring bodies for some of these schemes, TfGM is the strategic body responsible for the strategy and plans set out in the Greater Manchester Transport Strategy 2040. Determining the content, phasing and funding of the actual programme (effectively Scenario 2) will be a key element of the New Carrington Masterplan. Any investment on the motorway network (away from specific junctions) judged to be necessary to accommodate traffic generated by New Carrington is not on the infrastructure list and would require separate discussions with National Highways as the plans develop. Part of the Scenario 3 approach is geared towards making such investment unnecessary, due to high levels of internal trips and the use of bus, rail or tram for longer trips. Given this, an options assessment exercise should be undertaken, taking account of the highway and public transport investment requirements of the various scenarios.

It is anticipated that new and enhanced modelling, forecasting and options assessment tools will be developed in order to undertake the required planning and appraisal activities. This will help identify the highway investment required to accommodate traffic from New Carrington.

Although Greater Manchester buses are currently operated under a deregulated structure moderated by a bus partnership, there are committed and well-developed plans to bring bus services under local control. This process is scheduled to start in September 2023 and be phased in across the entire network through to January 2025. This provides the opportunity for direct intervention to specify levels of service for New Carrington, subject to the same constraints regarding strategic fit, affordability and value for money which are applicable to the capital investment programme. Some elements of the capital programme are intrinsically linked to bus service provision, particularly in relation to the delivery of new bus infrastructure. What is critically important is that bus service provision must be built into the development plans from the start and phased in such that good bus services are introduced from the outset before car-based journey patterns are established.

Similarly, if new residents are expected to use rail or tram services to travel across Greater Manchester, these need to be phased in early in the build-out process, otherwise car-based journey patterns will already be established before the infrastructure is provided.

Linked to the above are opportunities to use developer contributions to fund parts of the investment programme, as well as providing funds to support bus services. This is linked to the Development Management Policies and Developer Contributions and Obligations set out in previous sections.

The Waterbeach, Cambridgeshire development has been used as a benchmark in relation to the trip rates, mode share and internal versus external trip rates set out in Section 5.5. In planning for the supporting infrastructure for New Carrington, further development of this benchmarking approach will be important in terms of:

- Availability of nearby rail services and their impact on the travel to work horizons, mode of travel and internal: external trip ratio.
- Impact of local bus service provision and bus-rail/tram integration on mode share and internal: external trip ratio.
- Planned provision of active mode links and permeable designs to ensure local trips can be made by active mode – and the impact of that on the trip rates and internal: external trip ratio; and
- The use of Accessibility tools, especially in assessing the impact of the latter two of the above elements.

## 8.2. Business Case Development

It is envisaged that the following elements of the New Carrington, as well as the wider area investment programme may require business cases (either singly or in packages). Some schemes may also be private sector led as part of the New Carrington development:

- Carrington Greenway (Between Altrincham and Irlam).
- Greenway (cycle and footway) link to Sale.
- PROW improvements.
- Controlled pedestrian crossings at the A56 Dunham Road – Park Road – Charcoal Road.
- Access to Altrincham Package (New bus stops and junction improvements).
- Access to Sale Package (Junction improvements, enhanced bus stop and bus shelters).
- Access to Stretford Package/Carrington to Stretford (via Urmston) corridor (Junction improvements, bus stop improvements, extend/reroute buses and increase frequencies).
- A56 Junction – Manchester Road – Barrington Road (upgrade of signal equipment).
- Altrincham – A56 Dunham Road – Highgate Road (realignment of Highgate Road).
- Heatley – Paddock Lane – Bent Lane junction improvements.
- Carrington Spur widening on eastbound approach to M60 Junction 8.
- Flixton Road signalised junction upgrade with lane widening on approaches. (Phases 1 & 2).

- Carrington Link / Carrington Spur / Banky Lane - Junction (widening, upgrade and approach widening).
- Upgrade of the Isherwood Road route.
- Southern Link Road construction.
- Eastern Link Road construction.
- Sale West Link Road construction.
- Trafford bus priority schemes and New Carrington bus improvements (phases 1, 2 and 3).
- Carrington Relief Road construction – (single carriageway A6144 Manchester Road to Isherwood Road), including active travel facilities and accommodation for bus services.
- New Carrington Relief Road – (widening between Isherwood Road and Carrington Spur).
- M56 Bowden Roundabout – (circulatory Widening).
- Western Gateway Infrastructure Scheme (WGIS).
- Metrolink capacity improvements (Altrincham – Bury line).
- Warrington Line Tram-Train (Low-cost option).

Business Cases may also be required in relation to any highway investments, for example M60 investment required to accommodate growth from New Carrington and other growth locations.

### 8.3. Development Management Policies

Development management policies and STOD principles for New Carrington are being refined with some strategic imperatives set at a PfE level and will be specified in a detailed New Carrington Masterplan. This will be informed by this Transport Strategy.

### 8.4. Developer contributions and obligations

An infrastructure list and contribution schedule informed by this Transport Strategy will be produced as part of the detailed Masterplan for the whole allocation.

### 8.5. Summary and Next Steps

#### Conclusions

There is a shared ambition to establish New Carrington as a sustainable community with excellent active travel and public transport provision but given the location of the allocation there are challenges to achieving this.

The aim of the New Carrington (NC) Transport Strategy is to offer a realistic, viable and achievable vision, which:

- Establishes the new A1 link road as an initial, early-phase, access route for the New Carrington allocation, providing active travel, sustainable transport and highways connection.
- Complements a land use plan, and a mix of homes, jobs, schools, shops and amenities, for New Carrington, which embeds non vehicle-orientated travel behaviour.

- Provides radial, orbital and local routes for sustainable active travel movement, with links to bus, rail and tram corridors.
- Encourages shorter-distance internal movements by walking and cycling and enables sustainable travel choices and Public Transport use for longer-distance trips.
- Facilitates these shorter internal journeys, by securing developer and public funding for new active travel facilities.
- Sets a grounded level of ambition for New Carrington, in terms of sustainable land use and transport, given the constraints of its peripheral location in Greater Manchester and freedom of travel choices for new residents.
- Requires public investment in, and developer contribution to, new bus, rail and tram services, phased in over 15-20 years, to facilitate sustainable, longer-distance external trips.
- Configures land use sites and transport options, and applies parking and vehicle demand management, to encourage sustainable travel modes.

The New Carrington Transport Strategy supports development of the proposed PfE allocation (JPA33) by presenting the following:

- Estimated volume of trip movements, and travel mode share, by road, bus and active mode, arising from this planned and committed development, in an uncertain future, under three scenarios which include worst-case, best-case, and most realistically achievable outcomes.
- Outline orientation and routing of trip movements from and to New Carrington, determined according to worst-case ('predict and provide'), best-case ('decide and provide') and most realistic scenarios, based on historic 2017 GM data and GM 'Right Mix' targets in a 'Policy Off' and 'Policy On' future.

Assessment of three transport strategy scenarios has provided a better understanding of the transport challenges and uncertainties. The analytical work undertaken will support further appraisal and business case development and underpinning transport modelling.

The Transport Strategy has been progressed as far as is reasonably possible. It reports a sensible range of uncertain outcomes for developing New Carrington, in terms of sustainability and feasibility, extending from a worst case Scenario 1, (unsustainable, high cost), to a best case Scenario 3, (sustainable mode share, very high cost). Most importantly, it shows that a midpoint Scenario 2 is both realistic and achievable.

Securing a suitable balance in Scenario 2, between transport sustainability, satisfactory performance and affordability, is essential. The indicative Scenario 2 therefore now needs further iterative work to resolve intervention options, travel patterns, (especially trip distribution), impacts, costs, funding, land use arrangements, and approvals.

### Transport Strategy Scenarios

To assess the uncertain impact of the New Carrington development in terms of transport, a range of three future scenarios have been developed, which represent different trajectories and outcomes in terms of policy, travel behaviour and sustainability. These three scenarios are:

- **Scenario 1**, bottom (unsustainable, high cost, highway focussed):
  - ⌘ Based on PfE Locality Assessment trip rates and mode shares, 2017 GM model internalisation.

- ✧ Minimum Policy Off 2040 Transport Strategy implementation, and PT and walk/cycle intervention (supports 7-8 new buses).
- ✧ 79% car mode share, 21% non-car, and 6% internal trips.
- ✧ Total vehicle trips 38,344 daily, 4,788 AM peak hour.
- ✧ Total person trips 65,633 daily, 7,898 AM peak hour (64,742 daily, 7,786 AM peak hour, after adjusting for double counted internal home / work trips).
- ✧ No cost attributed to essential highway investment (e.g. M60 upgrade).
- **Scenario 2, (Midpoint):**
  - ✧ Initial Assessment – Scenario 2 is realistic and achievable:
  - ✧ Based on PfE trip rates, benchmark mode share (Filton / Stoke Gifford, S. Gloucestershire.) from 2021 Census JTW and TEMPro8, Waterbeach internalisation.
  - ✧ Moderate public transport and good walk/cycle intervention (16 buses).
  - ✧ 74% car mode share, 26% non-car, and 17% internal trips.
  - ✧ Total vehicle trips 35,707 daily, 4,441 AM peak hour.
  - ✧ Total person trips 65,636 daily, 7,893 AM peak hour (62,912 daily, 7,553 AM peak hour, after adjusting for double counted internal home / work trips).
  - ✧ Potential to improve these results from further evidence using MND for non-car mode share and trip distribution, and accessibility mapping for trip internalisation.
- **Scenario 3, top (sustainable mode share, very high cost):**
  - ✧ Based on PfE trip rates, GM ‘Right Mix’ mode share, and aspirational internalisation.
  - ✧ Maximum Policy On 2040 Transport Strategy implementation.
  - ✧ Comprehensive bus and active mode programme (Supports 25-26 new buses).
  - ✧ 54% car mode share, 46% non-car, and 25% internal trips.
  - ✧ Total vehicle trips 28,529 daily, 3,548 AM peak hour.
  - ✧ Total person trips 65,633 daily, 7,893 AM peak hour (61,629 daily, 7,392 AM peak hour, after adjusting for double counted internal home / work trips).
  - ✧ Investment programme unfunded and potentially unaffordable.

The cautious and realistic initial Scenario 2 requires further development to ensure it is a deliverable outcome. Currently, Scenario 2 includes:

- Outline commitments to ensure sustainable transport oriented development in New Carrington which could achieve the ITDP TOD ‘Bronze’ Standard, including mobility hubs.
- The A1 Link Road to provide physical access to the New Carrington developments, including for freight traffic.

- The walk, cycle and bus links which accompany the delivery of the Carrington Relief Road, including improvements on the A6144.
- Associated walk and cycle links to key locations in Partington, Sale and elsewhere in the local area.
- Physical bus links to enable the development of a comprehensive bus service (this includes the CRR).
- The delivery of bus services around the area and key destinations, including the use of pump-prime developer funding.
- Two buses an hour linking the new developments with Stretford and Sale Metrolink Stations, as well as less frequent links to other destinations (including Flixton Station).
- The Carrington Greenway, providing walk and cycle links to the east and west over the Ship Canal towards Irlam Rail Station.
- Good walk and cycle links and highly permeable housing and employment developments.
- A high level of provision of internal facilities, including primary schools, retail, leisure and healthcare, as well as good walk, cycle and bus links to nearby facilities, such as the secondary school at Partington.
- Internal movements which constitute at least 17% of total daily trips, but this is modest as it reflects good external PT connectivity to outside opportunities, and could be increased.

The most sustainable Scenario 3 entails the following:

- Full provision of GM Transport Strategy 2040, city-region-wide, sustainable travel schemes, (representing a ‘Policy On’ future).
- Ambitious local interventions, (including Carrington Greenway, walk and cycle facilities, and improved bus services), and sustainably-planned development, which result in –
  - A form of land use which aligns with a TOD ‘Silver’ standard.
  - Routing and destinations of journeys being influenced by PT and active travel provision.
- Introduction of the proposed A1 link road, Sale West link road, and Carrington Southern and Eastern link roads.
- The best-case Scenario 3 assumptions are currently unaffordable, with a substantial shortfall in required public funds and developer contributions.
- This scenario is more sustainable, exceeding the ‘Right Mix’ 2040 target of 41% for wider Trafford.

By contrast, the least sustainable Scenario 1 entails the following:

- Negligible provision of GM Transport Strategy 2040 schemes, (representing a ‘Policy Off’ future).
- Highway-focussed local interventions, to satisfy conventional land use and travel demands, enabling –
  - A high proportion of trips to be made, cost-effectively, by vehicle, and a form of land use which fails to achieve a satisfactory TOD standard.
  - A high proportion of trips to travel externally from and to the site.

- High volumes of vehicle movements using the A1 link road, requiring mitigation for excessive stress on the strategic road network (M60 J8).
- Introduction of the proposed A1 link road, Sale West link road, and Carrington Southern and Eastern link roads.
- These worst-case assumptions are less unaffordable, but still show a shortfall in public funds and developer contributions.
- This scenario is unsustainable, causing more environmental damage from vehicle use and longer journeys.

### **Next steps**

There are four overarching next steps to implement the Transport Strategy, which are interlinked, namely:

- Undertake modelling work and iterative process of fully developing Scenario 2
  - Progress design of the A1 Link Road, alongside an updated Masterplan.
  - Meet planning deadlines, resolve investment priorities and determine developer contributions.
  - Define a balanced land use arrangement in New Carrington, with sustainable transport options, as a guideline constraint for developers.
  - Proceed with further work around impact appraisal, and business case formulation.
  - Distil a Scenario 2, which achieves a suitable and vital balance between transport sustainability, satisfactory performance and affordability. This will entail resolving intervention options, costs, funding, land use arrangements, travel patterns, (especially trip distribution), and impacts.
- Produce a detailed Masterplan, as required by PfE Policy JPA33.
  - A phased plan of network improvements for the three main areas of New Carrington (Carrington, Partington urban extension and Sale West urban extension) - in particular for Active Travel and Public Transport - update the transport investment package for New Carrington.
  - Density of development and proximity to Public Transport and key local facilities.
  - More detailed trip analysis and present for three main areas of New Carrington (Carrington, Partington urban extension and Sale West urban extension).
  - Review the phasing of development areas and transport investments.
  - Specification of Transport Assessment to support planning applications and discussions with National Highways.
- Develop a funding strategy.
  - Set out the funding approach for delivering the A1 Link Road.
  - Set out the way forward for investment in sustainable transport infrastructure by March 2027 to draw on CRSTS funding.

- Consider how the Transport Strategy findings may inform the Greater Manchester Local Transport Plan investment programme and funding strategy.
- Prepare a business case for first phase of transport interventions (including CRR, and complementary measures).
  - Develop an Appraisal Specification Report for the A1 Link Road.
  - Develop a transport modelling specification report for the A1 Link Road.
  - Engage with National Highways regarding potential highway impacts of New Carrington trips on the strategic road network, especially M60 Junction 8.
  - Expand the appraisal specification and transport modelling method to include other key transport investments involving active travel and CRSTS for the first phase of development.



## **Appendix A: Published Documents**

### **Web Links to Relevant Published Documents (e.g. Trafford Council / GMCA / TfGM strategies).**

GM Joint development plan documents – Places for Everyone, pre and post examination:

[Places for Everyone Publication August 2021](#)

[PfE Main Modifications and Appendix D September 2023](#)

[PfE Main Modifications Schedule September 2023](#)

[PfE Transport Strategic Modelling Technical Note July 2021](#)

Places for Everyone new Carrington Locality assessment

[PfE JPA 33 New Carrington Locality Assessment Addendum July 2021](#)

[GMSF JPA 33 New Carrington Locality Assessment Addendum November 2020](#)

[New Carrington GMSF Masterplan 2020](#)

[PfE JPA 33 New Carrington Locality Assessment Topic Paper July 2021](#)

Transport for Greater Manchester (TfGM)

[Greater Manchester Transport Strategy 2040](#)

[Greater Manchester Transport Strategy 2040 Right Mix Technical Note](#)

[Greater Manchester Transport Strategy 2040 Five Year Delivery Plan 2021-2026](#)

Trafford Council

[Trafford Local Plan Core Strategy January 2012](#)

## Appendix B: New Carrington Phasing of Development Sites and Transport Interventions

This appendix shows how the proposed New Carrington residential and employment sites would be built out in phases, (in line with the quantum of development summarised in Appendix E1, Table 3, and could be co-ordinated with the introduction of new transport interventions, in the best-case Scenario 3), to encourage more sustainable travel choices amongst site users. These interventions will be refined further, through the detailed Masterplanning process and during the iterative process of defining the ‘most-deliverable’ Scenario 2, to represent an achievable and financially viable transport investment package.

### Scenario 3 Proposed Active Travel (Walking and Cycling) Interventions

A phased introduction of walking and cycling schemes is proposed in Scenario 3, to encourage more sustainable active travel movements around New Carrington. Indicative pedestrian and cyclist facilities are shown, by five-year intervals.

A scheme reference and scope description, for each intervention, is provided in Table 0, to accompany the location plans.

These phase drawings show that:

- New and improved active travel facilities for each main development area will be introduced ahead of significant build-out of the site, to establish walking and cycling as a viable travel choice, as soon as land is in use.

Table 20 – Scenario 3 Proposed Active Travel Interventions

New Carrington Active Travel Interventions	
Intervention Reference	Intervention Description
<b>Phase 1: 2021 – 2023</b>	
(01)	Active travel access to Carrington village residential site (A6144 Manchester Road / Isherwood Road), by 2023.
(02)	Active travel access to Heath Farm Lane residential site, by 2022.
<b>Phase 2: 2022 – 2026</b>	
(03)	‘Carrington Greenway’, the first section of active travel link between Partington and Irlam, along disused railway line, crossing Manchester Ship Canal on Cadishead Viaduct, by 2026.

<b>New Carrington Active Travel Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
(04)	Active travel link on Sinderland Road, between Common Lane and Sinderland Lane, (for Partington East residential sites), by 2025.
(05)	Active travel access for Partington South residential sites (east of Warburton Lane), eastwards from A6144 Warburton Lane, south of Red Brook, by 2025.
(06)	Active travel access on Heath farm Lane, for Partington East residential sites, between Moss View Road and Sinderland Road, by 2024.
(07)	Active travel around Partington 'Green Loop', by 2025.
(08)	Active travel on Ashton Road, connecting Partington and Sale, between Sinderland Road and Firtree Avenue estate, Sale, by 2024.
(09)	Active travel on Isherwood Road, connecting Partington and Carrington, between Ashton Road and A6144 Carrington Lane, by 2023.
(10)	Active travel south / north link between Ashton Road and A6144 Manchester Road, through Carrington employment area, by 2024.
<b>Phase 3: 2027 – 2031</b>	
(11)	Walk and cycle provision along A6144 Manchester Road / Carrington Lane, B5158 Flixton Road, and B5213 Church Road, connecting Partington, Carrington and Sale with Urmston rail station, by 2027.
(12)	Walk and cycle provision along CRR A1 link road, between A6144 Manchester Road, Isherwood Road, and A6144 Carrington Spur, by 2029.
(13)	Completion of Southern Link Road active travel, between A6144 Warburton Lane and Moss Lane, by 2028.
(14)	Active travel on Eastern Link Road, between Heath Farm Lane and Isherwood Road, by 2028.
(15)	Active travel access for Partington South, on A6144 Warburton Lane and Chapel Lane, Partington, by 2030.

<b>New Carrington Active Travel Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
(16)	Walk and cycle provision along Sale West Link Road, for Sale West residential sites, by 2029.
(17)	Active travel connections from Firs Way into Sale West residential sites, by 2027.
(18)	Active travel on Moss Lane, for Partington South and East residential sites by 2028.
<b>Phase 4: 2032 – 2036</b>	
(19)	Active travel access on east / west route through Carrington industrial estate for Phase 2 employment, by 2032.
(20)	Active travel access for Partington South residential sites (west of Warburton Lane), westwards from A6144 Warburton Lane, south of Red Brook, by 2034.
(21)	'Carrington Greenway', extension of first phase 'Carrington Greenway' (active travel link between Partington and Irlam across MSC), along disused railway line, to connect Altrincham and Irlam, as a complete active travel corridor by 2036.
(22)	Extension of Southern Link Road active travel, on Covershaw Lane, to Sinderland Lane, by 2033.
<b>Phase 5: 2037 – 2041</b>	
	No new interventions.

Figure 8 - New Carrington Active Travel Provision 2021 – 2023

New Carrington Existing Active Travel Facilities Period 1. 2021 - 2023

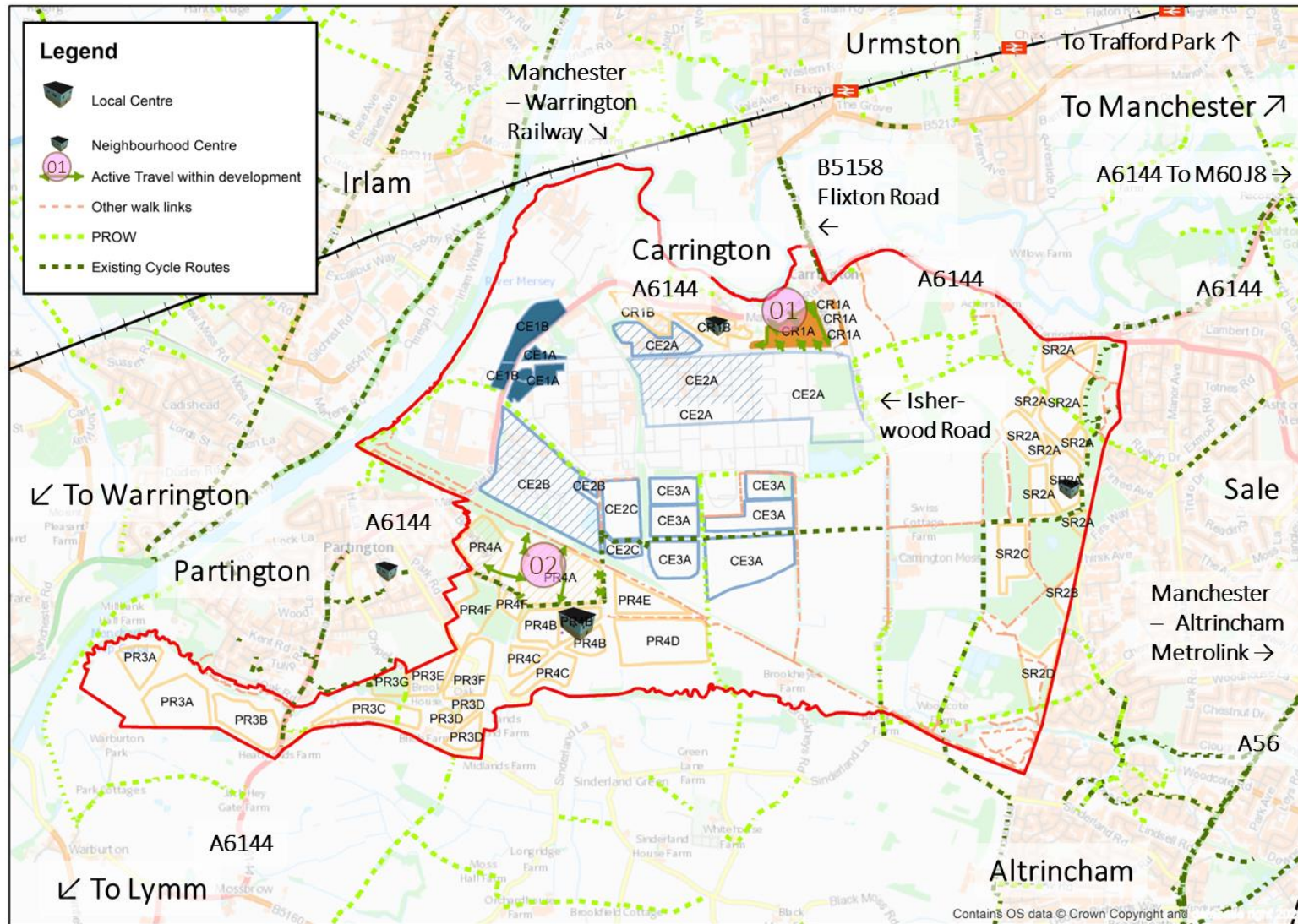


Figure 9 - New Carrington Active Travel Provision 2022 – 2026

New Carrington Proposed Active Travel Facilities Period 2. 2022 - 2026

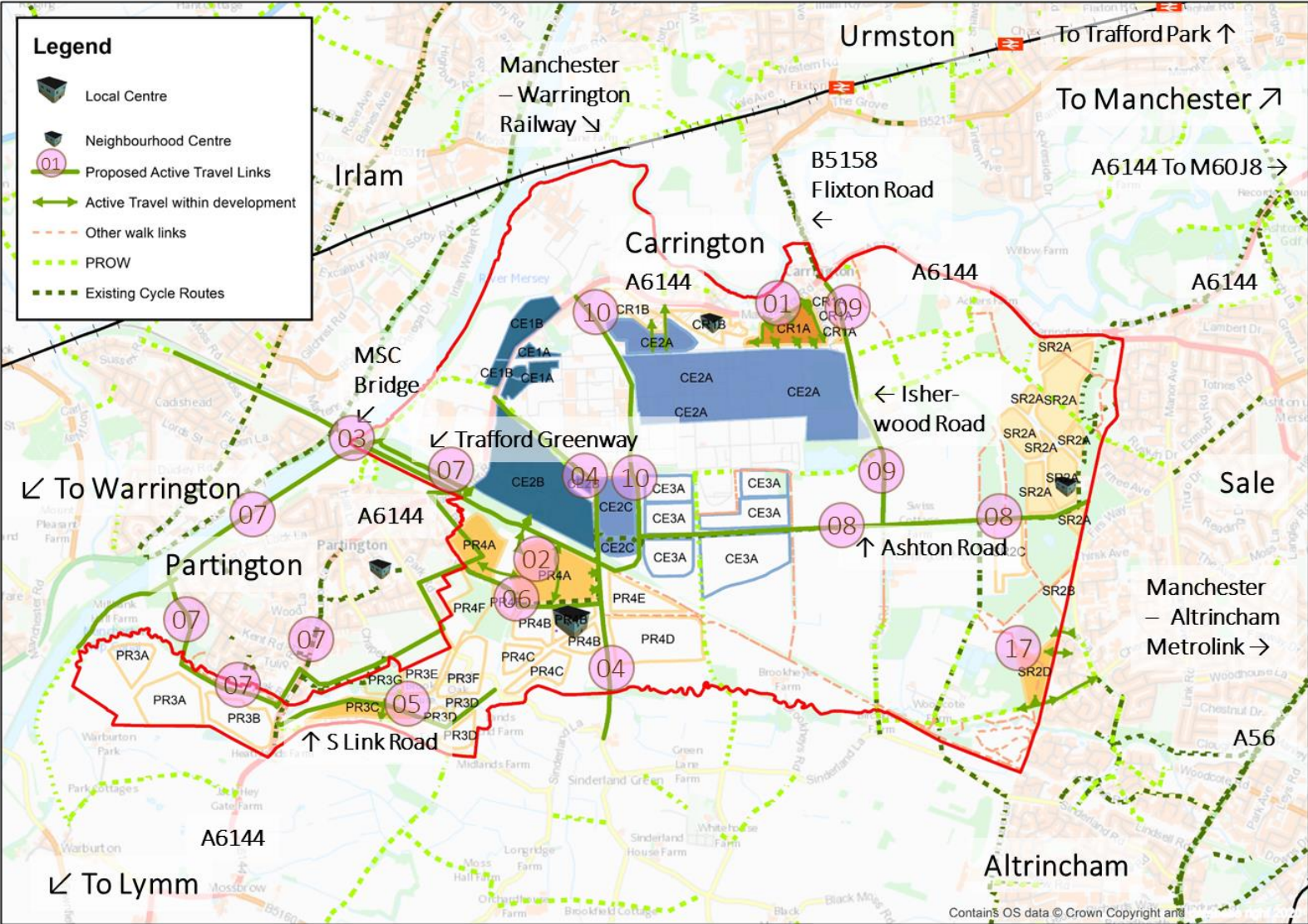


Figure 10 - New Carrington Active Travel Provision 2027 – 2031

New Carrington Proposed Active Travel Facilities Period 3. 2027 - 2031

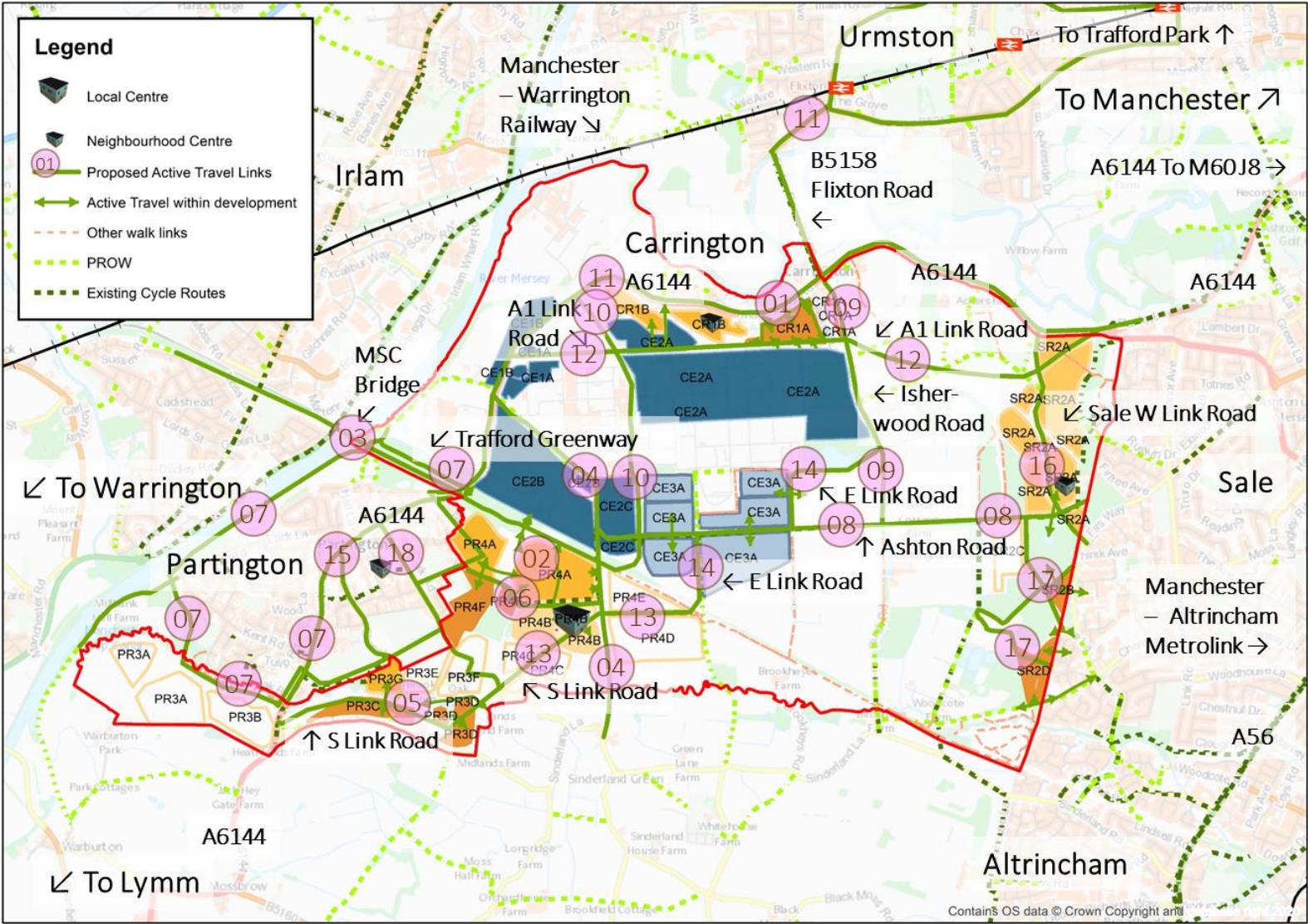


Figure 11 - New Carrington Active Travel Provision 2032 – 2036

New Carrington Proposed Active Travel Facilities Period 4. 2032 - 2036

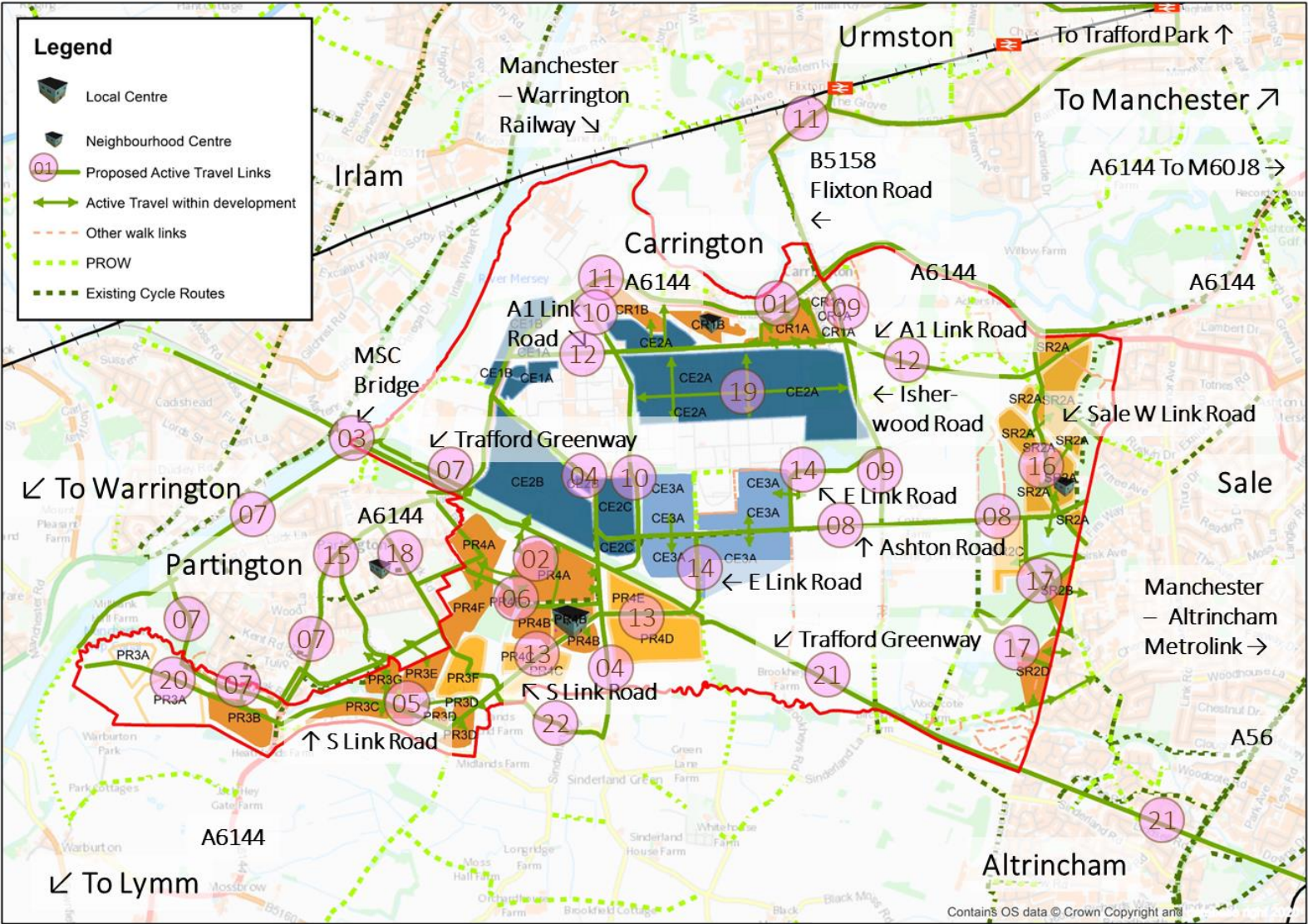
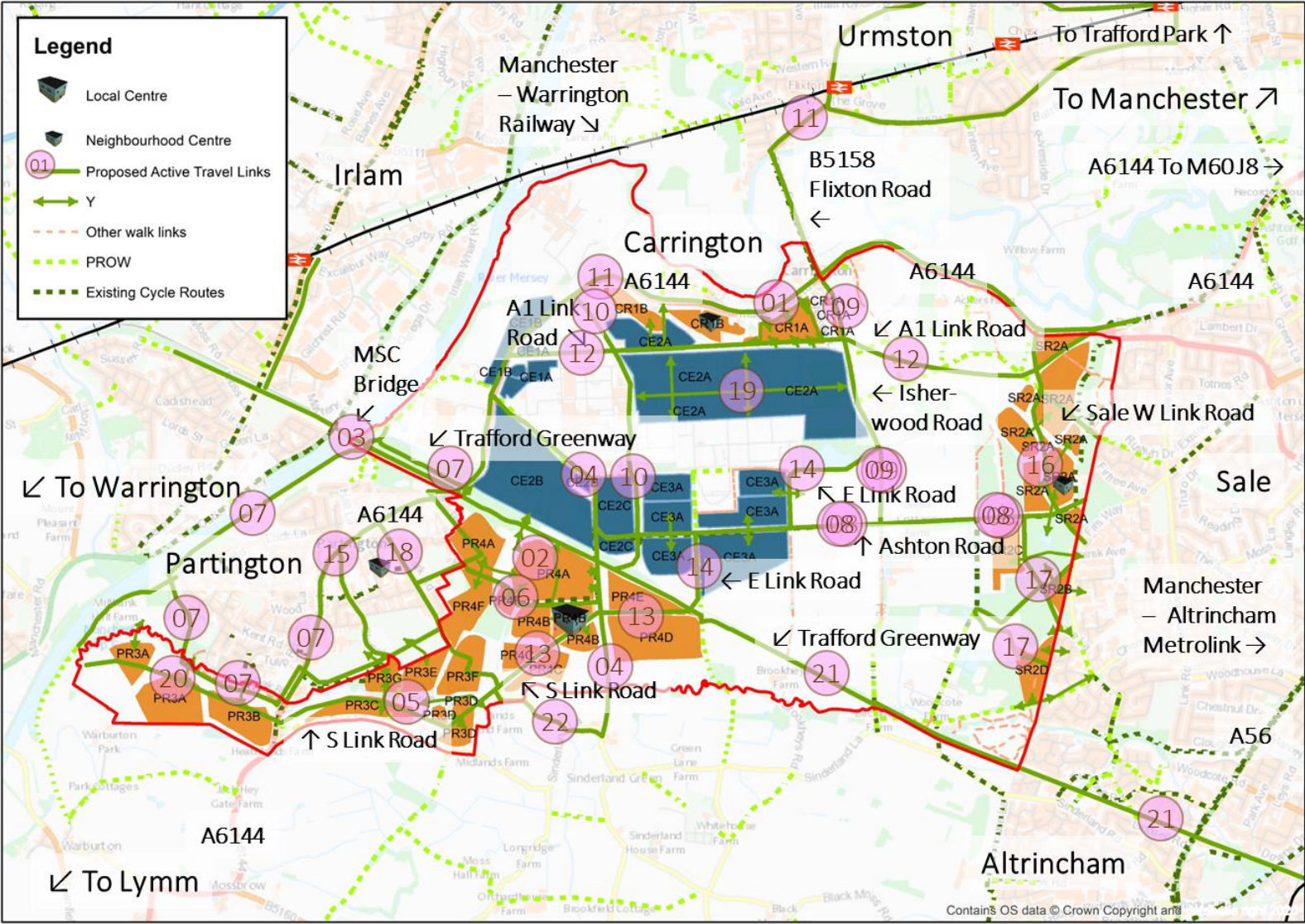




Figure 12 - New Carrington Active Travel Provision 2037 – 2041

New Carrington Proposed Active Travel Facilities Period 5. 2037 - 2041



### Scenario 3 Proposed Public Transport (Mainly Bus Service) Interventions

A phased introduction of bus routes and service improvements is proposed, to support more sustainable public transport use at New Carrington. Indicative bus routes are shown, by five-year intervals.

A scheme reference and scope description, for each intervention, is provided in Table 21, to accompany the location plans.

These phase drawings show that:

- Improvement to the service level on existing bus routes, plus some additional new bus routes and buses, to serve each main development area, will be introduced ahead of significant build-out of the site, to establish public transport as a viable travel choice, as soon as land is in use.

Table 21 – Scenario 3 Proposed Bus Service Interventions

<b>New Carrington Public Transport (Bus Service) Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
<b>Phase 1: 2021 – 2023</b>	
	Existing weekday bus services retained: Service Cat5, frequency 1 bus per hour each way, between Warrington and Altrincham. Service 18, frequency 1 bus per hour each way, between Manchester Airport and Eccles. Service 19, frequency 2 buses per hour each way, between Altrincham, Sale and Wythenshawe. Service 245, frequency 2 buses per hour each way between Altrincham, Sale, Stretford, Urmston, Flixton and Trafford Centre. Service 247, frequency 2 buses per hour each way, between Altrincham Metrolink and Trafford Centre Metrolink. Service 253 / 255, frequency 2 buses per hour each way, between Partington, Stretford Metrolink and Manchester City Centre. Service 280, frequency 1 bus per hour each way, between Altrincham and Partington.
<b>Phase 2: 2022 – 2026</b>	
(23)	Bus service Cat5, maintained frequency 1 bus per hour each way, between Warrington and Altrincham, serving Partington centre, with extension for Phase 2 South Partington residential sites, eastwards from A6144 Warburton Lane, south of Red Brook, by 2026.
(24)	Bus services 245 and 19, both maintained frequency 2 buses per hour each way, both re-routing by Sale West to serve new residential sites, service 245 running between Altrincham, Sale, Stretford, Urmston, Flixton and Trafford Centre, and service 19 running between Altrincham, Sale and Wythenshawe, both by 2024.

<b>New Carrington Public Transport (Bus Service) Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
(25)	Revised bus route 253, maintained frequency 2 buses per hour peak time only each way, between Partington and Stretford Metrolink, serving A6144 Manchester Road, Urmston, then non-stop connection to Stretford Metrolink for onward link to Arndale Metrolink / Manchester regional centre, by 2024.
(26)	Revised bus route 247, maintained frequency 2 buses per hour each way, between Altrincham Metrolink and Trafford Centre / Trafford Park Metrolink, but with expanded timetable, serving A6144 Manchester Road and Urmston, by 2024.
(27)	Bus service 280, maintained frequency 1 bus per hour each way, between Altrincham and Partington centre by 2024.
(28)	New bus route 20, 2 buses per hour each way, between South Partington and Sale Metrolink, initially serving Partington and East Partington residential sites, on loop from Broadway and Heath farm Lane to Common Lane, and Carrington sites on A6144 Manchester Road, then A6144 Carrington Lane, and Sale West residential sites on Sale West access road and Sale Metrolink, by 2025.
<b>Phase 3: 2027 – 2031</b>	
(28)	New bus route 20, as intervention (28) above, re-routed from A6144 Manchester Road to serve Carrington employment sites on A1 link road, and from A6144 Carrington Lane to serve Sale West residential sites on Sale West link road, by 2029.
(29)	Revised bus route 18A, maintained frequency 1 bus per hour each way (combined with maintained existing service 18), between Manchester Airport and Eccles, with 18A re-routed from Sale to Sale West residential sites on Sale West link road, and A1 link road, and B5158 Flixton Road near to Flixton rail station, by 2029.
(30)	New bus route 246, 2 buses per hour each way, between Altrincham and Stretford Metrolink, serving Southern Link road, East Partington residential sites and new local centre, Carrington employment sites on Eastern Link road, Urmston rail station and Stretford Metrolink, by 2029.
(31)	Potential new direct bus-only link from Partington East residential sites, and Southern Link road, via Sinderland Road, to Sinderland Lane and Altrincham Metrolink, for bus service 246, by 2031.
(32)	New bus route 21/21A, loop service, 1 bus per hour each way linking Partington residential areas with New Carrington employment sites on A6144 Manchester Road, A1 link road, Isherwood Road, Eastern and Southern link roads, and Warburton Lane, by 2028.

<b>New Carrington Public Transport (Bus Service) Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
<b>Phase 4: 2032 – 2036</b>	
(31)	Additional, direct bus-only link, from Partington South via Covershaw Lane to Sinderland Lane and Altrincham Metrolink, for bus service 247, by 2034, running parallel to above extension (31) from Partington East residential sites.
(28)	New bus route 20, as intervention (28) above, extended to serve South Partington, westwards from A6144 Warburton Lane, south of Red Brook, after 2032.
<b>Phase 5: 2037 – 2041</b>	
(33)	New orbital busway on Manchester Airport – Altrincham – Irlam disused railways (alongside Altrincham – Irlam ‘Trafford Greenway’ active travel link), connecting Manchester to Altrincham Metrolink, with Manchester to Airport Metrolink, and with Manchester to Irlam tram-train route, by 2041.
(34)	New Manchester – Irlam – Warrington rail line tram-train service, by 2041.

Figure 13 - New Carrington Bus Provision 2021 – 2023

New Carrington Existing Bus Operations Period 1. 2021 - 2023

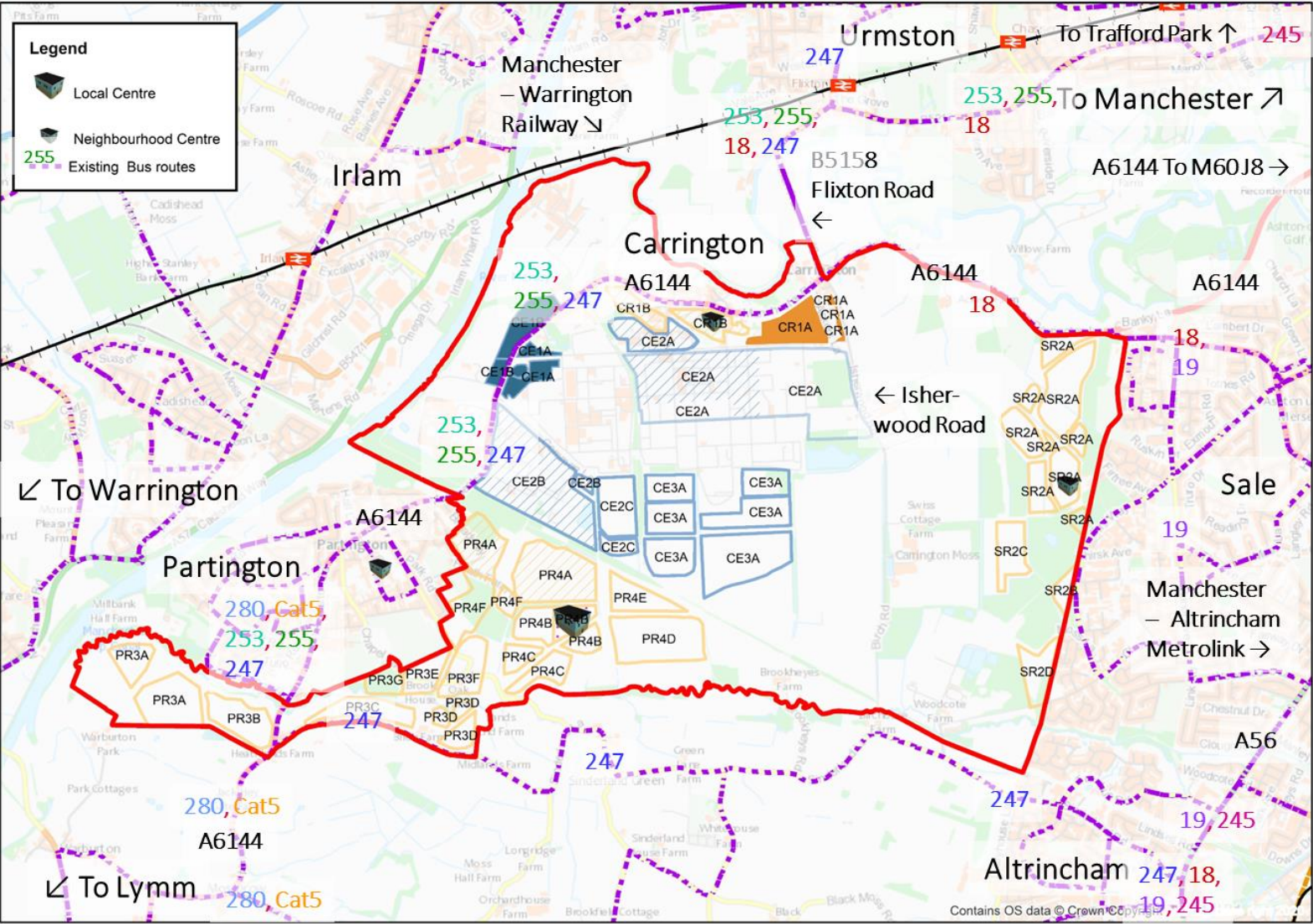


Figure 14 - New Carrington Bus Provision 2022 – 2026

New Carrington Proposed Bus Operations Period 2. 2022 - 2026

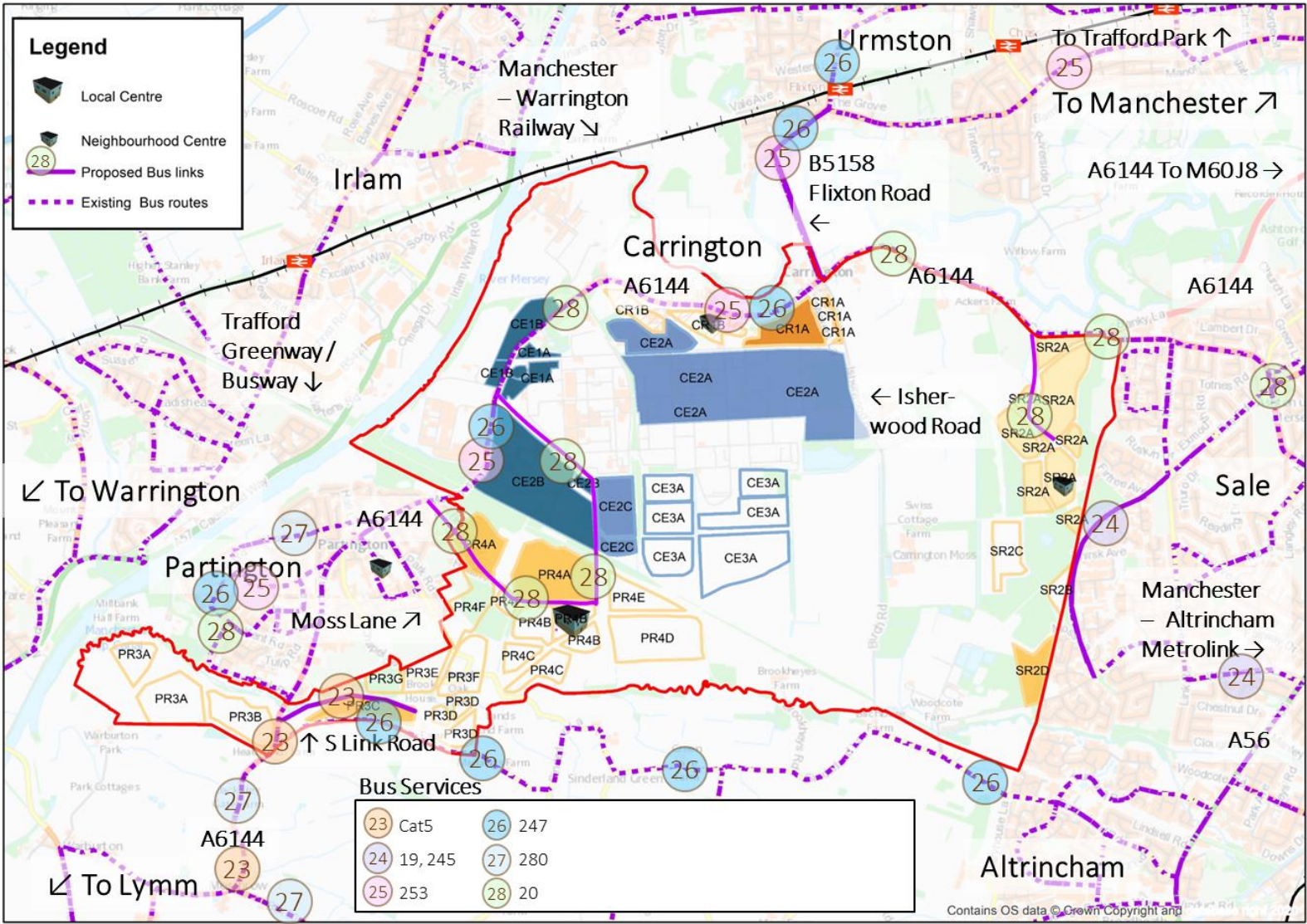


Figure 15 - New Carrington Bus Provision 2027 – 2031

New Carrington Proposed Bus Operations Period 3. 2027 - 2031

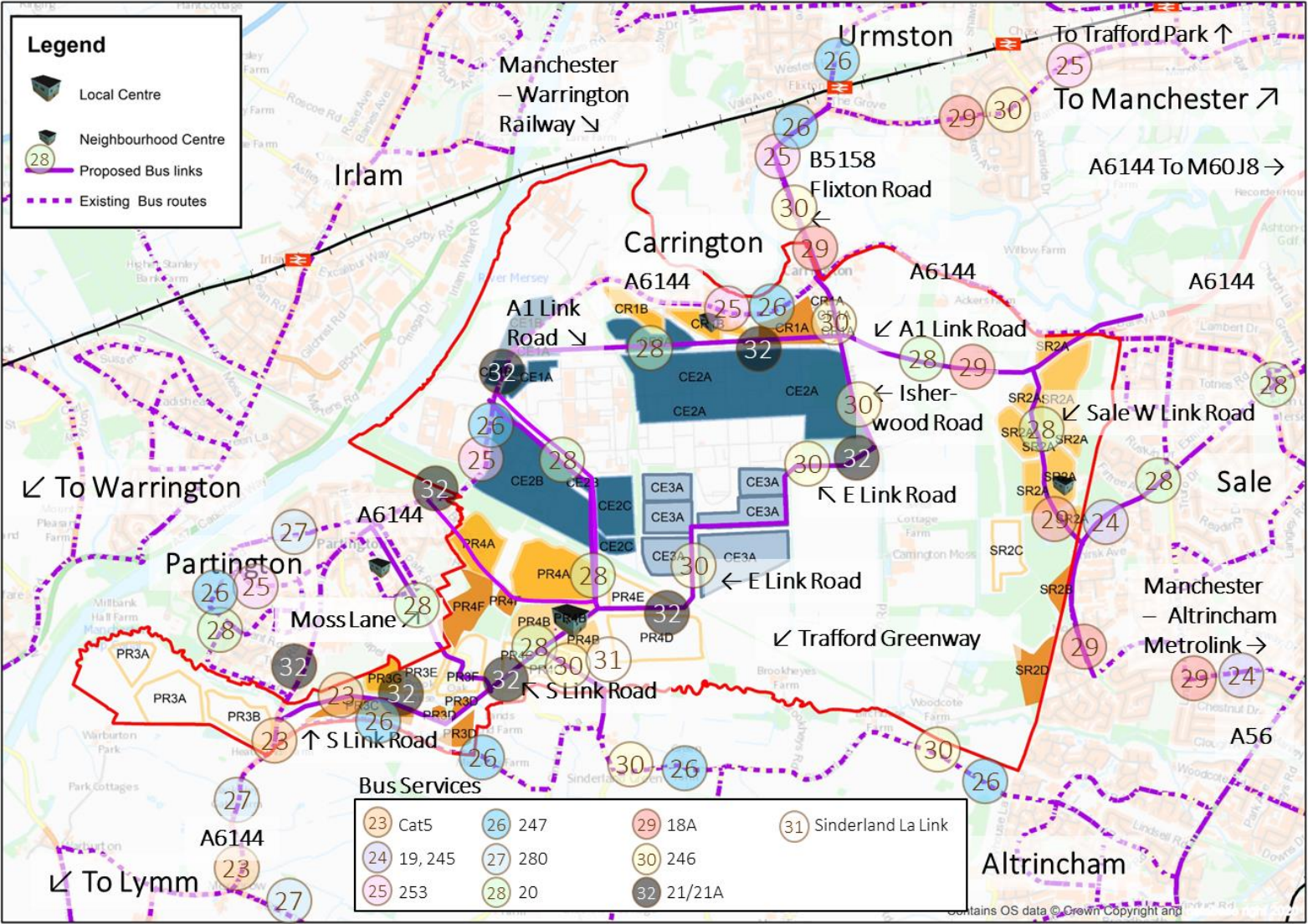


Figure 16 - New Carrington Bus Provision 2032 – 2036

New Carrington Proposed Bus Operations Period 4. 2032 - 2036

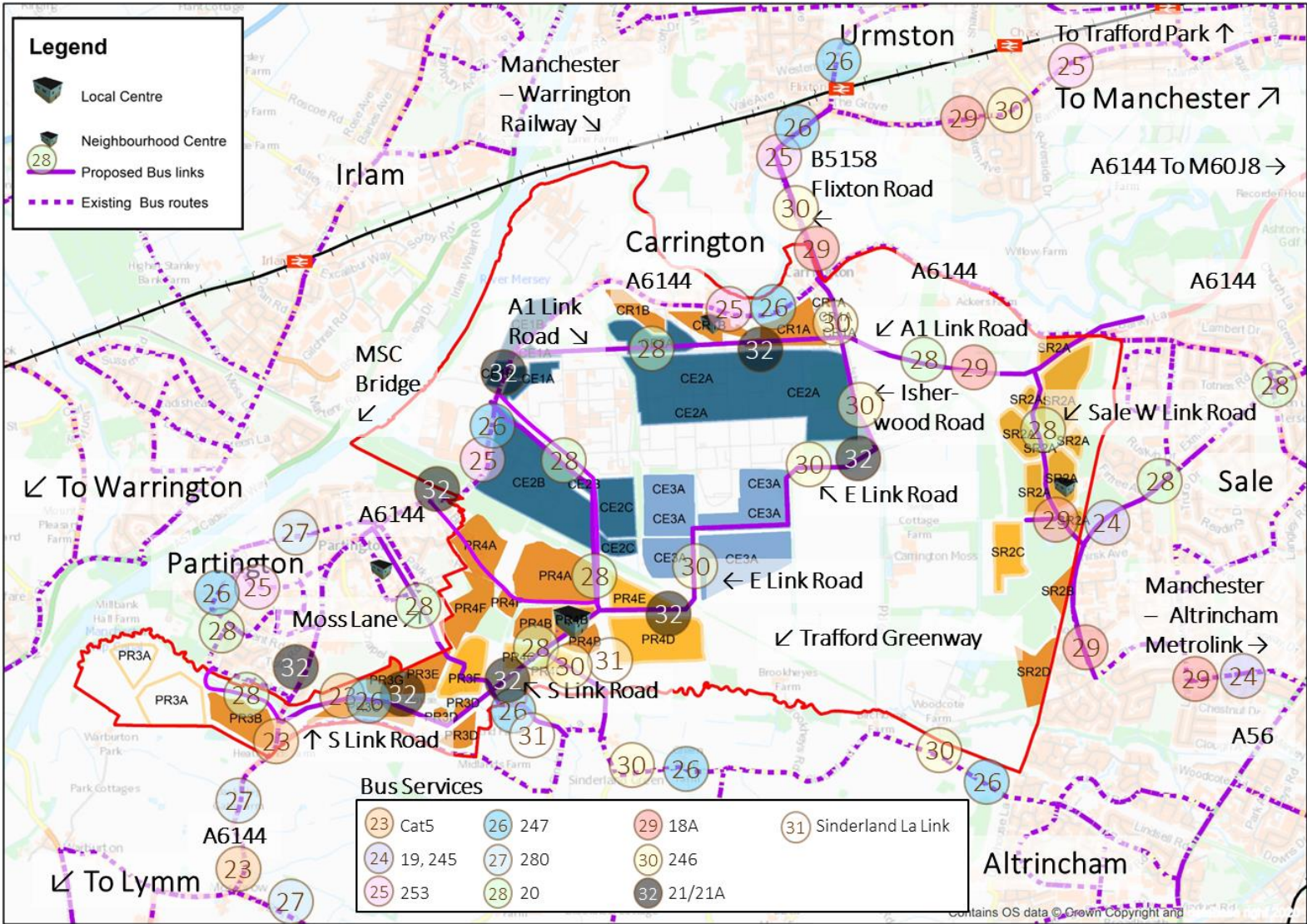
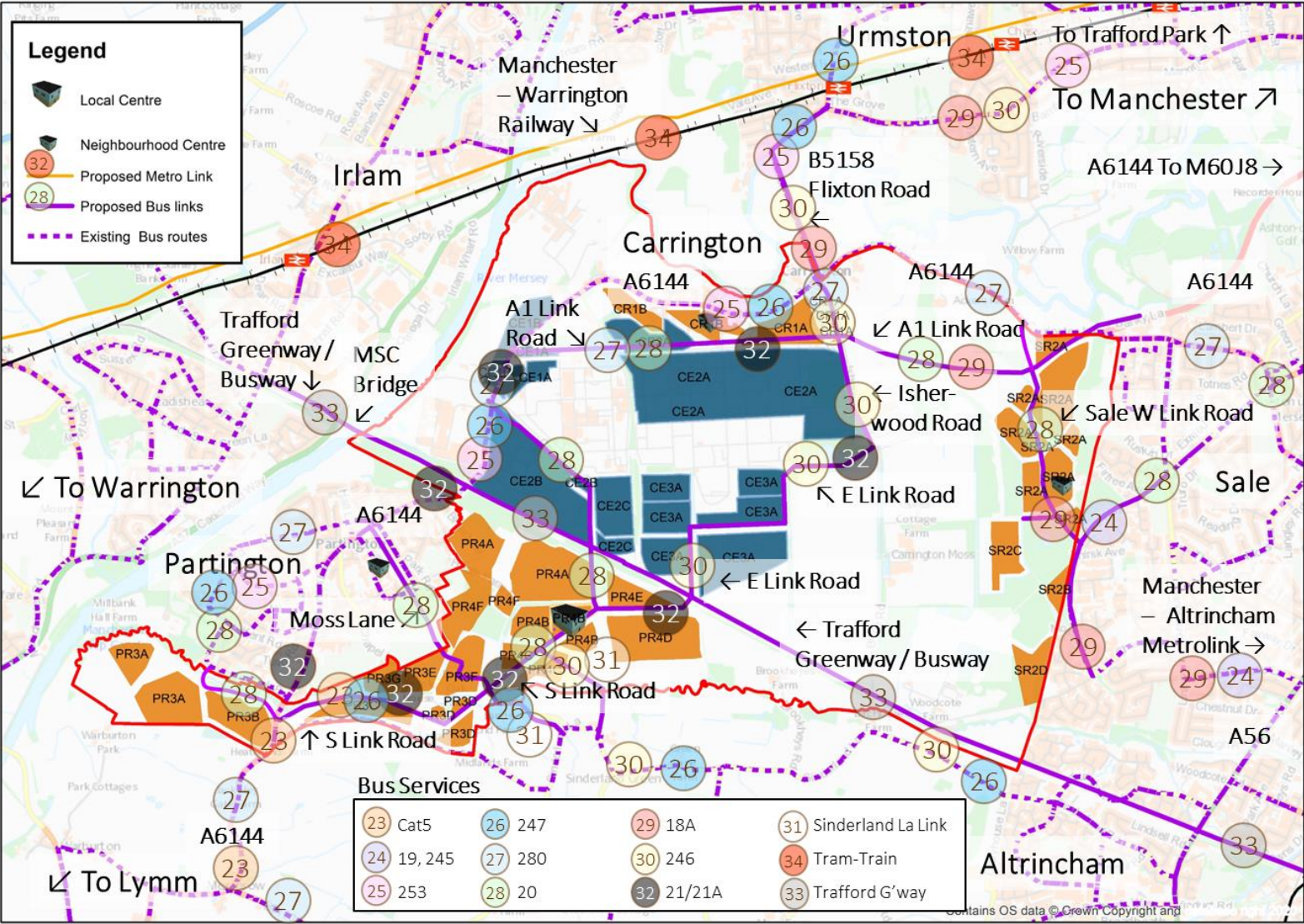




Figure 17 - New Carrington Bus Provision 2037 – 2041

New Carrington Proposed Bus Operations Period 5. 2037 - 2041



### Scenario 3 Proposed Highway Interventions

A phased introduction of road and junction improvements is proposed, to support essential vehicle access across New Carrington, for site operation and freight movement, and to reduce vehicle conflicts with other transport users. Indicative scheme alignments are shown, by five-year intervals.

A scheme reference and scope description, for each intervention, is provided in Table 22, to accompany the location plans.

These phase drawings show that:

- Highway improvements will only be implemented to provide essential vehicle access to build out each main development area, to remove new traffic from existing unsuitable or congested roads, and as freight routes to avoid conflicts between heavy vehicles and vulnerable users on existing highways.

Table 22 – Scenario 3 Proposed Highway Interventions

<b>New Carrington Highway (Road and Junction) Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
<b>Phase 1: 2021 – 2023</b>	
(34)	Improved highway access for Phase 2 Partington East residential sites, along Heath Farm Lane, south-eastwards from A6144 Manchester Road and Broadway, by 2023.
(35)	Southwards maintenance of Isherwood Road, (for Carrington new employment sites), by 2023.
<b>Phase 2: 2022 – 2026</b>	
(36)	South-eastwards extension of Moss Lane, (for Partington new residential sites), by 2025.
(37)	First section of New Carrington Southern Link Road, between A6144 Warburton Lane and Moss Lane, (for Partington new residential sites), by 2026.
(38)	Improved highway access for Phase 2 Carrington employment sites, along Common Lane, south-eastwards from A6144 Manchester Road, by 2024.
(39)	New highway access for Phase 2 Sale West residential sites, off Firs Way, by 2025.

<b>New Carrington Highway (Road and Junction) Interventions</b>	
<b>Intervention Reference</b>	<b>Intervention Description</b>
(40)	New highway access for Phase 2 Sale West residential sites, off Woodhouse Lane, by 2024.
<b>Phase 3: 2027 – 2031</b>	
(41)	A1 Link Road (formerly Carrington Relief Road), between A6144 Manchester Road and Carrington Spur / Banky Lane, by 2029.
(42)	Sale West Link Road by 2029.
(43)	Second section of New Carrington Southern Link Road, between Moss Lane and Heath Farm Lane, (for Partington new residential sites), by 2030.
(44)	New Carrington Eastern Link Road, between Heath Farm Lane and B5158 Isherwood Road, (for Carrington new employment sites), by 2031.
<b>Phase 4: 2032 – 2036</b>	
(19)	No new interventions.
<b>Phase 5: 2037 – 2041</b>	
(39)	Extension of highway access for Phase 2 Sale West residential sites, off Firs Way, by 2037.
(40)	Extension of highway access for Phase 2 Sale West residential sites, off Woodhouse Lane, by 2037.
(45)	Highway access for Phase 3 Partington South residential sites, westwards from A6144 Warburton Lane, south of Red Brook, by 2038.

Figure 18 - New Carrington Highway Provision 2021 – 2023

New Carrington Existing Highway Infrastructure Period 1. 2021 - 2023

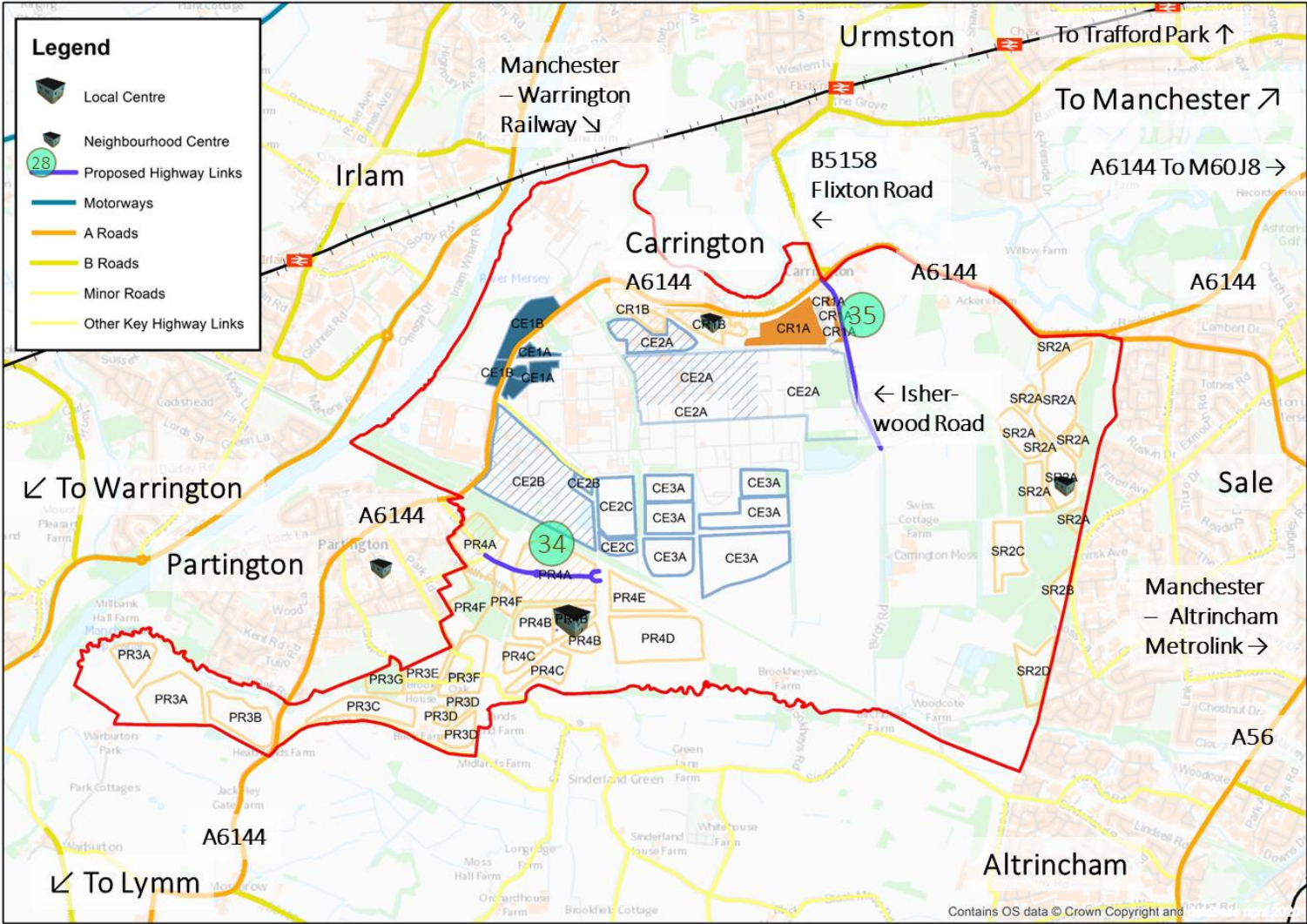


Figure 19 - New Carrington Highway Provision 2022 – 2026

New Carrington Proposed Highway Infrastructure Period 2. 2022 - 2026

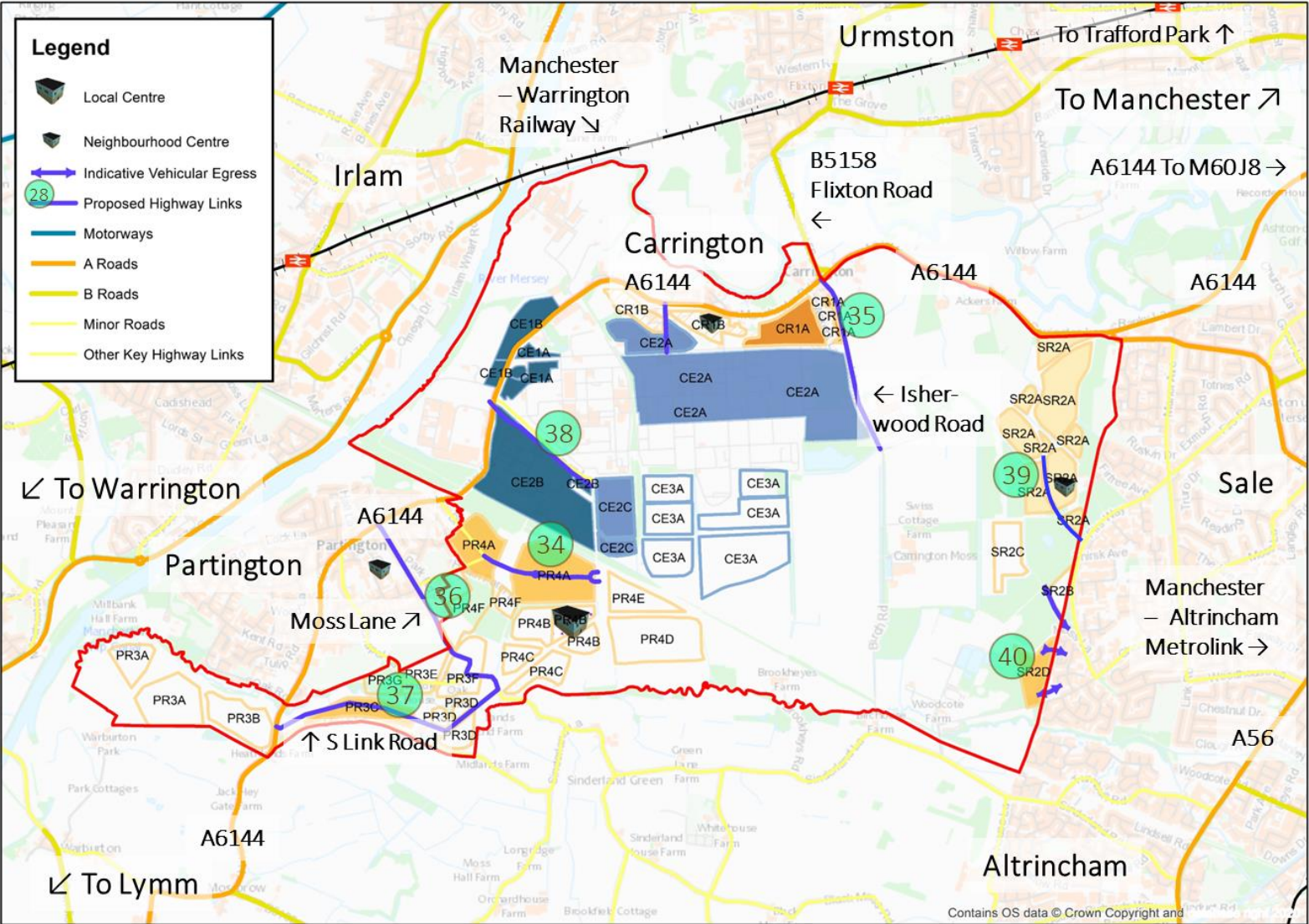


Figure 20 - New Carrington Highway Provision 2027 – 2031

New Carrington Proposed Highway Infrastructure Period 3. 2027 - 2031

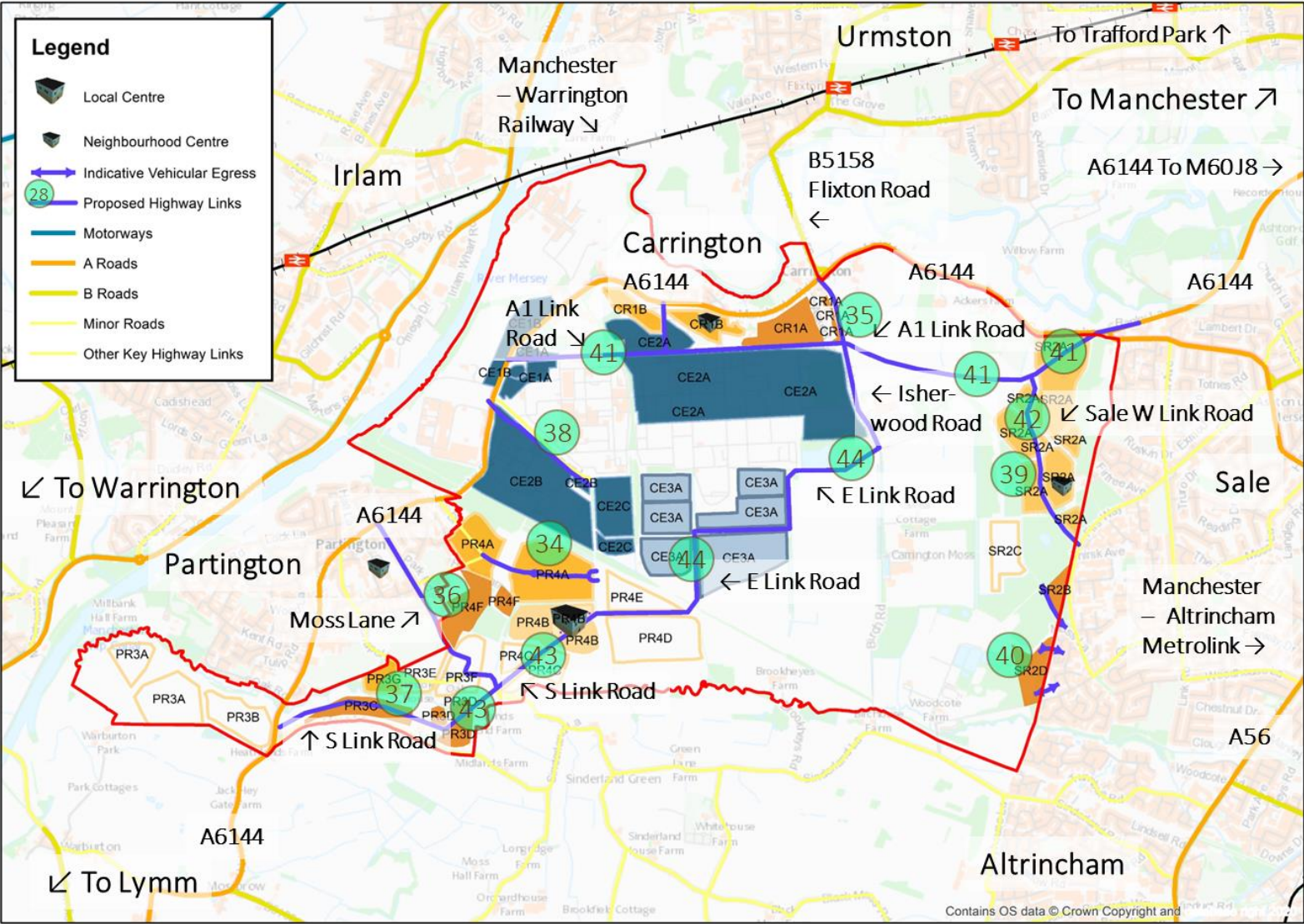


Figure 21 - New Carrington Highway Provision 2032 – 2036

New Carrington Proposed Highway Infrastructure Period 4. 2032 - 2036

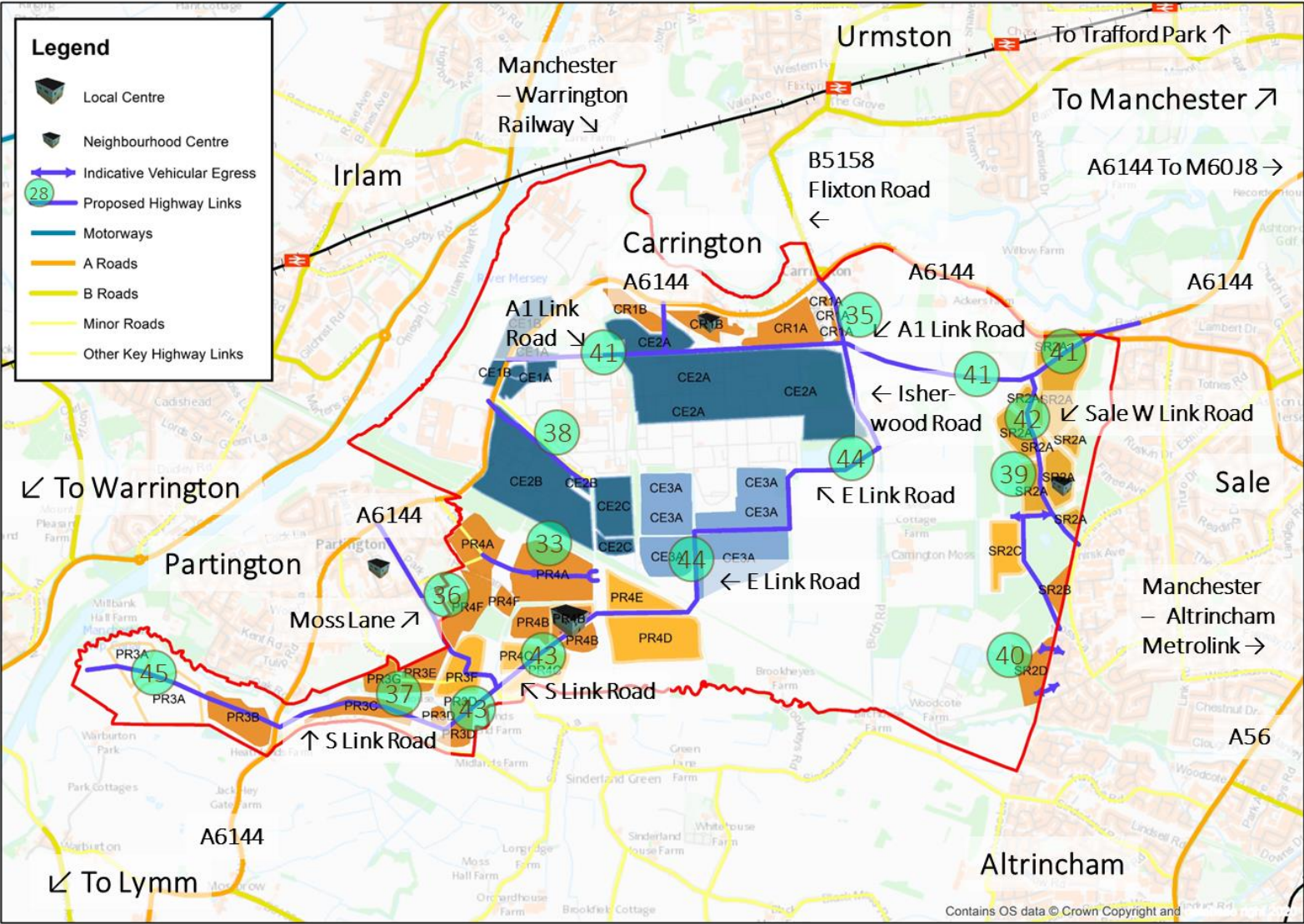
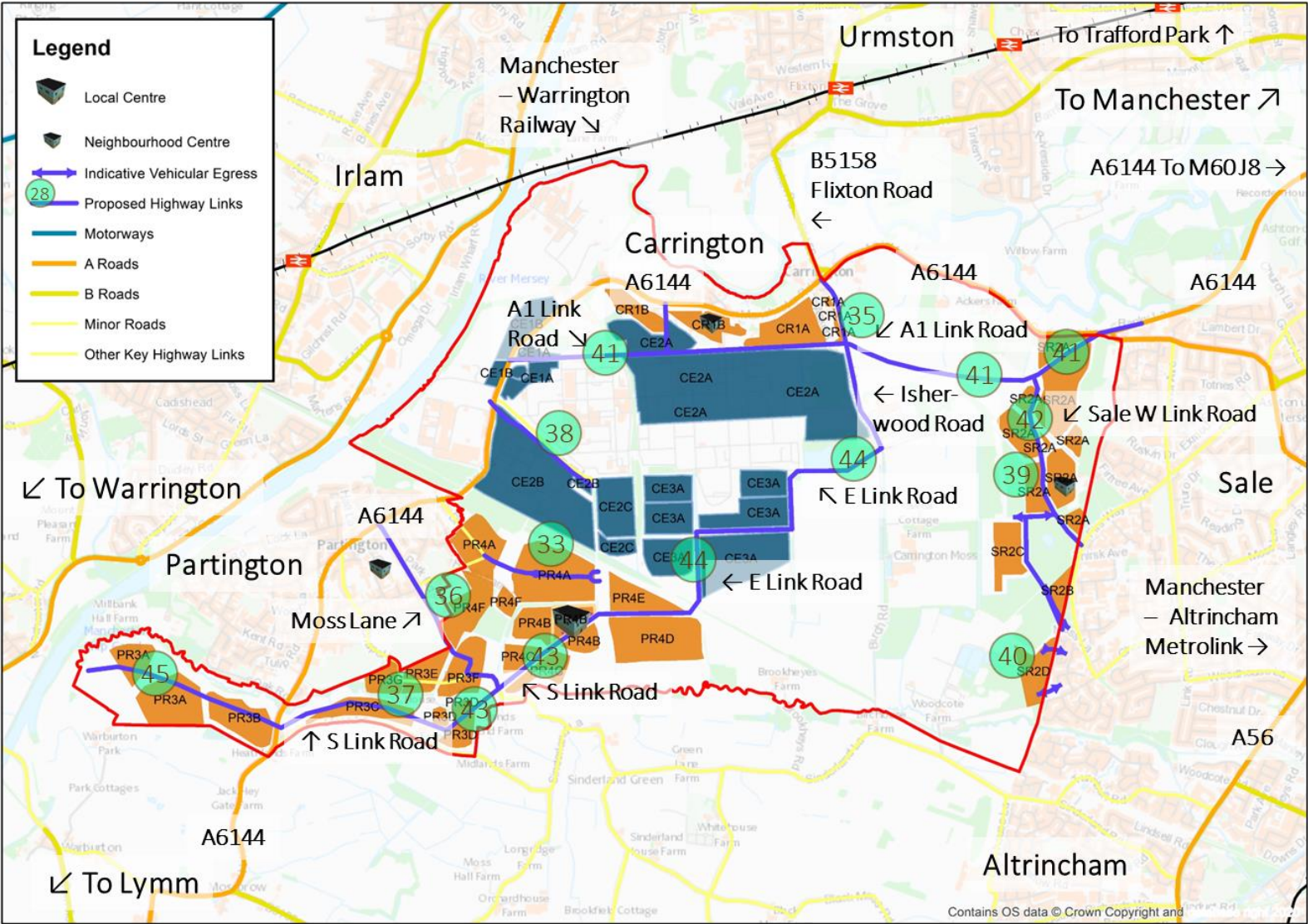


Figure 22 - New Carrington Highway Provision 2037 – 2041

New Carrington Proposed Highway Infrastructure Period 5. 2037 - 2041





## **Appendix C: New Carrington 20-Minute Neighbourhood Accessibility Maps**

### **Scenario 3 Active Travel Access (Walking and Cycling) with Proposed Interventions**

Outline accessibility, for cyclists and pedestrians, of various locations within the New Carrington development allocation has been assessed for best-case Scenario 3, by plotting 20-minute neighbourhood journey catchments around each location for each of these active travel modes. The journey catchments reflect the travel times for users of the proposed walking and cycling interventions in Scenario 3, when these schemes are added to the existing transport network and the interventions in Scenario 1.

20-minute Journeys have been plotted for nine representative locations within the allocation, plus four further sites with community amenities and services: the proposed local centre in Partington East, and the proposed neighbourhood centres in Partington village, Carrington village and Sale West. Figure 23 shows neighbourhoods accessible by 20-minute walking journeys. Similarly, Figure 24 shows neighbourhoods accessible by 20-minute cycling trips.

The 20-minute access routes shown in orange represent the active travel facilities available on the existing network in Scenario 1, whereas those shown in purple indicate additional facilities provided with Scenario 3. The underlying areas, shaded in brown in Figure 23 and in blue in Figure 24, represent the overall catchment surrounding New Carrington which is accessible in 20 minutes, by walking and cycling respectively, for all sites combined, in Scenario 3.

Figure 23 - New Carrington 20-Minute Neighbourhood Walking Accessibility

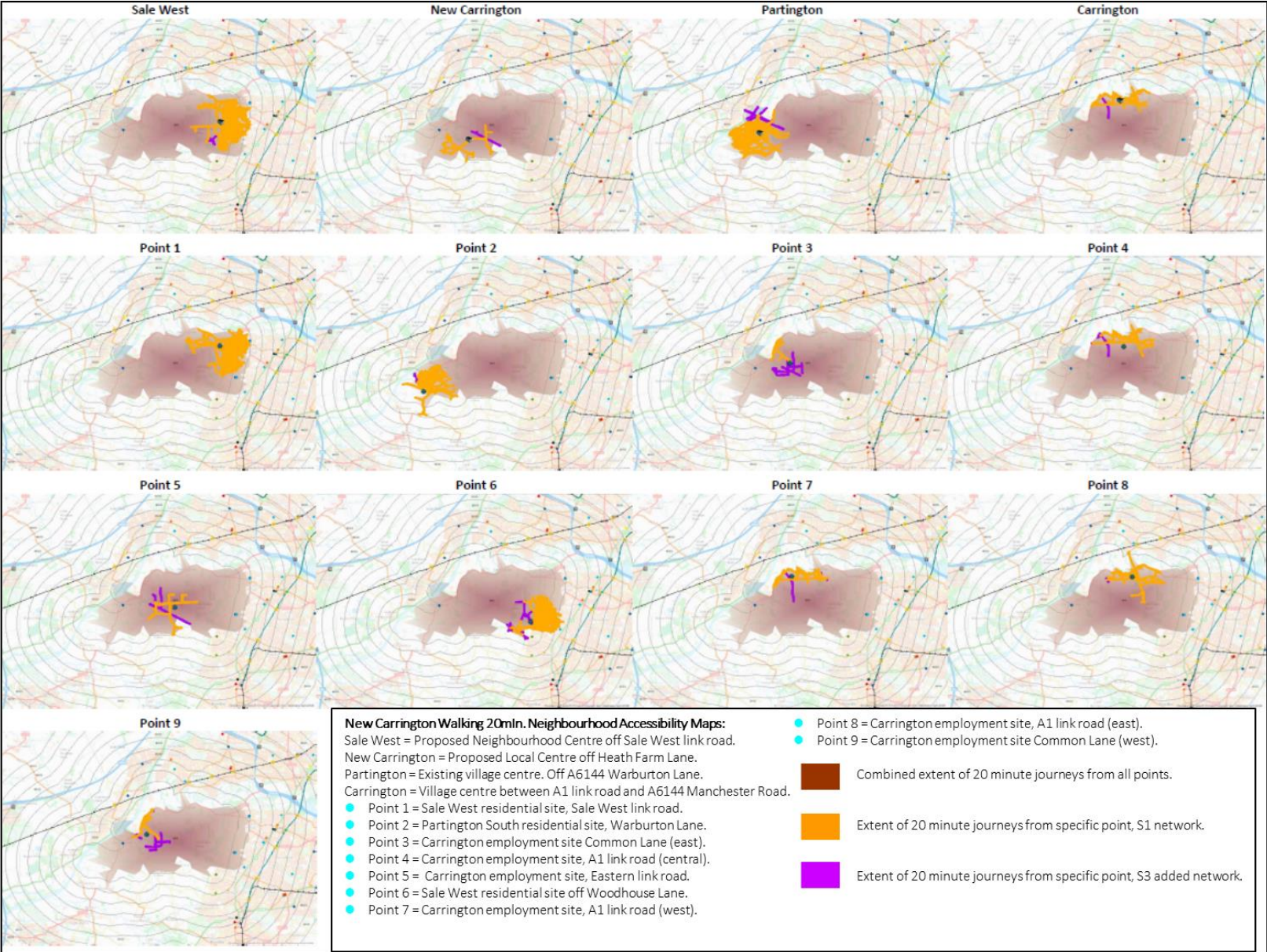
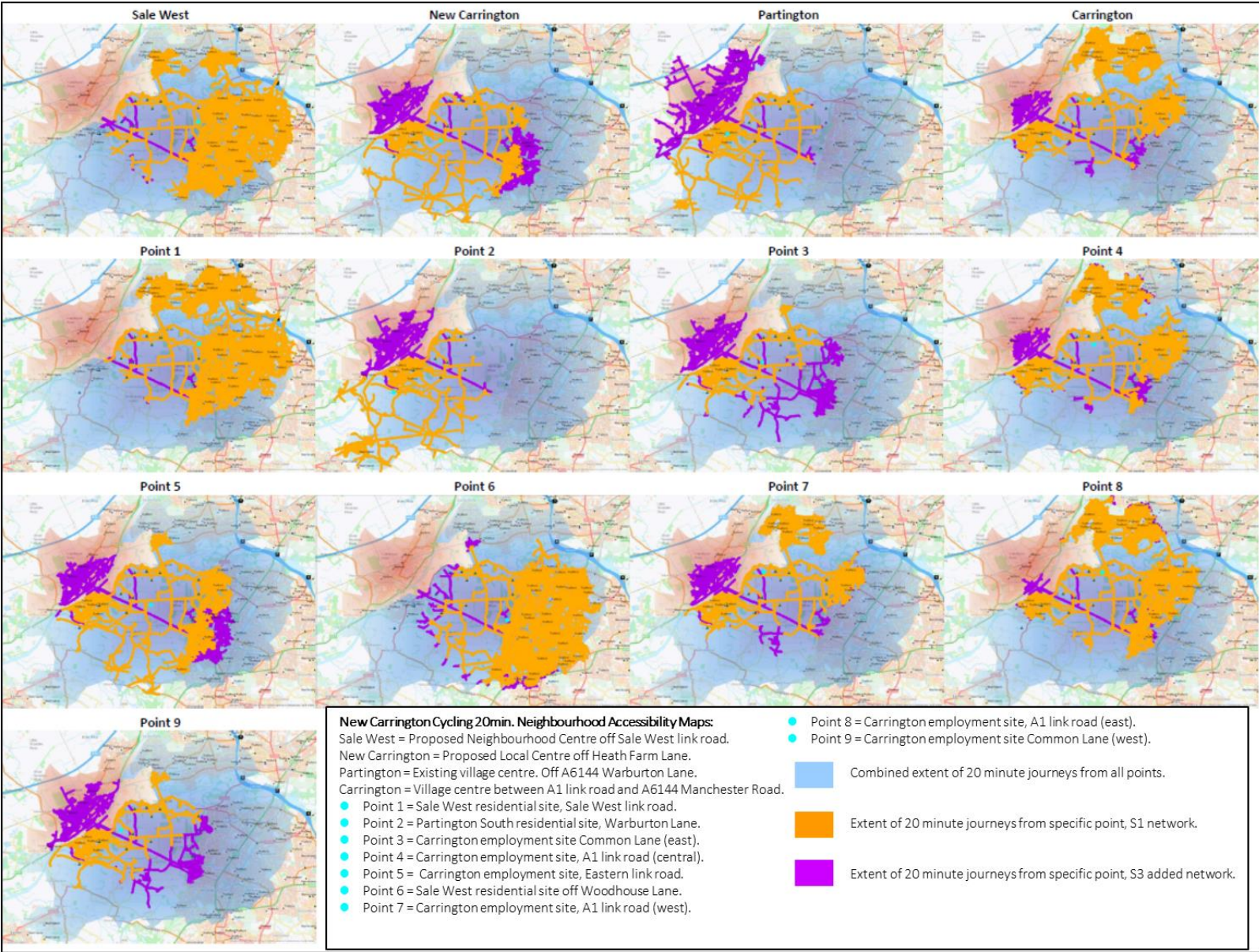


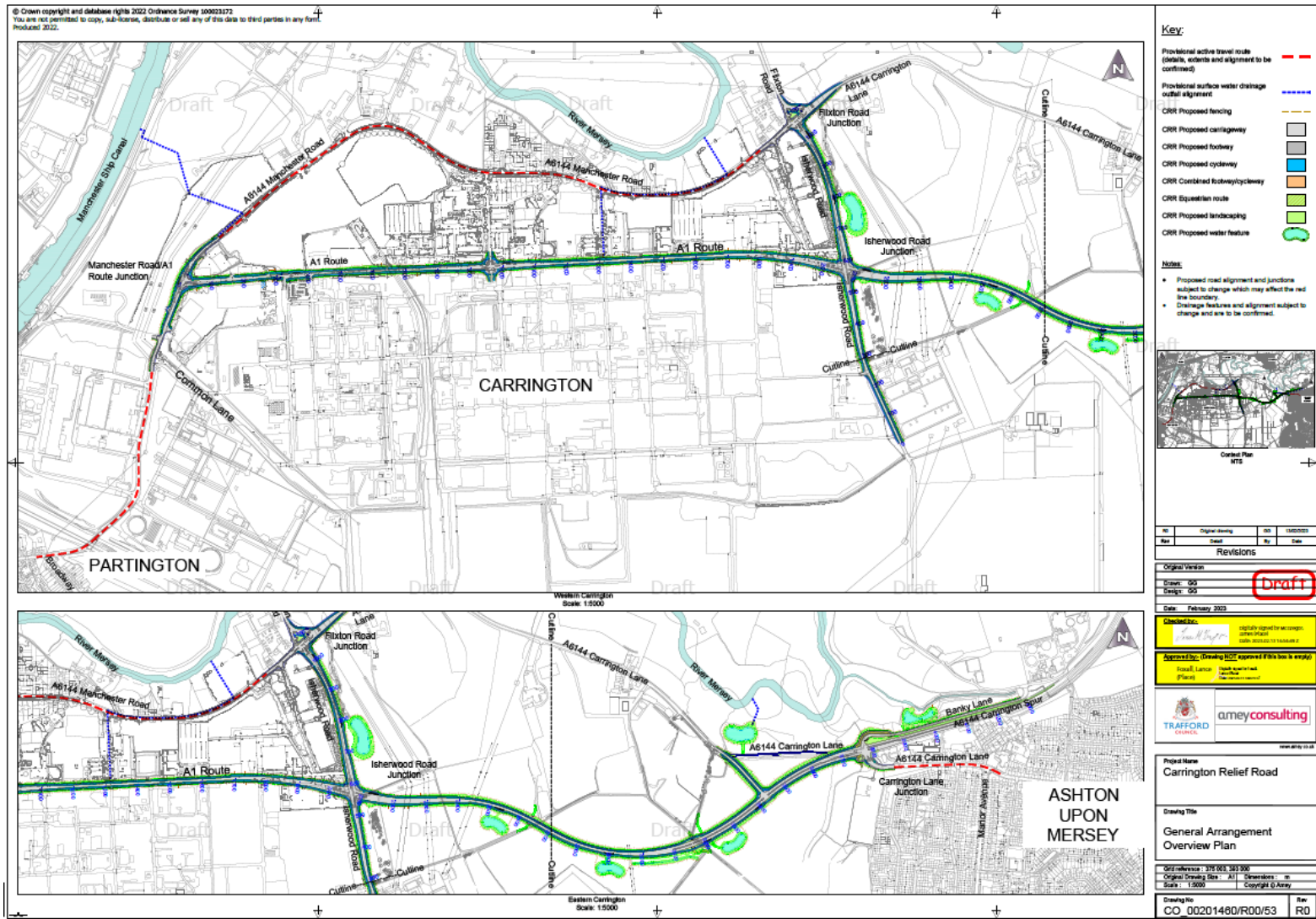
Figure 24 - New Carrington 20-Minute Neighbourhood Cycling Accessibility



Appendix D: Scheme Alignments and Phasing

Preliminary design drawing for New Carrington A1 Link Road (Carrington Relief Road) preferred option F.

Figure 25 - New Carrington A1 Link Road Preferred Route option F



**Appendix E - Details of Calculations**

**Appendix E1 – New Carrington Development Quantum**

The following tables outline the New Carrington development quantum set out in the PFE Policy JPA33 as well as other sites within the existing housing and employment land supply. This information is indicative and will be refined as part of the detailed masterplanning process for New Carrington.

*Table 23 – New Carrington Indicative Phasing and Quantum of Development*

New Carrington Development Sites		Residential Density (Dwellings / ha)	Employment Density (GFA / Site Area, ha)	Site Area (ha)	2022-2026			2027-2031			2032-2036			2037-2041			All Years		
					Proposed	Land Supply	Total	Proposed	Land Supply	Total	Proposed	Land Supply	Total	Proposed	Land Supply	Total	Proposed	Land Supply	Total
Residential Dwellinghouses (Class C3)																			
Carrington Residential (no. units) Sites: CR1A, CR1B (Including Carrington Village construction)	Houses				0	277	277	0	206	206	0	0	0	0	0	0	0	482	482
	Apartments				0	69	69	0	51	51	0	0	0	0	0	0	0	121	121
	Total Dwellings	35.00	17.23		0	346	346	0	257	257	0	0	0	0	0	0	0	603	603
Sale West Residential (no. units) Sites: SR2A,	Houses				63	0	63	422	0	422	523	0	523	146	0	146	1,154	0	1,154
	Apartments				16	0	16	105	0	105	131	0	131	37	0	37	289	0	289

SR2B, SR2C, SR2D	Total Dwellings	40.00	36.08	79	0	79	527	0	527	654	0	654	183	0	183	1,443	0	1,443
Partington East Residential (no. units) Sites: PR4A, PR4B, PR4C, PR4D, PR4E, PR4F, PR3E, PR3F, PR3G, Local Centre (Including Heath Farm Lane construction)	Houses			113	34	146	344	104	448	907	274	1,182	222	67	290	1,586	479	2,066
	Apartments			28	8	37	86	26	112	227	69	295	56	17	72	397	120	516
	Total Dwellings	43.33	59.58	141	42	183	430	130	560	1,134	343	1,477	278	84	362	1,983	599	2,582
Warburton Lane Residential (no. units) Sites: PR3A, PR3B, PR3C, PR3D	Houses			0	0	0	125	0	125	76	0	76	136	0	136	337	0	337
	Apartments			0	0	0	31	0	31	19	0	19	34	0	34	84	0	84
	Total Dwellings	25.00	16.84	0	0	0	156	0	156	95	0	95	170	0	170	421	0	421
All New Carrington Residential (Total Dwellings)	Houses			176	310	486	890	310	1,200	1,506	274	1,781	505	67	572	3,078	962	4,039
	Apartments			44	78	122	223	77	300	377	69	445	126	17	143	769	240	1,010
	Total Dwellings	38.92	129.73	220	388	608	1,113	387	1,500	1,883	343	2,226	631	84	715	3,847	1,202	5,049

Partington West Residential (no. units) Sites: Lock Lane construction	Houses			0	238	238	0	0	0	0	0	0	0	0	0	0	238	238
	Apartments			0	60	60	0	0	0	0	0	0	0	0	0	0	60	60
	Total Dwellings	25.38	11.74	0	298	298	0	0	0	0	0	0	0	0	0	0	298	298
Partington West Residential (no. units) Sites: Hall Lane construction	Houses			0	121	121	0	0	0	0	0	0	0	0	0	0	121	121
	Apartments			0	30	30	0	0	0	0	0	0	0	0	0	0	30	30
	Total Dwellings	33.93	4.45	0	151	151	0	0	0	0	0	0	0	0	0	0	151	151
Partington West Residential (no. units) Sites: Oak Road construction	Houses			0	75	75	0	0	0	0	0	0	0	0	0	0	75	75
	Apartments			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Dwellings	38.66	1.94	0	75	75	0	0	0	0	0	0	0	0	0	0	75	75
Partington West Residential (no. units) Sites: Greyhound Manchester Road construction	Houses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Apartments			0	24	24	0	0	0	0	0	0	0	0	0	0	24	24
	Total Dwellings	120.00	0.20	0	24	24	0	0	0	0	0	0	0	0	0	0	24	24

Sale West Residential (no. units) Sites: Firs Way, Manor Avenue, Cherry Lane / Woodhouse Lane construction & commitments	Houses			0	73	73	0	11	11	0	0	0	0	0	0	0	84	84
	Apartments			0	41	41	0	138	138	0	0	0	0	0	0	0	179	179
	Total Dwellings	40.09	6.56	0	114	114	0	149	149	0	0	0	0	0	0	0	263	263
All Committed / Under Construction Residential (Total Dwellings)	Houses			0	507	507	0	11	11	0	0	0	0	0	0	0	518	518
	Apartments			0	155	155	0	138	138	0	0	0	0	0	0	0	293	293
	Total Dwellings	32.58	24.89	0	662	662	0	149	149	0	0	0	0	0	0	0	811	811
Existing Partington and Carrington	Total Dwellings	23.54	142.07															3,345
Existing Sale West	Total Dwellings	40.09	36.42															1,460
Total Existing	Total Dwellings	26.92	178.49															4,805
All Residential	Houses			176	818	994	890	321	1,211	1,506	274	1,781	505	67	572	3,078	1,480	4,557



(Total Dwellings) Proposed & Committed	Apartments			44	232	276	223	215	438	377	69	445	126	17	143	769	533	1,303
	Total Dwellings	37.90	154.62	220	1,050	1,270	1,113	536	1,649	1,883	343	2,226	631	84	715	3,847	2,013	5,860
All Residential (Total Dwellings) Proposed, Committed & Existing	Total Dwellings	32.02	333.11															10,665
Stated Employment Area (Assumed to be Site Area) (Class B1, B2, B8)																		
New Carrington employment (floorspace, sqm) Sites: CE1A, CE1B, CE2A, CE2B, CE2C, CE3A	B1	9.44	0	46,050	46,050	7,752	17,659	25,411	10,337	4,028	14,365	7,753	774	8,526	25,841	68,510	94,352	
	B2	15.10	0	73,680	73,680	12,404	28,254	40,657	16,538	6,445	22,983	12,404	1,238	13,642	41,346	109,616	150,962	
	B8	13.21	0	64,470	64,470	10,853	24,722	35,575	14,471	5,639	20,110	10,854	1,083	11,936	36,178	95,914	132,092	
Total Floorspace (GFA, Sqm)	0.25	37.74	0	184,201	184,201	31,009	70,634	101,643	41,346	16,112	57,458	31,010	3,094	34,104	103,365	274,041	377,406	
Total Employment Site Area		152.80	0.0%			30.0%			40.0%			30.0%			100.0%			
Calculated Employment Floorspace (Site Area x [Gross Floor Area / Site Area]) (Class B1, B2, B8)																		
New Carrington employment (floorspace,	B1	3.77	0	18,420	18,420	3,101	7,063	10,164	4,135	1,611	5,746	3,101	309	3,410	10,337	27,404	37,741	

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sqm) Sites: CE1A, CE1B, CE2A, CE2B, CE2C, CE3A	B2		7.55	0	36,840	36,840	6,202	14,127	20,329	8,269	3,222	11,492	6,202	619	6,821	20,673	54,808	75,481
	B8		7.93	0	38,682	38,682	6,512	14,833	21,345	8,683	3,384	12,066	6,512	650	7,162	21,707	57,549	79,255
Total Floorspace (GFA, Sqm)		0.13	19.25	0	93,943	93,943	15,815	36,023	51,838	21,086	8,217	29,304	15,815	1,578	17,393	52,716	139,761	192,477
Total Employment Site Area			152.80	0.0%			30.0%			40.0%			30.0%			100.0%		

## Appendix E2 – GM Right Mix 2017 Evidence and 2040 Targets

Table 24 – GM Transport Strategy 2040 Right Mix Evidence and Targets (2021).

<b>GM Transport Strategy 2040 (Appendix 1: Right Mix Technical Note Feb 2017, Update Jan 2021).</b>							
<i>Right Mix target is for 50% of all journeys to be by non-vehicle travel modes by 2040, across GM as a whole, allowing for variations amongst different districts. Data below from TfGM, March 2023</i>							
Daily Trips (Assume weekday 7am - 7pm)							
	Zone	PT	Active	PT+Active	Car+Other	Total	% Non-Vehicle Mode Share
<b>2017</b>	Altrincham			7,849	33,368	41,217	19.0%
				19.0%	81.0%	100.0%	
	Assumed New Carrington			208,545	550,944	759,489	27.5%
				27.5%	72.5%	100.0%	
	Wider Trafford	Inferred	Inferred	216,394	584,312	800,706	27.0%
		13.2%	13.8%	27.0%	73.0%	100.0%	
	Regional Centre East			62,174	76,804	138,978	44.7%
				44.7%	55.3%	100.0%	
	Regional Centre MSIRR & Oxford Road			551,091	189,627	740,718	74.4%
				74.4%	25.6%	100.0%	
	Regional Centre West			42,959	61,802	104,761	41.0%
				41.0%	59.0%	100.0%	
	Neighbourhood	3.0%	52.0%	55.0%	45.0%	100.0%	55.0%
	GM Outside Regional Centre	8.0%	30.0%	38.0%	62.0%	100.0%	38.0%
	GM Regional Centre	26.0%	33.0%	59.0%	41.0%	100.0%	59.0%
	Wider City Region	14.0%	4.0%	18.0%	82.0%	100.0%	18.0%
	Inter City	13.0%	0.0%	13.0%	87.0%	100.0%	13.0%

<b>2040</b>	Altrincham			22,146	20,942	43,088	51.4%
				51.4%	48.6%	100.0%	
	Assumed New Carrington			341,388	506,367	847,755	40.3%
				40.3%	59.7%	100.0%	
	Wider Trafford	Inferred	Inferred	363,534	527,309	890,843	40.8%
		18.3%	22.5%	40.8%	59.2%	100.0%	
	Regional Centre East			138,000	82,183	220,183	62.7%
				62.7%	37.3%	100.0%	
	Regional Centre MSIRR & Oxford Road			798,234	159,758	957,992	83.3%
				83.3%	16.7%	100.0%	
	Regional Centre West			85,247	66,927	152,174	56.0%
				56.0%	44.0%	100.0%	
	Neighbourhood	2.0%	61.0%	63.0%	37.0%	100.0%	63.0%
	GM Outside Regional Centre	8.0%	39.0%	47.0%	53.0%	100.0%	47.0%
	GM Regional Centre	31.0%	45.0%	76.0%	24.0%	100.0%	76.0%
	Wider City Region	16.0%	6.0%	22.0%	78.0%	100.0%	22.0%
	Inter City	18.0%	0.0%	18.0%	82.0%	100.0%	18.0%

**Appendix E3 – GM Transport Model Base Year 2017 Without New Carrington PfE Development**

Base Year Daily Car Trips

Base Year Daily PT Trips

Base Year Daily Active Mode Trips Synthesised Using 'Right Mix' Evidence

Figure 26 – New Carrington Travel Demand Sectors (from GM Transport Model)

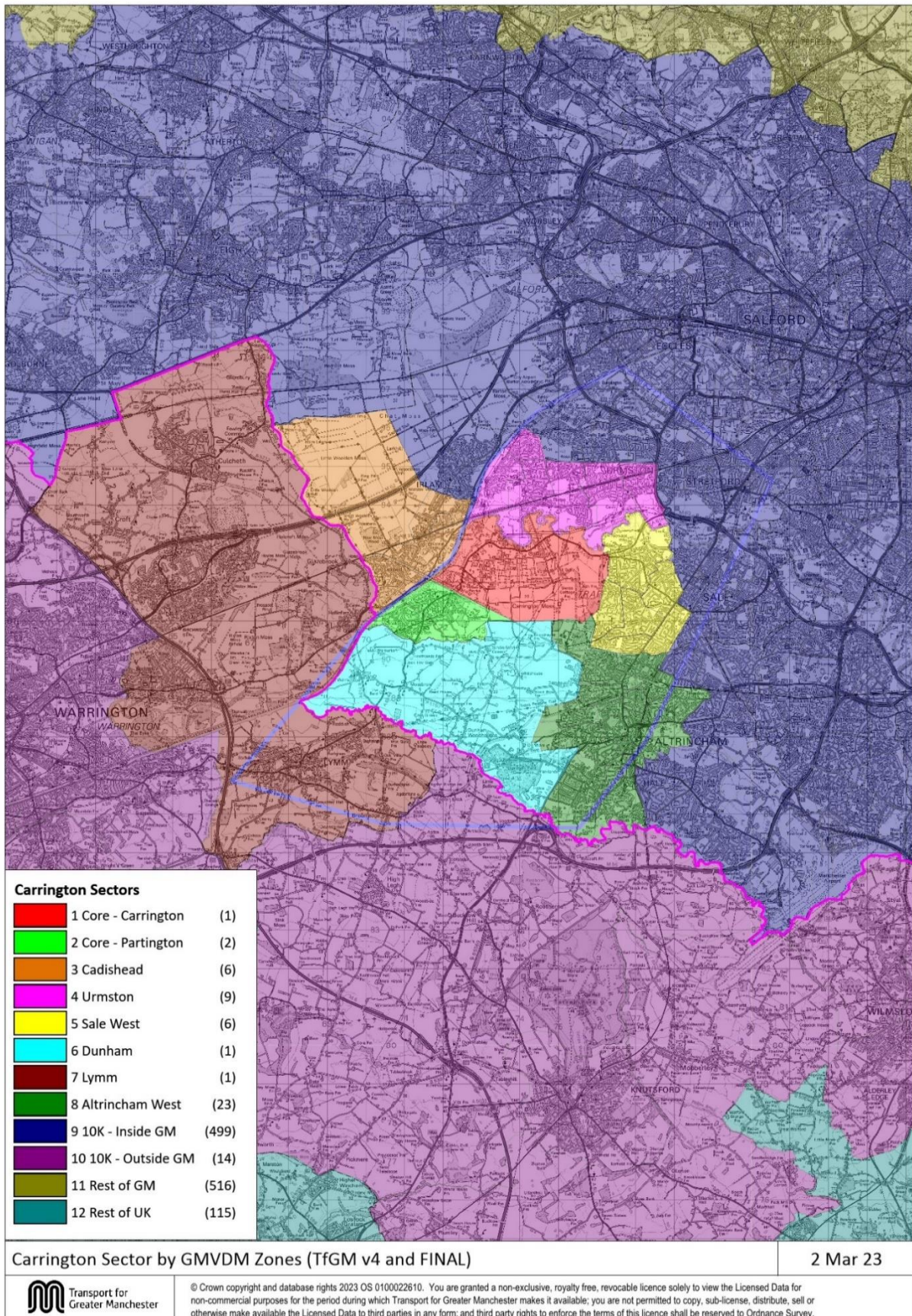


Table 25 – GM 2017 Base Year, Daily Car Trips.

	1	2	3	4	5	6	7	8	9	10	11	12		
<b>Car Daily</b>	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1	Core Carrington	382	669	175	388	1,582	149	528	1,953	4,682	649	246	616	<b>12,020</b>
2	Core Partington	600	620	345	487	414	175	506	2,531	3,909	735	336	754	<b>11,414</b>
3	Cadishead	129	291	6,043	720	56	57	1,668	162	12,765	852	780	1,285	<b>24,808</b>
4	Urmston	504	522	776	4,073	1,268	142	291	1,329	26,633	370	1,088	1,002	<b>37,997</b>
5	Sale West	452	481	186	628	3,584	75	166	6,907	20,155	802	1,150	1,422	<b>36,008</b>
6	Dunham	135	174	61	109	34	45	119	549	713	174	101	177	<b>2,390</b>
7	Lymm	265	466	1,463	399	75	99	719	20,046		3,849			<b>27,381</b>
8	Altrincham West	1,087	1,820	157	829	5,133	486	668	28,053	55,424	6,390	3,064	5,409	<b>108,517</b>
9	10K - Inside GM	3,652	4,325	14,503	26,249	19,160	752	22,186	57,456	1,703,030	78,292	521,006	154,496	<b>2,605,107</b>
10	10K - Outside GM	455	804	905	469	596	167	5,070	72,468		25,014			<b>105,947</b>
11	Rest of GM	633	863	340	1,748	1,492	67	5,667	2,697	512,295	28,041	2,318,869	228,451	<b>3,101,161</b>
12	Rest of UK	489	636	907	1,213	1,233	167	4,789	159,708		225,782			<b>394,923</b>
	<b>Total</b>	<b>8,781</b>	<b>11,672</b>	<b>25,862</b>	<b>37,311</b>	<b>34,626</b>	<b>2,379</b>	<b>31,800</b>	<b>112,214</b>	<b>2,591,828</b>	<b>116,304</b>	<b>3,101,285</b>	<b>393,612</b>	<b>6,467,673</b>

Table 26 – GM 2017 Base Year Daily Car Trip Distribution.

	1	2	3	4	5	6	7	8	9	10	11	12		
<b>Car Daily % 2-Way Distribution</b>	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1	Core Carrington	5.46%		2.26%	4.57%	7.04%	1.52%	4.24%	17.76%	39.82%	6.35%	4.99%	6.00%	<b>100.00%</b>
2	Core Partington													
3	Cadishead													
4	Urmston													
5	Sale West													
6	Dunham													
7	Lymm													
8	Altrincham West													
9	10K - Inside GM													
10	10K - Outside GM													
11	Rest of GM													
12	Rest of UK													
	<b>Total</b>													



Table 27 – GM 2017 Base Year, Daily PT Trips.

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
		Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total
1	Core Carrington	1	9	0	25	1	0	0	4	46	0	0	0	<b>86</b>
2	Core Partington	28	150	0	465	17	2	1	194	837	1	2	4	<b>1,702</b>
3	Cadishead	0	0	95	17	1	0	23	9	899	63	34	75	<b>1,216</b>
4	Urmston	14	118	15	468	38	0	31	97	2,565	40	58	134	<b>3,577</b>
5	Sale West	3	15	1	23	230	1	10	882	2,656	45	97	74	<b>4,038</b>
6	Dunham	0	7	0	1	0	2	0	30	14	0	0	0	<b>54</b>
7	Lymm	0	0	16	23	4	0		14	725		94		<b>875</b>
8	Altrincham West	16	376	8	155	949	80	18	2,776	8,725	449	495	491	<b>14,540</b>
9	10K - Inside GM	49	213	737	2,048	1,712	38	656	8,985	288,014	5,231	81,660	49,579	<b>438,922</b>
10	10K - Outside GM	0	1	44	29	27	0		452	5,143		876		<b>6,572</b>
11	Rest of GM	2	1	30	51	89	1	70	508	91,600	968	220,991	12,056	<b>326,367</b>
12	Rest of UK	0	3	53	93	118	1		503	50,737		10,499		<b>62,006</b>
	<b>Total</b>	<b>112</b>	<b>892</b>	<b>999</b>	<b>3,398</b>	<b>3,188</b>	<b>126</b>	<b>809</b>	<b>14,455</b>	<b>451,961</b>	<b>6,797</b>	<b>314,807</b>	<b>62,414</b>	<b>859,957</b>

Table 28 – GM 2017 Base Year Daily PT Trip Distribution.

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1	Core Carrington	7.20%		0.02%	23.87%	1.37%	0.34%	0.07%	22.64%	43.93%	0.07%	0.22%	0.28%	100.00%
2	Core Partington													
3	Cadishead													
4	Urmston													
5	Sale West													
6	Dunham													
7	Lymm													
8	Altrincham West													
9	10K - Inside GM													
10	10K - Outside GM													
11	Rest of GM													
12	Rest of UK													
	<b>Total</b>													

Table 29 – GM 2017 Base Year, Daily Active Mode Trips (Synthesised Using Right Mix).

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
	Core Carrington	Core Partington	Cadishhead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1	Core Carrington	415	735	28	66	254	6	22	82	197	0	10	0	<b>1,815</b>
2	Core Partington	680	834	55	153	69	7	21	114	198	0	14	0	<b>2,146</b>
3	Cadishhead	21	47	6,649	118	9	2	70	7	569	0	34	0	<b>7,527</b>
4	Urmston	83	103	127	4,919	209	6	13	59	1,217	0	48	0	<b>6,784</b>
5	Sale West	73	80	30	104	4,132	3	7	325	950	0	52	0	<b>5,756</b>
6	Dunham	6	8	3	5	1	50	5	24	30	0	4	0	<b>136</b>
7	Lymm	11	19	62	18	3	4	0	31	865	0	164	0	<b>1,177</b>
8	Altrincham West	46	91	7	41	253	24	29	33,398	2,673	0	148	0	<b>36,710</b>
9	10K - Inside GM	154	189	635	1,179	870	33	952	2,768	980,663	0	25,111	0	<b>1,012,554</b>
10	10K - Outside GM	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
11	Rest of GM	26	36	15	75	66	3	239	134	25,162	0	105,828	0	<b>131,584</b>
12	Rest of UK	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
	<b>Total</b>	<b>1,515</b>	<b>2,141</b>	<b>7,611</b>	<b>6,678</b>	<b>5,867</b>	<b>139</b>	<b>1,359</b>	<b>36,941</b>	<b>1,012,525</b>	<b>0</b>	<b>131,413</b>	<b>0</b>	<b>1,206,190</b>

Table 30 – GM 2017 Base Year Daily Active Mode Trip Distribution.

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1	Core Carrington	53.79%	3.05%	8.17%	9.60%	0.54%	1.49%	6.71%	14.90%	0.00%	1.75%	0.00%	100.00%	
2	Core Partington													
3	Cadishead													
4	Urmston													
5	Sale West													
6	Dunham													
7	Lymm													
8	Altrincham West													
9	10K - Inside GM													
10	10K - Outside GM													
11	Rest of GM													
12	Rest of UK													
	<b>Total</b>													

Table 31 – GM 2017 Base Year, Daily Car Plus PT Trips.

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1	Core Carrington	383	678	175	414	1,583	149	528	1,957	4,729	649	246	616	<b>12,107</b>
2	Core Partington	628	770	346	952	432	177	508	2,725	4,746	736	338	759	<b>13,116</b>
3	Cadishead	129	291	6,138	737	57	57	1,691	172	13,664	915	814	1,361	<b>26,024</b>
4	Urmston	517	640	791	4,541	1,306	142	321	1,426	29,198	410	1,146	1,136	<b>41,574</b>
5	Sale West	454	496	187	651	3,814	76	176	7,789	22,812	847	1,247	1,496	<b>40,046</b>
6	Dunham	135	180	61	110	35	47	119	579	727	174	101	177	<b>2,444</b>
7	Lymm	265	466	1,479	422	79	99	0	733	20,771	0	3,943	0	<b>28,257</b>
8	Altrincham West	1,102	2,196	165	985	6,082	566	686	30,829	64,149	6,839	3,559	5,900	<b>123,057</b>
9	10K - Inside GM	3,701	4,538	15,240	28,296	20,872	790	22,842	66,441	1,991,044	83,524	602,666	204,075	<b>3,044,029</b>
10	10K - Outside GM	455	804	949	498	623	167	0	5,522	77,611	0	25,890	0	<b>112,520</b>
11	Rest of GM	635	865	370	1,798	1,581	68	5,737	3,205	603,895	29,009	2,539,860	240,506	<b>3,427,528</b>
12	Rest of UK	489	639	960	1,306	1,351	168	0	5,292	210,444	0	236,280	0	<b>456,929</b>
	<b>Total</b>	<b>8,894</b>	<b>12,563</b>	<b>26,860</b>	<b>40,709</b>	<b>37,814</b>	<b>2,505</b>	<b>32,608</b>	<b>126,669</b>	<b>3,043,789</b>	<b>123,101</b>	<b>3,416,091</b>	<b>456,026</b>	<b>7,327,630</b>

Table 32 – GM 2017 Base Year Daily Car Plus PT Trip Distribution.

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1	Core Carrington	5.56%		2.13%	5.70%	6.70%	1.45%	4.00%	18.05%	40.06%	5.98%	4.71%	5.66%	100.00%
2	Core Partington													
3	Cadishead													
4	Urmston													
5	Sale West													
6	Dunham													
7	Lymm													
8	Altrincham West													
9	10K - Inside GM													
10	10K - Outside GM													
11	Rest of GM													
12	Rest of UK													
	<b>Total</b>													

Table 33 – GM 2017 Base Year, Daily Car Plus PT Plus Active Mode Trips (Synthesised Using Right Mix).

	1.11	1	2	3	4	5	6	7	8	9	10	11	12	
	Core Carrington	Core Partington	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1	Core Carrington	798	1,413	203	480	1,836	155	550	2,038	4,926	649	256	616	<b>13,922</b>
2	Core Partington	1,308	1,604	401	1,105	501	184	529	2,839	4,944	736	353	759	<b>15,262</b>
3	Cadishead	149	338	12,787	855	66	59	1,761	179	14,233	915	847	1,361	<b>33,551</b>
4	Urmston	600	742	918	9,460	1,515	148	335	1,485	30,415	410	1,194	1,136	<b>48,358</b>
5	Sale West	527	576	217	756	7,946	80	184	8,113	23,762	847	1,299	1,496	<b>45,802</b>
6	Dunham	141	188	63	115	36	97	124	603	757	174	105	177	<b>2,580</b>
7	Lymm	276	486	1,541	439	83	103	0	764	21,636	0	4,107	0	<b>29,434</b>
8	Altrincham West	1,148	2,287	171	1,026	6,335	590	715	64,227	66,822	6,839	3,708	5,900	<b>159,767</b>
9	10K - Inside GM	3,856	4,727	15,875	29,475	21,742	823	23,794	69,209	2,971,707	83,524	627,777	204,075	<b>4,056,584</b>
10	10K - Outside GM	455	804	949	498	623	167	0	5,522	77,611	0	25,890	0	<b>112,520</b>
11	Rest of GM	661	901	385	1,873	1,646	71	5,976	3,339	629,057	29,009	2,645,688	240,506	<b>3,559,112</b>
12	Rest of UK	489	639	960	1,306	1,351	168	0	5,292	210,444	0	236,280	0	<b>456,929</b>
	<b>Total</b>	<b>10,409</b>	<b>14,705</b>	<b>34,471</b>	<b>47,388</b>	<b>43,681</b>	<b>2,644</b>	<b>33,967</b>	<b>163,610</b>	<b>4,056,314</b>	<b>123,101</b>	<b>3,547,505</b>	<b>456,026</b>	<b>8,533,820</b>

**Appendix E4 – GM Transport Model Synthesised Future Year 2040 With New Carrington PfE Development**

Scenario 1 Least Sustainable Travel Demand Forecast 2040 Weekday, with TfGM Policy Off, Car and PT with development.

Scenario 3 Most Sustainable Travel Demand Forecast 2040 Weekday, with TfGM Policy On, Car and PT with development.

Scenario 2 Most Realistic Travel Demand Forecast 2040 Weekday, with TfGM Part Policy Off / On, Car and PT with development.

*Table 34 – GM 2040 Future Year, Scenario 1 Daily Car Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.*

**Scenario 1 2040 Policy-off sectorised demand - factored from 'GM Model' output using Tempo**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2													
2	Core Combined	5,329	1,275	2,144	4,889	793	2,534	10,983	21,046	3,390	1,427	3,357	<b>57,168</b>
3	Cadishead	1,032	7,188	857	67	68	1,984	193	15,184	1,014	927	1,529	<b>30,041</b>
4	Urmston	2,468	904	4,742	1,476	165	338	1,547	31,008	431	1,267	1,166	<b>45,512</b>
5	Sale West	2,223	214	724	4,132	87	191	7,963	23,237	924	1,326	1,640	<b>42,660</b>
6	Dunham	741	71	127	40	52	138	638	828	202	117	205	<b>3,158</b>
7	Lymm	1,705	1,651	450	85	111	0	811	22,621	0	4,343	0	<b>31,778</b>
8	Altrincham West	6,923	181	956	5,916	560	770	32,332	63,878	7,364	3,531	6,234	<b>128,645</b>
9	10K - Inside GM	19,223	16,908	30,601	22,337	877	25,865	66,984	1,985,419	91,274	607,397	180,113	<b>3,046,997</b>
10	10K - Outside GM	3,116	1,085	561	714	200	0	6,073	86,812	0	29,965	0	<b>128,526</b>
11	Rest of GM	3,604	396	2,038	1,739	78	6,607	3,144	597,241	32,690	2,703,375	266,331	<b>3,617,243</b>
12	Rest of UK	2,671	1,042	1,393	1,416	192	0	5,500	183,427	0	259,315	0	<b>454,955</b>
	<b>Total</b>	<b>49,035</b>	<b>30,914</b>	<b>44,592</b>	<b>42,810</b>	<b>3,181</b>	<b>38,428</b>	<b>136,168</b>	<b>3,030,702</b>	<b>137,289</b>	<b>3,612,990</b>	<b>460,576</b>	<b>7,586,685</b>



Table 35 – GM 2040 Future Year, Scenario 1 Daily Car Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - factored from 'GM Model' output using Tempo**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>Car Daily Trip Distribution %</b>													
1&2	Core Combined	5.3%	1.3%	2.1%	4.8%	0.8%	2.5%	10.9%	20.9%	3.4%	1.4%	3.3%	<b>54.0%</b>
3	Cadishead	1.0%											
4	Urmston	2.4%											
5	Sale West	2.2%											
6	Dunham	0.7%											
7	Lymm	1.7%											
8	Altrincham West	6.9%											
9	10K - Inside GM	19.1%											
10	10K - Outside GM	3.1%											
11	Rest of GM	3.6%											
12	Rest of UK	2.6%											
	<b>Total</b>	<b>46.0%</b>											

Table 36 – GM 2040 Future Year, Scenario 1 Daily Car Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - factored from 'GM Model' output using Tempro**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	58.1%	73.3%	50.3%	72.8%	90.9%	91.3%	88.4%	84.7%	99.9%	91.1%	99.8%	<b>80.4%</b>
3	Cadishead	72.5%	50.6%	86.0%	86.5%	96.5%	95.4%	91.9%	91.0%	94.1%	93.1%	95.3%	<b>76.2%</b>
4	Urmston	65.6%	86.4%	46.7%	85.6%	96.5%	88.7%	90.9%	89.3%	91.8%	92.4%	90.0%	<b>80.1%</b>
5	Sale West	71.5%	87.2%	85.1%	48.6%	95.0%	91.7%	87.1%	86.9%	95.5%	90.1%	95.8%	<b>80.4%</b>
6	Dunham	89.5%	96.5%	96.0%	95.6%	49.8%	96.4%	92.2%	94.9%	100.0%	96.3%	99.9%	<b>92.4%</b>
7	Lymm	91.0%	95.6%	91.9%	92.4%	96.5%	0.0%	94.9%	93.6%	0.0%	94.5%	0.0%	<b>93.7%</b>
8	Altrincham West	82.0%	92.5%	83.3%	83.4%	84.6%	94.4%	47.1%	85.1%	94.4%	84.8%	92.9%	<b>71.2%</b>
9	10K - Inside GM	88.9%	92.7%	90.7%	89.9%	92.6%	94.2%	85.5%	61.3%	94.8%	85.5%	79.1%	<b>68.0%</b>
10	10K - Outside GM	100.0%	96.2%	95.2%	96.4%	100.0%	0.0%	93.2%	94.5%	0.0%	97.2%	0.0%	<b>95.3%</b>
11	Rest of GM	91.0%	90.0%	94.3%	92.0%	95.3%	95.6%	83.5%	84.1%	97.2%	89.5%	95.8%	<b>89.1%</b>
12	Rest of UK	99.8%	95.3%	93.9%	92.5%	99.5%	0.0%	91.8%	78.7%	0.0%	96.2%	0.0%	<b>88.3%</b>
	<b>Total</b>	<b>81.8%</b>	<b>77.0%</b>	<b>79.6%</b>	<b>80.4%</b>	<b>90.7%</b>	<b>94.3%</b>	<b>72.3%</b>	<b>67.7%</b>	<b>95.5%</b>	<b>89.3%</b>	<b>88.5%</b>	<b>78.8%</b>

Table 37 – GM 2040 Future Year, Scenario 1 Daily PT Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - factored from 'GM Model' output using  
Tempro**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	540	1	898	33	4	2	362	1,617	2	4	8	<b>3,471</b>
3	Cadishead	0	95	17	1	0	23	10	902	63	34	76	<b>1,220</b>
4	Urmston	248	15	455	37	0	30	94	2,490	39	56	130	<b>3,593</b>
5	Sale West	33	1	22	222	1	10	851	2,564	43	94	71	<b>3,914</b>
6	Dunham	13	0	1	0	2	0	30	14	0	0	0	<b>59</b>
7	Lymm	1	15	22	4	0	0	14	698	0	90	0	<b>843</b>
8	Altrincham West	741	8	151	925	78	17	2,704	8,499	437	482	478	<b>14,522</b>
9	10K - Inside GM	487	707	1,965	1,643	37	63	8,621	276,353	5,019	78,354	47,572	<b>421,387</b>
10	10K - Outside GM	1	43	29	26	0	0	440	5,005	0	853	0	<b>6,397</b>
11	Rest of GM	6	29	49	85	1	67	487	87,892	929	212,044	11,568	<b>313,156</b>
12	Rest of UK	5	52	91	115	1	0	491	49,530	0	10,249	0	<b>60,533</b>
	<b>Total</b>	<b>2,075</b>	<b>965</b>	<b>3,698</b>	<b>3,092</b>	<b>124</b>	<b>77</b>	<b>14,104</b>	<b>435,563</b>	<b>6,533</b>	<b>302,260</b>	<b>59,903</b>	<b>829,097</b>

Table 382 – GM 2040 Future Year, Scenario 1 Daily PT Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - factored from 'GM Model' output using Tempo**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>PT Daily Trip Distribution %</b>													
1&2	Core Combined	10.8%	0.0%	17.9%	0.7%	0.1%	0.0%	7.2%	32.3%	0.0%	0.1%	0.2%	<b>63.9%</b>
3	Cadishead	0.0%											
4	Urmston	4.9%											
5	Sale West	0.7%											
6	Dunham	0.3%											
7	Lymm	0.0%											
8	Altrincham West	14.8%											
9	10K - Inside GM	9.7%											
10	10K - Outside GM	0.0%											
11	Rest of GM	0.1%											
12	Rest of UK	0.1%											
	<b>Total</b>	<b>36.1%</b>											

Table 39 – GM 2040 Future Year, Scenario 1 Daily PT Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

## Scenario 1 2040 Policy-off sector demand - factored from 'GM Model' output using Tempo

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>PT Daily Mode Share %</b>													
1&2	Core Combined	5.9%	0.0%	21.1%	0.5%	0.5%	0.1%	2.9%	6.5%	0.1%	0.3%	0.2%	<b>4.9%</b>
3	Cadishead	0.0%	0.7%	1.7%	1.2%	0.0%	1.1%	4.5%	5.4%	5.9%	3.4%	4.7%	<b>3.1%</b>
4	Urmston	6.6%	1.4%	4.5%	2.2%	0.0%	7.8%	5.5%	7.2%	8.2%	4.1%	10.0%	<b>6.3%</b>
5	Sale West	1.1%	0.5%	2.6%	2.6%	1.5%	4.8%	9.3%	9.6%	4.5%	6.4%	4.2%	<b>7.4%</b>
6	Dunham	1.5%	0.0%	0.5%	0.8%	1.5%	0.1%	4.3%	1.6%	0.0%	0.1%	0.1%	<b>1.7%</b>
7	Lymm	0.0%	0.9%	4.5%	4.1%	0.0%	0.0%	1.6%	2.9%	0.0%	2.0%	0.0%	<b>2.5%</b>
8	Altrincham West	8.8%	3.9%	13.2%	13.0%	11.8%	2.1%	3.9%	11.3%	5.6%	11.6%	7.1%	<b>8.0%</b>
9	10K - Inside GM	2.3%	3.9%	5.8%	6.6%	3.9%	2.3%	11.0%	8.5%	5.2%	11.0%	20.9%	<b>9.4%</b>
10	10K - Outside GM	0.0%	3.8%	4.8%	3.6%	0.0%	0.0%	6.8%	5.5%	0.0%	2.8%	0.0%	<b>4.7%</b>
11	Rest of GM	0.2%	6.6%	2.2%	4.5%	1.2%	1.0%	12.9%	12.4%	2.8%	7.0%	4.2%	<b>7.7%</b>
12	Rest of UK	0.2%	4.7%	6.1%	7.5%	0.5%	0.0%	8.2%	21.3%	0.0%	3.8%	0.0%	<b>11.7%</b>
	<b>Total</b>	<b>3.5%</b>	<b>2.4%</b>	<b>6.6%</b>	<b>5.8%</b>	<b>3.5%</b>	<b>1.9%</b>	<b>7.5%</b>	<b>9.7%</b>	<b>4.5%</b>	<b>7.5%</b>	<b>11.5%</b>	<b>8.6%</b>

Table 40 – GM 2040 Future Year, Scenario 1 Daily Active Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
<b>Active Mode Daily</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1&2	Core Combined	3,296	465	1,218	1,796	75	240	1,084	2,195	0	135	0	<b>10,505</b>
3	Cadishead	392	6,909	123	9	2	73	7	592	0	35	0	<b>8,143</b>
4	Urmston	1,045	128	4,950	211	6	13	60	1,224	0	48	0	<b>7,686</b>
5	Sale West	855	30	105	4,141	3	7	325	953	0	52	0	<b>6,472</b>
6	Dunham	75	3	5	1	51	5	25	31	0	4	0	<b>199</b>
7	Lymm	167	60	17	3	4	0	30	849	0	161	0	<b>1,293</b>
8	Altrincham West	773	7	41	255	24	29	33,574	2,687	0	149	0	<b>37,538</b>
													<b>1,011,99</b>
9	10K - Inside GM	1,918	634	1,177	868	33	950	2,763	978,592	0	25,058	0	<b>1</b>
10	10K - Outside GM	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
11	Rest of GM	349	15	75	66	3	239	133	25,109	0	105,60 4	0	<b>131,593</b>
12	Rest of UK	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
	<b>Total</b>	<b>8,871</b>	<b>8,250</b>	<b>7,711</b>	<b>7,351</b>	<b>202</b>	<b>1,556</b>	<b>38,001</b>	<b>1,012,231</b>	<b>0</b>	<b>131,24 7</b>	<b>0</b>	<b>1,215,42 0</b>

Table 41 – GM 2040 Future Year, Scenario 1 Daily Active Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

		1&2	3	4	5	6	7	8	9	10	11	12	
	<b>Active Mode Daily Trip Distribution %</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>
1&2	Core Combined	20.5%	2.9%	7.6%	11.2%	0.5%	1.5%	6.7%	13.6%	0.0%	0.8%	0.0%	<b>55.1%</b>
3	Cadishead	2.4%											
4	Urmston	6.5%											
5	Sale West	5.3%											
6	Dunham	0.5%											
7	Lymm	1.0%											
8	Altrincham West	4.8%											
9	10K - Inside GM	11.9%											
10	10K - Outside GM	0.0%											
11	Rest of GM	2.2%											
12	Rest of UK	0.0%											
	<b>Total</b>	<b>44.9%</b>											

Table 42 – GM 2040 Future Year, Scenario 1 Daily Active Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	36.0%	26.7%	28.6%	26.7%	8.7%	8.6%	8.7%	8.8%	0.0%	8.6%	0.0%	<b>14.8%</b>
3	Cadishead	27.5%	48.7%	12.3%	12.3%	3.5%	3.5%	3.5%	3.5%	0.0%	3.5%	0.0%	<b>20.7%</b>
4	Urmston	27.8%	12.2%	48.8%	12.2%	3.5%	3.5%	3.5%	3.5%	0.0%	3.5%	0.0%	<b>13.5%</b>
5	Sale West	27.5%	12.3%	12.3%	48.7%	3.5%	3.5%	3.6%	3.6%	0.0%	3.5%	0.0%	<b>12.2%</b>
6	Dunham	9.0%	3.5%	3.5%	3.5%	48.8%	3.5%	3.5%	3.5%	0.0%	3.5%	0.0%	<b>5.8%</b>
7	Lymm	8.9%	3.5%	3.5%	3.5%	3.5%	0.0%	3.5%	3.5%	0.0%	3.5%	0.0%	<b>3.8%</b>
8	Altrincham West	9.2%	3.5%	3.6%	3.6%	3.6%	3.5%	48.9%	3.6%	0.0%	3.6%	0.0%	<b>20.8%</b>
9	10K - Inside GM	8.9%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	30.2%	0.0%	3.5%	0.0%	<b>22.6%</b>
10	10K - Outside GM	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
11	Rest of GM	8.8%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	0.0%	3.5%	0.0%	<b>3.2%</b>
12	Rest of UK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
	<b>Total</b>	<b>14.8%</b>	<b>20.6%</b>	<b>13.8%</b>	<b>13.8%</b>	<b>5.8%</b>	<b>3.8%</b>	<b>20.2%</b>	<b>22.6%</b>	<b>0.0%</b>	<b>3.2%</b>	<b>0.0%</b>	<b>12.6%</b>



Table 43 – GM 2040 Future Year, Scenario 1 Daily Combined Mode Total Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
<b>All Travel Modes</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1&2													
2	Core Combined	9,165	1,741	4,261	6,719	872	2,777	12,430	24,858	3,392	1,566	3,365	<b>71,145</b>
3	Cadishead	1,424	14,192	996	77	70	2,080	210	16,677	1,077	997	1,605	<b>39,404</b>
4	Urmston	3,761	1,046	10,147	1,724	171	382	1,701	34,723	470	1,371	1,296	<b>56,791</b>
5	Sale West	3,111	245	851	8,496	91	209	9,139	26,754	968	1,472	1,711	<b>53,046</b>
6	Dunham	829	73	132	42	105	143	692	872	202	122	205	<b>3,417</b>
7	Lymm	1,873	1,727	489	92	115	0	855	24,168	0	4,595	0	<b>33,914</b>
8	Altrincham West	8,438	195	1,148	7,095	662	816	68,610	75,064	7,802	4,163	6,712	<b>180,705</b>
9	10K - Inside GM	21,627	18,249	33,742	24,847	946	4	78,367	3,240,364	96,294	710,809	5	<b>4,480,375</b>
10	10K - Outside GM	3,117	1,127	590	741	200	0	6,514	91,817	0	30,818	0	<b>134,923</b>
11	Rest of GM	3,959	440	2,161	1,890	82	6,912	3,765	710,242	33,619	3,021,022	277,899	<b>4,061,992</b>
12	Rest of UK	2,677	1,094	1,484	1,531	193	0	5,991	232,957	0	269,563	0	<b>515,489</b>
	<b>Total</b>	<b>59,981</b>	<b>40,129</b>	<b>56,001</b>	<b>53,253</b>	<b>3,507</b>	<b>40,763</b>	<b>188,274</b>	<b>4,478,495</b>	<b>143,822</b>	<b>4,046,497</b>	<b>520,480</b>	<b>9,631,201</b>

Table 44 – GM 2040 Future Year, Scenario 1 Daily Combined Mode Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 1 2040 Policy-off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

		1&2	3	4	5	6	7	8	9	10	11	12	
	All Travel Modes	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total
1&2	Core Combined	7.5%	1.4%	3.5%	5.5%	0.7%	2.3%	10.2%	20.4%	2.8%	1.3%	2.8%	54.6%
3	Cadishead	1.2%											
4	Urmston	3.1%											
5	Sale West	2.6%											
6	Dunham	0.7%											
7	Lymm	1.5%											
8	Altrincham West	6.9%											
9	10K - Inside GM	17.7%											
10	10K - Outside GM	2.6%											
11	Rest of GM	3.2%											
12	Rest of UK	2.2%											
	<b>Total</b>	<b>45.4%</b>											

Table 453 – GM 2040 Future Year, Scenario 3 Daily Car Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sectorised demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
<b>Car Daily</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1&2													
2	Core Combined	13,978	463	1,135	1,787	422	1,343	6,022	12,063	2,404	758	2,386	<b>42,761</b>
3	Cadishead	376	5,251	369	28	42	1,231	124	9,872	883	590	1,316	<b>20,082</b>
4	Urmston	997	387	3,754	638	101	226	1,007	20,553	385	812	1,063	<b>29,923</b>
5	Sale West	823	91	315	3,143	54	123	5,410	15,836	793	871	1,403	<b>28,863</b>
6	Dunham	400	43	78	25	39	85	410	516	165	72	168	<b>2,002</b>
7	Lymm	904	1,022	290	55	68	0	506	14,306	0	2,720	0	<b>19,870</b>
8	Altrincham West	4,092	115	680	4,200	392	483	25,386	44,432	6,397	2,464	5,504	<b>94,145</b>
9	10K - Inside GM	10,463	10,802	19,973	14,708	560	16,245	46,387	777,687	78,961	420,743	186,702	<b>1,583,230</b>
10	10K - Outside GM	2,209	924	484	607	164	0	5,341	75,290	0	25,271	0	<b>110,290</b>
11	Rest of GM	1,913	261	1,279	1,119	48	4,091	2,229	420,407	27,568	1,788,208	227,877	<b>2,475,000</b>
12	Rest of UK	1,897	897	1,216	1,255	158	0	4,913	191,025	0	221,042	0	<b>422,403</b>
	<b>Total</b>	<b>38,054</b>	<b>20,256</b>	<b>29,573</b>	<b>27,565</b>	<b>2,048</b>	<b>23,828</b>	<b>97,734</b>	<b>1,581,987</b>	<b>117,557</b>	<b>2,463,549</b>	<b>426,419</b>	<b>4,828,570</b>

Table 46 – GM 2040 Future Year, Scenario 3 Daily Car Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>Car Daily Trip Distribution %</b>													
1&2	Core Combined	20.9%	0.7%	1.7%	2.7%	0.6%	2.0%	9.0%	18.0%	3.6%	1.1%	3.6%	<b>53.5%</b>
3	Cadishead	0.6%											
4	Urmston	1.5%											
5	Sale West	1.2%											
6	Dunham	0.6%											
7	Lymm	1.4%											
8	Altrincham West	6.1%											
9	10K - Inside GM	15.7%											
10	10K - Outside GM	3.3%											
11	Rest of GM	2.9%											
12	Rest of UK	2.8%											
	<b>Total</b>	<b>46.5%</b>											

Table 47 – GM 2040 Future Year, Scenario 3 Daily Car Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	45.8%	37.1%	37.1%	37.1%	58.6%	58.6%	58.6%	58.6%	81.1%	58.6%	81.1%	<b>53.0%</b>
3	Cadishead	37.1%	37.0%	37.0%	37.0%	59.2%	59.2%	59.2%	59.2%	82.0%	59.2%	82.0%	<b>51.5%</b>
4	Urmston	37.1%	37.0%	37.0%	37.0%	59.2%	59.2%	59.2%	59.2%	82.0%	59.2%	82.0%	<b>53.7%</b>
5	Sale West	37.1%	37.0%	37.0%	37.0%	59.2%	59.2%	59.2%	59.2%	82.0%	59.2%	82.0%	<b>55.3%</b>
6	Dunham	58.6%	59.2%	59.2%	59.2%	37.0%	59.2%	59.2%	59.2%	82.0%	59.2%	82.0%	<b>61.2%</b>
7	Lymm	58.6%	59.2%	59.2%	59.2%	59.2%	0.0%	59.2%	59.2%	0.0%	59.2%	0.0%	<b>59.2%</b>
8	Altrincham West	58.6%	59.2%	59.2%	59.2%	59.2%	59.2%	37.0%	59.2%	82.0%	59.2%	82.0%	<b>52.5%</b>
9	10K - Inside GM	58.6%	59.2%	59.2%	59.2%	59.2%	59.2%	59.2%	24.0%	82.0%	59.2%	82.0%	<b>35.4%</b>
10	10K - Outside GM	81.1%	82.0%	82.0%	82.0%	82.0%	0.0%	82.0%	82.0%	0.0%	82.0%	0.0%	<b>82.0%</b>
11	Rest of GM	58.6%	59.2%	59.2%	59.2%	59.2%	59.2%	59.2%	59.2%	82.0%	59.2%	82.0%	<b>60.9%</b>
12	Rest of UK	81.1%	82.0%	82.0%	82.0%	82.0%	0.0%	82.0%	82.0%	0.0%	82.0%	0.0%	<b>82.0%</b>
	<b>Total</b>	<b>53.0%</b>	<b>51.1%</b>	<b>54.0%</b>	<b>53.7%</b>	<b>61.0%</b>	<b>59.2%</b>	<b>52.5%</b>	<b>35.4%</b>	<b>82.0%</b>	<b>60.9%</b>	<b>82.0%</b>	<b>50.1%</b>

Table 48 – GM 2040 Future Year, Scenario 3 Daily PT Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sectorised demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12			
<b>PT Daily</b>	<b>Core Combined</b>	<b>Cadishead</b>	<b>Urmston</b>	<b>Sale West</b>	<b>Dunham</b>	<b>Lymm</b>	<b>Altrincham West</b>	<b>10K - Inside GM</b>	<b>10K - Outside GM</b>	<b>Rest of GM</b>	<b>Rest of UK</b>	<b>Total</b>		
1&2														
2	Core Combined	2,334	27	65	103	13	9	442	1,983	3,973	561	250	557	<b>10,434</b>
3	Cadishead	22	284	20	2	13	381	38	3,056	194	183	289	<b>4,481</b>	
4	Urmston	57	21	203	34	31	70	312	6,363	85	251	233	<b>7,661</b>	
5	Sale West	47	5	17	170	17	38	1,675	4,903	174	270	308	<b>7,623</b>	
6	Dunham	132	13	24	8	2	26	127	160	36	22	37	<b>588</b>	
7	Lymm	298	316	90	17	21	0	157	4,429	0	842	0	<b>6,169</b>	
8	Altrincham West	1,348	36	210	1,300	12	1	150	1,372	13,756	1,404	763	1,208	<b>21,668</b>
9	10K - Inside GM	3,446	3,344	6,183	4,553	17	3	5,029	14,361	1,004,513	17,33	130,25	40,98	<b>1,230,17</b>
10	10K - Outside GM	516	203	106	133	36	0	1,172	16,527	0	3	8	3	<b>7</b>
11	Rest of GM	630	81	396	346	15	1,267	690	130,154	6,051	553,61	0	50,02	<b>743,262</b>
12	Rest of UK	443	197	267	276	35	0	1,078	41,932	0	48,521	0	2	<b>92,749</b>
	<b>Total</b>	<b>9,272</b>	<b>4,526</b>	<b>7,582</b>	<b>6,942</b>	<b>60</b>	<b>3</b>	<b>7,403</b>	<b>22,966</b>	<b>1,229,765</b>	<b>25,83</b>	<b>740,51</b>	<b>93,63</b>	<b>2,149,05</b>
										<b>9</b>	<b>7</b>	<b>8</b>	<b>3</b>	

Table 49 – GM 2040 Future Year, Scenario 3 Daily PT Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>PT Daily Trip Distribution %</b>													
1&2	Core Combined	13.4%	0.2%	0.4%	0.6%	0.8%	2.5%	11.4%	22.9%	3.2%	1.4%	3.2%	<b>53.3%</b>
3	Cadishead	0.1%											
4	Urmston	0.3%											
5	Sale West	0.3%											
6	Dunham	0.8%											
7	Lymm	1.7%											
8	Altrincham West	7.8%											
9	10K - Inside GM	19.8%											
10	10K - Outside GM	3.0%											
11	Rest of GM	3.6%											
12	Rest of UK	2.6%											
	<b>Total</b>	<b>46.7%</b>											

Table 50 – GM 2040 Future Year, Scenario 3 Daily PT Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sectorised demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	7.7%	2.1%	2.1%	2.1%	19.3%	19.3%	19.3%	19.3%	18.9%	19.3%	18.9%	<b>12.9%</b>
3	Cadishead	2.1%	2.0%	2.0%	2.0%	18.3%	18.3%	18.3%	18.3%	18.0%	18.3%	18.0%	<b>11.5%</b>
4	Urmston	2.1%	2.0%	2.0%	2.0%	18.3%	18.3%	18.3%	18.3%	18.0%	18.3%	18.0%	<b>13.8%</b>
5	Sale West	2.1%	2.0%	2.0%	2.0%	18.3%	18.3%	18.3%	18.3%	18.0%	18.3%	18.0%	<b>14.6%</b>
6	Dunham	19.3%	18.3%	18.3%	18.3%	2.0%	18.3%	18.3%	18.3%	18.0%	18.3%	18.0%	<b>18.0%</b>
7	Lymm	19.3%	18.3%	18.3%	18.3%	18.3%	0.0%	18.3%	18.3%	0.0%	18.3%	0.0%	<b>18.4%</b>
8	Altrincham West	19.3%	18.3%	18.3%	18.3%	18.3%	18.3%	2.0%	18.3%	18.0%	18.3%	18.0%	<b>12.1%</b>
9	10K - Inside GM	19.3%	18.3%	18.3%	18.3%	18.3%	18.3%	18.3%	31.0%	18.0%	18.3%	18.0%	<b>27.5%</b>
10	10K - Outside GM	18.9%	18.0%	18.0%	18.0%	18.0%	0.0%	18.0%	18.0%	0.0%	18.0%	0.0%	<b>18.0%</b>
11	Rest of GM	19.3%	18.3%	18.3%	18.3%	18.3%	18.3%	18.3%	18.3%	18.0%	18.3%	18.0%	<b>18.3%</b>
12	Rest of UK	18.9%	18.0%	18.0%	18.0%	18.0%	0.0%	18.0%	18.0%	0.0%	18.0%	0.0%	<b>18.0%</b>
	<b>Total</b>	<b>12.9%</b>	<b>11.4%</b>	<b>13.8%</b>	<b>13.5%</b>	<b>18.0%</b>	<b>18.4%</b>	<b>12.3%</b>	<b>27.5%</b>	<b>18.0%</b>	<b>18.3%</b>	<b>18.0%</b>	<b>22.3%</b>



Table 51 – GM 2040 Future Year, Scenario 3 Daily Active Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sectorised demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
<b>Active Mode Daily</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1&2													
2	Core Combined	14,178	757	1,856	2,921	15 9	506	2,267	4,542	0	285	0	<b>27,470</b>
3	Cadishead	615	8,657	608	47	16	468	47	3,749	0	224	0	<b>14,431</b>
4	Urmston	1,629	638	6,190	1,051	38	86	382	7,807	0	308	0	<b>18,130</b>
5	Sale West	1,345	150	519	5,182	20	47	2,055	6,015	0	331	0	<b>15,664</b>
6	Dunham	151	16	30	9	64	32	156	196	0	27	0	<b>682</b>
7	Lymm	341	388	110	21	26	0	192	5,434	0	1,033	0	<b>7,544</b>
8	Altrincham West	1,541	44	258	1,595	14 9	184	41,852	16,876	0	936	0	<b>63,435</b>
9	10K - Inside GM	3,939	4,103	7,586	5,586	21 3	6,170	17,619	1,458,164	0	159,808	0	<b>1,663,188</b>
10	10K - Outside GM	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
11	Rest of GM	720	99	486	425	18	1,554	846	159,681	0	679,204	0	<b>843,034</b>
12	Rest of UK	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
	<b>Total</b>	<b>24,459</b>	<b>14,852</b>	<b>17,642</b>	<b>16,838</b>	<b>70 4</b>	<b>9,046</b>	<b>65,417</b>	<b>1,662,464</b>	<b>0</b>	<b>842,157</b>	<b>0</b>	<b>2,653,578</b>

Table 52 – GM 2040 Future Year, Scenario 3 Daily Active Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>Active Mode Daily Trip Distribution %</b>													
1&2	Core Combined	37.6%	2.0%	4.9%	7.7%	0.4%	1.3%	6.0%	12.0%	0.0%	0.8%	0.0%	<b>54.0%</b>
3	Cadishead	1.6%											
4	Urmston	4.3%											
5	Sale West	3.6%											
6	Dunham	0.4%											
7	Lymm	0.9%											
8	Altrincham West	4.1%											
9	10K - Inside GM	10.4%											
10	10K - Outside GM	0.0%											
11	Rest of GM	1.9%											
12	Rest of UK	0.0%											
	<b>Total</b>	<b>46.0%</b>											

Table 53 – GM 2040 Future Year, Scenario 3 Daily Active Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>Active Mode Daily Mode Share %</b>													
1&2	Core Combined	46.5%	60.7%	60.7%	60.7%	22.1%	22.1%	22.1%	22.1%	0.0%	22.1%	0.0%	<b>34.1%</b>
3	Cadishead	60.7%	61.0%	61.0%	61.0%	22.5%	22.5%	22.5%	22.5%	0.0%	22.5%	0.0%	<b>37.0%</b>
4	Urmston	60.7%	61.0%	61.0%	61.0%	22.5%	22.5%	22.5%	22.5%	0.0%	22.5%	0.0%	<b>32.5%</b>
5	Sale West	60.7%	61.0%	61.0%	61.0%	22.5%	22.5%	22.5%	22.5%	0.0%	22.5%	0.0%	<b>30.0%</b>
6	Dunham	22.1%	22.5%	22.5%	22.5%	61.0%	22.5%	22.5%	22.5%	0.0%	22.5%	0.0%	<b>20.8%</b>
7	Lymm	22.1%	22.5%	22.5%	22.5%	22.5%	0.0%	22.5%	22.5%	0.0%	22.5%	0.0%	<b>22.5%</b>
8	Altrincham West	22.1%	22.5%	22.5%	22.5%	22.5%	22.5%	61.0%	22.5%	0.0%	22.5%	0.0%	<b>35.4%</b>
9	10K - Inside GM	22.1%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	45.0%	0.0%	22.5%	0.0%	<b>37.2%</b>
10	10K - Outside GM	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
11	Rest of GM	22.1%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	0.0%	22.5%	0.0%	<b>20.8%</b>
12	Rest of UK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
	<b>Total</b>	<b>34.1%</b>	<b>37.5%</b>	<b>32.2%</b>	<b>32.8%</b>	<b>21.0%</b>	<b>22.5%</b>	<b>35.1%</b>	<b>37.2%</b>	<b>0.0%</b>	<b>20.8%</b>	<b>0.0%</b>	<b>27.6%</b>

Table 54 – GM 2040 Future Year, Scenario 3 Daily Combined Mode Total Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sectorised demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12	
<b>All Travel Modes</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>
1&2	30,490	1,246	3,056	4,811	720	2,291	10,272	20,578	2,965	1,292	2,943	<b>80,665</b>
3	1,013	14,192	996	77	70	2,080	210	16,677	1,077	997	1,605	<b>38,993</b>
4	2,684	1,046	10,147	1,724	171	382	1,701	34,723	470	1,371	1,296	<b>55,714</b>
5	2,216	245	851	8,496	91	209	9,139	26,754	968	1,472	1,711	<b>52,151</b>
6	683	73	132	42	105	143	692	872	202	122	205	<b>3,271</b>
7	1,543	1,727	489	92	115	0	855	24,168	0	4,595	0	<b>33,584</b>
8	6,980	195	1,148	7,095	662	816	68,610	75,064	7,802	4,163	6,712	<b>179,248</b>
9	17,848	18,249	33,742	24,847	946	27,444	78,367	3,240,364	96,294	710,809	227,685	<b>4,476,595</b>
10	2,725	1,127	590	741	200	0	6,514	91,817	0	30,818	0	<b>134,531</b>
11	3,264	440	2,161	1,890	82	6,912	3,765	710,242	33,619	3,021,022	277,899	<b>4,061,296</b>
12	2,340	1,094	1,484	1,531	193	0	5,991	232,957	0	269,563	0	<b>515,153</b>
<b>Total</b>	<b>71,785</b>	<b>39,634</b>	<b>54,797</b>	<b>51,345</b>	<b>3,354</b>	<b>40,278</b>	<b>186,116</b>	<b>4,474,216</b>	<b>143,396</b>	<b>4,046,223</b>	<b>520,057</b>	<b>9,631,201</b>

Table 55 – GM 2040 Future Year, Scenario 3 Daily Combined Mode Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 3 2040 Policy-on sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

		1&2	3	4	5	6	7	8	9	10	11	12	
	<b>All Travel Modes</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>
1&2	Core Combined	25.0%	1.0%	2.5%	3.9%	0.6%	1.9%	8.4%	16.9%	2.4%	1.1%	2.4%	<b>53.6%</b>
3	Cadishead	0.8%											
4	Urmston	2.2%											
5	Sale West	1.8%											
6	Dunham	0.6%											
7	Lymm	1.3%											
8	Altrincham West	5.7%											
9	10K - Inside GM	14.6%											
10	10K - Outside GM	2.2%											
11	Rest of GM	2.7%											
12	Rest of UK	1.9%											
	<b>Total</b>	<b>46.4%</b>											

Table 56 – GM 2040 Future Year, Scenario 2 Daily Car Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12	
<b>Car Daily</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>
1&2	15,32											
2	7	885	2,171	3,417	606	1,927	8,639	17,306	2,632	1,087	2,612	<b>56,607</b>
3	720	5,932	667	52	57	1,672	169	13,408	915	801	1,364	<b>25,757</b>
4	1,906	700	4,241	1,154	138	307	1,367	27,917	399	1,102	1,102	<b>40,335</b>
5	1,574	164	570	3,551	73	168	7,348	21,510	822	1,183	1,454	<b>38,418</b>
6	574	59	106	34	44	115	556	701	171	98	175	<b>2,633</b>
7	1,297	1,388	393	74	93	0	687	19,431	0	3,694	0	<b>27,058</b>
8	5,870	157	923	5,704	532	656	28,679	60,352	6,632	3,347	5,705	<b>118,558</b>
9	15,00	14,67	27,12	19,97		22,06					193,53	<b>2,117,69</b>
9	9	2	9	7	761	5	63,007	1,108,204	81,850	571,490	3	<b>8</b>
10	2,419	958	501	630	170	0	5,537	78,045	0	26,195	0	<b>114,454</b>
11										2,428,90	236,21	<b>3,279,73</b>
11	2,745	354	1,737	1,520	66	5,557	3,027	571,035	28,576	2	4	<b>3</b>
12	2,077	930	1,261	1,301	164	0	5,093	198,013	0	229,129	0	<b>437,968</b>
	<b>49,51</b>	<b>26,20</b>	<b>39,70</b>	<b>37,41</b>	<b>2,70</b>	<b>32,46</b>	<b>124,10</b>			<b>3,267,02</b>	<b>442,15</b>	<b>6,259,21</b>
	<b>8</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>2,115,922</b>	<b>121,998</b>	<b>9</b>	<b>9</b>	<b>8</b>

Table 57 – GM 2040 Future Year, Scenario 2 Daily Car Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>Car Daily Trip Distribution %</b>													
1&2	Core Combined	16.9%	1.0%	2.4%	3.8%	0.7%	2.1%	9.5%	19.1%	2.9%	1.2%	2.9%	<b>53.9%</b>
3	Cadishead	0.8%											
4	Urmston	2.1%											
5	Sale West	1.7%											
6	Dunham	0.6%											
7	Lymm	1.4%											
8	Altrincham West	6.5%											
9	10K - Inside GM	16.5%											
10	10K - Outside GM	2.7%											
11	Rest of GM	3.0%											
12	Rest of UK	2.3%											
	<b>Total</b>	<b>46.1%</b>											

Table 58 – GM 2040 Future Year, Scenario 2 Daily Car Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	73.9%	53.7%	53.7%	53.7%	78.4%	78.4%	78.4%	78.4%	87.8%	78.4%	87.8%	<b>74.0</b> %
3	Cadishead	53.7%	41.8%	67.0%	67.0%	80.4%	80.4%	80.4%	80.4%	85.0%	80.4%	85.0%	<b>65.5</b> %
4	Urmston	53.7%	67.0%	41.8%	67.0%	80.4%	80.4%	80.4%	80.4%	85.0%	80.4%	85.0%	<b>71.3</b> %
5	Sale West	53.7%	67.0%	67.0%	41.8%	80.4%	80.4%	80.4%	80.4%	85.0%	80.4%	85.0%	<b>72.7</b> %
6	Dunham	78.4%	80.4%	80.4%	80.4%	41.8%	80.4%	80.4%	80.4%	85.0%	80.4%	85.0%	<b>79.3</b> %
7	Lymm	78.4%	80.4%	80.4%	80.4%	80.4%	0.0%	80.4%	80.4%	0.0%	80.4%	0.0%	<b>80.3</b> %
8	Altrincham West	78.4%	80.4%	80.4%	80.4%	80.4%	80.4%	41.8%	80.4%	85.0%	80.4%	85.0%	<b>66.0</b> %
9	10K - Inside GM	78.4%	80.4%	80.4%	80.4%	80.4%	80.4%	80.4%	34.2%	85.0%	80.4%	85.0%	<b>47.3</b> %
10	10K - Outside GM	87.8%	85.0%	85.0%	85.0%	85.0%	0.0%	85.0%	85.0%	0.0%	85.0%	0.0%	<b>85.1</b> %
11	Rest of GM	78.4%	80.4%	80.4%	80.4%	80.4%	80.4%	80.4%	80.4%	85.0%	80.4%	85.0%	<b>80.8</b> %
12	Rest of UK	87.8%	85.0%	85.0%	85.0%	85.0%	0.0%	85.0%	85.0%	0.0%	85.0%	0.0%	<b>85.0</b> %
	<b>Total</b>	<b>74.8%</b>	<b>65.4%</b>	<b>71.2%</b>	<b>70.7%</b>	<b>79.3%</b>	<b>80.3%</b>	<b>66.4%</b>	<b>47.3%</b>	<b>85.1%</b>	<b>80.7</b> %	<b>85.0</b> %	<b>65.0</b> %



Table 59 – GM 2040 Future Year, Scenario 2 Daily PT Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2													
2	Core Combined	2,261	108	265	417	88	279	1,250	2,505	365	157	362	<b>8,057</b>
3	Cadishead	88	369	104	8	10	308	31	2,468	162	147	241	<b>3,936</b>
4	Urmston	233	109	264	179	25	56	252	5,139	70	203	194	<b>6,725</b>
5	Sale West	192	26	89	221	13	31	1,353	3,960	145	218	257	<b>6,503</b>
6	Dunham	83	11	20	6	3	21	102	129	30	18	31	<b>454</b>
7	Lymm	188	256	72	14	17	0	127	3,577	0	680	0	<b>4,930</b>
8	Altrincham West	850	29	170	1,050	98	121	1,784	11,110	1,170	616	1,007	<b>18,004</b>
9	10K - Inside GM	2,172	2,701	4,994	3,677	0	4,062	11,598	907,302	14,444	105,200	34,153	<b>1,090,443</b>
10	10K - Outside GM	336	169	88	111	30	0	977	13,773	0	4,623	0	<b>20,107</b>
11	Rest of GM	397	65	320	280	12	1,023	557	105,116	5,043	447,111	41,685	<b>601,609</b>
12	Rest of UK	288	164	223	230	29	0	899	34,944	0	40,434	0	<b>77,210</b>
	<b>Total</b>	<b>7,087</b>	<b>4,006</b>	<b>6,608</b>	<b>6,193</b>	<b>466</b>	<b>5,901</b>	<b>18,930</b>	<b>1,090,021</b>	<b>21,430</b>	<b>599,408</b>	<b>77,930</b>	<b>1,837,977</b>

Table 60 – GM 2040 Future Year, Scenario 2 Daily PT Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
<b>PT Daily Trip Distribution %</b>													
1&2	Core Combined	17.5%	0.8%	2.1%	3.2%	0.7%	2.2%	9.7%	19.4%	2.8%	1.2%	2.8%	<b>53.8%</b>
3	Cadishead	0.7%											
4	Urmston	1.8%											
5	Sale West	1.5%											
6	Dunham	0.6%											
7	Lymm	1.5%											
8	Altrincham West	6.6%											
9	10K - Inside GM	16.9%											
10	10K - Outside GM	2.6%											
11	Rest of GM	3.1%											
12	Rest of UK	2.2%											
	<b>Total</b>	<b>46.2%</b>											

Table 61 – GM 2040 Future Year, Scenario 2 Daily PT Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	10.9%	6.6%	6.6%	6.6%	11.3%	11.3%	11.3%	11.3%	12.2%	11.3%	12.2%	<b>10.5 %</b>
3	Cadishead	6.6%	2.6%	10.4%	10.4%	14.8%	14.8%	14.8%	14.8%	15.0%	14.8%	15.0%	<b>10.0 %</b>
4	Urmston	6.6%	10.4%	2.6%	10.4%	14.8%	14.8%	14.8%	14.8%	15.0%	14.8%	15.0%	<b>11.9 %</b>
5	Sale West	6.6%	10.4%	10.4%	2.6%	14.8%	14.8%	14.8%	14.8%	15.0%	14.8%	15.0%	<b>12.3 %</b>
6	Dunham	11.3%	14.8%	14.8%	14.8%	2.6%	14.8%	14.8%	14.8%	15.0%	14.8%	15.0%	<b>13.7 %</b>
7	Lymm	11.3%	14.8%	14.8%	14.8%	14.8%	0.0%	14.8%	14.8%	0.0%	14.8%	0.0%	<b>14.6 %</b>
8	Altrincham West	11.3%	14.8%	14.8%	14.8%	14.8%	2.6%	14.8%	15.0%	14.8%	15.0%	15.0%	<b>10.0 %</b>
9	10K - Inside GM	11.3%	14.8%	14.8%	14.8%	14.8%	14.8%	28.0%	15.0%	14.8%	15.0%	15.0%	<b>24.4 %</b>
10	10K - Outside GM	12.2%	15.0%	15.0%	15.0%	15.0%	0.0%	15.0%	15.0%	0.0%	15.0%	0.0%	<b>14.9 %</b>
11	Rest of GM	11.3%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	15.0%	14.8%	15.0%	<b>14.8 %</b>
12	Rest of UK	12.2%	15.0%	15.0%	15.0%	15.0%	0.0%	15.0%	15.0%	0.0%	15.0%	0.0%	<b>15.0 %</b>
	<b>Total</b>	<b>10.7%</b>	<b>10.0%</b>	<b>11.8%</b>	<b>11.7%</b>	<b>13.7%</b>	<b>14.6%</b>	<b>10.1%</b>	<b>24.4%</b>	<b>14.9%</b>	<b>14.8 %</b>	<b>15.0 %</b>	<b>19.1 %</b>

Table 62 – GM 2040 Future Year, Scenario 2 Daily Active Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
<b>Active Mode Daily</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1&2	Core Combined	3,146	657	1,610	2,534	79	253	1,133	2,269	0	143	0	<b>11,824</b>
3	Cadishead	534	7,891	225	17	3	100	10	801	0	48	0	<b>9,629</b>
4	Urmston	1,414	237	5,642	390	8	18	82	1,667	0	66	0	<b>9,523</b>
5	Sale West	1,167	55	193	4,724	4	10	439	1,284	0	71	0	<b>7,947</b>
6	Dunham	75	4	6	2	58	7	33	42	0	6	0	<b>233</b>
7	Lymm	170	83	23	4	6	0	41	1,160	0	221	0	<b>1,708</b>
8	Altrincham West	770	9	55	341	32	39	38,147	3,603	0	200	0	<b>43,196</b>
													<b>1,269,75</b>
9	10K - Inside GM	1,968	876	1,620	1,193	45	1,317	3,762	1,224,857	0	34,119	0	<b>7</b>
10	10K - Outside GM	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
													<b>145,00</b>
11	Rest of GM	360	21	104	91	4	332	181	34,092	0	9	0	<b>180,193</b>
12	Rest of UK	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
													<b>179,88</b>
	<b>Total</b>	<b>9,604</b>	<b>9,832</b>	<b>9,478</b>	<b>9,296</b>	<b>240</b>	<b>2,076</b>	<b>43,827</b>	<b>1,269,774</b>	<b>0</b>	<b>179,88</b>	<b>1</b>	<b>1,534,00</b>
													<b>8</b>

Table 63– GM 2040 Future Year, Scenario 2 Daily Active Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sectorised demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

		1&2	3	4	5	6	7	8	9	10	11	12	
	<b>Active Mode Daily Trip Distribution %</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>
1&2	Core Combined	17.2%	3.6%	8.8%	13.9%	0.4%	1.4%	6.2%	12.4%	0.0%	0.8%	0.0%	<b>56.1%</b>
3	Cadishead	2.9%											
4	Urmston	7.7%											
5	Sale West	6.4%											
6	Dunham	0.4%											
7	Lymm	0.9%											
8	Altrincham West	4.2%											
9	10K - Inside GM	10.8%											
10	10K - Outside GM	0.0%											
11	Rest of GM	2.0%											
12	Rest of UK	0.0%											
	<b>Total</b>	<b>43.9%</b>											

Table 64 – GM 2040 Future Year, Scenario 2 Daily Active Mode Share, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	Total	
1&2	Core Combined	15.2%	39.8%	39.8%	39.8%	10.3%	10.3%	10.3%	10.3%	0.0%	10.3%	0.0%	<b>15.5%</b>
3	Cadishead	39.8%	55.6%	22.6%	22.6%	4.8%	4.8%	4.8%	4.8%	0.0%	4.8%	0.0%	<b>24.5%</b>
4	Urmston	39.8%	22.6%	55.6%	22.6%	4.8%	4.8%	4.8%	4.8%	0.0%	4.8%	0.0%	<b>16.8%</b>
5	Sale West	39.8%	22.6%	22.6%	55.6%	4.8%	4.8%	4.8%	4.8%	0.0%	4.8%	0.0%	<b>15.0%</b>
6	Dunham	10.3%	4.8%	4.8%	4.8%	55.6%	4.8%	4.8%	4.8%	0.0%	4.8%	0.0%	<b>7.0%</b>
7	Lymm	10.3%	4.8%	4.8%	4.8%	4.8%	0.0%	4.8%	4.8%	0.0%	4.8%	0.0%	<b>5.1%</b>
8	Altrincham West	10.3%	4.8%	4.8%	4.8%	4.8%	4.8%	55.6%	4.8%	0.0%	4.8%	0.0%	<b>24.0%</b>
9	10K - Inside GM	10.3%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	37.8%	0.0%	4.8%	0.0%	<b>28.4%</b>
10	10K - Outside GM	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
11	Rest of GM	10.3%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	0.0%	4.8%	0.0%	<b>4.4%</b>
12	Rest of UK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
	<b>Total</b>	<b>14.5%</b>	<b>24.6%</b>	<b>17.0%</b>	<b>17.6%</b>	<b>7.1%</b>	<b>5.1%</b>	<b>23.5%</b>	<b>28.4%</b>	<b>0.0%</b>	<b>4.4%</b>	<b>0.0%</b>	<b>15.9%</b>

Table 65 – GM 2040 Future Year, Scenario 2 Daily Combined Mode Total Trips, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

	1&2	3	4	5	6	7	8	9	10	11	12		
<b>All Travel Modes</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>	
1&2	20,734	1,650	4,046	6,368	773	2,459	11,021	22,079	2,997	1,387	2,974	<b>76,487</b>	
3	1,341	14,192	996	77	70	2,080	210	16,677	1,077	997	1,605	<b>39,321</b>	
4	3,552	1,046	10,147	1,724	171	382	1,701	34,723	470	1,371	1,296	<b>56,582</b>	
5	2,933	245	851	8,496	91	209	9,139	26,754	968	1,472	1,711	<b>52,868</b>	
6	733	73	132	42	105	143	692	872	202	122	205	<b>3,321</b>	
7	1,655	1,727	489	92	115	0	855	24,168	0	4,595	0	<b>33,696</b>	
8	7,490	195	1,148	7,095	662	816	68,610	75,064	7,802	4,163	6,712	<b>179,757</b>	
9	19,150	18,249	33,742	24,847	946	4	27,444	78,367	3,240,364	96,294	710,809	227,685	<b>4,477,897</b>
10	2,754	1,127	590	741	200	0	6,514	91,817	0	30,818	0	<b>134,560</b>	
11	3,502	440	2,161	1,890	82	6,912	3,765	710,242	33,619	3,021,022	277,899	<b>4,061,534</b>	
12	2,365	1,094	1,484	1,531	193	0	5,991	232,957	0	269,563	0	<b>515,178</b>	
<b>Total</b>	<b>66,209</b>	<b>40,038</b>	<b>55,787</b>	<b>52,902</b>	<b>3,407</b>	<b>40,445</b>	<b>186,865</b>	<b>4,475,717</b>	<b>143,427</b>	<b>4,046,318</b>	<b>520,088</b>	<b>9,631,203</b>	

Table 66 – GM 2040 Future Year, Scenario 2 Daily Combined Mode Trip Distribution, Background 2017 Plus Policy Off Forecast (Without GM Right Mix) Plus New Carrington.

**Scenario 2 2040 Part policy on off sector demand - Calculated from 2040 Policy-Off using Right-Mix Targets and Assumptions**

		1&2	3	4	5	6	7	8	9	10	11	12	
	<b>All Travel Modes</b>	Core Combined	Cadishead	Urmston	Sale West	Dunham	Lymm	Altrincham West	10K - Inside GM	10K - Outside GM	Rest of GM	Rest of UK	<b>Total</b>
1&2	Core Combined	17.0%	1.4%	3.3%	5.2%	0.6%	2.0%	9.0%	18.1%	2.5%	1.1%	2.4%	<b>54.2%</b>
3	Cadishead	1.1%											
4	Urmston	2.9%											
5	Sale West	2.4%											
6	Dunham	0.6%											
7	Lymm	1.4%											
8	Altrincham West	6.1%											
9	10K - Inside GM	15.7%											
10	10K - Outside GM	2.3%											
11	Rest of GM	2.9%											
12	Rest of UK	1.9%											
	<b>Total</b>	<b>45.8%</b>											



**Appendix E5 – Bus Services**

The following spreadsheets relate to Section 7 (A Balanced, Affordable Transport Package) in relation to bus services.

*Table 67 – Scenario 1, 3 and 2 new Buses Supported by passenger Trip Demand from and to New Carrington.*

	<b>Scenario 1</b>	<b>Scenario 2</b>	<b>Scenario 3</b>			
<b>Bus Total Daily Trips</b>	2,529	5,579	9,349			
Daily revenue	£ 2,529	£ 5,579	£ 9,349			
Annual revenue	£ 758,678	£ 1,673,779	£ 2,804,630			
Buses supported	3.4	7.4	12.5	Annual Operating Cost of new Buses @ £0.225m pa per bus		
Cost recovery	50%	50%	50%	<b>Scenario 1</b>	<b>Scenario 2</b>	<b>Scenario 3</b>
Buses supported (cost recovery model)	8.0	16.0	26.0	£ 1,800,000	£ 3,600,000	£ 5,850,000