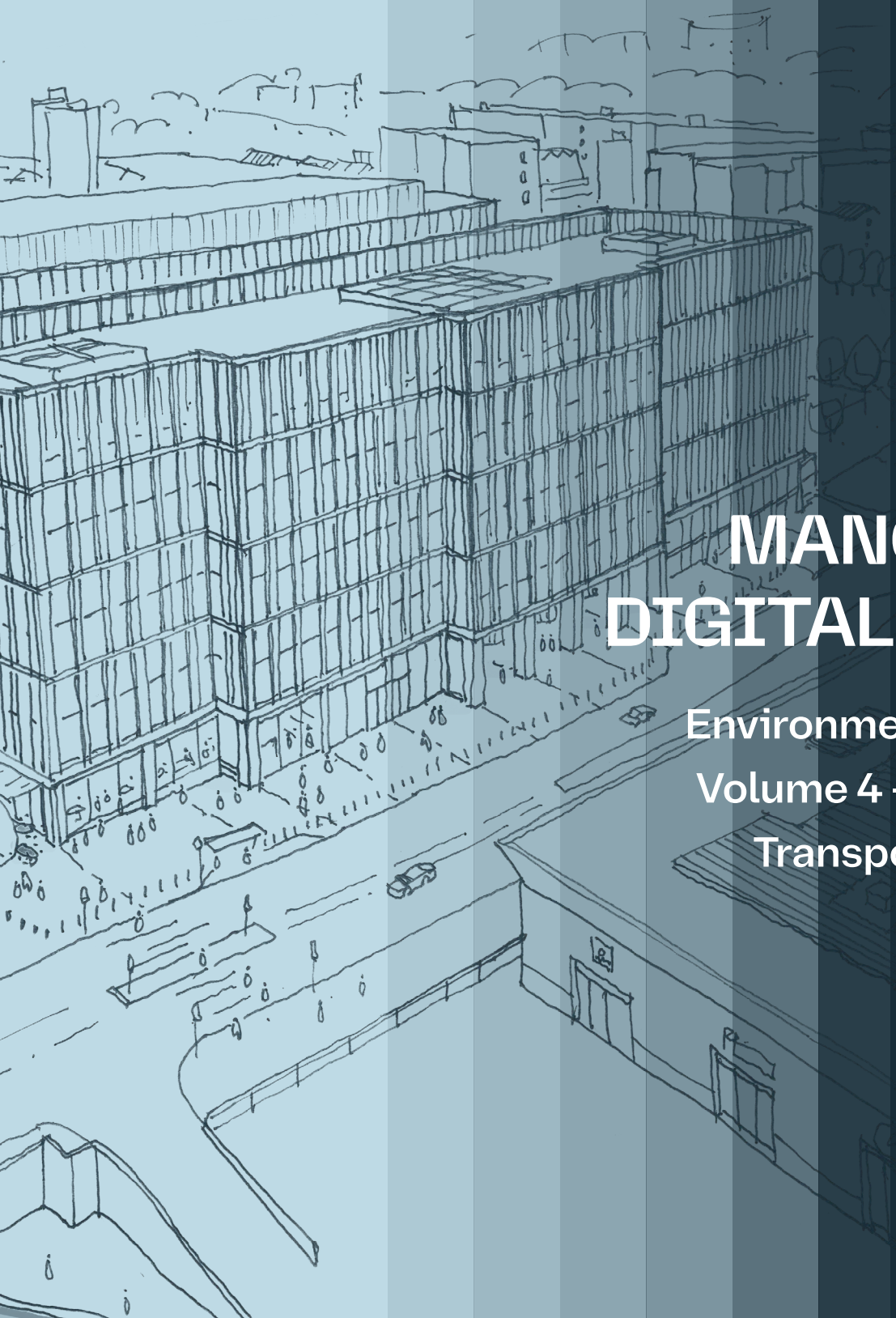
Government Property Agency

AtkinsRéalis



MANCHESTER DIGITAL CAMPUS

Environmental Statement
Volume 4 - Appendix 18.1: Transport Assessment

NOVEMBER 2024

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1. Introduction

1.1 Overview

AtkinsRéalis was appointed to conduct a Transport Assessment on behalf of the Government Property Agency (GPA) as part of an application for full planning permission for the development of a new civil service campus and associated public realm on part of the Former Central Retail Park in Ancoats (herein referred to as the 'Proposed Development'). The site is also referred to as 'Phase 1' and 'Manchester Digital Campus' (MDC).

The Site is located to the north of Manchester city centre in the Ancoats district. It is proposed to construct two office buildings totalling around 83,000 sqm of floorspace to house circa 7,000 civil servants with up to 4,373 full time equivalents (FTEs) attending each day. It is also proposed to provide 50 accessible parking bays, (plus 5 spaces associated with facilities management and operations) with 15 electric vehicle (EV) charging points and with 320 cycle parking bays. The Proposed Development has been assessed under the assumption it will become operational in 2030 at the time of data collection.

It is envisioned that the Proposed Development will become a highly sustainable commercial district with the ability to attract new businesses and talent to Manchester. The development should bring together activities and people to create a vibrant neighbourhood, complementing and uniting the surrounding districts. In doing so, the Proposed Development represents a key opportunity to help unlock the potential of east Manchester.

AtkinsRéalis has been working for the Government Property Agency (GPA) through RIBA Stages 0 - 2 and participated in a pre-application meeting that discussed transport issues, in particular the level of trip generation, with Manchester City Council held on 4th July 2023. Other relevant meetings are be listed as:

- 29th May 2024 - Proposals - Pre-Application Discussion (Highways) – Manchester City Council/ GPA/ AtkinsRéalis;
- 28th August 2024 - Transport & Highways Discussion – AtkinsRéalis/ Transport for Greater Manchester (TfGM); and
- 3rd November 2024 – Highway Layout – AtkinsRéalis (Highways)/ Manchester City Council/ Highway Forecasting and Analytical Services (part of TfGM).

1.2 Site location

The Site was previously occupied by the former Central Retail Park. Ownership of the Site passed to Manchester City Council in 2017. The retail units were closed and demolished in 2019.

The Site is located approximately 600 (crow-fly) metres to the north of Piccadilly train station. It is bounded by A665 Great Ancoats Street to the southwest, the Rochdale Canal to the northwest running parallel with Redhill Street and a school along its northeast boundary. It is proposed that the Site will occupy the northwest end of the former Central Retail Park, the southwest end of the former Central Retail Park alongside Old Mill Street will be taken forward by another developer and end user.

The Site is located in an area of high accessibility to public transport involving bus, train and tram modes. Bus access is provided predominantly at the Piccadilly Gardens Interchange with some services passing on Great Ancoats Street, along the Oldham Road/ Street corridor and serving the Shudehill Bus Station, the nearest train station is at Piccadilly and the nearest tram stop is at New Islington, with others at Piccadilly train station, Piccadilly Gardens Interchange and Shudehill.

The Site is shown in Figure 1-1, with a closer view of the surrounding highway network at Figure 1-2. The area shown as the 'neighbouring site' is planned to contain an area of parkland linking Great Ancoats Street and Cotton Field Park with a further phase of office development towards Old Mill Street.



Figure 1-1 Site Location Plan



Figure 1-2 Site Location Plan showing surrounding highway network

1.3 Principle of approach

In this report, the Proposed Development will be considered against National Planning Practice Guidance (NPPG) 'Travel plans, transport assessment and statements in decision-taking' (DCLG, March 2014) with reference to the assessment thresholds outlined in the Department for Transport (DfT) document 'Guidance on Transport Assessments' (GTA, 2007). With the publication of the revised National Planning Policy Framework (NPPF, 2021), GTA was archived in October 2014 however, it is still widely referred to and is considered to provide the best guidance for setting thresholds for assessment.

1.4 Report structure

This Transport Assessment provides further information in the following sections:

- Section 2 lists and tests the Proposed Development against national and local policy;
- Section 3 presents the existing transport conditions in the vicinity of the Site;
- Section 4 details the Proposed Development;
- Section 5 considers the delivery and servicing strategy;
- Section 6 considers the construction traffic principles;
- Section 7 reviews the potential impacts on proposals for the neighbouring element of the former retail park; and
- Section 8 summarises the findings and provides the conclusions.

2. Local and National Policy Review

Table 2.1 summarises the key points from local and national policy to provide a context to understanding aspirations, objectives, planning strategy and future requirements for the Proposed Development.

Table 2.1 Planning Policy Summary

Document	Relevant Policy	Relevance to Proposed Development
National Planning Policy Framework (NPPF) December 2023	The NPPF was first published in March 2012, updated in February 2019 and July 2021, and most recently revised in December 2023. It sets out the government's planning policies for England and how these are expected to be applied. The NPPF aims to make the planning system more accessible, and to promote sustainable growth. The NPPF states that significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be considered in both plan-making and decision-making (Paragraph 109 of Section 9). The NPPF states that planning policies should: ▪ Be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned (Paragraph 110.b of Section 9); ▪ Identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development (Paragraph 110.c of Section 9); ▪ Provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans) (Paragraph 110.d of Section 9); and ▪ Provide for any large-scale transport facilities that need to be in the area, and the infrastructure and wider development required to support their operation, expansion, and contribution to the wider economy (Paragraph 110.e of Section 9). The NPPF states that in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:	This TA will demonstrate that the Proposed Development is in-line with NPPF, taking an early and holistic view of transport arrangements.

	▪ Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location (Paragraph 114.a of Section 9); and ▪ Safe and suitable access to the site can be achieved for all users (Paragraph 114.b of Section 9). The NPPF also states that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe (Paragraph 115 of Section 9). Within this context, applications for development should: ▪ Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second–so far as possible–to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use (Paragraph 116.a of Section 9); ▪ Address the needs of people with disabilities and reduced mobility in relation to all modes of transport (Paragraph 116.b of Section 9); ▪ Allow for the efficient delivery of goods, and access by service and emergency vehicles (Paragraph 116.d of Section 9); and ▪ Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations (Paragraph 116.e of Section 9). All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed (Paragraph 117 of Section 9).	
National Planning Practice Guidance (NPPG)	The NPPG supports the NPPF and provides an additional layer of policy guidance and interpretation. Para 002, 004 ‘Travel Plans, transport assessment and statements in decision-making’ states that: ▪ “Travel Plans, Transport Assessments and Statements are ways of assessing and mitigating the negative transport impacts of development to promote sustainable development.” ▪ “Transport Assessments and Statements are ways of assessing the potential transport impacts of developments (and they may propose mitigation measures to promote sustainable development”); and ▪ “Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be ‘severe’.”	This TA will demonstrate an assessment of travel impacts associated with the Proposed Development, in-line with the requirements of the NPPG.

Places for Everyone 2024	Places for Everyone (March 2024) is a Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan Councils. It acknowledges that the pandemic has brought challenging times, in which the need for bold ambitious plans for good quality employment is critical. This includes the need to continue to invest in our city and town centres to drive our recovery. There is also a preference for proposed developments to be situated on brownfield sites and limit the need extent of Green Belt release. This Plan sets out proposals to support the Greater Manchester ambition to be a carbon neutral city region by 2038. A key element of this is to require all new development to be net zero carbon by 2028 at the latest. The vision for 2040 is for half of all daily trips in Greater Manchester to be made by public transport, cycling and walking. This will mean a million more trips each day using sustainable and active modes of travel which will help in achieving economic growth. The Plan includes ten Strategic Objectives to help deliver the Vision of the Plan. There are three objectives particularly pertinent to transport. ▪ Objective 6 – Promote the sustainable movement of people, goods and information. The Plan will achieve this through: ▫ Enhancing the existing transport network; ▫ Focus new development within 800m of sustainable transport hubs; ▫ Ensure new development is designed to encourage and enable active and sustainable travel; ▫ Expand the transport network to facilitate new areas of sustainable and inclusive growth; and ▫ Capitalise on national and regional investment in transport infrastructure. ▪ Objective 7 – Playing our part in ensuring that Greater Manchester is a more resilient and carbon neutral city-region. The plan will achieve this through: ▫ Promote carbon neutrality of new development by 2028; ▫ Promote sustainable patterns of development that minimise the need to travel and contribute to cleaner air; ▫ Locate and design development to reduce car dependency; and ▫ Facilitate the provision of infrastructure for cleaner vehicles. ▪ Objective 10 – Promote the health and wellbeing of communities through: ▫ Reducing the health impacts of air pollution by increasing the accessibility of sustainable travel such as public transport, cycling and walking.	This TA will demonstrate that the Proposed Development is in-line with the relevant objectives in the Places for Everyone Joint Development Plan including maximising carbon-neutrality, promoting sustainable movement, and reducing air pollution impacts.

	The Plan will seek a creation of a much larger, integrated, rapid transit network within Greater Manchester which incorporates bus, Metrolink tram, tram / train and rail services. This will be supported by policies that focus new development in locations close to existing and proposed public transport connections. New development will have a significant role in delivering the future sustainable and integrated transport network in order to reduce car dependency and increase levels of walking, cycling and public transport. Although the focus of the Plan is on increasing walking, cycling and public transport, it must be recognised that there is a need to accommodate other forms of transport.	
Greater Manchester Transport Strategy 2040	Since 2017 Transport for Greater Manchester (TfGM) have developed a Transport Strategy across the Greater Manchester county. First published in February 2017, and updated in January 2021 with a view to refresh the Strategy on a regular basis, the vision of the Greater Manchester Transport Strategy 2040 is to provide 'world class connections that support long-term sustainable economic growth and access to opportunity for all'. There are four key elements of the Vision which represent the goals of the Greater Manchester Transport Strategy 2040, which include: ▪ Supporting sustainable economic growth ▪ Protecting the environment. ▪ Improving quality of life for all ▪ Developing an innovative city-region Meeting the transport needs of residents, businesses, and visitors is at the heart of the Strategy. It has seven mutually reinforcing principles which will be applied consistent as Greater Manchester's transport system is improved to ensure it meets the needs of all customers, including: ▪ Integration – to enable people to move seamlessly between services on a single, high quality, easy-to-use network; providing choice and supporting low-car lifestyles, made possible by integrated land use and transport planning. This will ensure that new developments are accessible by sustainable modes and reduce transport emissions and impacts on the highway network. This will include: ▫ A digital first approach will allow tools to be tailored to the needs of individual customers including journey planning tools, and information to encourage travel behaviour change and mode shift (Policy 3). ▫ Transport for Greater Manchester (TfGM) and local planning authorities will continue to work with developers to better integrate transport and new development in accordance with principles including: ▪ Reducing the need to travel by car, and the distance travelled; ▪ Maximising accessibility by sustainable modes;	This TA will demonstrate that the Proposed Development is in-line with the GM Transport Strategy.

	▪ Making the best use of existing infrastructure, particularly through increasing the density of development close to public transport nodes; and ▪ Designing to encourage active travel. ▪ Inclusive – to develop a fully inclusive and affordable sustainable transport system for all. ▪ Healthy – to develop a transport system that supports people in leading active healthy lives. ▪ Environmentally Responsible - for Greater Manchester to be known for the quality of its urban areas, natural environments with transport emissions reduced to near zero, and new transport schemes delivering environmental enhancements whenever possible. ▪ Reliable – to develop a transport network that offers reliable journey times and gives people the confidence to use public transport. ▪ Safe and Secure - to reduce deaths on Greater Manchester roads as close as possible to zero and ensure that poor perceptions of personal security are no longer a significant barrier to people using public transport or walking and cycling. ▪ Well Maintained and resilient – to keep a transport network that is in a safe and useable condition and to avoid the cost of unnecessary replacement. The Greater Manchester Transport Strategy 2040 focuses principally on creating an integrated, well-co-ordinated transport system which supports a wide range of different travel needs. This includes modal principles such as 'Streets for All', Travel Demand Management, bus priority measures, and developing a comprehensive walking and cycling network (Bee Network).	
Manchester City Council Local Development Framework: Core Strategy	The Core Strategy describes Manchester as a city today and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision. Objective 5 of the Core Strategy is to improve the physical connectivity of the City, through sustainable transport networks, to enhance its functioning and competitiveness and provide access to jobs, education, services, retail, leisure and recreation. It highlights that an efficient and sustainable transport system is an essential to attract a growing, stable population to support existing and new businesses within the City, and thereby, to help contribute to sustainable economic growth ensure good access to employment. Transport is a major source of pollution particularly in the form of emissions into the air. Encouraging a modal shift away from private cars will contribute to halting climate change and reduce the negative impact on health. The Local Plan states that through Policy T1 (Sustainable Transport) the Council will support proposals, such as the GPA site, that: ▪ Improve choice by developing alternatives to the car;	This TA will demonstrate that the Proposed Development is in-line with MCC's Local Development Framework.

	▪ Promote regeneration and economic vitality by relieving traffic congestion and improving access to jobs and services; ▪ Improve pedestrian routes and the pedestrian environment; ▪ Improve and develop further Manchester's cycle network; ▪ Contribute to improvements to the extent and reliability of the public transport network through safe and attractive waiting and interchange facilities, improved services and information provision; ▪ Facilitate modes of transport that reduce carbon emissions such as incorporating charging points for electric vehicles, subject to their appropriate design and location; and ▪ Take account the needs of roads users according to a broad hierarchy, in order of priority: ▫ Pedestrians and disabled people; ▫ Cyclists, public transport; ▫ Commercial access; ▫ General off peak traffic; and ▫ General peak time traffic. Policy T2 (Accessible areas of opportunity and need) outlines how all new development should provide appropriate car parking facilities taking into consideration the accessibility of the location and the potential for nearby uses to share facilities. All development proposals should also have regard to the need for disabled and cycle parking. Whilst Appendix B of the Manchester City Council Local Plan presents parking standards for cars, disabled parking, and cycling for different land use, the car parking standards do not apply to Manchester city centre, this is due to the city centre whilst being the most accessible location in Greater Manchester, it also accommodates a complex variety of development. Therefore, parking standards within Manchester city centre are on a case-by-case basis.	
Manchester City Council Local Plan: Unitary Development Plan	The Manchester City Council Local Plan, Unitary Development Plan (UDP) was adopted by the Council on 21 July 1995 and has been mostly replaced by the Manchester 's Core Strategy that was adopted on 11 July 2012, outlined above, but some policies are extant (remain). This includes 'Part 1: Transport' with the overall objective to improve all forms of public transport so that it make a much greater contribution to meeting the City's travel needs and achieves a better balance between public and private transport.	This TA will demonstrate that the Proposed Development is in-line with remaining and relevant elements of MCC's UDP.
City Centre Transport Strategy	The City Centre Transport Strategy to 2040: Getting from A to Bee is a sub-strategy of the Greater Manchester Transport Strategy 2040 (above), developed again by TfGM with Manchester and Salford City Councils to develop strategies for movement across these neighbouring cities. Published in March 2021 it outlines the vision for Manchester city centre to be a well-connected zero-carbon city centre at the heart of the North, offering residents, employees and visitors a great place to work, live and visit. There is a target for 90% of	The MDC proposal contributes to the City Centre Transport Strategy by maximising access by sustainable modes of transport.

	morning peak trips into the city centre to be made on foot, by cycle or public transport before 2040. The ambitious target for Greater Manchester to be net-zero carbon by 2038 highlights the need for urgent action over the next five years, and any forthcoming developments should promote sustainable travel. Improved regional and local transport interventions are expected to significantly contribute to an increasing number of job opportunities in Manchester city centre. These, and other, investments will also unlock further major redevelopment opportunities in the heart of the city centre, therefore it is important that transport networks are able to support the predicted growth. The document outlines seven ambitions to deliver the City Centre Transport Strategy vision: 1. Walking as the main way of getting around the city centre. 2. A city centre which is cleaner, greener and less congested. Traffic levels and pollution in the city will be reduced, through the removal of non-essential and polluting vehicles travelling into and across the city centre. 3. More people choose to cycle to destinations within the city centre. An attractive, safe, protected and efficient cycling network into and through the city centre will help achieve this ambition. 4. Enhancing public transport connections within the city centre, particularly surrounding public transport operating hours and service patterns to support travel needs at evenings and weekends, particularly for leisure and commuting trips. 5. Parking in the city centre is smarter and integrated with other modes. The strategy proposes to reduce car parking within the city centre and where car parking remains in the city centre it is located appropriately and remains available to those with specific mobility needs that rely upon accessible parking provision. 6. Goods are moved and delivered sustainably and efficiently into and within the city centre. It is proposed to shift towards cleaner, more efficient vehicles and operating processes. 7. Innovation is embraced where it benefits the city centre and its users in order to create a better travel experience within Manchester City Centre using new technologies and emerging methods of travel.	
Electric Vehicle Charging in Residential and Non-Residential Buildings' (DfT) July 2019	For new non-residential buildings - *'The government proposes every new non-residential building with more than 10 car parking spaces to have one charge point and cable routes for an electric vehicle ChargePoint for one in five spaces.'* This is 20% provision for Electric Vehicle Charging Points (EVCP's).	The Proposed Development includes provision for EVCP, with further details provided in Section 4.5.4.

Greater Manchester Electric Vehicle Charging Infrastructure Strategy	The Greater Manchester Electric Vehicle Charging Infrastructure (EVCI) Strategy is another sub-strategy of the Greater Manchester Transport Strategy 2040. The Greater Manchester EVCI Strategy sets out the vision-led adaptive planning approach to the provision of charging infrastructure, to be adopted to support a rapid transition towards a carbon neutral transport system. The transition to electric vehicles (EVs) and provision of EVCI are co-dependent. Availability of and access to charging infrastructure is a critical barrier to the adoption of EVs. Having an available public charging network that people have confidence in, is an important factor in enabling the switch to an EV. To ensure that adequate provision of EV charging infrastructure is provided in new developments a number of factors need to be considered including: ▪ The development type; ▪ EV user profiles, vehicle dwell times and charging behaviour; ▪ Potential for EV Car Club requirements; ▪ Future management, operation and maintenance requirements; and ▪ Passive and Active charge point provision. New developments within Greater Manchester should make adequate provision of EVCI to meet demand and encourage and accelerate the transition to EVs. To achieve this, new developments should be required to provide a minimum number of active EV charge points and offer enough passive provision to enable efficient expansion as demand increases. The Greater Manchester EVCI Strategy recommends that for office developments active provision equates for 10% of total car parking spaces, and passive provision 20% of spaces.

The reviewed policies indicate that the focus of new development proposals should be aimed at encouraging more sustainable travel opportunities such as walking, cycling and the use of public transport, as well as identifying other improvements that can be made to the existing transportation networks.

3. Existing Transport Conditions

3.1 Introduction

3.1.1 Overview

The Site is in excellent proximity to the public transport system provided by bus, train and tram networks. In the centre of Manchester is the Piccadilly Gardens bus and tram interchange, a 800m walk away from the Site with

plenty of bus stops along route. There is also a tram stop closer to the Site at New Islington some 670m away, and National Rail's Piccadilly Station is a 960m walk away. A summary of distances and walking time is provided in Table 3.1.

Table 3.1 Walking distances and times to and from public transport hubs

Public Transport Hub	Distance	Walking time (at 80m per minute)
Piccadilly Station (Railway Station and Tram Stop)	960m	12 mins
Victoria Station (Railway Station and Tram Stop)	1.27km	16 mins
New Islington Tram Stop	667m via Great Ancoats St and Pollard St (680m via Vesta St)	8 mins (9 mins)
Piccadilly Gardens Bus Station and Tram Stop	800m	10 mins
Market Street Tram Stop	942m	12 mins
Shudehill Bus Sation and Tram Stop	961m	12 mins

Part of the National Cycle Network (NCN) runs close by and there are walking routes surrounding the Site in the city centre for local amenities and access to public transport.

A main east-west artery – the A665 Great Ancoats Street – passes in front of the Site with many links to the north and south of different road types.

3.2 Surrounding Highway Network

3.2.1 Wider network

The A665 Great Ancoats Street forms part of the ring road around the city centre along with other roads, including the A6042 Trinity Way and the A57(M) Mancunian Way. This ring road is crossed by roads affording access into the city centre and surrounding areas. The A57(M) is linked via Regent Road to the M602 to the west providing a direct connection to the M60 Manchester Orbital motorway and the east-west M62 motorway connecting Manchester with Liverpool, Bradford, Wakefield, Leeds and Hull. The M62 connects directly with the M6 and less-directly with M1. The A5103 to the south of the city provides links to the M6 for Chester and North Wales as well as providing a link to Manchester International Airport. Figure 3-1 shows the wider highway network.



Figure 3-1 Wider highway network

The motorway network is frequently congested in the peak periods, particularly in the morning on the M62 and the continuation of the M56 along the A5103 towards the city centre. Most other A-roads inbound to the city centre are also particularly congested at these times. Whilst congestion is an issue the Proposed Development is seeking to minimise the traffic impact by promoting sustainable travel choices and this is addressed more fully in the associated Framework Travel Plan.

3.2.2 Local network

Figure 3-2 shows the local highway network.

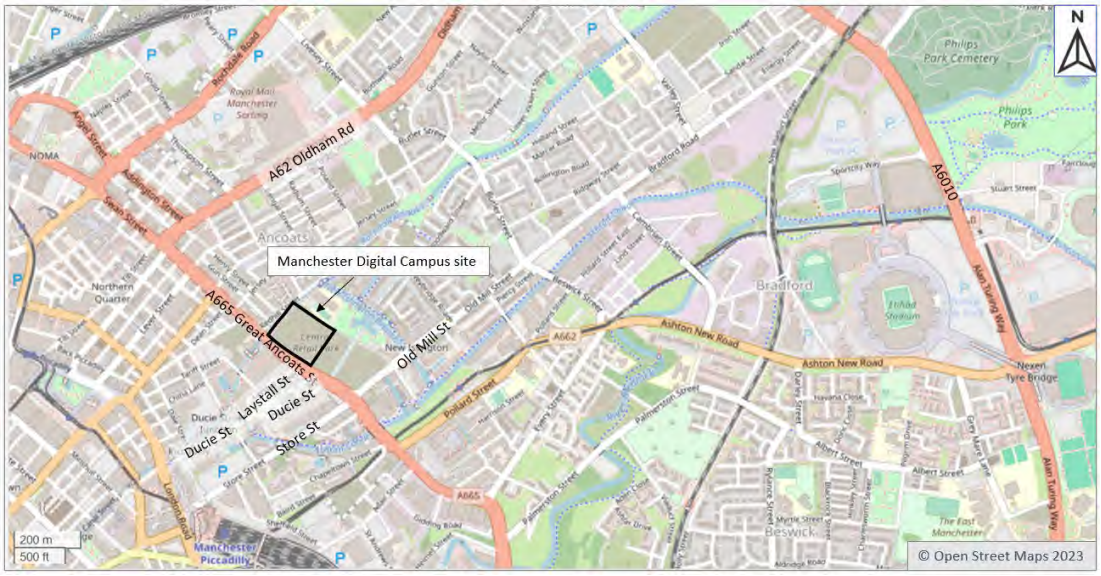


Figure 3-2 Local highway network

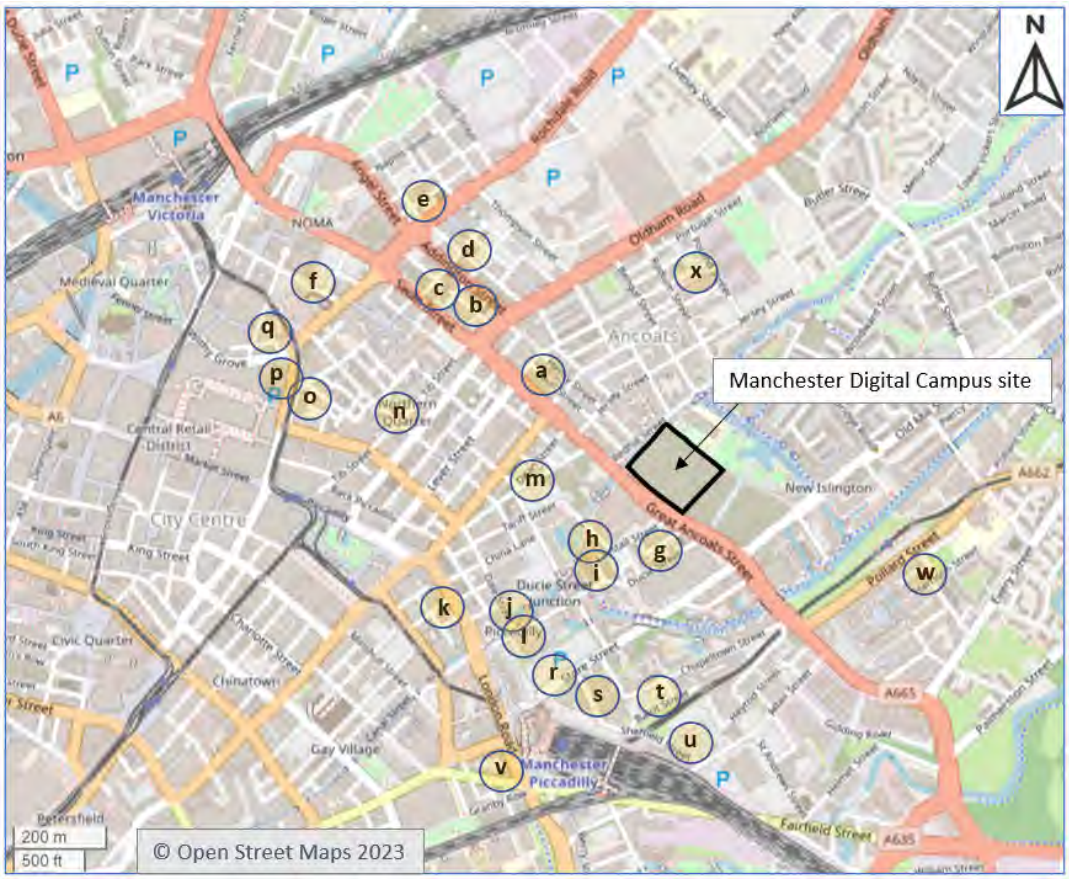
A665 Great Ancoats Street along the front of the Site is a busy road with mostly 2 lanes in either direction and a 30mph speed limit. It is a dual carriageway where is passes the Site. It has frequent junctions with other roads, mostly signal controlled. It has no cycle lanes.

To the east of the Site is Old Mill Street, forming a broadly northeast-south west link with Great Ancoats Street. It forms a quiet road with a boulevard character for a short section close to the Proposed Development hosting parking along its centre. It links to the A6010 which can be regarded as an outer distributor road, which also has connections with other roads linking with the parallel Great Ancoats Street using the A62 Oldham Road further west of the Site. Accessed from Old Mill Street and running along the northern edge of the Site is Hugh Oldham Way which affords access to a school – the Co-Op Academy New Islington - at its western end.

Opposite the Site is Laystall Street currently providing a one-way link towards the Site from its south. It contains parking bays and is mostly only wide enough for one vehicle but becomes sufficiently wide enough for two lanes to form at its junction with Great Ancoats Street. Ducie Street a little further east is similar and is one-way southbound. Both meet to form a 2-way road taking the Ducie Street name providing access to Piccadilly Station and off-street parking, and links to Store Street linking Great Ancoats Street with Piccadilly Station and the rest of the highway network around the Piccadilly area. It forms a 4-arm signalised junction with Great Ancoats Street and Old Mill Street.

3.2.3 Car parking

Existing parking within a 1km walk is identified in Figure 3-3 and identifies 7,499 car parking spaces based on data sought through the Parkopedia website[1]. It is known that there are some additional parking locations; it is estimated that there are circa 8,500 spaces within a 1.2km (15 minute) walk.



[1] Parkopedia Website: https://en.parkopedia.co.uk

Ref	Location	No. of parking spaces	Comment	Ref	Location	No. of parking spaces	Comment	Ref	Location	No. of parking spaces
a	Gun Street	140		h	Tariff Street	232		u	Sheffield Street	165
b	Castle Street	32		i	Ducie Street	50		v	Piccadilly Place	583
c	Cross Keys Street	13		j	Ducie Street	285			Pollard Street	55
	Cross Keys Street	39		k	Piccadilly Gardens	712		w	Boond Street	30
	Goulden Street	25		l	Ducie Street	30			Providence Street	55
	Goulden Street	33			Port Street	21			Radium Street	28
d	Thompson Street	67			Port Street	20			George Leigh Street	17
	Mason Street	15		m	Tariff Street	115		x	Jersey Street	130
	Rochdale Road	23			Port Street Central	76			Harriett Street	28
	Rochdale Road	65			Port Street	3			Oldham Road	15
e	Rochdale Road	45		n	Northern Quarter	685				
	Shudehill	84	Reserve spaces	o	Edgehill Street	13				
f	Hanover Street	145	Reserve spaces	p	Arndale	1487				
	Manchester Printworks	771	Reserve spaces	q	Dantzic Street	24				
	Lomax Street	15		r	Store Street	406				
g	Ducie Street	9		s	Piccadilly Station	711				
	Ducie Street	42		t	Baird Street	100	Reserve spaces			

Source: Parkopedia website, https://en.parkopedia.co.uk

Figure 3-3 Location and numbers of long stay parking with 1km walk of the Proposed Development

Surveys undertaken by Transport for Greater Manchester (TfGM) by their Highways Forecasting and Analytical Services (HFAS) team as part of this commission during the summer of 2024 identified that many of the car parks have spare capacity.

3.3 Surrounding Pedestrian and Cyclist Network

3.3.1 Overview

Footways and crossings are generally situated alongside the local highway network, which prioritises connections to and from the city centre, particularly along and around Great Ancoats Street. Currently there are pedestrian crossings adjacent to the Site, with one crossing Great Ancoats Street at the northern end of the Site and another further southeast at the junction with Store Street and Old Mill Street. Both have dropped kerbs and tactile paving, with the latter having some cycleway markings

The facilities at the Store Street junction are commensurate with both Old Mill Street and Store Street being on NCN Route 66 linking Manchester with Rochdale, Leeds and Hull. This route crosses NCN Route 60 which afford cycle access across east Manchester, linking Reddish near Stockport with Crumpsall to the north. NCNs in the local area are shown in Figure 3-4. Aside from this NCN, cycle lane provision is limited in the immediate area despite some roads being narrowed, providing better access for pedestrians. Two stretches of southbound cycle lane separated by a shared cycle/footway are provided on Port Street, a relatively minor road south of Great Ancoats Street on a possible walking route to Piccadilly Gardens.

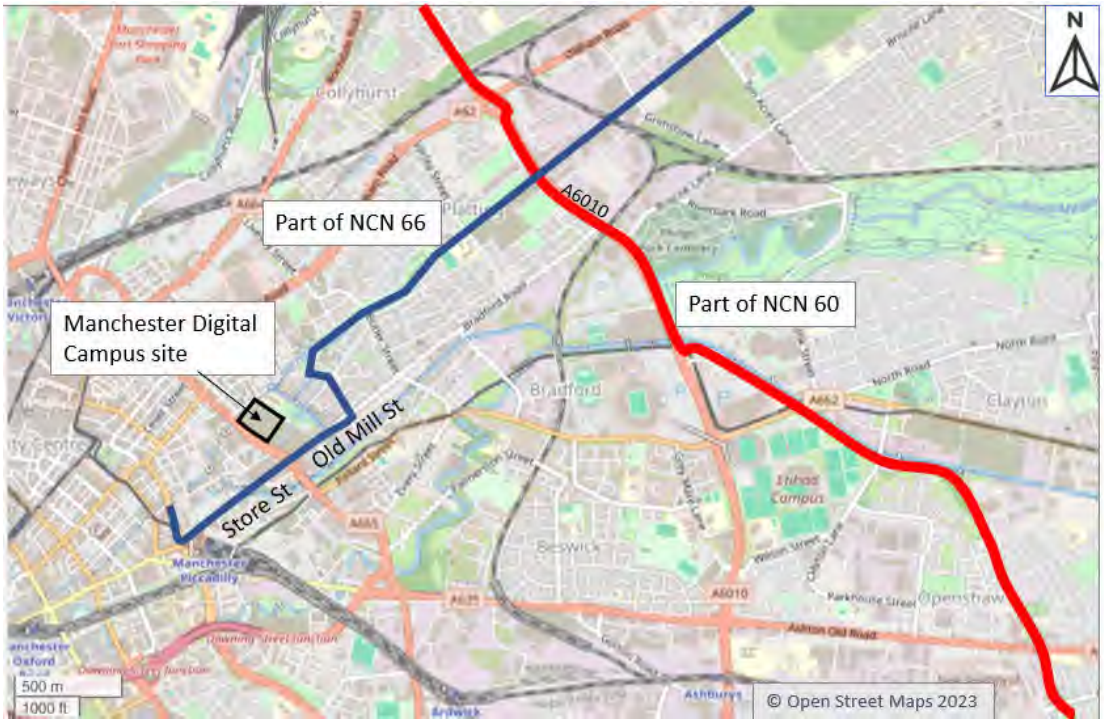


Figure 3-4 National Cycle Network in the local area

Most of the surrounding area is relatively flat. There is a change in gradient on Great Ancoats Street along the Site's frontage sloping downwards in the southeastern direction. Old Mill Street has a greater incline over a short stretch northeast bound. None of the changes in height should pose an issue for older people and people with disabilities.

Across the network there are dropped kerbs allowing informal pedestrian crossings for all users. These are occasionally supported by tactile paving which increases in provision closer to the city centre.

A review of the walking distribution was undertaken using the "commute.datashine.org.uk"[2] website for Travel to Work Flows based on the 2011 census as released by the Office for National Statistics. This is, in essence, an origin-destination matrix of where people commute to work based on postcodes. The walking distribution is summarised in Table 3.2 in relation to the Proposed Development. The train station split is based on 2022/23 passenger totals (non-interchange) at each station with 23.56m passenger at Piccadilly and 7.0m passengers at Victoria.

Table 3.2 Pedestrian distribution

From/ to	Percentage of walk-to-work trips	Percentage of Train Station split	Percentage of Bus and Tram assumed split
North	42%		
East	9%		25% (New Islington)
West	9%	23% (Victoria)	75% (Piccadilly Gardens)
South	40%	77% (Piccadilly)	

It can be assumed that the cycle trips will be distrusted in a similar way as the walk-to-work trips.

[2] Oliver O'Brien & James Cheshire (2016) Interactive mapping for large, open demographic data sets using familiar geographical features, Journal of Maps, 12:4, 676-683, DOI: 10.1080/17445647.2015.1060183

3.3.2 Local amenities

The Institute of Highways and Transportation *'Guidance for Journeys on Foot'* (2000) sets out 1km as acceptable, and 2km as preferred maximum for access to services and amenities.

There is a good level of amenity within a 500m shortest safe walking distance. As illustrated in Figure 3-5, within a 500m walking distance are a school, a cash machine, community facilities (pharmacy and barber shop), post office, food outlet, some outdoor space and plenty of centres for physical fitness.

It is considered that the Site is well located and readily accessible by active modes (walking and cycling) for both commuters and those visiting.

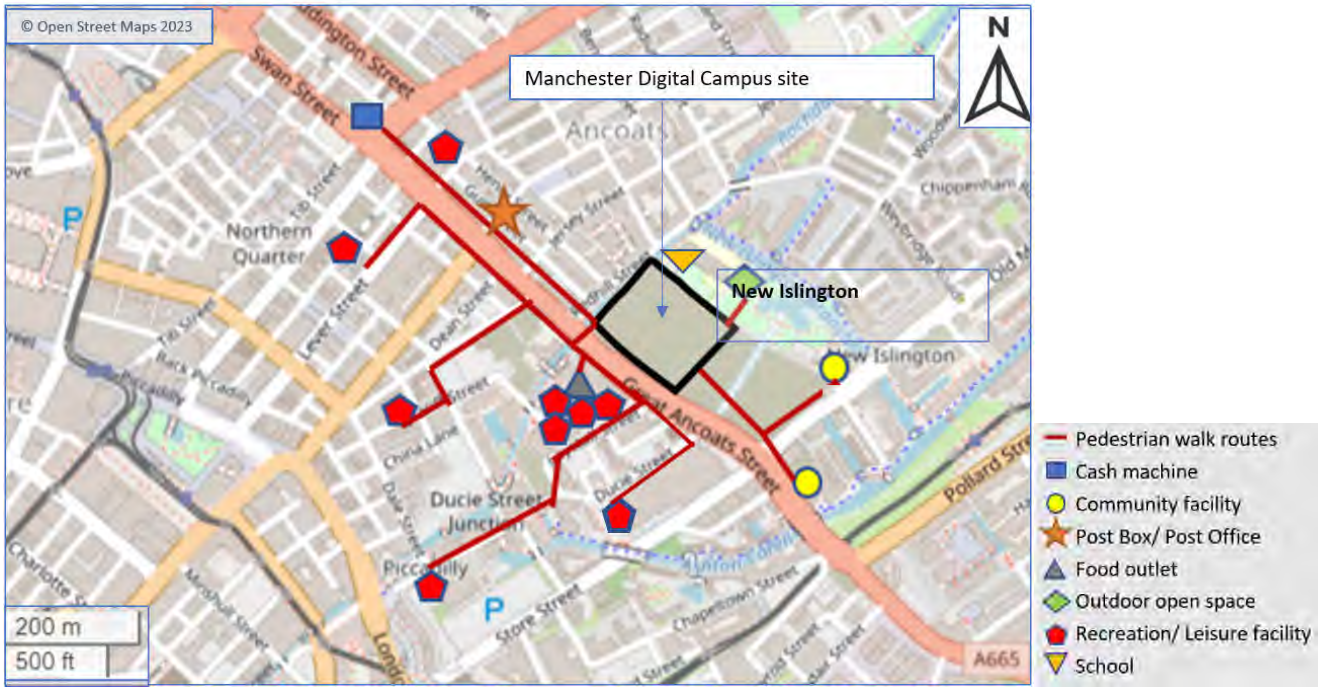


Figure 3-5 Local Amenities (500m walk distance)

3.3.3 Street lighting

Streetlighting is provided across the network.

3.3.4 E-scooters

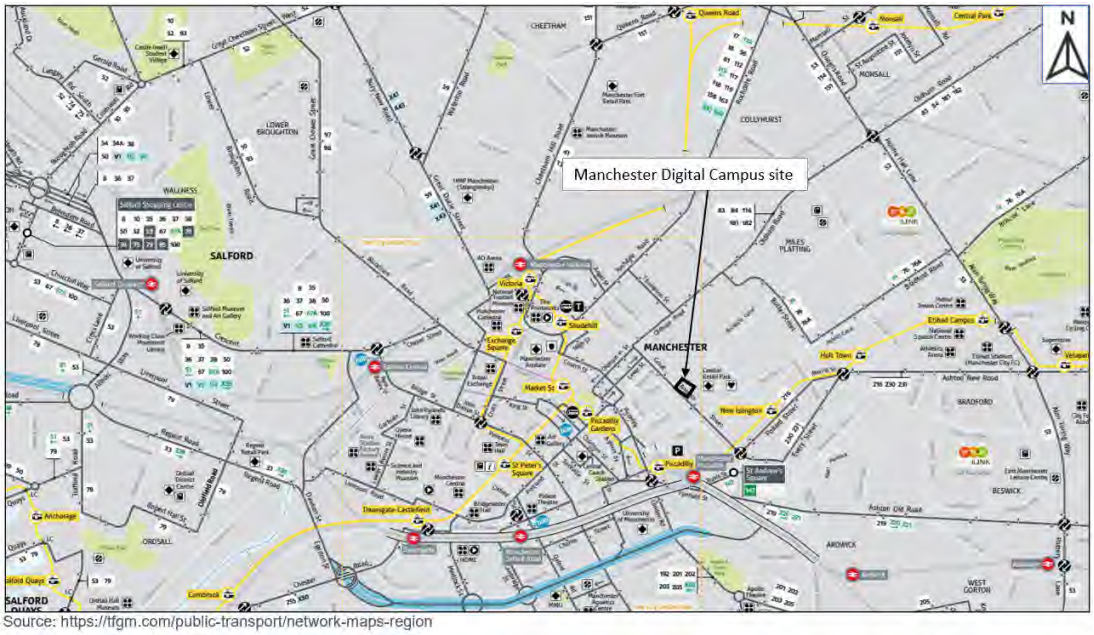
Neighbouring authorities Salford and Rochdale are participating in the Department for Transport's E-scooter trial, offering residents, commuters and visitors access to E-Scooters. Manchester is not part of those trials.

3.4 Surrounding Public Transport Network

3.4.1 Bus

The local area is served by an extensive bus network, in particular serving Piccadilly Gardens some 800m away on foot. To be included in the Public Transport Accessibility Level (PTAL) scoring bus stops need to be within a 640m

walk of the Site being considered, and that constraint still includes a number of services that contribute to the PTAL category of ‘Excellent’ provision. The extent of bus provision is shown in Figure 3-6.



Source: https://tfgm.com/public-transport/network-maps-region

Figure 3-6 Manchester Bus Map

In addition to Piccadilly Gardens which hosts 70-100 buses on nearly 30 services in the peak hours, Shudehill Interchange, at a walking distance of 960m from the Site host some 16 bus services providing around 50-60 buses in the peak hours.

Figure 3-7 shows some of the bus stops in the vicinity of the Site.

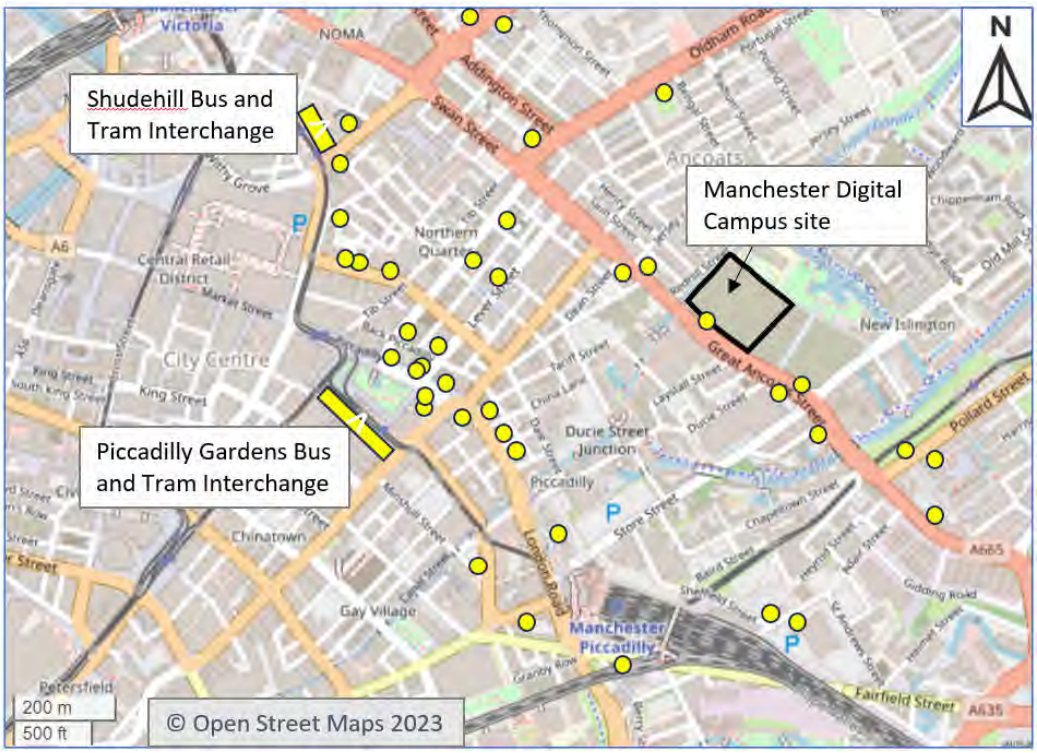


Figure 3-7 Sample of local bus stop locations

As part of the PTAL calculation, Table 3.3 lists the bus services and where the bus stops are located with the PTAL 640m bus stop walk threshold. As can be seen there are 31 peak hour buses over 8 routes.

Table 3.3 Bus services within a 640m walk

Service	Operator	Route	Nearest Stop	Weekday number of peak hour buses
74	Stagecoach	Manchester city centre – Newton Heath – Failsworth – Woodhouses	Oldham Road	1
76/ 76A	Stagecoach	Manchester city centre – Failsworth – Hollinwood/ Limeside – Oldham	Oldham Road	4
83	FirstBus	Manchester city centre – Failsworth – Oldham (Sholver)	Oldham Road	4
84	FirstBus	Manchester city centre – Hollinwood – Oldham – Lees – Uppermill	Oldham Road	6
114	Stagecoach	Manchester city centre – Middleton – Boarshaw	Oldham Street	3
181/ 182	FirstBus	Manchester city centre – Chadderton – Royton – Shaw (Wrens Nest)	Oldham Road	2
216	Stagecoach	Manchester city centre – Ashton-under-Lyne – Stalybridge	A665 Great Ancoats Street	6
230/ 231	Stagecoach	Manchester city centre – Droylsden – Ashton-under-Lyne	A665 Great Ancoats Street	5

3.4.2 Rail

The nearest train station to the Site is Manchester Piccadilly, which is located to the east of Manchester city centre and a 960m walk from the Site. As it is within, or coincidentally the same as the PTAL criteria of a 960m walk from the Site all the train services here contribute to the PTAL category of 'Excellent' provision.

The main train stations are shown in Figure 3-8.

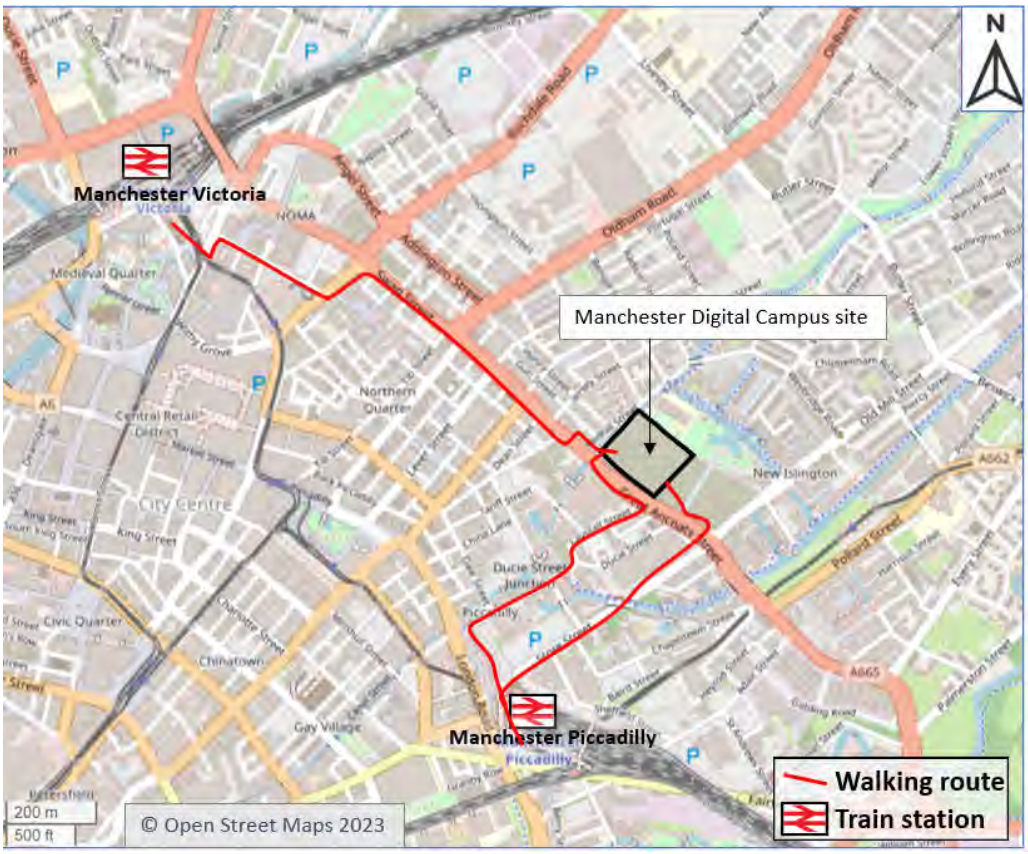


Figure 3-8 Train Stations, showing walking routes

Managed by Network Rail, Piccadilly is the busiest train station in Manchester with over an annual 23 million passengers during 2022/2023 (down from over 30 million passenger between April 2019 and March 2020). As of March 2019 and December 2023, it is the third busiest station in the United Kingdom outside of London.

There are 6 train operating companies across the 14 platforms at Piccadilly operating regular services: Cross-Country, East Midlands Railway, Northern, TransPennine Express, Transport for Wales, and Avanti West Coast. These allow for long distance and cross-country services including to London, Birmingham, Nottingham, Edinburgh, Bristol, Cardiff, Plymouth and Southampton. Regional services provide access to cities such as Liverpool, Leeds, Sheffield, Newcastle and York. There are also local commuter services available from the station to destinations around Greater Manchester. Key details of the services are provided in Table 3.4.

Table 3.4 Manchester Piccadilly train services

Operator	Destination	Weekday number of peak hour trains
Northern	Alderley Edge	1
Northern	Barrow-in-Furness	1

Operator	Destination	Weekday number of peak hour trains
Cross-Country	Birmingham	2
Northern	Blackpool	2
Northern	Buxton	2
Transport for Wales	Cardiff	1
Northern	Chester	1
TransPennine Express	Cleethorpes	1
Northern	Crewe	2
TransPennine Express	Glasgow	1
Northern	Hadfield	2
Northern	Hazel Grove	1
TransPennine Express	Huddersfield	1
Northern, East Midlands Railway and TransPennine Express	Liverpool	3
Transport for Wales	Llandudno	1
Avanti West Coast	London	2
Northern	Manchester International Airport	7
Northern	Marple	1
TransPennine Express	Newcastle	1
Northern	New Mills	3
East Midlands Railway	Nottingham	1
TransPennine Express	Saltburn	1
Northern	Sheffield	1
Northern	Stoke-on-Trent	2

Source: https://www.realtimetrains.co.uk Timings for planned arrivals at Manchester Piccadilly in the morning peak period for Tues 5th December 2023 as listed on the website in advance

The train station is accessible for disabled users. Wheelchairs are available at the station and ramp access can be provided to the trains. There is step-free coverage across the station and staff are available to assist.

Manchester Victoria is also a busy train station located 1.25km/ 15 minutes walking distance from the Site, and also forms a major interchange for the metro system. It offers regional and local services to a range of destinations across northern England.

Other train stations in Manchester city centre include Oxford Road and Deansgate, however these are located over a 20 minute walk away.

3.4.3 Tram

The location of all the nearby tram stops is shown in Figure 3-9.

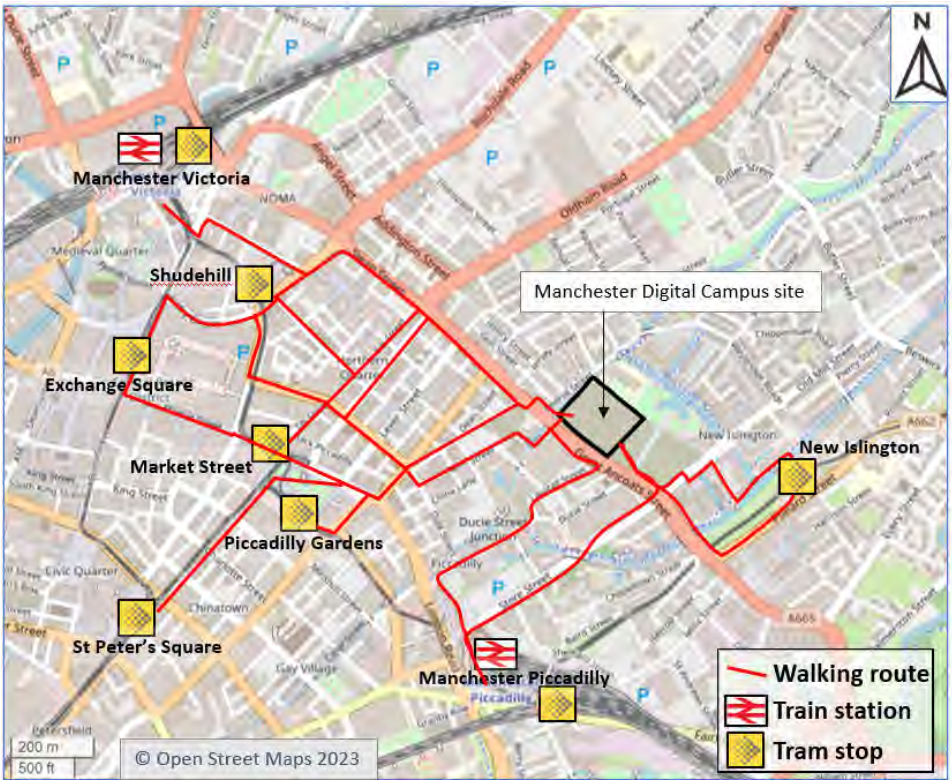


Figure 3-9 Tram Stops, showing walking routes

The nearest tram stop is at New Islington, east of the Site, a walk of 670m along Great Ancoats Street and Pollard Street; a slightly longer walk (680m) is through a canal side walk and various crossings. There is also a tram stop further away south of the New Islington tram stop at Manchester Piccadilly underneath the mainline station.

Each destination is served on a 12 minute frequency, Monday to Saturday. At New Islington, the provision of services can be more, although not as regular; i.e. they may be a 10 minute wait before 2 trams arrive within the next 2 minutes. At Piccadilly tram is provided between 1 every minute to 1 every 4 minutes.

3.4.4 Air travel

The closest international airport to the Site is Manchester International, almost 10 miles to the south of the Site. The airport is linked to the Site by tram and train, with a tram to and from Manchester Victoria every 12 minutes typically taking an hour (with a change if starting at New Islington or Piccadilly tram stops) and 7 trains typically taking around 15 minutes in the peak hours to and from Manchester Piccadilly. There are some bus services to and from Piccadilly Gardens, with 8 buses in the morning peak hour each taking around 1 hr 20 minutes.

3.4.5 Accessibility Index - Existing

The Accessibility Index (AI) of the Proposed Development has been calculated using the Building Research Establishment Environmental Assessment Method (BREEAM) Accessibility Index Tool. The tool calculates a public transport accessibility index (or score) which then is then placed in a band of scores to determine the Public Transport Accessibility Level (PTAL) ranging from Poor to Excellent. The indices, score ranges and description are shown in Table 3.5.

Table 3.5 Public Transport Accessibility Level thresholds

Public Transport Accessibility Level	Range of Index	Description
1a (Low)	0.01 to 2.5	Very poor
1b	2.51 to 5.0	Very poor
2	5.01 to 10.0	Poor
3	10.01 to 15.0	Moderate
4	15.01 to 20.0	Good
5	20.01 to 25.0	Very Good
6a	25.01 to 40.0	Excellent
6b (High)	40.01 +	Excellent

The AI is a measure that provides an indicator of accessibility and density of the public transport networks for an individual location. The index can be influenced by the proximity and diversity of the public transport network and the frequency of services.

The methodology is based on a walk speed of 4.8km/h and considers rail stations within a 12-minute walk (960m) of a Site, and bus stops within an eight-minute walk (640m).

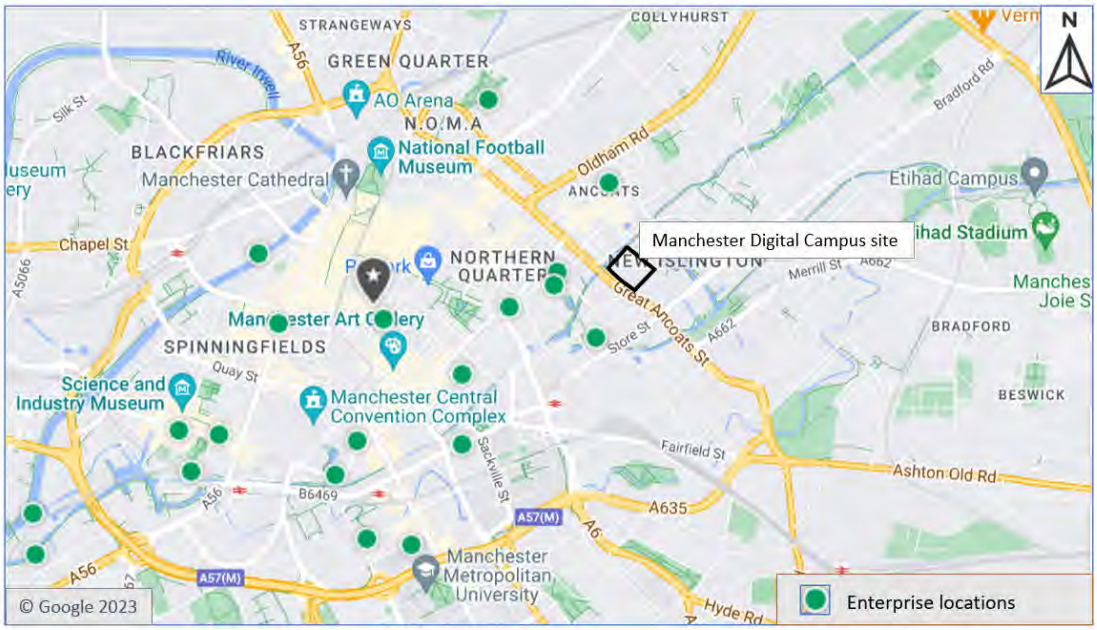
The AI of the Proposed Development has been calculated as 29.84, which is categorised as ‘excellent’, reflecting the high provision of public transport services.

3.4.6 Accessibility Index - Proposed

There are no public transport interventions currently planned other than the potential relocation of a bus stop on the north side of Great Ancoats Street to accommodate vehicle access into the Site. Also the Travel Plan will be stressing the need for increased public transport use.

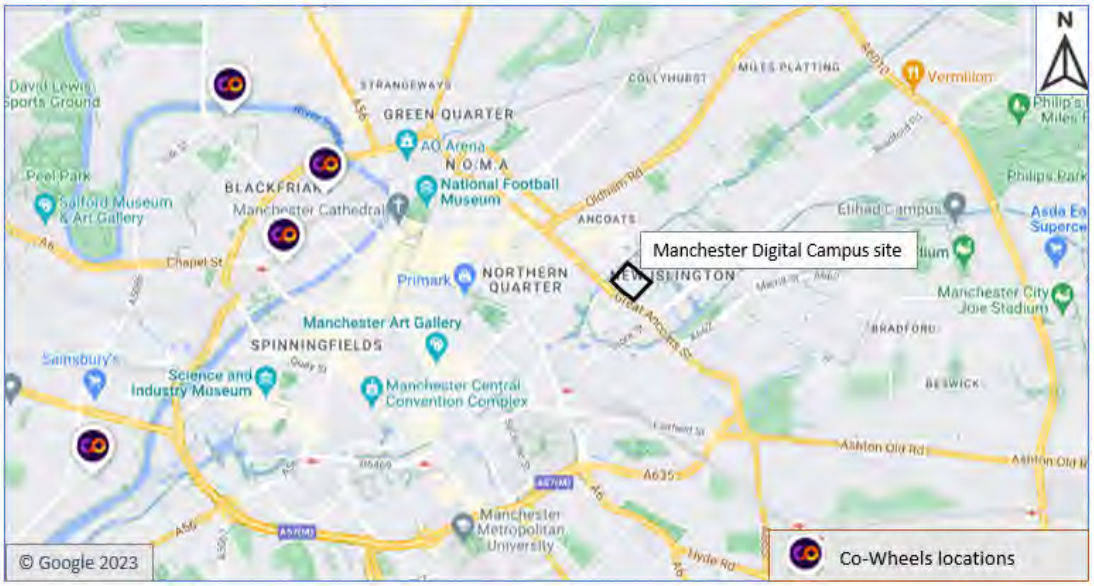
3.5 Car Clubs

Car Clubs operate across Greater Manchester, including Enterprise and Co Wheels, which allow users to rent vehicles by the hour or the day, reducing reliance on private car ownership. There are multiple pick-up and drop-off locations across the city, as shown in Figure 3-10 and Figure 3-11.



Source: www.enterprisecarclub.co.uk

Figure 3-10 Enterprise Car Club Vehicle Locations

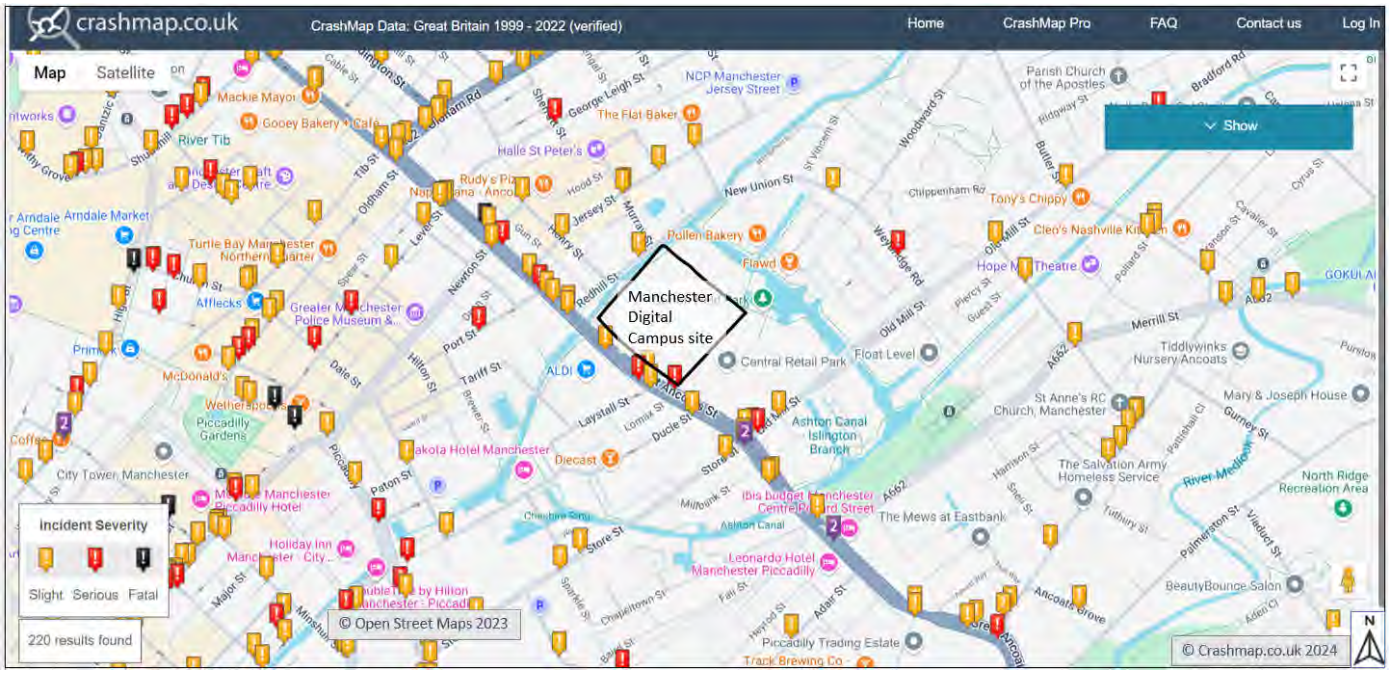


Source: www.co-wheels.org.uk

Figure 3-11 Co-Wheels Car Club Vehicle Locations

3.6 Collision analysis

Figure 3-12 shows the location of personal injury collisions by severity for the more recent full 5 years' worth of data in the Crashmap database (www.crashmap.co.uk), 2018 to 2022.



Source: www.crashmap.co.uk

Figure 3-12 Injury Collision Locations by collision severity, 2018-22

Taking A665 Great Ancoats Street between A65 Oldham Road and A662 Pollard Street the annual number of collisions by injury severity is listed in Table 3.6.

Table 3.6 Personal Injury Collisions by year and severity

Year	Injury Severity		
	Serious	Slight	Fatal
2018	9	-	-
2019	8	1	-
2020	4	1	1
2021	6	1	-
2022	3	2	-

Personal Injury Collisions on Great Ancoats Street outside the Site include two Serious Injury Collisions, one in 2019 and another in 2022. The Fatal Injury Collision (in 2020) occurred was near Newton Street.

4. Development Proposals

4.1 Overview

The Site was previously home to the former Central Retail Park; however, the retail units were demolished in 2019 and the Site has been cleared. The Proposed Development is planned to open in 2030.

Trip numbers have been derived from the Trip Rate Information Computer System (TRICS) database[3]. This database contains trip data for a variety of land uses across the UK and Ireland and has been commercially available and widely used since 1989.

4.2 Proposed development details

4.2.1 Development type and floorspace

he Proposed Development that forms the basis of this planning application comprise the provision of Class E[4] office space of approximately 83,000 sqm GIA of floorspace across two office buildings and retail frontage onto Great Ancoats Street of approximately 1,000 sqm. The Site layout arrangement is shown in Figure 4-1.

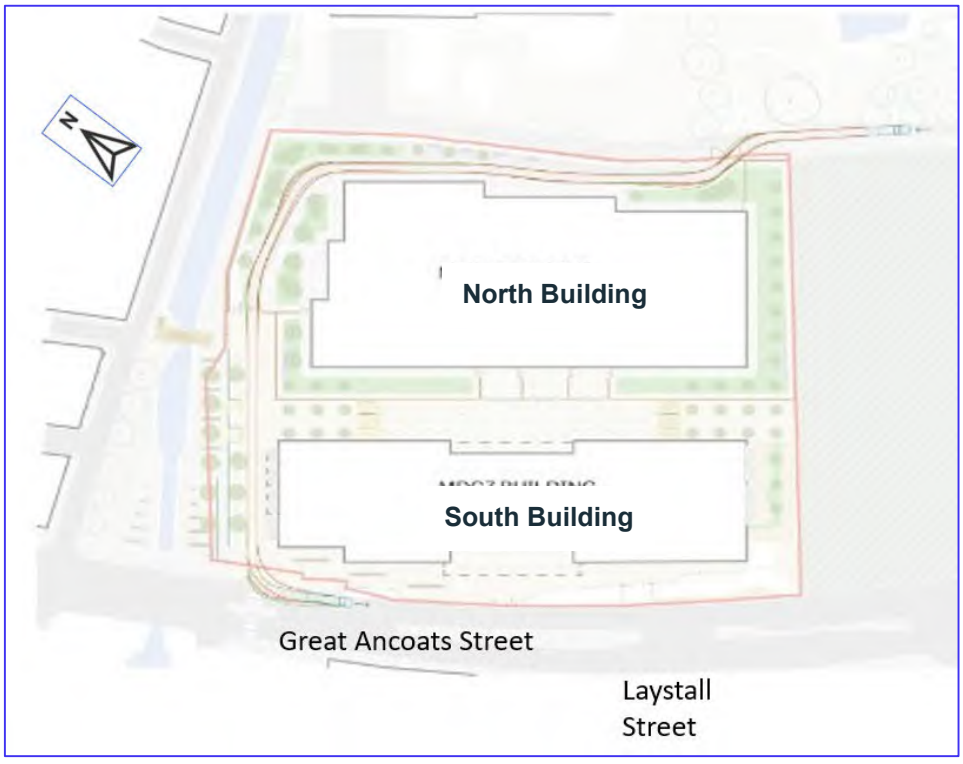


Figure 4-1 Site layout

[3] TRICS® is the system of trip generation analysis for the UK and Ireland.
[4] Use Classes Order in England (September 2020)

4.2.2 Parking and Vehicular site access

The Proposed Development includes the provision of 50 accessible parking bays plus 5 spaces associated with facilities management and operations, and15 electric vehicle (EV) charging points. There is cycle parking for 320 bikes. The proposed vehicular Site access is illustrated by Figure 4-2 with some further details included in Figure 4-3.

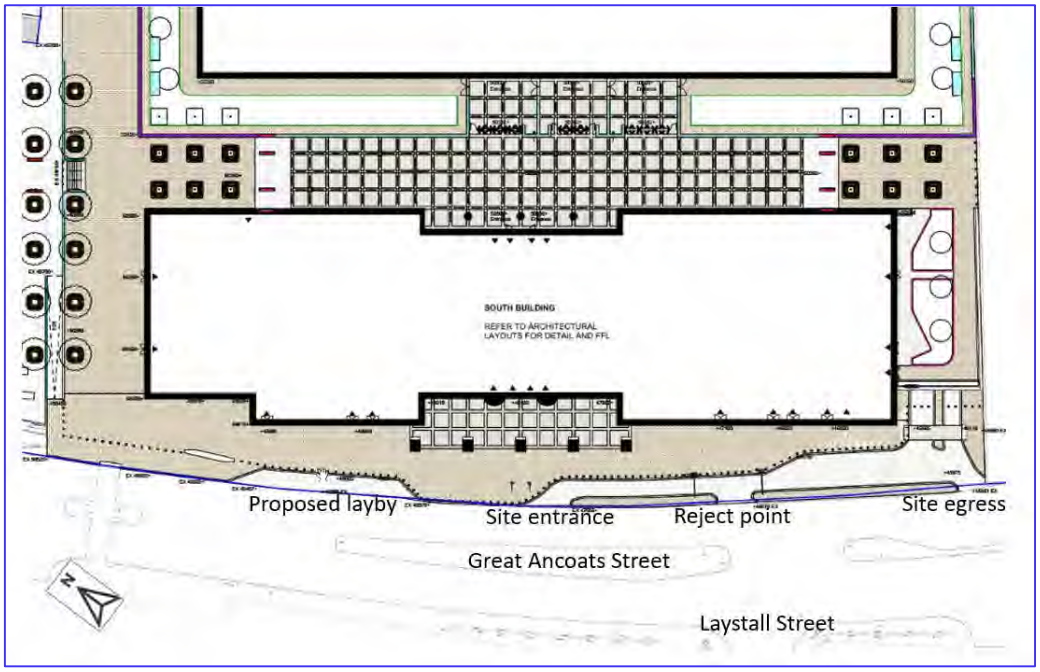


Figure 4-2 Proposed vehicular Site access

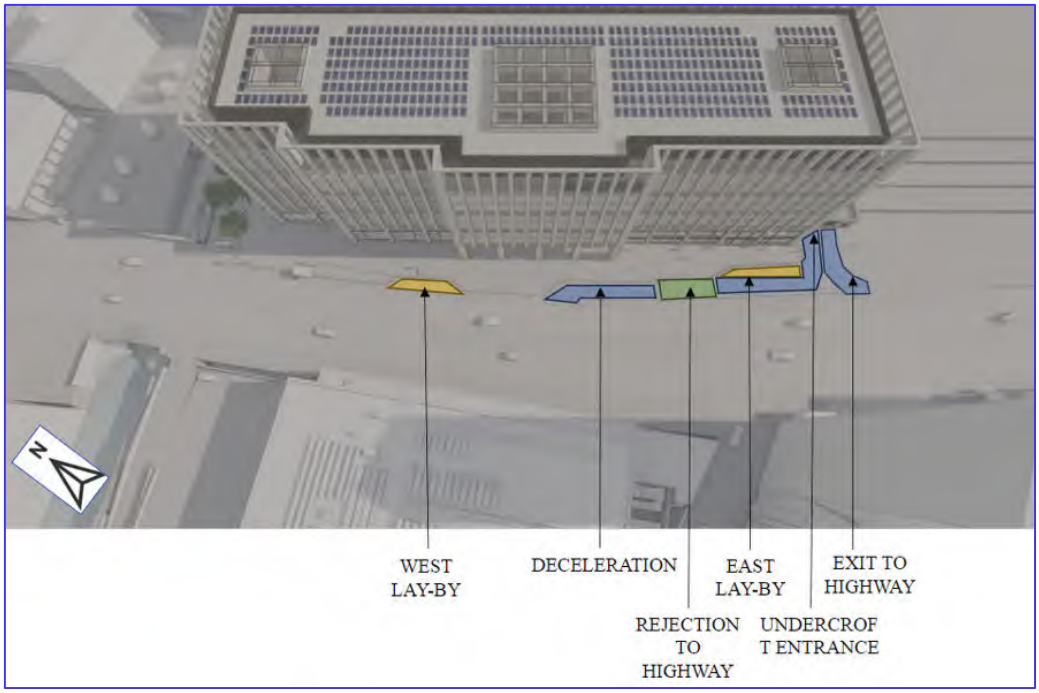


Figure 4-3 Proposed vehicular Site access – additional details and relation to building in 3D

The Site will be accessed from and alongside the northern edge of A665 Great Ancoats Street between the Rochdale Canal bridge and just west of the access to the former Central Retail Park. The access and egress arrangements will be a left-in/ left-out junction, either side of the existing Great Ancoats Street junction with the former Central Retail Park and Laystall Street. A deceleration lane will be formed taking arriving traffic from the eastbound direction of Great Ancoats Street, separated from it by a parallel island. Vehicles will be held in this holding area which will also have a 2-bay parking layby for servicing. Traffic passed for entry will turn left into the Site. Traffic not passed for entry will be returned to Great Ancoats Street to continue in the eastbound direction just ahead of the former Central Retail Park access/ Laystall Street junction. Non-rejected traffic leaving the Site as part of the normal operations will join Great Ancoats Street just beyond this junction. In addition, the Site would be served by a separate layby further west in advance of the deceleration lane for servicing the retail units and for drop-offs and pick-ups.

Access will be managed from a control room alongside the eastern edge of the Proposed Development, with a holding area and 4-bay parking in a layby on the northside of Great Ancoats Street.

An assessment has been made with the Visual Simulation (VISSIM) suite of traffic modelling software of the Site access, using the TRICS data to spread the car park maximum of 50 vehicles over the day; this results in a demand of 18 vehicles in the morning peak hour. It was assumed that a further 4 vehicles would be rejected and turn back onto Great Ancoats Street. This modelling has shown that even with a peak-of-peak hour arrival, any queue formed would be within the site and not tail back onto Great Ancoats Street.

Similarly, an assessment has been made of the west layby based on assumed dwell times, and this concluded that a layby here should be no more than 4 vehicles in length. This analysis was based on an onerous but robust series of assumptions, the 4-bay solution solving any queueing onto the mainline if demand was set at a vehicle arriving every 20 seconds, having a dwell time of 1 minute and approach and depart times of 10 seconds. This assumes 180 vehicles will arrive in an hour which is above the 82 multi-occupancy vehicles expected to arrive in the morning peak hour, which includes 24 taxis (see Section Trip Generation), and assumes all multi-occupancy vehicles will use this layby.

4.2.3 Bus stop relocation

The eastbound bus stop currently located between the canal bridge and the Laystall Street junction would be moved further east to just east of the Ducie Street junction as shown in Figure 4-4.

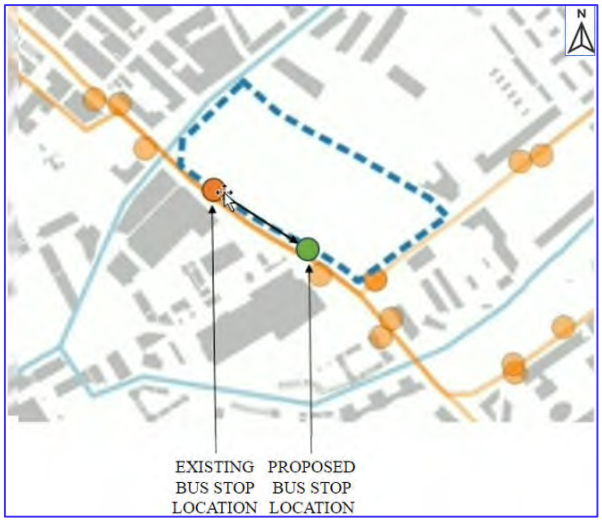


Figure 4-4 Proposed eastbound bus stop relocation

4.2.4 Pedestrian access

Pedestrian access will be along the 'front' of the site along Great Ancoats Street and between the two buildings from the west side with access from Great Ancoats Street and the east side through the proposed Park also accessed from Great Ancoats Street. There may be some use of Hugh Oldham Way.

There are no proposals to add pedestrian crossings given the layout of the buildings and the location and configuration of the vehicular access on Great Ancoats Street. Further details are provided in the Pedestrian Movement Assessment in Appendix A.

4.2.5 Cyclist access

Cycle access is proposed to be along the eastern edge of the Site from Great Ancoats Street (north side) and Hugh Oldham Way and along the western edge of the Site from Great Ancoats Street.

4.3 Cycle Parking

Local Transport Note 1/20 (LTN1/20) specifies 1 long stay space per 200 sqm of floorspace with 1 short stay space per 100 sqm of floorspace. Floorspace has been determined to be 53,000 sqm GIA (Gross Internal Area) which equates to 265 short-stay spaces and 53 long-stay spaces; a total of 318 spaces. The proposal is for 320 cycle spaces.

One shower for every 10 cycle parking spaces will be provided alongside 320 lockers and drying/changing areas.

Given the proximity to public transport hubs and the nature of the proposals it is expected that some employees would use bicycles for travel between home locations and public transport. Folding bikes are ideal for commuters needing to travel between home and a public transport stop or station; they also fold into a compact shape that makes storing them easy.

4.4 Public Transport

The Site is readily accessible by public transport, located close to Manchester Piccadilly Train Station, Piccadilly and New Islington Tram Stops and several bus stops.

It is considered that the Site is well located and readily accessible by public transport (train, tram and bus) for both commuters and visitors.

The Travel Plan will be encouraging greater use of public transport given the proximity of the bus, tram and train networks and stops/ stations.

4.5 Highways

4.5.1 Great Ancoats Street

Great Ancoats Street is the primary vehicle route passing the Site and providing vehicular access. It is proposed to provide a left-in/ left-out lane parallel to Great Ancoats Street separated from it by a narrow, kerbed area. As mentioned above, it is proposed to relocate the eastbound bus stop to permit this proposed arrangement.

An emergency egress is proposed to provide an exit from the Site onto Great Ancoats Street in the west most corner of the Site.

4.5.2 Servicing Lane

It is proposed that servicing would also use the Great Ancoats Street entrance, making use of the servicing lane .

4.5.3 Emergency Vehicle Access

Emergency access and egress to the Site would use a one-way route from Old Mill Street east of the Site along Hugh Oldham Way, with egress onto Great Ancoats Street. This is strictly for emergency use only. The route is shown at Figure 4-5.

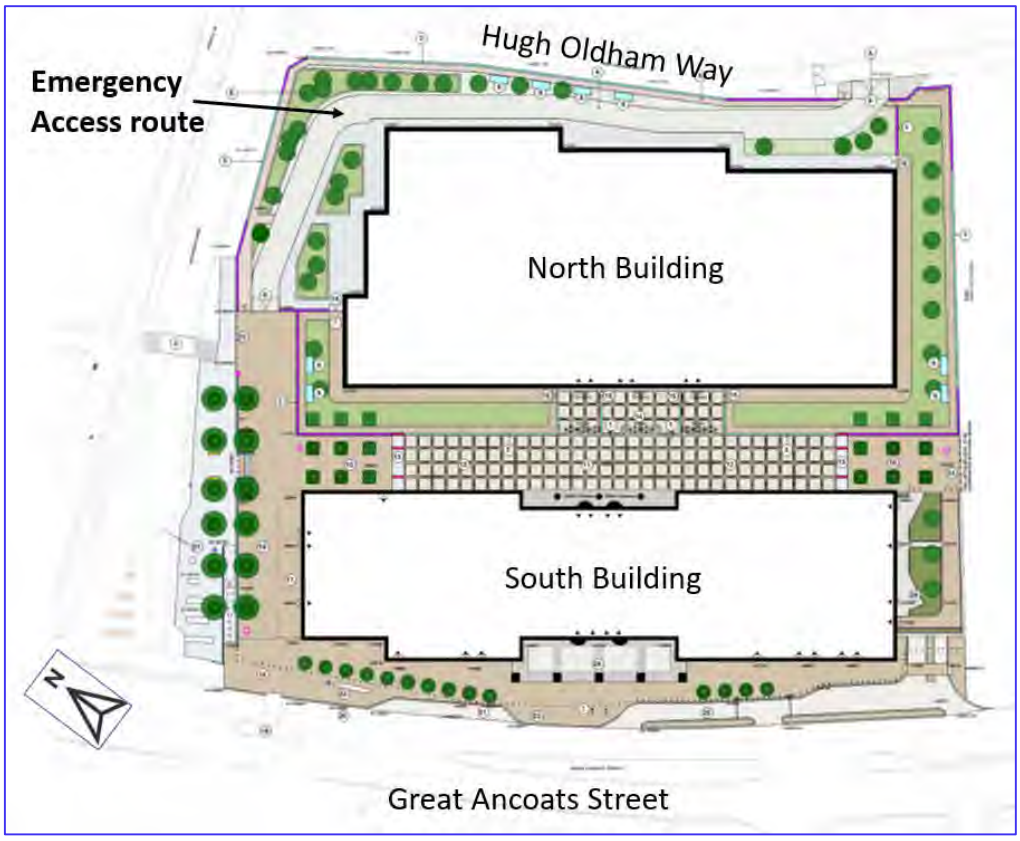


Figure 4-5 Emergency Access route location

4.5.4 Car Parking Provision

On-site parking provision will be limited to accessible spaces for disabled drivers and for visitors located in the basement and accessed from Great Ancoats Street.. It is proposed to provide 50 accessible parking bays, plus 5 spaces associated with facilities management and operations and 15 electric vehicle (EV) charging points.

It is proposed that any car commuters other than people with accessibility needs would make use of publicly available parking around the city centre, of which there are at least 7,000 parking spaces within a 1km walk of the Site. However, the Civil Service is committed to sustainable forms of transport and actively encourages its staff to use public transport and other sustainable modes of transport, seeking to minimise commuting by car. This will be the approach with this proposed scheme and is underlined by the low provision of on-site parking, itself directed towards disabled users.

4.6 Taxi Strategy

Taxis are an important part of the city's public transport system. Manchester's taxi drivers provide a demand responsive, 24 hours a day, 7 days a week, year-round service catering to a wide range of individuals' needs. It is one of the most flexible elements of the transport system and operates on a completely commercial basis.

In Manchester, taxis are integral in their support to the local economy by transporting people to their places of work and customers to places of business.

The Proposed Development is expected to be served by taxis. It is likely that the maximum number of arriving taxis at the Site would be 24 in the morning peak hour.

Traffic and parking in the area is limited. Drop-off and pick-up movements are to be restricted to the proposed layby to be provided generally at the west end of the Proposed Development (see Figure 4-2 and Figure 4-3), on the northside (eastbound side) of Great Ancoats Street. No drop-offs or pick-ups are permitted to take place elsewhere.

The Travel Plan Co-ordinator must ensure that taxi operators avoid all other areas, and also calls from taxi passengers to permit them to be dropped-off anywhere. An instruction will be issued that anyone travelling to or from the Site can only be dropped-off or pick-up in the proposed layby at the west end of the Proposed Development on Great Ancoats Street.

Existing Traffic Regulation Orders in the area controlling parking are to continue to be rigorously enforced by Manchester City Council, including and in particular on Redhill Street to the west of the Site.

In addition to any instruction about where taxis should drop-off or pick-up passengers is a directive on taxi routing. In order to arrive at the eastbound layby on the northside of Great Ancoats Street there is no alternative other than to approach this layby from the west. U-turning, particularly on Great Ancoats Street from a westbound to eastbound direction is to be expressly forbidden. In order to use the most appropriate routes, taxis are to be directed to approach the A665 Great Ancoats Street either from A62 Oldham Road on the northside, A665 Addington Road as part of the A665 Ring Road, also then making use of the A62 Oldham Road) or Lever Street on the southside.

4.7 Walking Strategy

Pedestrians will adopt a range of routes to and from the Site. Many will be associated with trips to and from bus stops, tram stops, and train stations in particular Manchester Piccadilly.

There are several existing pedestrian crossing facilities along Great Ancoats Street, including one towards the northwestern corner of the Site and at Old Mill Street.

The layout of the North and South Buildings of the Proposed Development is such that there will be a central boulevard between them, parallel with Great Ancoats Street. The North Building, furthest from Great Ancoats Street, is the larger of the two buildings and is expected to be home to circa two thirds of the proposed staff. With entrances to both from the central boulevard as well as an entrance on Great Ancoats Street, the layout of the buildings generates walking routes conducive to the use of the existing crossing points.

Staff and visitors to and from Manchester Piccadilly will be advised to use the pedestrian crossing at Old Mill Street and use Store Street as their walking route as part of the measures in the Travel Plan. Routes including Ducie Street and Laystall Street will also be used, and make use of the pedestrian crossing close to the canal.

4.8 Traffic Regulation Orders

There are no proposals to change any of the Traffic Regulation Orders in association with this Proposed Development. However, the proponents are very aware of the issues regarding parking on the local road network and will as part of the associated Framework Travel Plan will emphasise to the Proposed Development's staff and visitors to respect the restrictions on parking on the surrounding streets.

4.9 Trip Generation

The TRICS database has been used to estimate the trip rates associated with the Proposed Development. This database contains surveyed trip data for different land use types, including office sites. The database is widely used across the industry to predict trip rates for proposed land use development based on groupings of similar sites. For development sites in England outside London, it is normal practice to avoid using Greater London sites given the magnitude of the of public transport offer in the capital; trips here not only tend to show a greater public transport use, but also show a commensurate lower level of car use than the rest of the country.

After some initial runs of TRICS, the database was interrogated to consider sites in the West Midlands and North West considered as reasonable regions as a comparator for Manchester city centre/ Greater Manchester, with Town Centre and Edge of Town Centre sites with the default Gross Floor Area (GFA) range. TRICS offered sites based in Greater Manchester and Merseyside, but the total floor areas fell well below that of the Proposed Development. Table 4.1 shows a comparison of the GFA selected by TRICS in this initial scenario.

Table 4.1 Initial sites used to derive trip rates

TRICS Region	Location	Office type (as detailed by TRICS)	GFA (sqm)	TRICS Site reference
Greater Manchester	Fountain Street	Regus	3,960	GM-02-A-08
	New Mount Street	Leased Offices	2,500	GM-02-A-09
	St Peter's Square	Offices	6,420	GM-02-A-11
Merseyside	Mount Pleasant	Science Park Offices	11,250	MS-02-A-02
	Mann Island	Offices	15,000	MS-02-A-04

As can be seen, the Greater Manchester sites have relatively low GFAs. In terms of car trips, this combination of sites provided a morning peak hour inbound trip rate of 0.409 for an average of 7,826 sqm, giving 341 car trips inbound in the morning peak hour for the Proposed Development.

More comparable floor areas were provided by sites in Greater London. The combination of sites listed in Table 4.2 provided a GFA of 38,934 sqm for cars trips and a morning peak hour trip rate of 0.475, producing a generation of 395 car trips for the Proposed Development. Generally Greater London sites show a greater public transport use and commensurate lower level of car use than the rest of the country. Therefore, for development sites outside of London, it is normal practice to exclude London based sites from TRICS analysis. However, in this instance, the effect of using these Greater London sites generated more car trips. This may be due to the use of a large office development outside the heart of London, at Isleworth. From this point of view it is considered that the trip rates derived are robust, and if anything may be an overestimate.

Therefore, it considered that the two central London sites (in Fitzrovia and Farringdon) and the two outer London sites (in Hayes and Isleworth) balance to an extent that they reflect the high level of public transport offer for Manchester city centre.

Table 4.2 Resulting sites used in derivation of trip rates, reflecting large floorspace

TRICS Region	Location	Office type (as detailed by TRICS)	GFA (sqm)	TRICS site reference
Greater London	Fitzroy Street, Fitzrovia	Planning and Engineering	26,639	CN-02-A-03
	Charterhouse Street, Farringdon	Office	20,129	CN-02-A-04
	Millington Road, Hayes	Data Centre	18,900	HD-02-A-08
	Syon Lane, Isleworth	Sky Headquarters	120,000	HO-02-A-01
Merseyside	Mann Island	Offices	15,000	MS-02-A-04

Trip rates for the Proposed Development are based on the latest forecast of full time equivalent staff (at up to 4,373 FTEs) attending on any one day and a modal split based on the most relevant Sites selected from the TRICS database.

The total person rates are shown in Table 4.3 with the number of trips. The full TRICS output can be found in Appendix B. Delivery and servicing vehicles including Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) are to be timed outside the peak hours and are not part of those trip numbers. LGVs at this these times are forecast to be 94 vehicles with HGVs at 12 vehicles on average per weekday.

The mode share for car users has been compared with other sites. Single and multi-occupancy car trips have been predicted to be 32%. For comparison, although discounted from use in developing trip rates due to their size, other 'office' site sites in the TRICS database show a broad similarity in that approximately a quarter of trips with car-based trips ranging from 17.6% (Regus, Fountain Street, Manchester) to 39.4% (offices on St Peter's Square, Manchester). A separate survey of the Government office on First Street in Manchester recorded a 26% car use percentage. As mitigation will be introduced as part of the Travel Plan these trip numbers can be regarded as a worse-case scenario.

Table 4.3 Trip Generation

		Morning peak hour		Evening peak hour	
Mode	**Percent**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Single vehicle occupants	25.9	349	24	17	338
Cyclists	5.2	70	5	3	68
Pedestrians	18.5	249	17	12	241
Rail passengers	37.6	506	35	25	490
Coach passengers	1.1	15	1	1	14
Bus and Tram passengers	5.5	74	5	4	72
Multi-vehicle occupants	6.1	82	6	4	79
TOTALS		**1,346**	**92**	**66**	**1,302**

		Morning peak hour		Evening peak hour	
Mode	**Percent**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
		1,437		**1,367**	

4.10 Traffic Impact

The impact of the Proposed Development traffic has been modelled by Transport for Greater Manchester (TfGM) by their Highways Forecasting and Analytical Services (HFAS) team. The results and details of the traffic modelling are set out in summary in Appendix C and in detail in Appendix . The junction impacts are repeated here in Table 4.4, with the link traffic impacts shown in Table 4.5.

Table 4.4 Junction traffic impacts (between Adair Street and Cheetham Hill Road)

Total Junction Flows	**Morning peak hour**			**Evening peak hour**		
Junction	**Base traffic flow (vehs)**	**MDC vehicles**	**Impact (% change)**	**Base traffic flow (vehs)**	**MDC vehicles**	**Impact (% change)**
Adair St/ Great Ancoats St	2,298	216	9%	2,685	210	8%
Store St/ Old Mill St/ Great Ancoats St	2,166	149	7%	1,896	159	8%
Pollard St/ Great Ancoats St	2,143	136	6%	1,386	134	10%
Laystall St/ Great Ancoats St	2,422	121	5%	2,558	131	3%
Newton St/ Great Ancoats St	1,836	99	5%	1,878	60	1%
Lever St/ Great Ancoats St	1,805	84	5%	2,896	43	2%
Oldham St/ Great Ancoats St	2,058	66	3%	2,099	43	2%
Oldham Rd/ Addington St	2,046	63	3%	2,209	15	0%
Rochdale Rd/ Addington St	1,807	55	3%	2,086	17	0%
Corporation St/ Ring Rd	2,057	41	2%	2,748	35	1%
Cheetham Hill Rd/ Ring Rd	1,661	41	2%	1,933	35	2%
Rochdale Rd/ Ring Rd	1,789	4	0%	2,099	43	2%

Table 4.5 Link traffic impacts (between Adair Street and Cheetham Hill Road)

2-Way Link Flows	Morning peak hour			Evening peak hour		
Link	Base traffic flow (vehs)	MDC vehicles	Impact (% change)	Base traffic flow (vehs)	MDC vehicles	Impact (% change)
Trinity Way	815	31	4%	1,582	2	0%
A665 Cheetham Hill Road (north of Trinity Way)	802	7	1%	1,233	0	0%
A665 Cheetham Hill Road (between Trinity Way and Corporation Rd)	1,941	41	2%	2,657	38	1%
A664 Corporation Street (north of Ring Road junction, northbound only)	879	39	4%	1,139	29	3%
A664 Angel Street eastbound only	942	33	4%	1,018	29	3%
Corporation Street (south of Ring Road)	448	11	2%	443	30	7%
A664 Rochdale Road (north of Angel Street)	867	22	3%	938	15	2%
A664 Rochdale Road (south of Angel Street)	803	1	0%	1,020	14	1%
Rochdale Road (south of Ring Road) ('Shudehill')	651	0	0%	844	4	0%
A665 Miller Street westbound only (between Rochdale Rd and Corporation St)	977	3	0%	1,453	43	3%
A665 Adlington Street eastbound only	905	37	4%	1,173	29	2%
A62 Oldham Road (north of Adlington Street)	1,376	26	2%	1,486	40	3%
A62 Oldham Road (south of Adlington Street)	1,933	63	3%	1,906	15	1%
Oldham Street southbound only	142	0	0%	122	0	0%
A665 Swan Street westbound only (between Oldham Rd and Rochdale Road)	987	4	0%	1,122	43	4%
A665 Great Ancoats Street (between Oldham Road and Lever Street)	1,773	66	4%	2,120	42	2%

2-Way Link Flows	Morning peak hour			Evening peak hour		
Link	Base traffic flow (vehs)	MDC vehicles	Impact (% change)	Base traffic flow (vehs)	MDC vehicles	Impact (% change)
George Leigh Street northbound only	46	23	50%	43	1	2%
Lever Street northbound only	191	0	0%	335	0	0%
A665 Great Ancoats Street (between Lever Street and Newton Street)	1,697	79	5%	1,883	43	2%
Blossom Street southbound only	97	2	2%	82	25	31%
Newton Street	448	32	7%	472	10	2%
A665 Great Ancoats Street (between Newton Street and Laystall Street)	1,505	85	6%	1,489	43	3%
Laystall Street northbound only	145	5	3%	382	28	7%
A665 Great Ancoats Street (between Laystall Street and Ducie Street)	2,449	69	3%	2,615	116	4%
A665 Great Ancoats Street (between Ducie Street and Store Street)	1,912	99	5%	1,534	117	8%
Old Mill Street	309	3	1%	480	17	4%
Store Street	519	15	3%	485	51	11%
A665 Great Ancoats Street (between Store Street and Pollard Street)	1,593	89	6%	1,410	133	9%
Pollard Street	723	4	1%	182	5	3%
A665 Great Ancoats Street (between Pollard Street and Adair Street)	1,943	133	7%	1,248	130	10%
Adair Street	543	78	14%	499	81	16%
A665 Great Ancoats Street (east of Adair Street)	1,799	215	12%	2,214	209	9%

In this area nearly all the junction impacts are below 10%, but most would have more than 30 2-way trips added. There are some links where the two-way flows increase by more than 5%. Given that these are at a base year of 2024 and that the modelling excludes committed development traffic, these impacts could be reduced at the 2030 opening year.

Although traditionally this would trigger junction assessments to be considered in a Transport Assessment following discussions with HFAS and the Council Highways team it was agreed that in light of improvements already made to the network, that there should no more improvements to the highway solely to contain the additional traffic this

Proposed Development would generate. Instead the emphasis should be towards reducing this generated traffic to more sustainable travel choices, which is consistent with the objectives of the Applicant. This should be achievable given TfGM's July 2024 announced update to further improve public transport building on local bus service franchising and development of the Bee Network to help local areas like Manchester realise their own aims to reduce single-occupancy car use with new services, better ticketing, cheaper fares, more local control of the bus network and some rail routes across Greater Manchester. The Framework Travel Plan proposes a range of measures at providing high quality public information for staff and visitors as well as contributing to additional buses and/or bus services.

5. Deliveries and Servicing Strategy

5.1 High Level Principles

The Proposed Development will be serviced out-of-hours, but only up to 2200hrs on weekdays and possibly starting at 0600hrs, with most trips being confined to after the evening peak period; there may be some movements prior to the morning peak period. The TRICS analysis has forecast 94 LGVs at this these times and 12 HGVs on an average weekday.

Servicing will take place off Great Ancoats Street in the eastern layby. Some servicing for the shops would also take place in the western layby (see Figure 4-2 and Figure 4-3).

There will be a pre-booking system in place managed by the onsite facilities management team to ensure the servicing bay is used effectively and to avoid congestion.

Goods stores will be provided at ground level for receipt of deliveries. A waste tore with external doors will also be provided so outgoing waste can be consolidated and readily collected from the kerbside.

5.1.1 Management

The following key measures would be implemented during the operational phase of development to manage delivery and servicing requirements

- There will be a facilities management team stationed at the Proposed Development throughout the operational hours;
- There will be a booking system in place to manage deliveries. The system will be time-specific and provide time-limited slots to those delivering to the Proposed Development. This will prevent any traffic destined for the Proposed Development building-up on the network. Additionally, the pre-booking system will ensure that delivery vehicles meet any space / height restrictions;
- There will be security measures including CCTV, intercom, and access control;
- Ongoing monitoring of deliveries to the Proposed Development, via service / delivery logs and the online booking system will highlight whether further reductions and efficiencies in delivery timings and reductions are required.

There are also several measures that could be considered for incorporation should future monitoring require improvement to delivery processes, efficiency, or control; these potential future measures include delivery and servicing trip rationalisation and management. A cohesive strategy between the buildings could be implemented whereby orders are logged by a certain day each week, and then consolidated to reduce the overall number of delivery and servicing trips to the Proposed Development each week.

6. Construction Traffic Management Principles

The contractor will provide full details of how construction will be managed for the Site including principles of best practice construction management and any other information or recommended mitigation measures that have been identified at this stage, based on information available.

Further details are to be found in the Construction and Environmental Management Plan (CEMP), see ES (Volume 4) Appendix 6.1.

6.1 Objectives

The objectives of construction management for the Proposed Development are to:

- Provide a safe environment for transport network users (drivers, pedestrians, and cyclists) and construction staff; and
- Manage and / or mitigate construction traffic-related effects.

6.2 Construction Programme

Construction is expected to take place over a 48 month period. A construction programme indicating the likely number of one-way vehicle trips during the different stages of the site's construction has been made available and is summarised below in Table 6.1.

Table 6.1 Construction Programme

Construction Phase	Construction Period (months)	All Vehicles (average per day)	HDVs (average per day)
Enabling works	6 months	113	19
Sub Structure	6 months	153	11
Superstructure	9 months	298	39
Façade & Roof	12 months	183	5
Internal Fit-out	12 months	130	2
Hard & Soft Landscaping	3 months	14	2

As can be seen in Table 6.1 the third construction phase (Superstructure) is the most instensive with on average 298 one-way vehicle trips per day (of which 39 would be HDVs). This phase is estimated to last nine months (month 13 to month 21, of the 48 month programme).

It is envisaged that typical construction hours will be Monday to Friday 07:30-18:00 hours and Saturday 08:30-14:00 hours.

6.3 Construction Methodology

Any proposed temporary traffic management measures shall be agreed between the contractor and Manchester City Council in accordance with their licencing procedures. All necessary licences shall be applied for by the contractor.

Formation of a permanent area for car parking will be allocated at the start of the construction phase. An area will be allocated for the loading and unloading of construction vehicles. Parking arrangements will be confirmed by the contractor following appointment. It is anticipated that as much parking will be provided within the Proposed Development Site as possible, with off-site space for parking also identified should it be required.

Space will be made for the storage of materials and waste and for the loading and unloading of vehicles where possible. This will ensure that disruption to the public highway is minimised with activities limited to the lifting of larger materials by mobile crane if required.

A site set up plan showing the access / egress points, site office and material storage location will be provided by the contractor for sign off prior to commencement.

Details of any excavation, sub-structure, super-structure, and cladding, fit out, testing and commissioning will be confirmed by the contractor once appointed.

6.4 Vehicle Routing and Site Access

To reduce the impacts of any construction movements, particularly HGV movements, vehicle routing will need to be considered and informed by the following:

- Avoid sensitive areas, such as residential areas and the neighbouring school, where possible;
- Avoid busy routes / junctions where possible;
- Ensure that vehicles can access roads and site gates; and
- Provide suitable loading / unloading areas for vehicles onsite.

Routes for construction traffic are proposed. The Outline Construction Environmental and Management Plan (OCEMP) has proposed 3 routes and a primary and secondary access to the Site. The Plan will be secured in detail via planning condition once a contractor is appointed and prior to commencement of development.

The construction traffic routes are shown in Figure 6-1 and are listed as:

- Blue Route, MDC Site linked to M60 Junction 22 via A62 Oldham Road;
- Green Route, MDC Site linked to M60 Junction 23 via A662 Pollard Street/ Ashton New Road; and
- Orange Route, also linking MDC Site with M60 Junction 23, but via A635 Ashton Old Road.

The primary access has been cited as at the existing Great Ancoats Street/ Former Central Retail Park / Laystall Street junction, and a secondary access at the Old Mill Street/ former retail service access junction (adjacent to Hugh Oldham Way), when the primary access is not available.



Figure 6-1 Proposed construction traffic routes

Construction traffic should arrive using the A62 Blue Route and depart using either the A662 Green Route or A635 Orange Route to avoid vehicles having to make a right turn into the Site or out of the Site at the existing Great Ancoats Street/ former retail park/ Laystall Street junction.

A key exclusion is that no heavy goods construction traffic should use Old Mill Street north of the High Oldham Way junction in either direction.

Should any temporary traffic management be required these will be identified and agreed with Manchester City Council prior to commencement. This will include swept path analysis.

Once appointed the contractor will need to confirm Site access details for the construction stage. The contractor will ensure that good access will be available to and from the Site from the start of construction process for construction vehicles including adequate visibility and a banksman if required.

Site access arrangements will be discussed with Manchester City Council prior to commencement of any works by the contractor.

6.5 Construction Management

The contractor will confirm the measures to reduce risk and congestion and submit them to Manchester City Council for approval.

It is envisaged that these measures would be formed around the principles of demand management and the “5R’s”; ReTime, ReMode, ReRoute, ReStructure, and ReDuce, and include the following:

- A site materials controller will be appointed to schedule and manage deliveries on site. The site materials controller will ensure that timings for deliveries are staggered throughout the day.
- Vehicular activity will be controlled through designated timing. Any vehicles arriving outside of their designated time may be turned away (with a rearranged delivery time) unless there is available capacity for them to load / unload on-site.
- Deliveries and haul of materials off site will take place outside of peak hours, considered to comprise between 07:00-09:00 and 16:00-18:00 hours. Any deliveries or haulage required during these hours will require permission from Manchester City Council.

- Sub-contractors will be required to request an appropriate delivery day / time with the Site team to avoid, as best as possible, any stacking of delivery vehicles and congestion on local roads. Vehicle queuing and idling in the public highway will not be permitted.
- Any re-timing of deliveries will have to be carefully managed and re-timed to avoid the peak periods where possible.
- Parking will be provided on site for construction staff and vehicles where possible with a focus on car sharing to reduce vehicle movements on the local network. There may also the opportunity for construction staff to travel to and from the Site via sustainable modes such as buses and rail which will be promoted as part of the induction process by the contractor.
- Secure (temporary) cycle parking will be provided on-site and monitored to ensure capacity meets demand.
- Construction vehicles travelling to and from the Site will be notified of the appropriate construction routing.
- The contractor will follow the guidelines within the Freight Operators Recognition Scheme (FORS). The FORS aims to promote the improved operational efficiency and performance of a haulier and encourages freight companies to prioritise safety and reducing their impact on the environment.
- The contractor will be required to be a part of the Considerate Contractors Scheme (CCS) with their contact details provided to the Manchester City Council and to be advertised on the site hoarding.
- The contractor will appoint a Construction Liaison Officer to manage communication and any complaints that arise, with their contact details clearly displayed in a location viewable by the public.
- Secure hoarding will be placed around the boundary of the Site with signed and gated vehicular access.
- Traffic marshals (banksmen) will be allocated to monitor access and egress of construction vehicles to ensure protection to pedestrian and highway traffic during the construction process.
- The contractor will ensure that all reasonably practical measures are implemented to stop the deposition of mud and other debris on the highway network. The aim of the measure is to ensure that no detritus leaves the Site and leads to remedial action being required on the road network. The measures should include:
    - Providing a hard standing loading area for construction vehicles to minimise the potential for mud collection and transferal onto the road
    - Controlling dust by damping down of materials
    - Ensuring the Site is cleaned consistently to reduce the change of construction vehicles transferring any debris onto the highway
    - Facilities for wheel washing at the Site ingress and egress, and
    - Covering all vehicles leaving the Site which have soil or surplus material.
- Dust suppression measures, air quality controls, and noise and vibration controls will all be adopted during the construction process.
- Contact details for the Site construction manager will be provided to Manchester City Council to facilitate expedient action should any issues relating to construction vehicles arise.

6.6 Vehicle Movements

Given the envisaged Site working hours of 08:00-18:00 hours, it is expected that most construction staff will travel outside of the typical peak hours and avoid network peak traffic.

Parking will be provided where required, and alternative methods of transport (such as bus) will be promoted.

The mix of construction vehicles is currently unknown. The Site materials controller will schedule and manage deliveries on Site, ensuring that timings for deliveries are staggered throughout the day and avoiding peak hours.

Vehicle movements for construction works and vehicles will be confirmed by the contractor once appointed.

6.7 Implementing, Monitoring and Updating

A Construction Traffic Management Plan (CTMP) will be produced by the contractor and submitted to Manchester City Council for approval.

It is envisaged that the contractor will appoint a CTMP Coordinator. The responsibilities of the CTMP Coordinator will include:

- Implementation, review and updating the CTMP as required;
- Monitoring Site activities;
- Arranging and enforcing appropriate traffic management;
- Conducting Site inductions, including routing / restrictions for construction vehicles;
- Liaison with sub-contractors;
- Engagement with local residents; and
- Managing and maintaining the complaints log and mitigating transport related risk.

The CTMP Coordinator will review the CTMP regularly and as / when conditions change. Records of any updated revisions will be held on file. This should include any certificates or inspection records required for traffic management.

7. Impacts on adjacent proposals

7.1 Introduction

The remaining elements of the former retail park are proposed to be a Park adjacent to the proposed MDC Site, and then further office development known as ‘Phase 2’ towards and bordered by Old Mill Street and Great Ancoats Street. ‘Phase 1’ is also a reference to the MDC Site.

The proposed Park development is shown in Figure 7-1 as taken from the proposed Park’s Transport Statement (October 2024 for Manchester City Council) which also shows proposals for the Phase 2 development.



Figure 7-1 Proposed Park and Phase 2 developments

7.2 Park development

Connections of the Park proposals with the Proposed Development are shown in Figure 7-2 as taken from the same Transport Statement, focusing on the proposed Park’s main mode of movement. It is assumed cyclists will also cross between the proposed Park and MDC site. Vehicular servicing of the site will be taken from Hugh Oldham Way to the northeast.

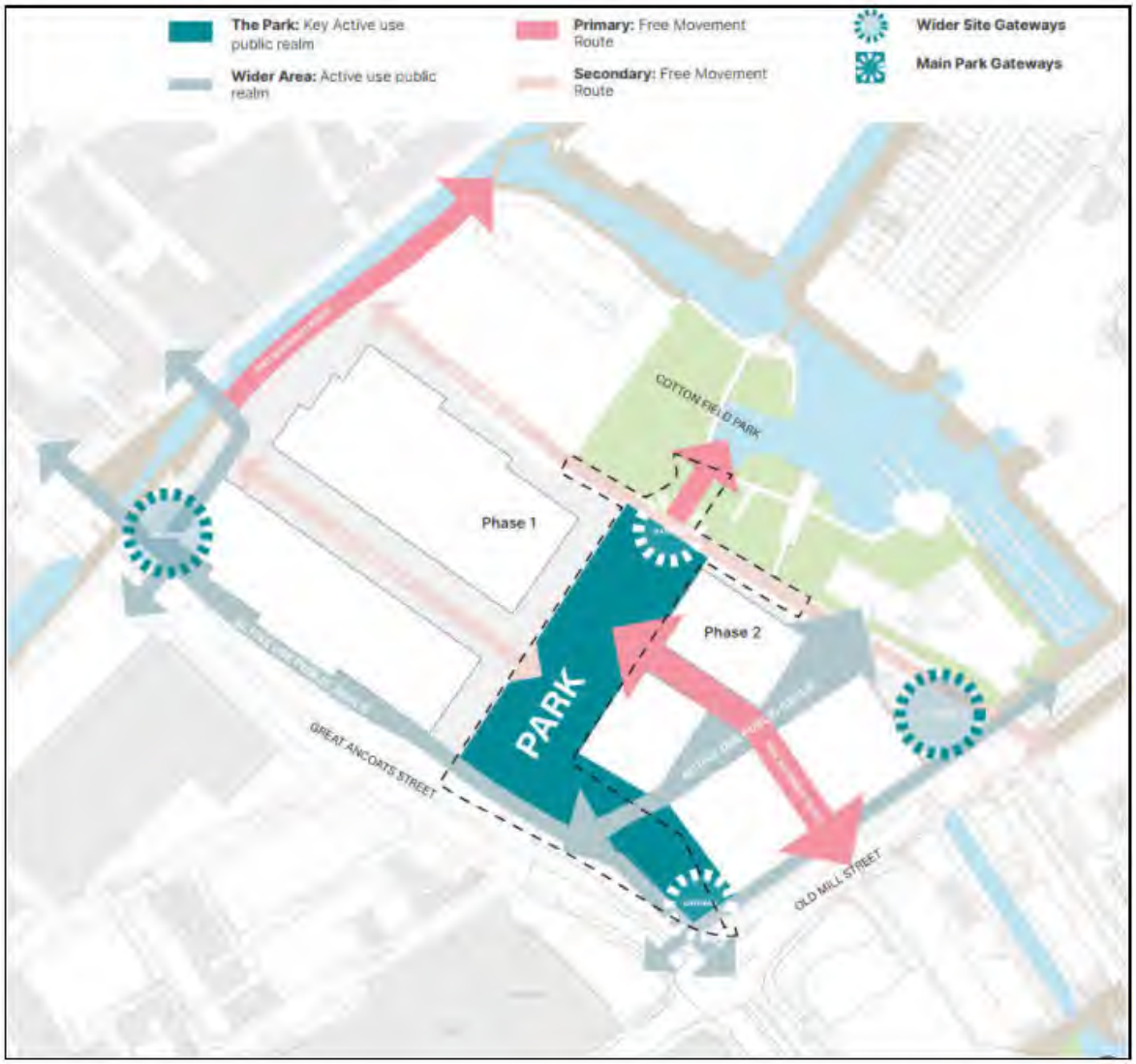


Figure 7-2 Pedestrian access of the Proposed Park and relationship with MDC

7.2.1 Operational trip generation

The proposed Park will provide an amenity for the local residential and business community, as well as for passersby. Therefore, it is not anticipated to be a trip attractor, other than for the local surrounding community, including people working in the proposed adjacent office developments, and for people passing by. No car parking will be provided for the proposed Park.

Consequently, the proposed Park is only anticipated to generate local trips, with the vast majority being made on-foot, a few being made by bicycle, and a negligible number by car. Many of these trips will also be linked, or pass-by trips, rather than trips made solely to access the Park. Maintenance of the proposed Park is anticipated to generate very few, infrequent vehicle trips, typically less than one return trip per day.

7.2.2 Construction trip generation

Construction of the proposed park is anticipated to generate relatively few construction vehicle trips over the construction programme. Much of the ground/earthworks for the proposed Park will be completed by Phase 1 (MDC), using surplus excavated material reused on site as much as possible to minimise traffic movements. Peak construction traffic generation will be in the early stages of construction when construction materials, such as

topsoil, will need to be delivered to site. Most of the construction workforce is anticipated to commute to and from the Site by public transport.

Construction of Phase 1 (MDC) is not anticipated to overlap with the construction of the proposed Park.

7.2.3 Operational phase impacts

The proposed Park is anticipated to only generate local trips, with the vast majority being made on-foot, a few being made by bicycle and a negligible number by car. Many of these trips will also be linked, or pass-by trips, rather than trips made solely to access the Park. It will generate negligible additional vehicle trips.

The proposed Park will also provide a local amenity that will encourage local trips by sustainable modes of transport, particularly on foot, by improving accessibility and linkages in the area that offer pleasant alternative routes to existing footways along local streets.

Consequently, use of the proposed Park will have a negligible impact on the operation performance of the road network and a minimal impact on pedestrian and cycling facilities and public transport services.

7.2.4 Construction phase impacts

Much of the ground/earthworks for the proposed Park will be completed by Phase 1 (MDC), using surplus excavated material. This will significantly reduce the amount of additional traffic generated by the construction of the proposed Park. Consequently, construction of the proposed Park is not anticipated to generate enough construction vehicles per day to materially affect the operational performance of the road network or to give rise to any related significant adverse consequential effects.

Any adverse effects of construction traffic generated by the building of the proposed Park will also be minimised by the implementation of a Construction Management Plan (CMP) that will be prepared by the Principal Contractor, once appointed, and will include a construction traffic management plan. The CMP will build on the draft CMP contained in the Environmental Statement (ES) and agreed with the planning authority prior to commencement of construction.

7.2.5 Impacts of Manchester Digital Campus proposals on the Proposed Park

Given the low level of trip generation from the proposed Park and that most of the vehicular traffic associated with the Proposed Development (MDC) is spread across the city centre, it is not considered that the Proposed Development will impact on the operation of the Park and its construction.

Links between the sites are for pedestrians and cyclists. The proposed Park will be used to access the Proposed Development.

7.3 Phase 2 development

Proposals for the Phase 2 development appear to be a similar level office development as the Proposed (Phase 1,MDC) Development, and although the parking element is yet to be defined there may be a greater level than at the Proposed Development. Access is assumed to be taken from Old Mill Street adjacent to Hugh Oldham Way where the former retail park had its service access.

As traffic generated for the Proposed Development is forecast to be spread across the city centre to gain access to off-site car parks it is not considered that the Proposed Development would have a material impact on the Phase 2 development. Clearly traffic will pass through the Great Ancoats Street/ Old Mill Street junction; the Proposed

development adds 149 and 159 vehicles through the junction in the morning and evening peak hours respectively, equating to increases of 7% and 8%, respectively. These increases are likely to be within the daily fluctuation and so should not cause an issue for the development of the Phase 2 site.

8. Summary and Conclusions

8.1 Summary

AtkinsRéalis was appointed by the Government Property Agency (GPA) to conduct a Transport Assessment and accompanying Framework Travel Plan to support the proposal to build new offices on part of the former Central Retail Park Site alongside the A665 Great Ancoats Street in the Ancoats district of Manchester, just to the north and east of the city centre. The Proposed Development will support 7,000 jobs into the region, with the operational development being expected to hold around 4,400 staff per day across the two office buildings.

There has been detailed discussions with Manchester City Council and GPA, particularly to determine the level of trip generation to and from the Proposed Development and to ensure car trips generated are not underestimated. To that end, the trip generation has used data available from similar sites in terms of location and/or size of development and in areas with a similarly high level of traffic of public transport provision. Checks have been made on the level of car use predicted for the Site comparative to other offices including a Government office site in Manchester, confirming that the level proposed for this Site is in alignment.

Parking provision on-site has been focused on delivering a good level of service to disabled users, with 50 car park spaces on-site for disabled users, 15 of these will be fitted with equipment for EV charging. Additionally,320 cycle parking spaces are also to be provided on-site with showers and lockers.

The level of public transport provision has been assessed resulting in an ‘excellent’ score as defined by BREEAM following a Public Transport Accessibility Level assessment. This assessment has been based on the level of public transport offer – bus, tram and train - within different walking times for each mode. The buses and trams that use the Piccadilly Gardens Interchange fall outside this walking time criteria, but the score is aided by bus provision on the Oldham Road corridor, Great Ancoats Street itself, tram provision at New Islington tram stop and the range of train services and the tram stop at Manchester Piccadilly Station.

Vehicular access will be only provided in the eastbound direction. The Site access will be formed of an off-road access lane from Great Ancoats Street. There will be an initial managed checking point where rejection will put vehicles back onto Great Ancoats Street just ahead of the existing stop line at the Laystall Street junction. Traffic permitted into the Site will then either park in a layby for servicing the Site or proceed to turn into the Site at a second security gateway. Traffic leaving the Site will join eastbound-only traffic at a location after the Laystall Street junction. The existing bus stop on the northside of Great Ancoats Street west of Laystall Street is proposed to be relocated to the east of Laystall Street.

A west layby will also be provided for dropping-off and picking-up passengers and has been deemed as the drop-off and pick-up point for taxis.

TfGM’s traffic modelling team, Highways Forecasting and Analytical Services (HFAS) were commissioned to model the impact of the additional traffic associated with the Proposed Development. They were approached as they would have access to data that an otherwise independent model would be scrutinised against by HFAS. In particular, HFAS have data on home trip-ends and city centre car park trip ends. Some new surveys were undertaken by HFAS to fill gaps in the data they already have. In the Ring Road corridor from and including Trinity Way to just beyond Adair Street, on which Great Ancoats Street forms a part, the additional traffic does appear to have a material impact and, ordinarily, junction assessments would be required with mitigation measures proposed, with the emphasis of providing capacity for the additional traffic by physical means (such as lane widenings, extra lanes) or traffic signal timing changes. As the network has been recently and continues to be improved to provide better movements for all users, the focus on mitigation is placed firmly on removing single-occupancy car use from the network to more sustainable travel choices, aided by recent and planned public transport improvements and by a stretching series of targets in the Framework Travel Plan.

A delivery and servicing strategy has been produced, including measures to manage servicing and operations. An off-street servicing bay will be provided after the first check point.

Construction traffic management principles have been identified including measures and how they will be implemented, monitored, and updated.

8.2 Conclusions

The Proposed Development will provide office accommodation for GPA which falls under Class E office use.

This Transport Assessment has been prepared with consideration of the local and national policy context. The Site encourages employment growth whilst being able to maximise sustainable travel modes due to the high level of public transport which has resulted in this Site achieving 'excellent' public transport access as defined by a test against BREEAM criteria.

Car parking on-site has been kept to a minimum, focused on providing parking for disabled staff. Whilst car parking off-site is likely to be used by some staff, the GPA will actively encourage sustainable modes of transport and this is supported by steps already taken, with more to follow, by TfGM to improve the already high level of supply of public transport.

Appendix A. Pedestrian Movement Assessment

Government Property Agency

AtkinsRéalis



MANCHESTER DIGITAL CAMPUS

Pedestrian Movement Assessment Report

NOVEMBER 2024

Notice

This document and its contents have been prepared and are intended solely as information for Government Property Agency and use in relation to Environment Impact Assessment of the Manchester Digital Campus

AtkinsRéalis UK Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 19 pages including the cover.

Document history

Document title: Environmental Statement Volume 4 – Appendix 18.1 Transport Assessment – Appendix A Pedestrian Movement Assessment

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Planning Submission issue	DRG	PW	GF	IL	25/11/2024

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1. Introduction

1.1 Overview

AtkinsRéalis was appointed to support the development of the proposed Manchester Digital Campus (MDC) for the Government Property Agency (GPA). The Site is located to the north of Manchester city centre in the Ancoats district.

It is proposed to construct 2 office units totalling around 84,000sqm of floorspace for 4,373 full time equivalents (FTEs) out of a workforce that will be based here of 7,000 FTEs. It is also proposed to provide only 50 parking bays, of which 49 will be for disabled users with 15 electric vehicle (EV) charging points and with 320 cycle parking bays. The offices would open in 2030.

It is envisioned that the Proposed Development will attract new businesses and talent to Manchester. The development should bring together activities and people to create a vibrant mixed use neighbourhood, complementing and uniting the surrounding districts. In doing so, the proposal represents a key opportunity to help unlock the potential of east Manchester.

1.2 Site location

The Site was previously occupied by a Former Central Retail Park. Ownership of the Site passed to Manchester City Council in 2017. The retail units were closed and demolished in 2019.

The Site is located approximately 600 metres to the north of Piccadilly train station. It is bounded by A665 Great Ancoats Street to the southwest, the Rochdale Canal to the northwest running parallel with Redhill Street and a school along its northeast boundary. It is proposed that the Site will occupy the northwest end of the former retail park, the southwest end of the Site alongside Old Mill Street being taken forward by another developer and end user.

The Site is located in an area of high accessibility by public transport involving bus, train and tram modes. Bus access is provided predominantly at the Piccadilly Gardens Interchange with some service passing on Great Ancoats Street, along the Oldham Road/ Street corridor and serving the Shudehill Bus Station, the nearest train station is at Piccadilly and the nearest tram stop is at New Islington, with others at Piccadilly train station, Piccadilly Gardens Interchange and Shudehill.

The Site is shown in Table 1-1, the area shown as the ‘neighbouring site’ is planned to contain an area of parkland across the area from Great Ancoats Street immediately adjacent to the MDC site and further office development towards Old Mill Street.



Figure 1-1 – Site Location Plan

1.3 Principle of approach

To support the ambition of a highly sustainable development, the understanding of pedestrian movements to and from the Site from receptors on the surrounding highway network (such as transport and local amenities) will enable the identification of usable routes and whether any of those routes are sufficient to cater for the demand generated by the development.

1.3.1 Pedestrian trip generation

Trip generation figures for pedestrians (either those who are pedestrians for the whole of their journey or those use public transport as part of their commute) are based on those supplied by the Transport Assessment. These figures are reproduced in Table 1-1.

Table 1-1 - Trip Generation

		Morning peak hour		Evening peak hour	
Mode	**Percent**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Single vehicle occupants	25.9	349	24	17	338
Cyclists	5.2	70	5	3	68
Pedestrians	18.5	249	17	12	241
Rail passengers	37.6	506	35	25	490
Coach passengers	1.1	15	1	1	14
Bus and Tram passengers	5.5	74	5	4	72
Multi-vehicle occupants	6.1	82	6	4	79
TOTALS		**1,346**	**92**	**66**	**1,302**
		1,437		**1,367**	

1.3.2 Pedestrian walking times

Isochrones have also been generated to illustrate the distances that can be traversed by pedestrians in 5, 10 and 15 minute walking times. These are shown with uneven extents in the blue shaded areas. In terms of distance, these roughly equate to 325 meters, 650 meters and 975 meters respectively. These are shown as concentric circles which also serve to approximate the isochrones as regular circles. The isochrone plot can be seen in Figure 1-2.

The origin point for the isochrones plot is the main pedestrian courtyard/boulevard area located at the south west corner of the MDC Site close to the controlled pedestrian crossing near the canal towpath as is goes under Great Ancoats Street. This is the predominant “landing area” for pedestrians as this facilitates an at-level access to the various entrances within the development.



Figure 1-2 - Walking isochrones

In addition to the isochrones plot, the map also includes the locations of local transport infrastructure that is expected to serve the development.

shows the MDC development's connectivity to the local transport hubs. The walking routes are shown together with their walking times.

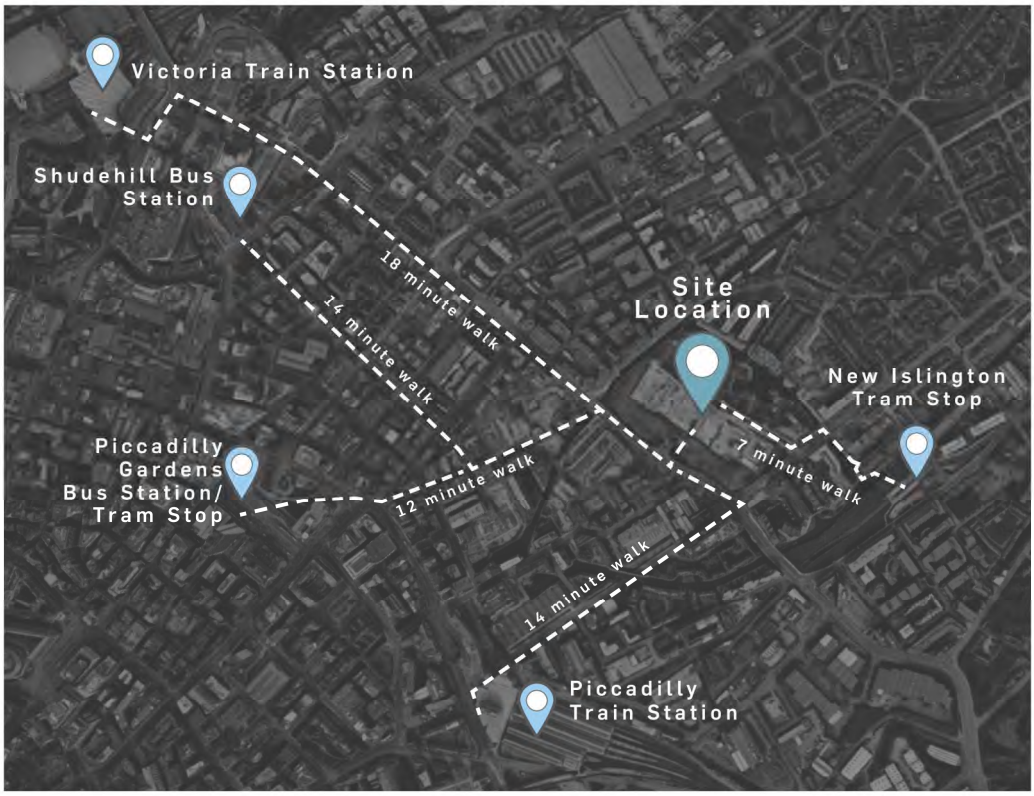
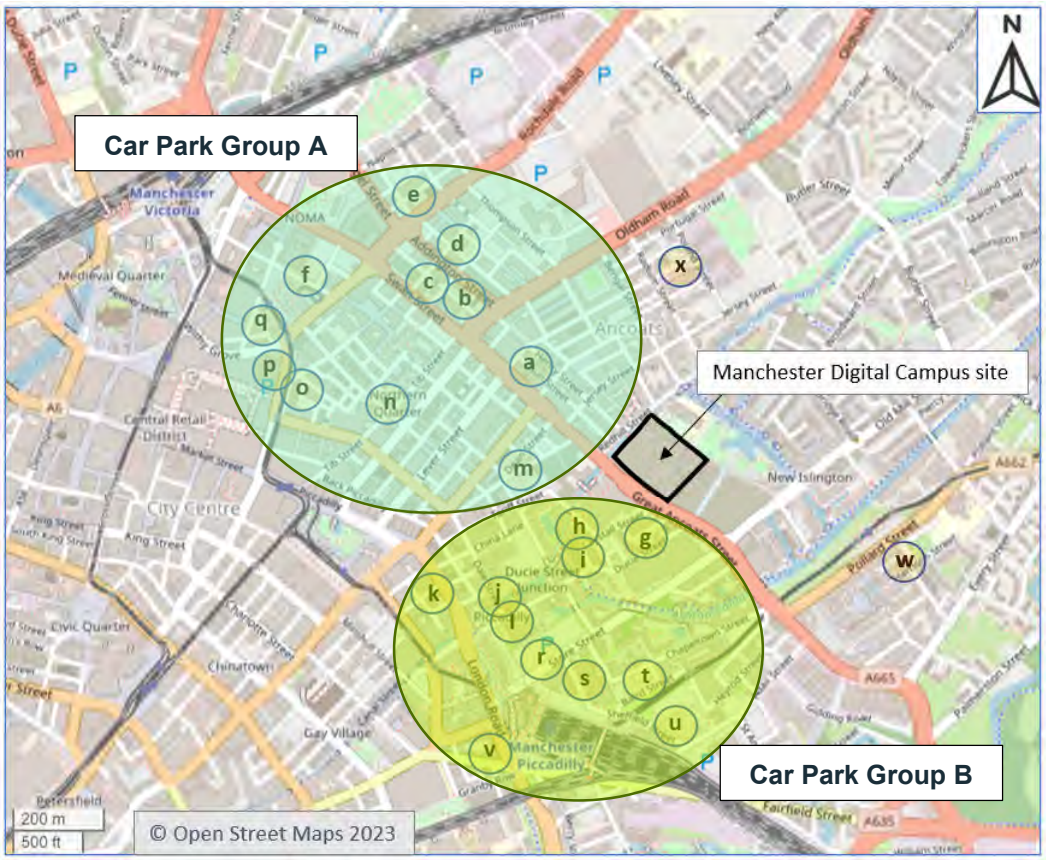


Figure 1-3 - Connectivity to local transport hubs

For the AM peak, trip generation figures in Table 1-1 indicate that there will be 349 single-occupancy trips and 82 multi-occupancy trips. This will equate to around 529 pedestrians walking to/from long stay car parking locations assuming multi-occupancy vehicles contain, on average, 2.2 people.

349 + 2.2 * 82 = 349 + 180 = **529**

There are approximately 7,500 car parking spaces located within a 1 km /15 minute walk of the development. The location of these long stay car parks is shown in Figure 1-4 below.



Ref	Location	No. of parking spaces	Comment
a	Gun Street	140	
b	Castle Street	32	
c	Cross Keys Street	13	
	Cross Keys Street	39	
	Goulden Street	25	
	Goulden Street	33	
d	Thompson Street	67	
	Mason Street	15	
	Rochdale Road	23	
	Rochdale Road	65	
e	Rochdale Road	45	
	Shudehill	84	Reserve spaces
f	Hanover Street	145	Reserve spaces
	Manchester Printworks	771	Reserve spaces
	Lomax Street	15	
g	Ducie Street	9	
	Ducie Street	42	

Ref	Location	No. of parking spaces	Comment
h	Tariff Street	232	
i	Ducie Street	50	
j	Ducie Street	285	
k	Piccadilly Gardens	712	
l	Ducie Street	30	
	Port Street	21	
	Port Street	20	
m	Tariff Street	115	
	Port Street Central	76	
	Port Street	3	
n	Northern Quarter	685	
o	Edgehill Street	13	
p	Arndale	1487	
q	Dantzic Street	24	
r	Store Street	406	
s	Piccadilly Station	711	
t	Baird Street	100	Reserve spaces

Ref	Location	No. of parking spaces
u	Sheffield Street	165
v	Piccadilly Place	583
	Pollard Street	55
w	Boond Street	30
	Providence Street	55
	Radium Street	28
	George Leigh Street	17
x	Jersey Street	130
	Harriett Street	28
	Oldham Road	15

Figure 1-4 - Location of long stay parking with 1km/15min walk of the Site

The majority of the car parks are either to the northwest or south/southwest of the Proposed Development which informs the expected routes for the associated pedestrian flows. These two areas of car parking account for 95% of the non-reserved parking within this 1km radius of the Proposed Development and they are not too dissimilar in the number of car parking spaces they offer. Reserved spaces are not considered as there is no guarantee that they will be available.

The split between the total 6181 spaces is as follows;-

- Car Park Group A – 2941 spaces (48%)
- Car Park Group B – 3240 spaces (52%)

All pedestrians wishing to move between Car Park Group B and the development will need to cross Great Ancoats Street. In contrast, only part of Car Park Group A will need to do so (2444 out of 2941 – 83%).

These percentages will be used to assign the **529** pedestrian trips generated as a consequence of a motor vehicle commute and the associated walk between their parked vehicle and the development (and vice versa).

1.4 Identified pedestrian access routes and walking times

- **Rail**
  - **Piccadilly** - Store Street (**14 mins**)
  - **Victoria** – Great Ancoats Street (**18 mins**)
- **Bus / Tram**
  - **Piccadilly Gardens** – Great Ancoats Street / Port Street / Newton Street / Portland Street (**12 mins**)
  - **New Islington Tram Stop** – Canal towpath infrastructure / Old Mill Street (**7 mins**)
  - **Shudehill Bus Station** – Port Street / Thomas Street (**14 mins**)

2. Existing pedestrian infrastructure

2.1 Controlled pedestrian crossings

There are three locations adjacent to the development where existing pedestrian crossing points with call facilities. Details are show in Table 2-1 and Figure 2-1



Figure 2-1 - Existing controlled crossing facilities

Table 2-1 - Existing pedestrian crossings

Crossing Point A Between Port Street and Redhill Street. E384902 , N398468	
Crossing Point B East of Rochdale Canal Towpath E384959 , N398414	
Crossing Point C Great Ancoats St / Store St / Old Mill St Junction E385199 , N398249	

2.2 Pedestrian safety

Over the 5-year period of available data (2019-2023), there have been 3 pedestrian casualties in the vicinity of the development - 1 slight and 2 serious. None occurred at the existing crossing points. The locations of the collisions are shown in Figure 2-2

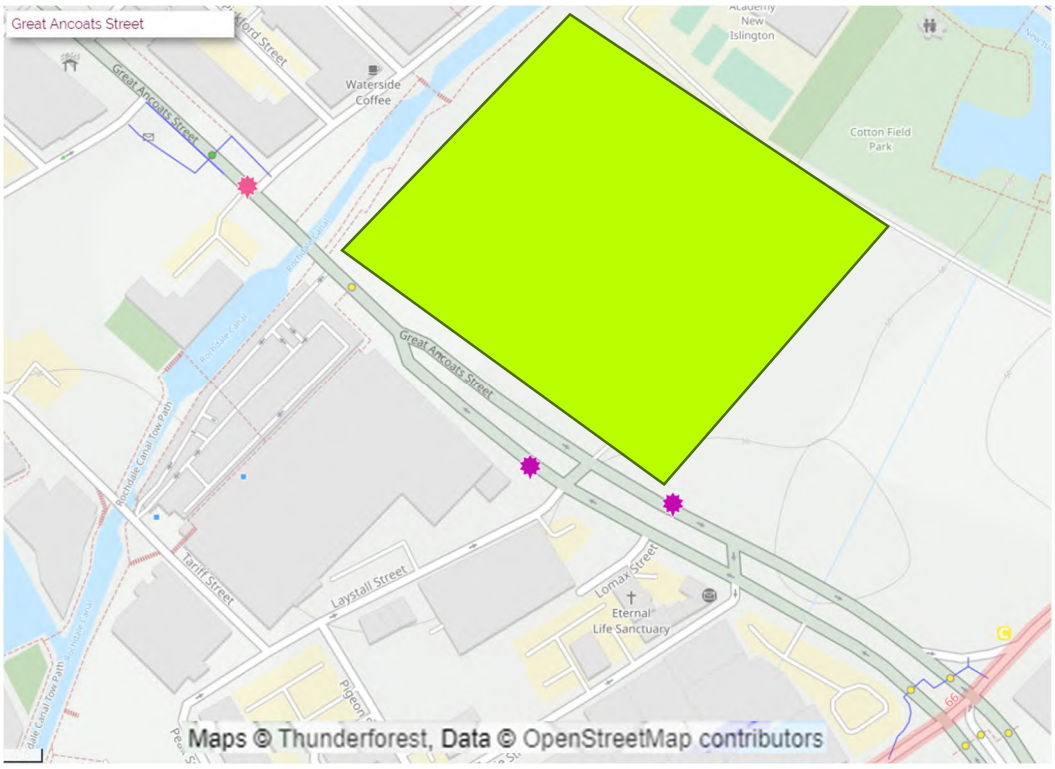


Figure 2-2 - Pedestrian casualty locations

The two serious collisions occurred on the dual carriageway section of Great Ancoats Street. Furthermore, in the same time period, there were no records of any pedestrian collisions on Store Street or Laystall Street. However, there was a slight injury collision at the junction of Ducie Street with Dale Street.

The available data does not suggest that there is an extant problem with pedestrian safety in the location in proximity to the MDC or the routes leading to it as identified as part of this assessment.

2.3 Identifying desire lines and estimating flows

Using the locations of the transport hubs and the trip generation figures, it is possible to estimate the desire lines and approximate pedestrian numbers using them. Where those routes require pedestrians to cross main roads, it is necessary to calculate the confluence of the pedestrian flows and whether the existing crossing points have sufficient reserve capacity to accommodate them.

In lieu of specific Transport for Greater Manchester guidance, Transport for London's document "Pedestrian Comfort Guidance for London" is the most relevant industry guidance regarding pedestrian flows. It looks at the number of people who can use a pedestrian crossing in an hour via the metric of pedestrian comfort. With this model, there is an inverse relationship between flows and comfort i.e. pedestrian comfort decreases as pedestrian flow increases.

Generally, for an office & retail typology, the comfort level is given as “C+” which equates to 18 to 20 people per minute per metre of width (ppmm).

Using this approach to calculate a maximum capacity of a crossing, the following is arrived at for Crossing Point B (3.5m wide);

Capacity = 3.5m x 20 ppmm x 60 (mins/hr) = **4,200 people per hour**.

Crossing Point C has much more signalling infrastructure, but as a conservative limit, the same figures can be used.

2.3.1 Pedestrian numbers (car parking)

Pedestrian numbers for AM peak (the highest) coming from the car parks and needing to cross Great Ancoats Street are calculated thus;-

- Car Park Group A - 48% * 83% * 529 = **211** pedestrians
- Car Park Group B – 52% * 529 = **275** pedestrians

It is further assumed that Group A will approach the development from the west and Group B will approach from the east but split evenly across Store Street / Ducie Street / Laystall Street.

2.3.2 Pedestrian numbers (rail)

For heavy rail in Manchester, Wikipedia gives 2022/23 passenger totals (non-interchange) at each station as 23.56m at Piccadilly and 7.0m at Victoria.

This translates to a 77% / 23% split.

- Piccadilly – 77% * 506 = **390** pedestrians
- Victoria – 23% * 506 = **116** pedestrians

It has been assumed that Piccadilly station patrons will approach the development from the southwest and will further be equally distributed between Store Steet and Ducie Street/Laystall Street. Victoria station users will approach from the west.

2.3.3 Pedestrian numbers (bus and tram)

For Metrolink a simple assumption is made on a 75% / 25% split in Piccadilly's favour in the absence of any patronage information regarding the two stations/stops.

- Piccadilly Gardens – 75% * 74 = **55** pedestrians
- New Islington – 25% * 74 = **19** pedestrians

It is reasonable to assume that Piccadilly Gardens Metrolink patrons will approach the development from the west and those from New Islington will approach from the east.

2.3.4 Pedestrian numbers (residential)

The trip generation numbers indicate that 249 wholly pedestrian movements are likely in the worst case (AM peak hour). It is a fair assumption that these will be originating from residential areas around the city centre. The website

"commute.datashine.org.uk"[1] has been consulted which provides Travel to Work Flows based on the 2011 census as released by the Office for National Statistics. This is, in essence, an origin-destination matrix of where people commute to work based on postcodes. There are 3 nodes that surround the development (see Figure 2-3).

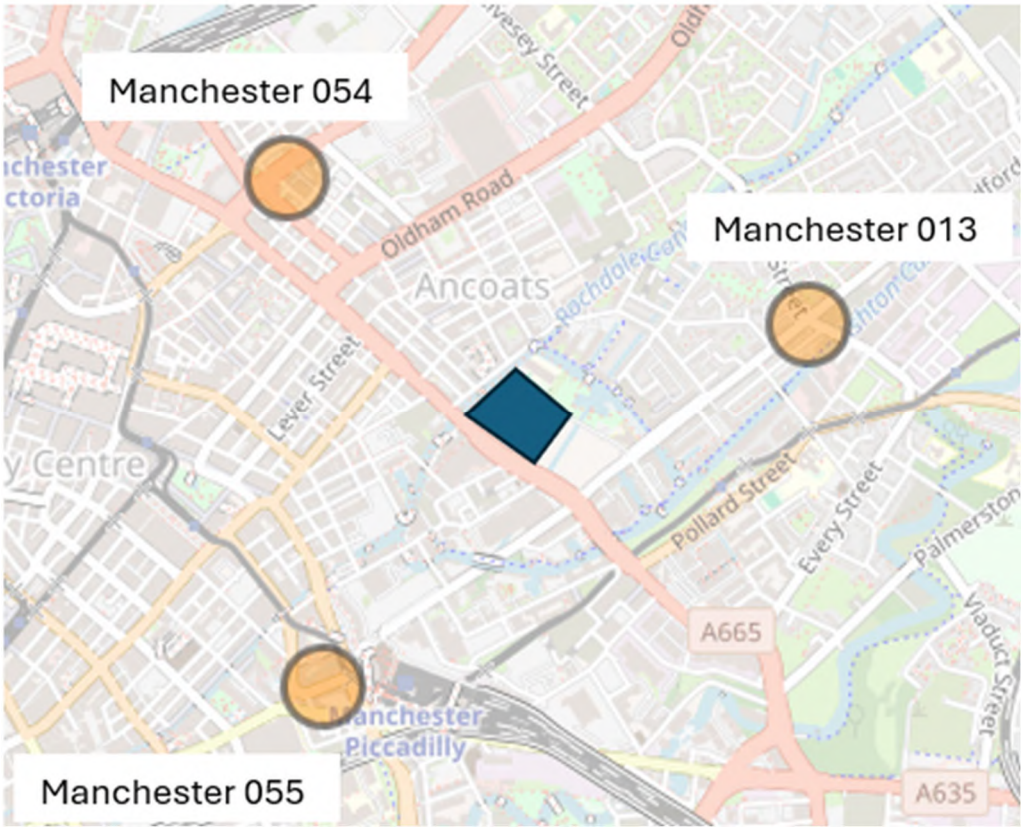


Figure 2-3 - DataShine Commute nodes

These nodes encapsulate part of the postcodes M1, M2, M3, M4, M12, M40 & M60.

Using these data, the origins of the 249 pedestrian trips generated will be split in the following fashion.

- North - 42% * 249 = **105** pedestrians
- East - 9% * 249 = **22** pedestrians
- West - 9% * 249 = **22** pedestrians
- South - 40%, * 249 = **100** pedestrians

Pedestrians approaching from the west and the south have been assigned the need to cross Great Ancoats Street.

- Approaching from the west – **22** pedestrians
- Approaching from the south – **100** pedestrians

[1] Oliver O'Brien & James Cheshire (2016) Interactive mapping for large, open demographic data sets using familiar geographical features, Journal of Maps, 12:4, 676-683, DOI: 10.1080/17445647.2015.1060183

2.3.5 Pedestrian totals

Totals for pedestrians approaching the Proposed Development from the west and needing to cross Great Ancoats Street.

Victoria (rail) + Car Park Group A + Peds (residential) + Piccadilly Gardens (bus/tram)

- 116 + 211 + 22 + 55 = **404** pedestrians

Totals for pedestrians approaching the MDC from the southwest and needing to cross Great Ancoats Street – these include for splits across Laystall Street, Ducie Street and Store Street.

- Laystall Street = 33% * Car Park Group B + 33% * Peds (residential) + Piccadilly (rail)
  - 92 + 33 + 130 = **225** pedestrians
- Ducie Street = 33% * Car Park Group B + 33% * Peds (residential) + Piccadilly (rail)
  - 92 + 33 + 130 = **225** pedestrians
- Store Street = 33% * Car Park Group B + 34% * Peds (residential) + Piccadilly (rail)
  - 91 + 34 + 130 = **255** pedestrians

This gives a grand total of **1109** (404 + 225 + 225 + 255) pedestrians needing to cross Great Ancoats Street in the AM peak.

2.3.6 Crossing Assignments

Assigning pedestrian trips to existing crossing location has been done on the basis of which they meet first. For the two adjacent crossings (A & B) a 50:50 split between them is assumed.

Crossing point A will take 50% of pedestrian flows coming west down Great Ancoats Street.

- Crossing Point A = 50% * 404 = **202** pedestrians

Crossing point B will take 50% of pedestrian flows coming west down Great Ancoats Street in addition to all those from Laystall Street and 50% from Ducie Street.

- Crossing Point B = 202 + 225 + 112 = **539** pedestrians

Crossing point C will take all of Store Steet and 50% of the Ducie Street flows.

- Crossing Point C = 255 + 113 = **368** pedestrians

The total number of pedestrians across the crossing points will equal:

202 + 539 + 368 = **1109** pedestrians.

For context, these figures are shown geographically on Figure 2-4.

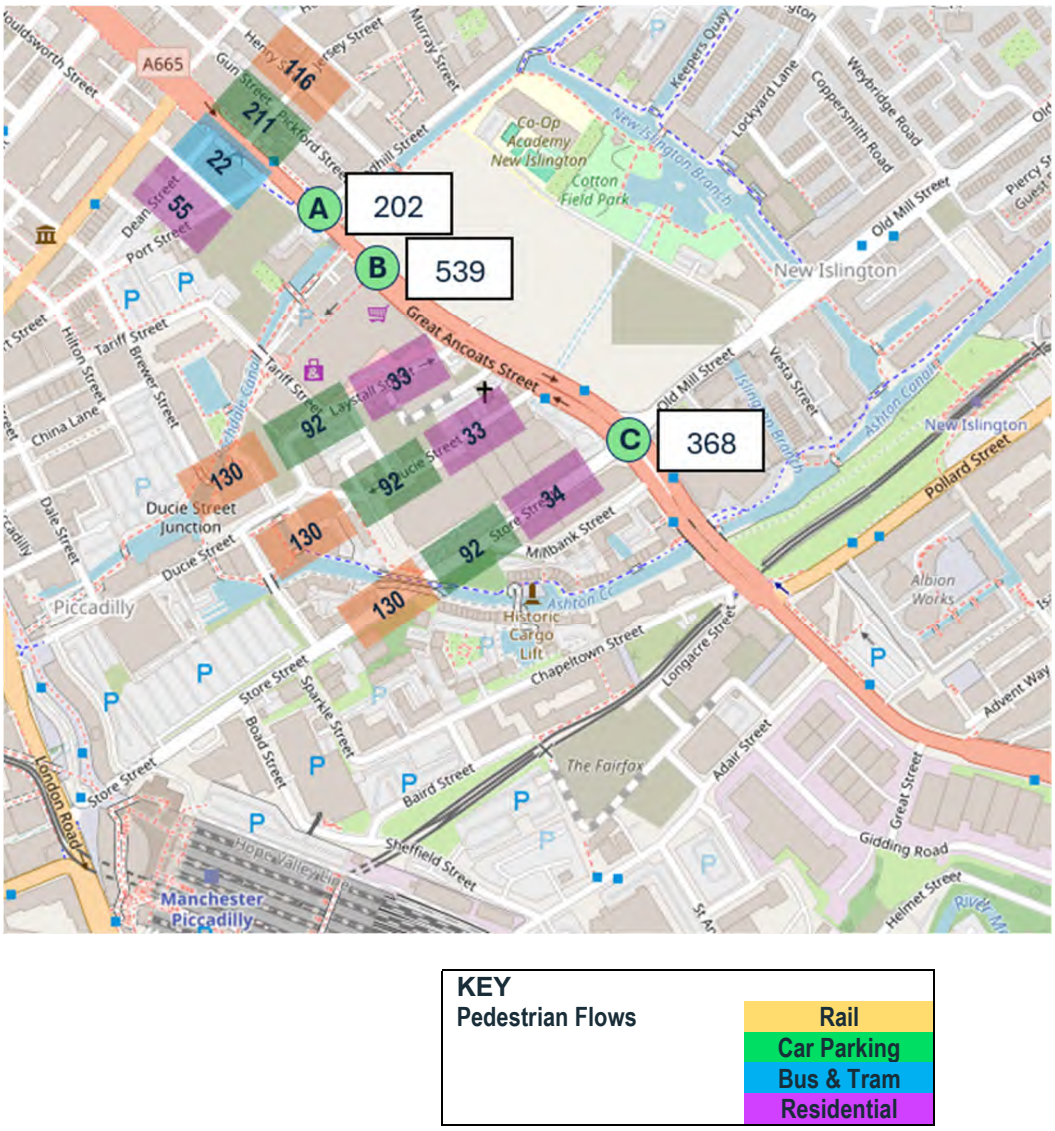


Figure 2-4 - Crossing Assignments for AM Peak

2.3.7 Existing crossing usage

There are no official figures available for the current number of pedestrians using the existing Crossing Points A, B & C. However, for Crossing Point B, a site visit (07/10/2024) sampled crossing numbers during the peak AM period (0830 to 0930). Subsequent extrapolation allows the estimation of the number of pedestrians using the crossing over the full hour to be of the order of **450** pedestrians.

2.4 Impact of generated pedestrian flows

The maximum number of additional pedestrian movements generated by the development that need to use any one crossing in the peak AM period is **539** (Crossing Point B).

Estimated future demand = 450 (existing)+ 539 (new) = **989** pedestrians per hour.

Consequently, there appears to be more than sufficient capacity for each crossing (4,200 peds per hour) to cater for existing usage plus that generated by the development with an available headroom of around 3,200.

3. Results / outcomes

3.1 Capacities

Whilst this assessment is an approximation based on assumptions and sampling, the results indicate that reserve capacity in the crossings remain so significant that they could continue to accommodate increases to both the existing and generated pedestrian flows by over 300%.

As a consequence, the figures presented indicate that no additional pedestrian crossing facilities are required on Great Ancoats Street to cater for the demand likely generated by the MDC development as it has been demonstrated that the existing pedestrian crossing infrastructure has sufficient capacity to accommodate the predicted pedestrian flows.

AtkinsRéalis

AtkinsRéalis Manchester
3 Piccadilly Place,
M1 3BN,
Manchester,
United Kingdom

T: +44 1612 453400

www.atkinsrealis.com

Appendix B. TRICS Output

Calculation Reference: AUDIT-803401-230426-0437

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	2 days
	HD	HILLINGDON	1 days
	HO	HOUNSLOW	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Employees
Actual Range: 1000 to 6500 (units:)
Range Selected by User: 0 to 6500 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 28/06/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	3 days
Wednesday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	2
Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	1
Development Zone	1
Built-Up Zone	2
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	14 days - Selected
Servicing vehicles Excluded	6 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

20,001 to 25,000	1 days
25,001 to 50,000	2 days
100,001 or More	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More	5 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	4 days
No	1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	1 days
1b Very poor	1 days
4 Good	1 days
6b (High) Excellent	2 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CN-02-A-03 PLANNING & ENGINEERING CAMDEN
FITZROY STREET
FITZROVIA

Town Centre
Built-Up Zone
Total No of Employees: 2420
Survey date: WEDNESDAY *06/12/17* *Survey Type: MANUAL*

2 CN-02-A-04 OFFICE CAMDEN
CHARTERHOUSE STREET
FARRINGDON

Town Centre
Built-Up Zone
Total No of Employees: 1160
Survey date: TUESDAY *28/06/22* *Survey Type: MANUAL*

3 HD-02-A-08 DATA CENTRE HILLINGDON
MILLINGTON ROAD
HAYES
HYDE PARK
Edge of Town Centre
Commercial Zone
Total No of Employees: 1076
Survey date: TUESDAY *14/06/16* *Survey Type: MANUAL*

4 HO-02-A-01 SKY HEADQUARTERS HOUNSLOW
SYON LANE
ISLEWORTH

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Employees: 6500
Survey date: WEDNESDAY *05/07/17* *Survey Type: MANUAL*

5 MS-02-A-04 OFFICES MERSEYSIDE
MANN ISLAND
LIVERPOOL
MANN ISLAND
Edge of Town Centre
Development Zone
Total No of Employees: 1000
Survey date: TUESDAY *05/04/22* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BN-02-A-01	Research
BT-02-A-03	Research
BT-02-A-04	Research
EN-02-A-01	Research
GM-02-A-08	Research
GM-02-A-09	Research
GM-02-A-10	Research
GM-02-A-11	Research
HD-02-A-10	Research
KN-02-A-01	Research
LB-02-A-02	Research
MS-02-A-02	Research

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.82

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.025	1	6500	0.004	1	6500	0.029
06:30 - 07:00	1	6500	0.038	1	6500	0.006	1	6500	0.044
07:00 - 07:30	5	2431	0.027	5	2431	0.004	5	2431	0.031
07:30 - 08:00	5	2431	0.038	5	2431	0.005	5	2431	0.043
08:00 - 08:30	5	2431	0.044	5	2431	0.005	5	2431	0.049
08:30 - 09:00	5	2431	0.049	5	2431	0.008	5	2431	0.057
09:00 - 09:30	5	2431	0.034	5	2431	0.007	5	2431	0.041
09:30 - 10:00	5	2431	0.027	5	2431	0.006	5	2431	0.033
10:00 - 10:30	5	2431	0.012	5	2431	0.006	5	2431	0.018
10:30 - 11:00	5	2431	0.008	5	2431	0.005	5	2431	0.013
11:00 - 11:30	5	2431	0.006	5	2431	0.005	5	2431	0.011
11:30 - 12:00	5	2431	0.007	5	2431	0.005	5	2431	0.012
12:00 - 12:30	5	2431	0.008	5	2431	0.008	5	2431	0.016
12:30 - 13:00	5	2431	0.007	5	2431	0.005	5	2431	0.012
13:00 - 13:30	5	2431	0.005	5	2431	0.006	5	2431	0.011
13:30 - 14:00	5	2431	0.006	5	2431	0.008	5	2431	0.014
14:00 - 14:30	5	2431	0.005	5	2431	0.006	5	2431	0.011
14:30 - 15:00	5	2431	0.005	5	2431	0.006	5	2431	0.011
15:00 - 15:30	5	2431	0.003	5	2431	0.011	5	2431	0.014
15:30 - 16:00	5	2431	0.005	5	2431	0.013	5	2431	0.018
16:00 - 16:30	5	2431	0.005	5	2431	0.029	5	2431	0.034
16:30 - 17:00	5	2431	0.005	5	2431	0.028	5	2431	0.033
17:00 - 17:30	5	2431	0.005	5	2431	0.043	5	2431	0.048
17:30 - 18:00	5	2431	0.005	5	2431	0.051	5	2431	0.056
18:00 - 18:30	5	2431	0.004	5	2431	0.029	5	2431	0.033
18:30 - 19:00	5	2431	0.005	5	2431	0.021	5	2431	0.026
19:00 - 19:30	2	3830	0.004	2	3830	0.018	2	3830	0.022
19:30 - 20:00	2	3830	0.003	2	3830	0.017	2	3830	0.020
20:00 - 20:30	2	3830	0.003	2	3830	0.009	2	3830	0.012
20:30 - 21:00	2	3830	0.002	2	3830	0.005	2	3830	0.007
21:00 - 21:30	1	6500	0.006	1	6500	0.007	1	6500	0.013
21:30 - 22:00	1	6500	0.003	1	6500	0.006	1	6500	0.009
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.409			0.392			0.801

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected:	1000 - 6500 (units:)
Survey date date range:	01/01/15 - 28/06/22
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	12

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TAXIS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
06:30 - 07:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
07:00 - 07:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
07:30 - 08:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
08:00 - 08:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
08:30 - 09:00	5	2431	0.003	5	2431	0.002	5	2431	0.005
09:00 - 09:30	5	2431	0.002	5	2431	0.002	5	2431	0.004
09:30 - 10:00	5	2431	0.002	5	2431	0.002	5	2431	0.004
10:00 - 10:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
10:30 - 11:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
11:00 - 11:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:30 - 13:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
13:00 - 13:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:30 - 14:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.001	5	2431	0.000	5	2431	0.001
15:00 - 15:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
15:30 - 16:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
16:00 - 16:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
16:30 - 17:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
17:00 - 17:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
17:30 - 18:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
18:00 - 18:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
18:30 - 19:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
19:00 - 19:30	2	3830	0.001	2	3830	0.001	2	3830	0.002
19:30 - 20:00	2	3830	0.001	2	3830	0.001	2	3830	0.002
20:00 - 20:30	2	3830	0.001	2	3830	0.001	2	3830	0.002
20:30 - 21:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
21:00 - 21:30	1	6500	0.001	1	6500	0.000	1	6500	0.001
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.026			0.022			0.048

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL OGVS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
06:30 - 07:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
07:00 - 07:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
07:30 - 08:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
08:00 - 08:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
08:30 - 09:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
09:00 - 09:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
09:30 - 10:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
10:00 - 10:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
10:30 - 11:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:00 - 11:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:30 - 13:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:00 - 13:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:30 - 14:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:00 - 15:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:30 - 16:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
16:00 - 16:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
16:30 - 17:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
17:00 - 17:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
17:30 - 18:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
18:00 - 18:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
18:30 - 19:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
19:00 - 19:30	2	3830	0.000	2	3830	0.000	2	3830	0.000
19:30 - 20:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:00 - 20:30	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:30 - 21:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
21:00 - 21:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PSVS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
06:30 - 07:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
07:00 - 07:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
07:30 - 08:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
08:00 - 08:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
08:30 - 09:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
09:00 - 09:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
09:30 - 10:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
10:00 - 10:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
10:30 - 11:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:00 - 11:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:30 - 13:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:00 - 13:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:30 - 14:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:00 - 15:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:30 - 16:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
16:00 - 16:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
16:30 - 17:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
17:00 - 17:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
17:30 - 18:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
18:00 - 18:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
18:30 - 19:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
19:00 - 19:30	2	3830	0.001	2	3830	0.001	2	3830	0.002
19:30 - 20:00	2	3830	0.001	2	3830	0.001	2	3830	0.002
20:00 - 20:30	2	3830	0.001	2	3830	0.000	2	3830	0.001
20:30 - 21:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
21:00 - 21:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.015			0.015			0.030

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL CYCLISTS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.001	1	6500	0.000	1	6500	0.001
06:30 - 07:00	1	6500	0.003	1	6500	0.000	1	6500	0.003
07:00 - 07:30	5	2431	0.003	5	2431	0.000	5	2431	0.003
07:30 - 08:00	5	2431	0.005	5	2431	0.000	5	2431	0.005
08:00 - 08:30	5	2431	0.008	5	2431	0.000	5	2431	0.008
08:30 - 09:00	5	2431	0.012	5	2431	0.000	5	2431	0.012
09:00 - 09:30	5	2431	0.009	5	2431	0.000	5	2431	0.009
09:30 - 10:00	5	2431	0.003	5	2431	0.000	5	2431	0.003
10:00 - 10:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
10:30 - 11:00	5	2431	0.001	5	2431	0.000	5	2431	0.001
11:00 - 11:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:30 - 13:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
13:00 - 13:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
13:30 - 14:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:00 - 15:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
15:30 - 16:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
16:00 - 16:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
16:30 - 17:00	5	2431	0.000	5	2431	0.005	5	2431	0.005
17:00 - 17:30	5	2431	0.000	5	2431	0.007	5	2431	0.007
17:30 - 18:00	5	2431	0.000	5	2431	0.010	5	2431	0.010
18:00 - 18:30	5	2431	0.000	5	2431	0.008	5	2431	0.008
18:30 - 19:00	5	2431	0.000	5	2431	0.005	5	2431	0.005
19:00 - 19:30	2	3830	0.000	2	3830	0.002	2	3830	0.002
19:30 - 20:00	2	3830	0.000	2	3830	0.002	2	3830	0.002
20:00 - 20:30	2	3830	0.000	2	3830	0.001	2	3830	0.001
20:30 - 21:00	2	3830	0.000	2	3830	0.001	2	3830	0.001
21:00 - 21:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.046			0.046			0.092

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.026	1	6500	0.003	1	6500	0.029
06:30 - 07:00	1	6500	0.039	1	6500	0.005	1	6500	0.044
07:00 - 07:30	5	2431	0.028	5	2431	0.004	5	2431	0.032
07:30 - 08:00	5	2431	0.039	5	2431	0.003	5	2431	0.042
08:00 - 08:30	5	2431	0.048	5	2431	0.003	5	2431	0.051
08:30 - 09:00	5	2431	0.053	5	2431	0.004	5	2431	0.057
09:00 - 09:30	5	2431	0.037	5	2431	0.004	5	2431	0.041
09:30 - 10:00	5	2431	0.028	5	2431	0.003	5	2431	0.031
10:00 - 10:30	5	2431	0.012	5	2431	0.005	5	2431	0.017
10:30 - 11:00	5	2431	0.008	5	2431	0.004	5	2431	0.012
11:00 - 11:30	5	2431	0.005	5	2431	0.005	5	2431	0.010
11:30 - 12:00	5	2431	0.007	5	2431	0.005	5	2431	0.012
12:00 - 12:30	5	2431	0.008	5	2431	0.009	5	2431	0.017
12:30 - 13:00	5	2431	0.006	5	2431	0.004	5	2431	0.010
13:00 - 13:30	5	2431	0.006	5	2431	0.006	5	2431	0.012
13:30 - 14:00	5	2431	0.007	5	2431	0.008	5	2431	0.015
14:00 - 14:30	5	2431	0.005	5	2431	0.007	5	2431	0.012
14:30 - 15:00	5	2431	0.005	5	2431	0.007	5	2431	0.012
15:00 - 15:30	5	2431	0.003	5	2431	0.012	5	2431	0.015
15:30 - 16:00	5	2431	0.005	5	2431	0.014	5	2431	0.019
16:00 - 16:30	5	2431	0.004	5	2431	0.030	5	2431	0.034
16:30 - 17:00	5	2431	0.004	5	2431	0.030	5	2431	0.034
17:00 - 17:30	5	2431	0.003	5	2431	0.047	5	2431	0.050
17:30 - 18:00	5	2431	0.003	5	2431	0.057	5	2431	0.060
18:00 - 18:30	5	2431	0.003	5	2431	0.032	5	2431	0.035
18:30 - 19:00	5	2431	0.004	5	2431	0.022	5	2431	0.026
19:00 - 19:30	2	3830	0.004	2	3830	0.017	2	3830	0.021
19:30 - 20:00	2	3830	0.002	2	3830	0.019	2	3830	0.021
20:00 - 20:30	2	3830	0.002	2	3830	0.010	2	3830	0.012
20:30 - 21:00	2	3830	0.002	2	3830	0.005	2	3830	0.007
21:00 - 21:30	1	6500	0.005	1	6500	0.007	1	6500	0.012
21:30 - 22:00	1	6500	0.003	1	6500	0.006	1	6500	0.009
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.414			0.397			0.811

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.001	1	6500	0.001	1	6500	0.002
06:30 - 07:00	1	6500	0.003	1	6500	0.000	1	6500	0.003
07:00 - 07:30	5	2431	0.002	5	2431	0.002	5	2431	0.004
07:30 - 08:00	5	2431	0.007	5	2431	0.003	5	2431	0.010
08:00 - 08:30	5	2431	0.010	5	2431	0.003	5	2431	0.013
08:30 - 09:00	5	2431	0.015	5	2431	0.004	5	2431	0.019
09:00 - 09:30	5	2431	0.012	5	2431	0.005	5	2431	0.017
09:30 - 10:00	5	2431	0.009	5	2431	0.005	5	2431	0.014
10:00 - 10:30	5	2431	0.008	5	2431	0.009	5	2431	0.017
10:30 - 11:00	5	2431	0.009	5	2431	0.010	5	2431	0.019
11:00 - 11:30	5	2431	0.005	5	2431	0.006	5	2431	0.011
11:30 - 12:00	5	2431	0.009	5	2431	0.012	5	2431	0.021
12:00 - 12:30	5	2431	0.011	5	2431	0.019	5	2431	0.030
12:30 - 13:00	5	2431	0.020	5	2431	0.020	5	2431	0.040
13:00 - 13:30	5	2431	0.019	5	2431	0.017	5	2431	0.036
13:30 - 14:00	5	2431	0.013	5	2431	0.013	5	2431	0.026
14:00 - 14:30	5	2431	0.012	5	2431	0.006	5	2431	0.018
14:30 - 15:00	5	2431	0.006	5	2431	0.005	5	2431	0.011
15:00 - 15:30	5	2431	0.004	5	2431	0.007	5	2431	0.011
15:30 - 16:00	5	2431	0.003	5	2431	0.005	5	2431	0.008
16:00 - 16:30	5	2431	0.003	5	2431	0.004	5	2431	0.007
16:30 - 17:00	5	2431	0.003	5	2431	0.005	5	2431	0.008
17:00 - 17:30	5	2431	0.002	5	2431	0.008	5	2431	0.010
17:30 - 18:00	5	2431	0.002	5	2431	0.012	5	2431	0.014
18:00 - 18:30	5	2431	0.001	5	2431	0.007	5	2431	0.008
18:30 - 19:00	5	2431	0.001	5	2431	0.003	5	2431	0.004
19:00 - 19:30	2	3830	0.000	2	3830	0.002	2	3830	0.002
19:30 - 20:00	2	3830	0.001	2	3830	0.004	2	3830	0.005
20:00 - 20:30	2	3830	0.001	2	3830	0.002	2	3830	0.003
20:30 - 21:00	2	3830	0.000	2	3830	0.001	2	3830	0.001
21:00 - 21:30	1	6500	0.000	1	6500	0.001	1	6500	0.001
21:30 - 22:00	1	6500	0.001	1	6500	0.001	1	6500	0.002
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.193			0.202			0.395

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.002	1	6500	0.000	1	6500	0.002
06:30 - 07:00	1	6500	0.003	1	6500	0.001	1	6500	0.004
07:00 - 07:30	5	2431	0.002	5	2431	0.002	5	2431	0.004
07:30 - 08:00	5	2431	0.004	5	2431	0.000	5	2431	0.004
08:00 - 08:30	5	2431	0.008	5	2431	0.000	5	2431	0.008
08:30 - 09:00	5	2431	0.012	5	2431	0.000	5	2431	0.012
09:00 - 09:30	5	2431	0.009	5	2431	0.000	5	2431	0.009
09:30 - 10:00	5	2431	0.005	5	2431	0.000	5	2431	0.005
10:00 - 10:30	5	2431	0.002	5	2431	0.001	5	2431	0.003
10:30 - 11:00	5	2431	0.002	5	2431	0.001	5	2431	0.003
11:00 - 11:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
11:30 - 12:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
12:00 - 12:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
12:30 - 13:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
13:00 - 13:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
13:30 - 14:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.001	5	2431	0.002	5	2431	0.003
15:00 - 15:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
15:30 - 16:00	5	2431	0.000	5	2431	0.003	5	2431	0.003
16:00 - 16:30	5	2431	0.001	5	2431	0.002	5	2431	0.003
16:30 - 17:00	5	2431	0.000	5	2431	0.004	5	2431	0.004
17:00 - 17:30	5	2431	0.001	5	2431	0.007	5	2431	0.008
17:30 - 18:00	5	2431	0.001	5	2431	0.011	5	2431	0.012
18:00 - 18:30	5	2431	0.000	5	2431	0.006	5	2431	0.006
18:30 - 19:00	5	2431	0.000	5	2431	0.004	5	2431	0.004
19:00 - 19:30	2	3830	0.001	2	3830	0.002	2	3830	0.003
19:30 - 20:00	2	3830	0.001	2	3830	0.002	2	3830	0.003
20:00 - 20:30	2	3830	0.001	2	3830	0.001	2	3830	0.002
20:30 - 21:00	2	3830	0.000	2	3830	0.001	2	3830	0.001
21:00 - 21:30	1	6500	0.001	1	6500	0.000	1	6500	0.001
21:30 - 22:00	1	6500	0.001	1	6500	0.001	1	6500	0.002
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.065			0.057			0.122

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
06:30 - 07:00	1	6500	0.005	1	6500	0.001	1	6500	0.006
07:00 - 07:30	5	2431	0.011	5	2431	0.001	5	2431	0.012
07:30 - 08:00	5	2431	0.025	5	2431	0.001	5	2431	0.026
08:00 - 08:30	5	2431	0.047	5	2431	0.001	5	2431	0.048
08:30 - 09:00	5	2431	0.084	5	2431	0.001	5	2431	0.085
09:00 - 09:30	5	2431	0.062	5	2431	0.002	5	2431	0.064
09:30 - 10:00	5	2431	0.038	5	2431	0.001	5	2431	0.039
10:00 - 10:30	5	2431	0.020	5	2431	0.003	5	2431	0.023
10:30 - 11:00	5	2431	0.007	5	2431	0.002	5	2431	0.009
11:00 - 11:30	5	2431	0.004	5	2431	0.004	5	2431	0.008
11:30 - 12:00	5	2431	0.005	5	2431	0.003	5	2431	0.008
12:00 - 12:30	5	2431	0.006	5	2431	0.004	5	2431	0.010
12:30 - 13:00	5	2431	0.004	5	2431	0.006	5	2431	0.010
13:00 - 13:30	5	2431	0.006	5	2431	0.007	5	2431	0.013
13:30 - 14:00	5	2431	0.005	5	2431	0.004	5	2431	0.009
14:00 - 14:30	5	2431	0.002	5	2431	0.003	5	2431	0.005
14:30 - 15:00	5	2431	0.002	5	2431	0.006	5	2431	0.008
15:00 - 15:30	5	2431	0.003	5	2431	0.009	5	2431	0.012
15:30 - 16:00	5	2431	0.001	5	2431	0.011	5	2431	0.012
16:00 - 16:30	5	2431	0.002	5	2431	0.023	5	2431	0.025
16:30 - 17:00	5	2431	0.002	5	2431	0.034	5	2431	0.036
17:00 - 17:30	5	2431	0.002	5	2431	0.055	5	2431	0.057
17:30 - 18:00	5	2431	0.001	5	2431	0.078	5	2431	0.079
18:00 - 18:30	5	2431	0.002	5	2431	0.044	5	2431	0.046
18:30 - 19:00	5	2431	0.001	5	2431	0.025	5	2431	0.026
19:00 - 19:30	2	3830	0.000	2	3830	0.011	2	3830	0.011
19:30 - 20:00	2	3830	0.001	2	3830	0.011	2	3830	0.012
20:00 - 20:30	2	3830	0.001	2	3830	0.006	2	3830	0.007
20:30 - 21:00	2	3830	0.001	2	3830	0.003	2	3830	0.004
21:00 - 21:30	1	6500	0.000	1	6500	0.002	1	6500	0.002
21:30 - 22:00	1	6500	0.000	1	6500	0.001	1	6500	0.001
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.350			0.363			0.713

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL COACH PASSENGERS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
06:30 - 07:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
07:00 - 07:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
07:30 - 08:00	5	2431	0.002	5	2431	0.000	5	2431	0.002
08:00 - 08:30	5	2431	0.002	5	2431	0.000	5	2431	0.002
08:30 - 09:00	5	2431	0.002	5	2431	0.000	5	2431	0.002
09:00 - 09:30	5	2431	0.002	5	2431	0.000	5	2431	0.002
09:30 - 10:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
10:00 - 10:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
10:30 - 11:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:00 - 11:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:30 - 13:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:00 - 13:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:30 - 14:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:00 - 15:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:30 - 16:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
16:00 - 16:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
16:30 - 17:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
17:00 - 17:30	5	2431	0.000	5	2431	0.002	5	2431	0.002
17:30 - 18:00	5	2431	0.000	5	2431	0.003	5	2431	0.003
18:00 - 18:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
18:30 - 19:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
19:00 - 19:30	2	3830	0.000	2	3830	0.001	2	3830	0.001
19:30 - 20:00	2	3830	0.000	2	3830	0.004	2	3830	0.004
20:00 - 20:30	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:30 - 21:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
21:00 - 21:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.008			0.014			0.022

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.002	1	6500	0.000	1	6500	0.002
06:30 - 07:00	1	6500	0.008	1	6500	0.001	1	6500	0.009
07:00 - 07:30	5	2431	0.013	5	2431	0.003	5	2431	0.016
07:30 - 08:00	5	2431	0.031	5	2431	0.001	5	2431	0.032
08:00 - 08:30	5	2431	0.057	5	2431	0.001	5	2431	0.058
08:30 - 09:00	5	2431	0.098	5	2431	0.002	5	2431	0.100
09:00 - 09:30	5	2431	0.073	5	2431	0.002	5	2431	0.075
09:30 - 10:00	5	2431	0.043	5	2431	0.002	5	2431	0.045
10:00 - 10:30	5	2431	0.023	5	2431	0.004	5	2431	0.027
10:30 - 11:00	5	2431	0.009	5	2431	0.003	5	2431	0.012
11:00 - 11:30	5	2431	0.006	5	2431	0.004	5	2431	0.010
11:30 - 12:00	5	2431	0.006	5	2431	0.004	5	2431	0.010
12:00 - 12:30	5	2431	0.007	5	2431	0.005	5	2431	0.012
12:30 - 13:00	5	2431	0.006	5	2431	0.007	5	2431	0.013
13:00 - 13:30	5	2431	0.007	5	2431	0.008	5	2431	0.015
13:30 - 14:00	5	2431	0.006	5	2431	0.005	5	2431	0.011
14:00 - 14:30	5	2431	0.002	5	2431	0.003	5	2431	0.005
14:30 - 15:00	5	2431	0.003	5	2431	0.008	5	2431	0.011
15:00 - 15:30	5	2431	0.003	5	2431	0.011	5	2431	0.014
15:30 - 16:00	5	2431	0.002	5	2431	0.014	5	2431	0.016
16:00 - 16:30	5	2431	0.003	5	2431	0.026	5	2431	0.029
16:30 - 17:00	5	2431	0.002	5	2431	0.039	5	2431	0.041
17:00 - 17:30	5	2431	0.003	5	2431	0.064	5	2431	0.067
17:30 - 18:00	5	2431	0.002	5	2431	0.092	5	2431	0.094
18:00 - 18:30	5	2431	0.002	5	2431	0.051	5	2431	0.053
18:30 - 19:00	5	2431	0.001	5	2431	0.030	5	2431	0.031
19:00 - 19:30	2	3830	0.001	2	3830	0.014	2	3830	0.015
19:30 - 20:00	2	3830	0.001	2	3830	0.017	2	3830	0.018
20:00 - 20:30	2	3830	0.001	2	3830	0.007	2	3830	0.008
20:30 - 21:00	2	3830	0.001	2	3830	0.003	2	3830	0.004
21:00 - 21:30	1	6500	0.001	1	6500	0.002	1	6500	0.003
21:30 - 22:00	1	6500	0.001	1	6500	0.002	1	6500	0.003
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.424			0.435			0.859

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.82

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.031	1	6500	0.004	1	6500	0.035
06:30 - 07:00	1	6500	0.053	1	6500	0.007	1	6500	0.060
07:00 - 07:30	5	2431	0.046	5	2431	0.008	5	2431	0.054
07:30 - 08:00	5	2431	0.082	5	2431	0.007	5	2431	0.089
08:00 - 08:30	5	2431	0.122	5	2431	0.007	5	2431	0.129
08:30 - 09:00	5	2431	0.178	5	2431	0.010	5	2431	0.188
09:00 - 09:30	5	2431	0.130	5	2431	0.011	5	2431	0.141
09:30 - 10:00	5	2431	0.084	5	2431	0.010	5	2431	0.094
10:00 - 10:30	5	2431	0.044	5	2431	0.017	5	2431	0.061
10:30 - 11:00	5	2431	0.027	5	2431	0.017	5	2431	0.044
11:00 - 11:30	5	2431	0.017	5	2431	0.015	5	2431	0.032
11:30 - 12:00	5	2431	0.022	5	2431	0.021	5	2431	0.043
12:00 - 12:30	5	2431	0.026	5	2431	0.034	5	2431	0.060
12:30 - 13:00	5	2431	0.032	5	2431	0.032	5	2431	0.064
13:00 - 13:30	5	2431	0.032	5	2431	0.031	5	2431	0.063
13:30 - 14:00	5	2431	0.026	5	2431	0.026	5	2431	0.052
14:00 - 14:30	5	2431	0.019	5	2431	0.016	5	2431	0.035
14:30 - 15:00	5	2431	0.014	5	2431	0.020	5	2431	0.034
15:00 - 15:30	5	2431	0.010	5	2431	0.030	5	2431	0.040
15:30 - 16:00	5	2431	0.010	5	2431	0.034	5	2431	0.044
16:00 - 16:30	5	2431	0.010	5	2431	0.062	5	2431	0.072
16:30 - 17:00	5	2431	0.009	5	2431	0.079	5	2431	0.088
17:00 - 17:30	5	2431	0.008	5	2431	0.127	5	2431	0.135
17:30 - 18:00	5	2431	0.007	5	2431	0.171	5	2431	0.178
18:00 - 18:30	5	2431	0.006	5	2431	0.099	5	2431	0.105
18:30 - 19:00	5	2431	0.007	5	2431	0.061	5	2431	0.068
19:00 - 19:30	2	3830	0.004	2	3830	0.036	2	3830	0.040
19:30 - 20:00	2	3830	0.004	2	3830	0.043	2	3830	0.047
20:00 - 20:30	2	3830	0.004	2	3830	0.019	2	3830	0.023
20:30 - 21:00	2	3830	0.003	2	3830	0.010	2	3830	0.013
21:00 - 21:30	1	6500	0.006	1	6500	0.010	1	6500	0.016
21:30 - 22:00	1	6500	0.004	1	6500	0.009	1	6500	0.013
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.077			1.083			2.160

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL CARS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.024	1	6500	0.002	1	6500	0.026
06:30 - 07:00	1	6500	0.034	1	6500	0.005	1	6500	0.039
07:00 - 07:30	5	2431	0.025	5	2431	0.002	5	2431	0.027
07:30 - 08:00	5	2431	0.035	5	2431	0.003	5	2431	0.038
08:00 - 08:30	5	2431	0.038	5	2431	0.003	5	2431	0.041
08:30 - 09:00	5	2431	0.042	5	2431	0.004	5	2431	0.046
09:00 - 09:30	5	2431	0.030	5	2431	0.003	5	2431	0.033
09:30 - 10:00	5	2431	0.021	5	2431	0.003	5	2431	0.024
10:00 - 10:30	5	2431	0.008	5	2431	0.002	5	2431	0.010
10:30 - 11:00	5	2431	0.006	5	2431	0.002	5	2431	0.008
11:00 - 11:30	5	2431	0.003	5	2431	0.003	5	2431	0.006
11:30 - 12:00	5	2431	0.005	5	2431	0.004	5	2431	0.009
12:00 - 12:30	5	2431	0.006	5	2431	0.006	5	2431	0.012
12:30 - 13:00	5	2431	0.005	5	2431	0.003	5	2431	0.008
13:00 - 13:30	5	2431	0.004	5	2431	0.005	5	2431	0.009
13:30 - 14:00	5	2431	0.003	5	2431	0.005	5	2431	0.008
14:00 - 14:30	5	2431	0.003	5	2431	0.004	5	2431	0.007
14:30 - 15:00	5	2431	0.003	5	2431	0.005	5	2431	0.008
15:00 - 15:30	5	2431	0.002	5	2431	0.010	5	2431	0.012
15:30 - 16:00	5	2431	0.003	5	2431	0.011	5	2431	0.014
16:00 - 16:30	5	2431	0.002	5	2431	0.025	5	2431	0.027
16:30 - 17:00	5	2431	0.002	5	2431	0.024	5	2431	0.026
17:00 - 17:30	5	2431	0.003	5	2431	0.039	5	2431	0.042
17:30 - 18:00	5	2431	0.004	5	2431	0.046	5	2431	0.050
18:00 - 18:30	5	2431	0.002	5	2431	0.026	5	2431	0.028
18:30 - 19:00	5	2431	0.003	5	2431	0.018	5	2431	0.021
19:00 - 19:30	2	3830	0.003	2	3830	0.015	2	3830	0.018
19:30 - 20:00	2	3830	0.001	2	3830	0.016	2	3830	0.017
20:00 - 20:30	2	3830	0.002	2	3830	0.007	2	3830	0.009
20:30 - 21:00	2	3830	0.002	2	3830	0.004	2	3830	0.006
21:00 - 21:30	1	6500	0.004	1	6500	0.006	1	6500	0.010
21:30 - 22:00	1	6500	0.002	1	6500	0.005	1	6500	0.007
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.330			0.316			0.646

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL LGVS
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.001	1	6500	0.000	1	6500	0.001
06:30 - 07:00	1	6500	0.001	1	6500	0.000	1	6500	0.001
07:00 - 07:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
07:30 - 08:00	5	2431	0.001	5	2431	0.000	5	2431	0.001
08:00 - 08:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
08:30 - 09:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
09:00 - 09:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
09:30 - 10:00	5	2431	0.001	5	2431	0.000	5	2431	0.001
10:00 - 10:30	5	2431	0.002	5	2431	0.001	5	2431	0.003
10:30 - 11:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
11:00 - 11:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.001	5	2431	0.001	5	2431	0.002
12:30 - 13:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
13:00 - 13:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:30 - 14:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
14:00 - 14:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
14:30 - 15:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
15:00 - 15:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:30 - 16:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
16:00 - 16:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
16:30 - 17:00	5	2431	0.001	5	2431	0.001	5	2431	0.002
17:00 - 17:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
17:30 - 18:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
18:00 - 18:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
18:30 - 19:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
19:00 - 19:30	2	3830	0.000	2	3830	0.000	2	3830	0.000
19:30 - 20:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:00 - 20:30	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:30 - 21:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
21:00 - 21:30	1	6500	0.000	1	6500	0.000	1	6500	0.000
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.016			0.013			0.029

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL MOTOR CYCLES
Calculation factor: 1 EMPLOY
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6500	0.001	1	6500	0.000	1	6500	0.001
06:30 - 07:00	1	6500	0.002	1	6500	0.000	1	6500	0.002
07:00 - 07:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
07:30 - 08:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
08:00 - 08:30	5	2431	0.002	5	2431	0.000	5	2431	0.002
08:30 - 09:00	5	2431	0.003	5	2431	0.000	5	2431	0.003
09:00 - 09:30	5	2431	0.001	5	2431	0.000	5	2431	0.001
09:30 - 10:00	5	2431	0.002	5	2431	0.000	5	2431	0.002
10:00 - 10:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
10:30 - 11:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:00 - 11:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
11:30 - 12:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:00 - 12:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
12:30 - 13:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:00 - 13:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
13:30 - 14:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:00 - 14:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
14:30 - 15:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:00 - 15:30	5	2431	0.000	5	2431	0.000	5	2431	0.000
15:30 - 16:00	5	2431	0.000	5	2431	0.000	5	2431	0.000
16:00 - 16:30	5	2431	0.000	5	2431	0.001	5	2431	0.001
16:30 - 17:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
17:00 - 17:30	5	2431	0.000	5	2431	0.002	5	2431	0.002
17:30 - 18:00	5	2431	0.000	5	2431	0.002	5	2431	0.002
18:00 - 18:30	5	2431	0.000	5	2431	0.002	5	2431	0.002
18:30 - 19:00	5	2431	0.000	5	2431	0.001	5	2431	0.001
19:00 - 19:30	2	3830	0.000	2	3830	0.001	2	3830	0.001
19:30 - 20:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:00 - 20:30	2	3830	0.000	2	3830	0.000	2	3830	0.000
20:30 - 21:00	2	3830	0.000	2	3830	0.000	2	3830	0.000
21:00 - 21:30	1	6500	0.000	1	6500	0.001	1	6500	0.001
21:30 - 22:00	1	6500	0.000	1	6500	0.000	1	6500	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.012			0.011			0.023

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Appendix C. TfGM/ HFAS Traffic Modelling Note - High Level Analysis

Client **Manchester City Council**

Report **TfGM HFAS Report 2258**

Project **Manchester Digital Campus**

Subject **Modelling Note – High Level Analysis**

This document summarises the modelling results of the proposed Manchester Digital Campus development.

This Note	**Manchester Digital Campus Modelling Note.docx**		
Originator	Mike Atkinson		
Version	Comments	Date	Check / Approve
2.0	Development description updated	27/08/24	MA

Contact	**HFAS:**	**E-mail**	**Tel:**
	Mike Atkinson	michael.atkinson@tfgm.com	

Issued	**Organisation**	**FAO**
Aug 2024	WS ATKINS	Graham Foulkes
Aug 2024	MCC	Neil Bayliss-Rowe

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1. Modelling Summary

1.1 This note outlines the results of modelling work undertaken to assess the proposed Manchester Digital Campus (MDC) development on Great Ancoats St. This work is being used to help inform the planning application process.

1.2 Manchester Digital Campus is a new Government office complex in the city, bringing together a number of Civil Service departments with a focus around digital skills. This digital hub will be home for 7,000 civil servants, with capacity for almost 4,400 on-site at any one time. There will also be a Business Enterprise Centre on site with capacity for up to 600 people, attracted from the within the site and other Government office locations across the city centre (that will not be impacting on peak hour movements).

1.3 Manchester City Council have requested a high-level analysis to understand the vehicle impacts of the development prior to the submission of the planning application. This note briefly describes the modelling methodology and results.

1.4 **Trip Generation** has been provided by WS ATKINS for the morning peak hour (08:30-09:30) and evening peak hour (17:00-18:00). The development has 50 on-site parking spaces. The following trips numbers were provided.

- Morning Peak Hour – total vehicle trip generation 373 two-way trips. The breakdown is as follows: 50 arrivals on site, 299 arrivals off-site and 24 departures off-site
- Evening Peak Hour – total vehicle trip generation 355 two-way trips. The breakdown is as follows: 50 departures from site, 288 departures off-site and 17 arrivals off-site
- The vehicle trip generation is circa 8% of the total employee trips

1.5 **Trip Distribution** has been undertaken by TfGM HFAS. The trip distribution used 2011 ONS Census data. The distribution was based upon existing travel to work patterns for Middle Super Output Area (MSOA) Manchester 055.

1.6 Due to the large number of vehicles parking off-site a car park choice model was built based upon cost/distance and availability of spaces. TfGM HFAS alongside Manchester City Council have been collaborating with on a car park data collection program over the last few years.

1.7 **Highway Assignment** has been undertaken by TfGM HFAS. The highway assignment was based upon Google Route Planner and initially looked at routes to/from the existing Central Retail Park.

1.8 The car choice model took the initial routing and reassigned the vehicles to groups of car parks based on original routing and then cost/distance and availability of spaces. The cost and distance parameters were less than 15 minutes' walk and less than £10 daily parking cost. Some more expensive car parks were included to represent a broad range of employees and visitors to the development.

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1.9 Appendix 1 shows the car parks used in the car park choice model.

1.10 Table 1 below shows the results of the car park choice model.

Table 1: Manchester Digital Campus (MDC) – Car Park Analysis

Reference	Description	Route	Avg. Price	Capacity	Spaces at 9am	AM MDC Trips	PM MDC Trips
MAN19	Sheffield St	Pollard St and East Only	£7	390	169	86	81
MAN100	St. Andrews Sq.						
MAN989	Baird St						
MAN2003	Radium St	Oldham Rd	£4	167	57	28	27
MAN2004	George Leigh St						
MAN2110	Poland St						
MAN2111	Silk St						
MAN2112	George Leigh St						
MAN8	Piccadilly	All Routes	£26	712	574	19	19
MAN14	Ducie St	All Routes	£8	830	171	133	132
MAN156	Ducie St						
MAN183	Port St						
MAN969	Store St						
MAN1311	Port St						
MAN1180	Port St						
MAN2008	Gun St						
MAN2116	Ducie St						
MAN1085	Thompson St	Rochdale Rd, Oldham Rd and West Only	£7	303	125	45	44
MAN1086	Goulden St						
MAN1088	Cross Keys St						
MAN1095	Cable St						
MAN1097	Cable St						
MAN2113	Goulden St						
MAN2214	Marshall St						
MAN26	Arndale	West Only	£20	2,172	1,638	4	4
MAN30	Northern Quarter						
MAN151	Printworks	West Only	£7	777	148	1	1

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1.11 The car park choice model shows that circa 650 spaces were available at 9am. The model distributed the majority of trips to car parks closest to the development based around Store St, and Gun St and to car parks at the rear of Piccadilly Train Station based around Adair St.

1.12 The car park choice model shows that within each grouping of car parks after the development trips have been assigned that there is still spare capacity.

1.13 The highway assignment forecasts that the development will have a noticeable impact on traffic flows around the Regional Centre.

1.14 Figure 1 shows the vehicle impacts during the morning peak hour along the Inner Ring Road. The normal planning application threshold for individual junction modelling is an impact greater than 30 vehicles. The modelling shows that 87% of junctions (27) impacted by the development exceed the threshold and only 13% of junctions (4) were below the threshold.

1.15 Figure 2 shows the vehicle impacts during the evening peak hour along the Inner Ring Road. The modelling shows that 74% of junctions (28) impacted by the development exceed the threshold and only 26% of junctions (10) were below the threshold.

1.16 The modelling shows that the majority of the vehicles come from the south and east and head towards the development anticlockwise along the inner ring road with a cumulative build up as development traffic joins the ring road at Chester Rd, Princess Rd and Chancellor Ln.

1.17 Traffic from the south and east heading towards the development tend to seek car parking around Adair St and Store St whilst traffic heading from the north and west tend to seek car parking around Ancoats, Addington St and the NCP at Gun St

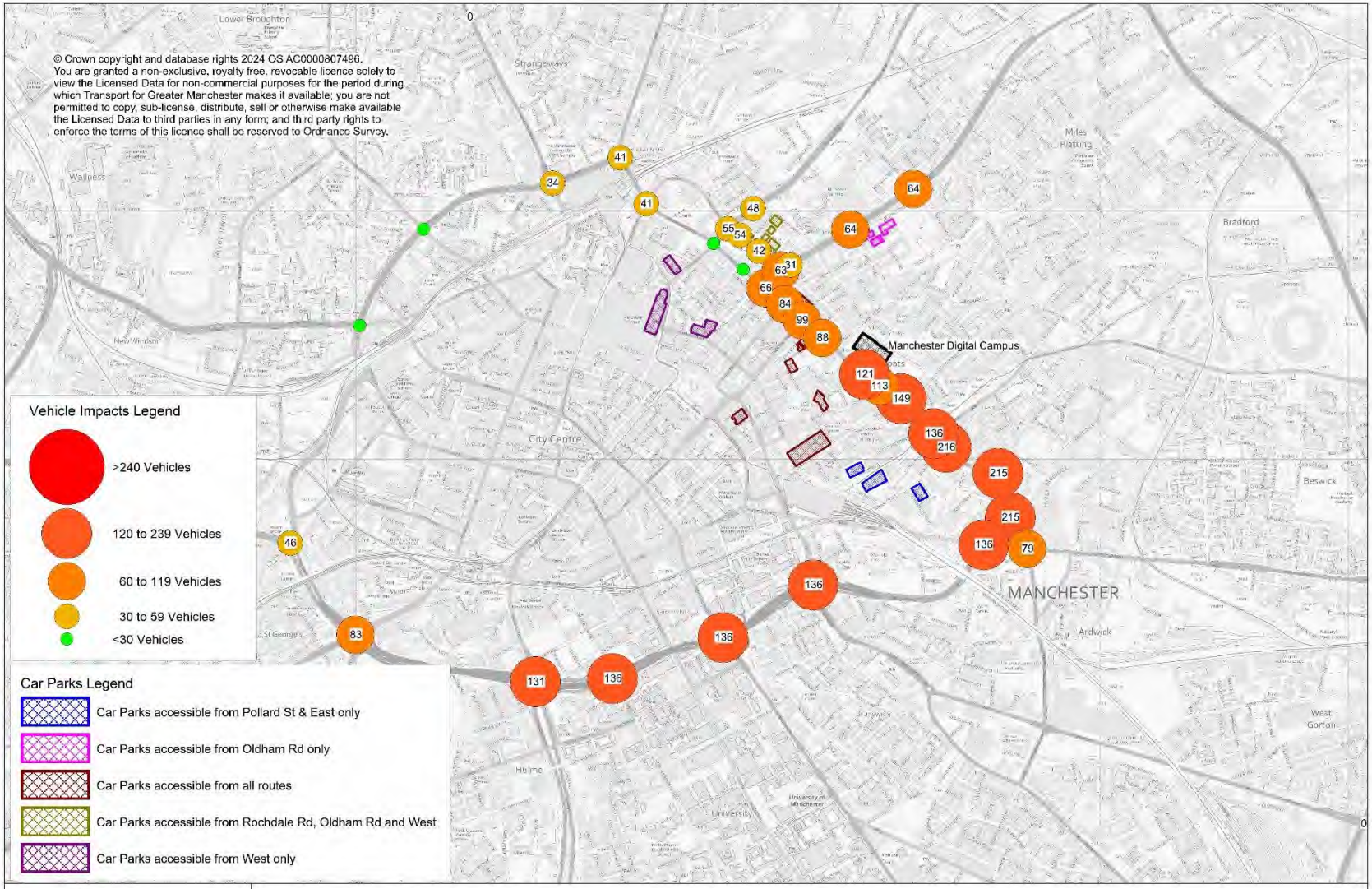
1.18 An area of interest (AOI) has been agreed with MCC to provide more detail data for the planning application. The AOI is along the Inner Ring Rd between Adair St and Cheetham Hill Rd.

1.19 The modelling shows that during both time periods the most impacted AOI junctions are:

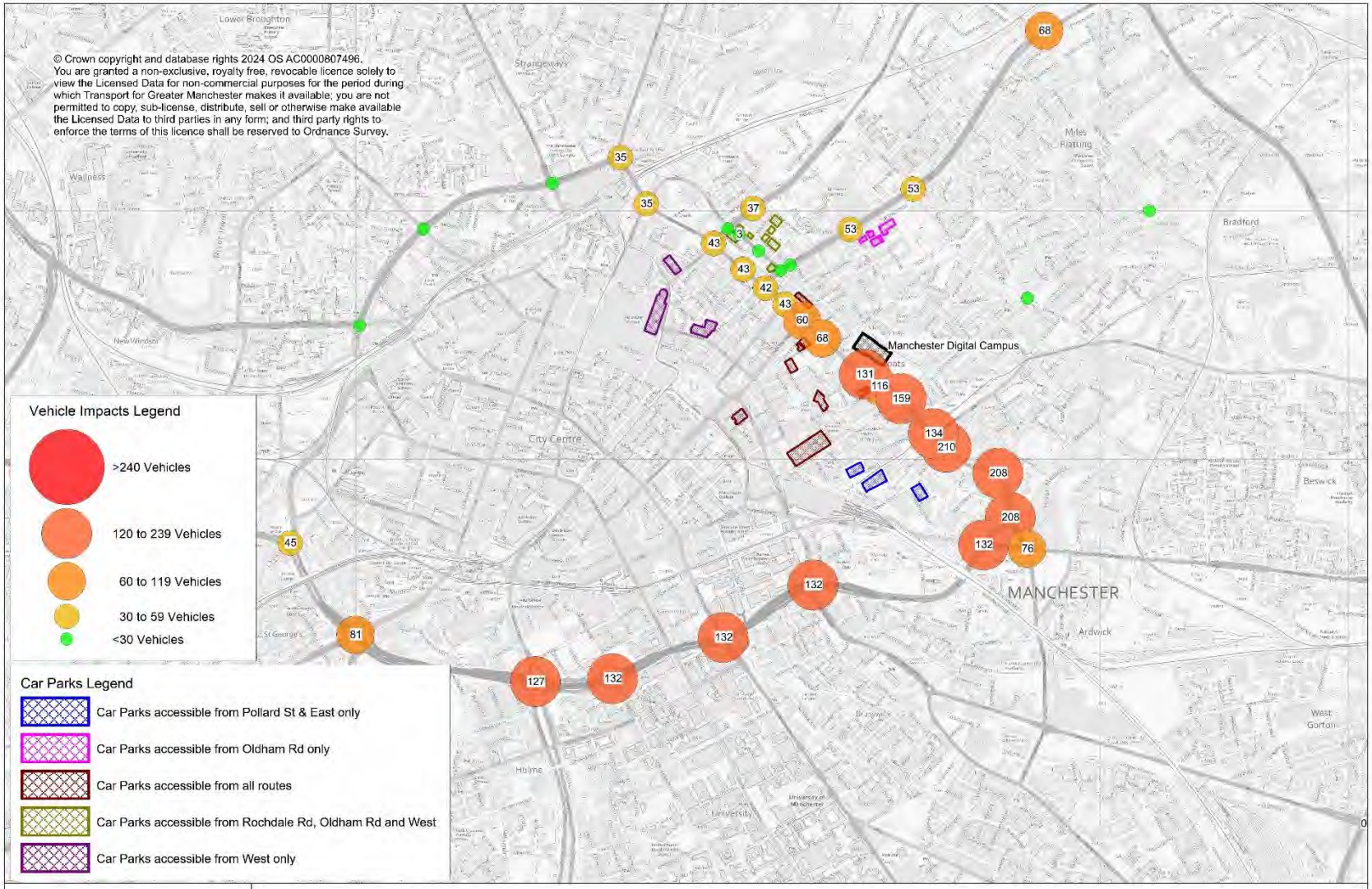
- Gt Ancoats St / Adair St – circa 200 vehicles and an increase of circa 9% to the hourly flow
- Gt Ancoats St / Store St – circa 150 vehicles and an increase of circa 8% to the hourly flow
- Gt Ancoats St / Pollard St - circa 130 vehicles and an increase of circa 6% to the hourly flow

1.20 The tables showing the impacts on junctions along the AOI are included in appendix 2 and 3.

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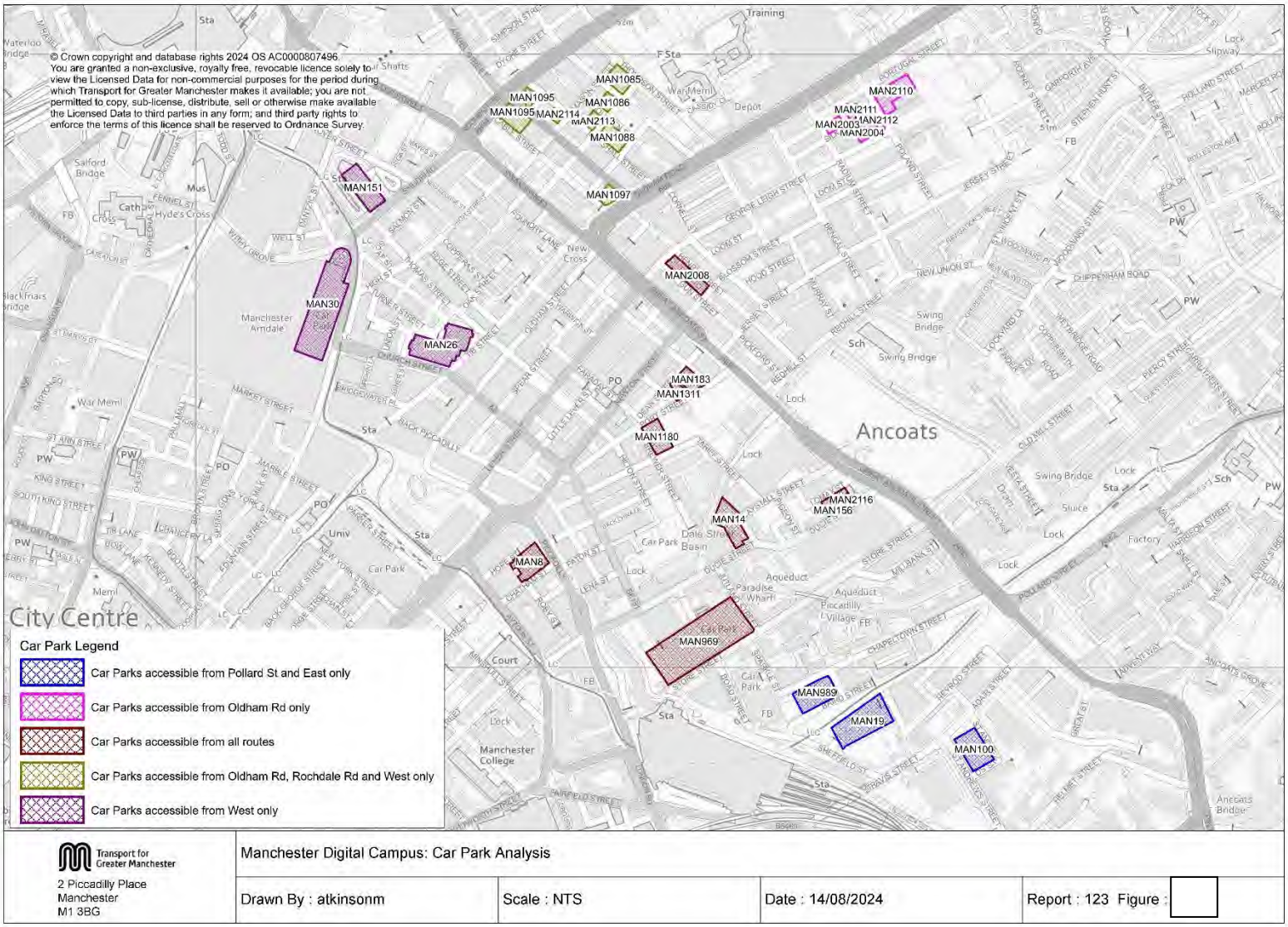


Transport for Greater Manchester 2 Piccadilly Place Manchester M1 3BG	Manchester Digital Campus: Morning Peak Hour Junction Impacts (All Vehicle Trips - Inbound 349 & Outbound 24)			
	Drawn By : atkinsonm	Scale : NTS	Date : 06/08/2024	Report : 123 Figure 2


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Vehicle Impacts Legend
>240 Vehicles
120 to 239 Vehicles
60 to 119 Vehicles
30 to 59 Vehicles
<30 Vehicles
Car Parks Legend
Car Parks accessible from Pollard St & East only
Car Parks accessible from Oldham Rd only
Car Parks accessible from all routes
Car Parks accessible from Rochdale Rd, Oldham Rd and West
Car Parks accessible from West only
Manchester Digital Campus
MANCHESTER
City Centre
Bradford
Ardwick
Beswick
Hulme
Transport for Greater Manchester
2 Piccadilly Place
Manchester
M1 3BG
Manchester Digital Campus: Evening Peak Hour Junction Impacts (All Vehicle Trips - Inbound 17 & Outbound 338)
Drawn By : atkinsonm
Scale : NTS
Date : 06/08/2024
Report : 123 Figure 3

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Appendix


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City Centre
Ancoats
Car Park Legend
Car Parks accessible from Pollard St and East only
Car Parks accessible from Oldham Rd only
Car Parks accessible from all routes
Car Parks accessible from Oldham Rd, Rochdale Rd and West only
Car Parks accessible from West only
MAN151
MAN30
MAN26
MAN1085
MAN1095
MAN1086
MAN2114
MAN2113
MAN1088
MAN1097
MAN2110
MAN2111
MAN2112
MAN2003
MAN2004
MAN2008
MAN183
MAN1311
MAN1180
MAN14
MAN2116
MAN156
MAN8
MAN969
MAN989
MAN19
MAN100
Transport for Greater Manchester
2 Piccadilly Place
Manchester
M1 3BG
Manchester Digital Campus: Car Park Analysis
Drawn By : atkinsonm
Scale : NTS
Date : 14/08/2024
Report : 123 Figure :

Appendix 1

Appendix 2 - MDC Morning Peak Hour: Inner Ring Rd Junction Impacts (Adair St – Cheetham Hill Rd)			
Junction	AM Hourly Flow	AM MDC Trips	% Impact
Gt Ancoats St / Adair St	2,298	216	9%
Gt Ancoats St / Store St	2,166	149	7%
Gt Ancoats St / Pollard St	2,143	136	6%
Gt Ancoats St / Central Retail Park	2,422	121	5%
Gt Ancoats St / Ducie St	*1	113	*1
Gt Ancoats St / Newton St	1,836	99	5%
Gt Ancoats St / Lever St	1,805	84	5%
Gt Ancoats St / Oldham St	2,058	66	3%
Addington St / Oldham Rd	2,046	63	3%
Rochdale Rd / Addington St	1,807	55	3%
Ring Rd / Corporation St	2,057	41	2%
Cheetham Hill Rd / Ring Rd	1,661	41	2%
Rochdale Rd / Ring Rd	1,789	4	0%
*1 – No Survey data available for Gt Ancoats St / Ducie St			

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Appendix 3 - MDC Evening Peak Hour: Inner Ring Rd Junction Impacts (Adair St – Cheetham Hill Rd)			
Junction	PM Hourly Flow	AM MDC Trips	% Impact
Gt Ancoats St / Adair St	2,685	210	8%
Gt Ancoats St / Store St	1,896	159	8%
Gt Ancoats St / Pollard St	1,386	134	10%
Gt Ancoats St / Central Retail Park	2,558	131	5%
Gt Ancoats St / Ducie St	*2	116	*2
Gt Ancoats St / Newton St	1,878	60	3%
Gt Ancoats St / Lever St	2,896	43	1%
Rochdale Rd / Ring Rd	2,099	43	2%
Gt Ancoats St / Oldham St	2,422	42	2%
Cheetham Hill Rd / Ring Rd	1,933	35	2%
Ring Rd / Corporation St	2,748	35	1%
Rochdale Rd / Addington St	2,086	17	0%
Addington St / Oldham Rd	2,209	15	0%
*2 – No Survey data available for Gt Ancoats St / Ducie St			

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Appendix D. TfGM/ HFAS Traffic Modelling Report

Client **WS ATKINS**

Report **TfGM HFAS Report 2263**

Project **Manchester Digital Campus**

Subject **Modelling Report**

This document summarises the modelling results of the proposed Manchester Digital Campus development.

This Note	**Rep2263 MDC Modelling Report_Final.docx**		
Originator	Mike Atkinson		
Version	Comments	Date	Check / Approve
0.1		AC	30/09/24

Contact	**HFAS:**	**E-mail**	**Tel:**
	Mike Atkinson	michael.atkinson@tfgm.com	

Issued	**Organisation**	**FAO**
Sep 2024	WS ATKINS	Graham Foulkes

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1. Introduction

1.1 This report outlines the results of modelling work undertaken to assess the proposed Manchester Digital Campus development on Great Ancoats Street. This work is being used to help inform the planning application process.

1.2 Manchester Digital Campus is a new Government office complex in the city, bringing together a number of Civil Service departments with a focus around digital skills. This digital hub will be home for 7,000 civil servants, with capacity for almost 4,400 on-site at any one time. There will also be a Business Enterprise Centre on site with capacity for up to 600 people, attracted from within the site and other Government office locations across the city centre (that will not be impacting on peak hour movements).

1.3 Figure 1.1 on the following page shows the location of the proposed development.

1.4 The Manchester Digital Campus site access/egress is expected to be a left in/left out only arrangement and this is reflected in the work undertaken on the vehicle impacts of the development. The development has 50 on-site parking spaces which are accessed from Great Ancoats Street.

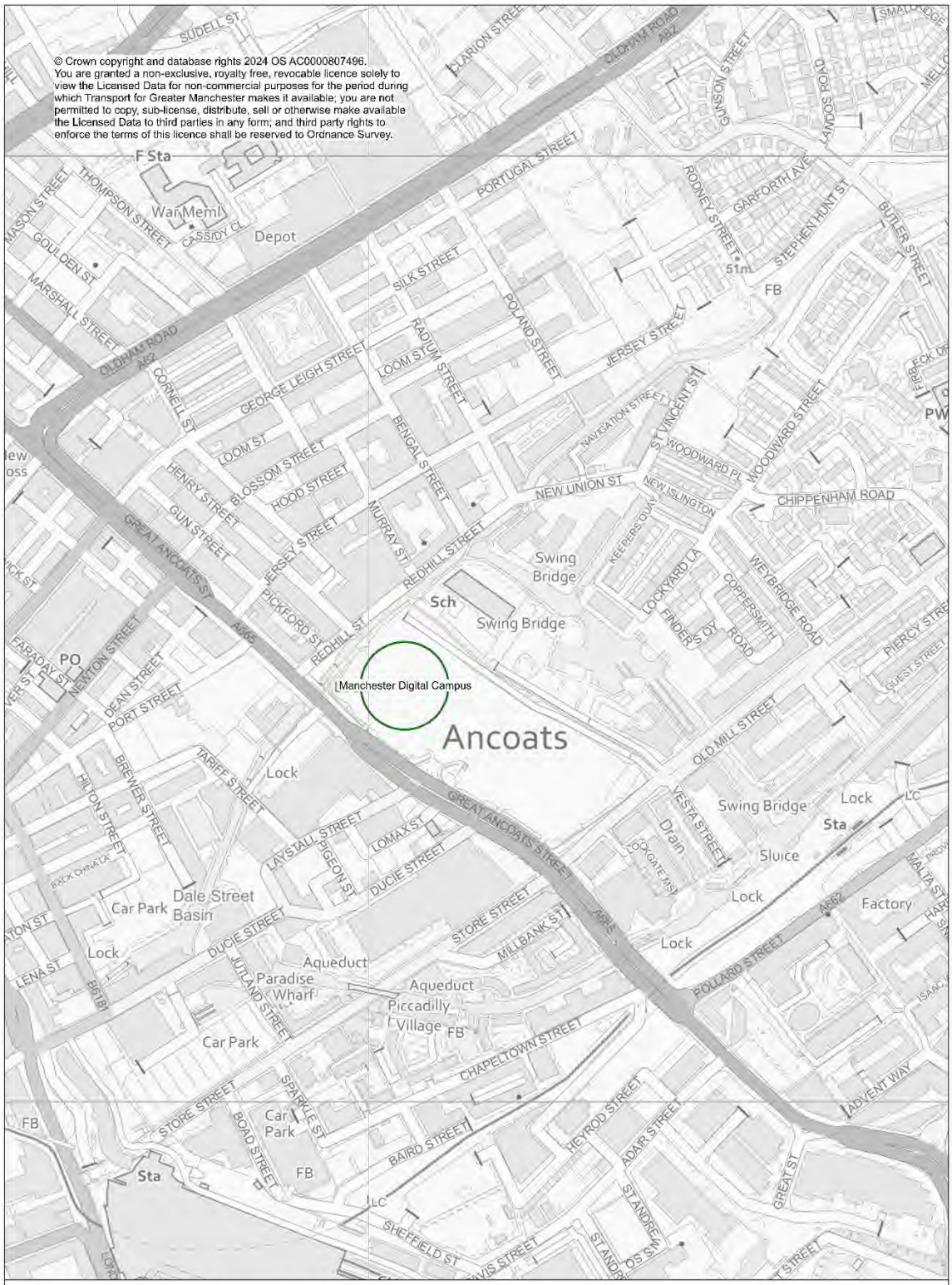
1.5 The development site was formerly known as Central Retail Park.

1.6 Recent traffic survey data from 2023/2024 has been included in the report for key junctions along Great Ancoats Street with traffic surveys commissioned and carried out on car parks close to the site in June 2024.

1.7 The remainder of the report is set out as follows:

- Trip Generation
- Trip Distribution
- Highway Assignment
- Car Park Choice Model
- Modelling Results
- Summary & Conclusions

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Manchester Digital Campus - Location Plan

Transport for Greater Manchester 2 Piccadilly Place Manchester M1 3BG	Drawn By : atkinsonm	Date : 20/09/2024
	Scale : NTS	Report : 2263 Figure : 1.1

2. Trip Generation

2.1 Trip Generation has been provided by WS ATKINS for the morning peak hour (08:30-09:30) and evening peak hour (17:00-18:00). The trip generation is based upon TRICS Land Use 02 – A – Office and a multi-modal analysis was undertaken.

2.2 Table 2.1 below shows the trip generation summary by mode.

Table 2.1 – Manchester Digital Campus – Trip Generation (Multi Modal)

Mode	Morning Peak Hour (08:30-09:30)		Evening Peak Hour (17:00-18:00)	
	Arrivals	Departures	Arrivals	Departures
Single Vehicle Occupants (On-Site)	50	0	0	50
Single Vehicle Occupants (Off-Site)	299	24	17	288
Cyclists	70	5	3	68
Pedestrians	249	17	12	241
Rail Passengers	506	35	25	490
Coach Passengers	15	1	1	14
Bus/Tram Passengers	74	5	4	72
Multi-Vehicle Occupants	82	6	4	79
Total	1,346	92	66	1,302

2.3 The following vehicle numbers were provided and used in the subsequent analysis.

- Morning Peak Hour – total vehicle trip generation 373 two-way trips. The breakdown is as follows: 50 arrivals on site, 299 arrivals off-site and 24 departures off-site
- Evening Peak Hour – total vehicle trip generation 355 two-way trips. The breakdown is as follows: 50 departures from site, 288 departures off-site and 17 arrivals off-site

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3. Trip Distribution

3.1 Trip Distribution has been undertaken by TfGM HFAS. The trip distribution is based upon 2011 ONS census data. The distribution was based upon existing travel to work patterns for Middle Super Output Area (MSOA) Manchester 055.

3.2 Figure 3.1 on the following page shows the 2011 ONS census area for (MSOA) Manchester 055.

3.3 The trip distribution exercise was undertaken by using Middle Super Output Areas for Manchester and Salford and then at a district level for all other areas.

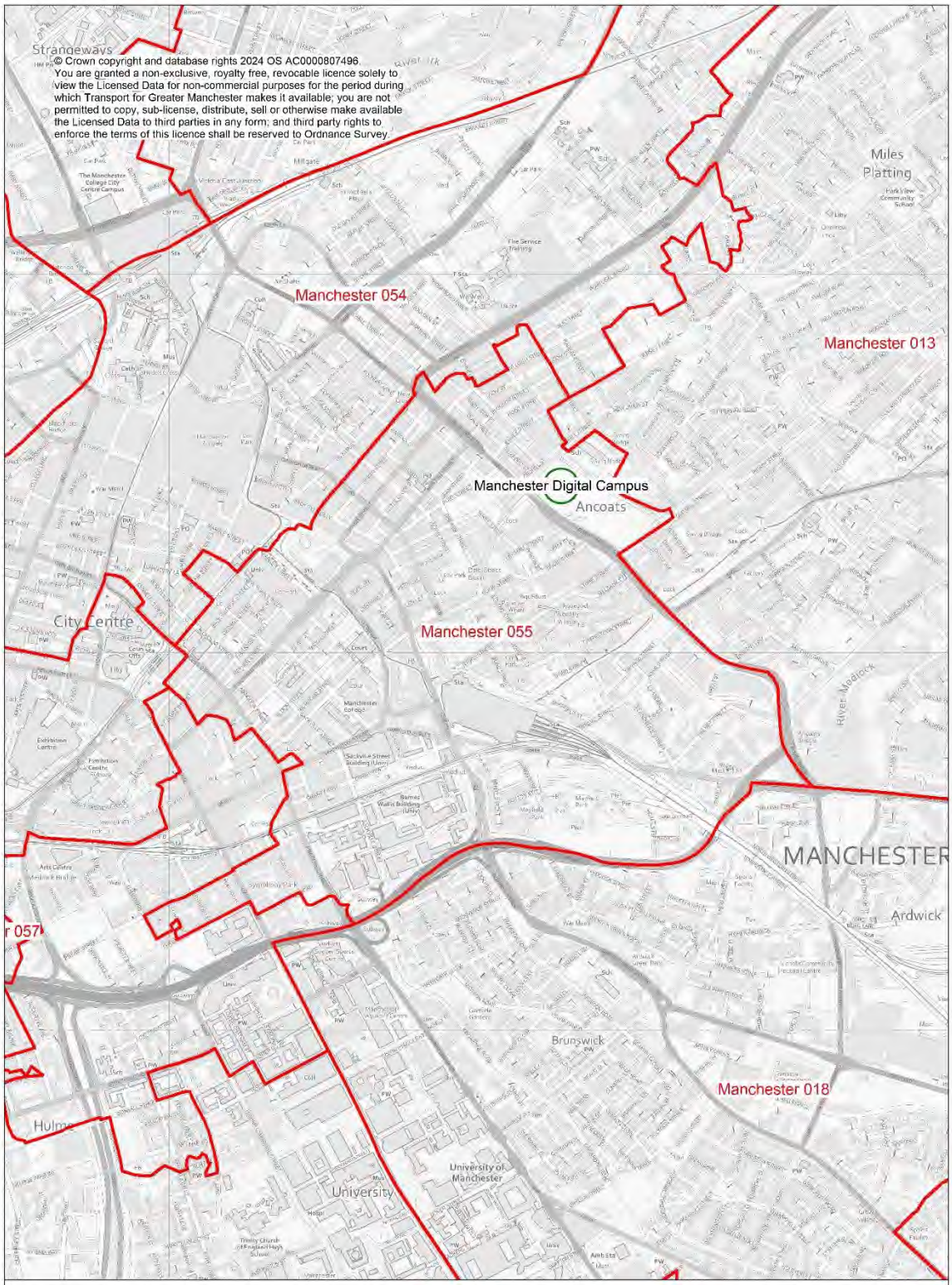
3.4 Table 3.1 shows the origins of person workplace trips to (MSOA) Manchester 055. The table shows all origins with percentage above 2%. The full tables can be found in appendices 1 & 2.

Table 3.1 – Manchester Digital Campus – 2011 ONS place of work – Manchester 055

Origin Area	Number of Persons	%
Manchester	2,110	21%
Salford	801	8%
Trafford	769	8%
Stockport	762	8%
Tameside	695	7%
Bury	675	7%
Oldham	659	7%
Rochdale	555	6%
Bolton	359	4%
Cheshire East	334	3%
Wigan	323	3%
Yorkshire and the Humber	261	3%
Warrington	236	2%

3.5 The above table represents circa 85% of the origins of person workplace trips to (MSOA) Manchester 055. This table has been used to derive the highway assignment origins for vehicle trips to/from the proposed development. It is assumed that the origins can be reversed to provide destinations.

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Manchester Digial Campus - MSOA Manchester 055

Transport for Greater Manchester 2 Piccadilly Place Manchester M1 3BG	Drawn By : atkinsonm	Date : 23/09/2024
	Scale : NTS	Report : 2263 Figure : 3.1

4. Highway Assignment

4.1 Highway Assignment has been undertaken by TfGM HFAS. The highway assignment was based upon Google route planner and initially looked at routes to/from Table 3.1 to/from Central Retail Park on Great Ancoats Street.

4.2 The highway assignment analysis was based upon the existing access/egress arrangement at Central Retail Park (i.e. all movements allowed in and out of the site).

4.3 Inbound routes towards the development were determined using Google route planner with journey origins determined by the trip distribution exercise. Inbound routes were calculated to arrive at the destination by 9am.

4.4 Outbound routes away from the development location were determined using Google route planner with journey destinations determined by the trip distribution exercise. Outbound routes were calculated to leave the destination at 5pm. The quickest routes were chosen.

4.5 Manchester and Salford routes were determined at a ONS (MSOA) level based upon a central postcode and all other routes were determined by a central location at a district level. For example, routes to/from Tameside were centralised upon Ashton Town Centre.

4.6 Examples of both the inbound and outbound routes are presented in appendix 3. Manchester and Salford are represented by Manchester 004 inbound and Salford 011 outbound.

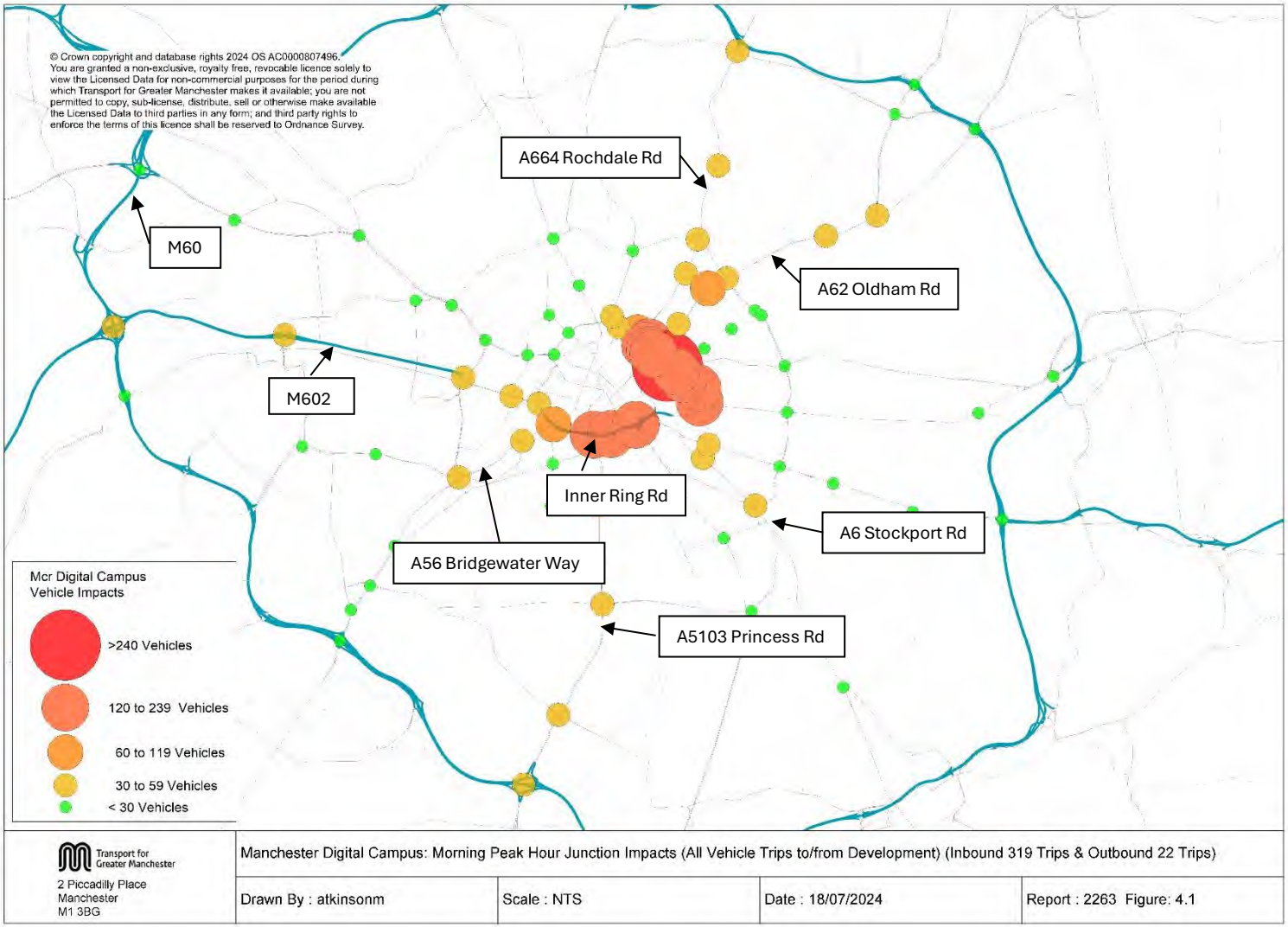
4.7 Figure 4.1 and Figure 4.2 show the strategic impact of the development on the highway within the M60. The figures show an initial lower trip generation for vehicle trips routed to/from the proposed development.

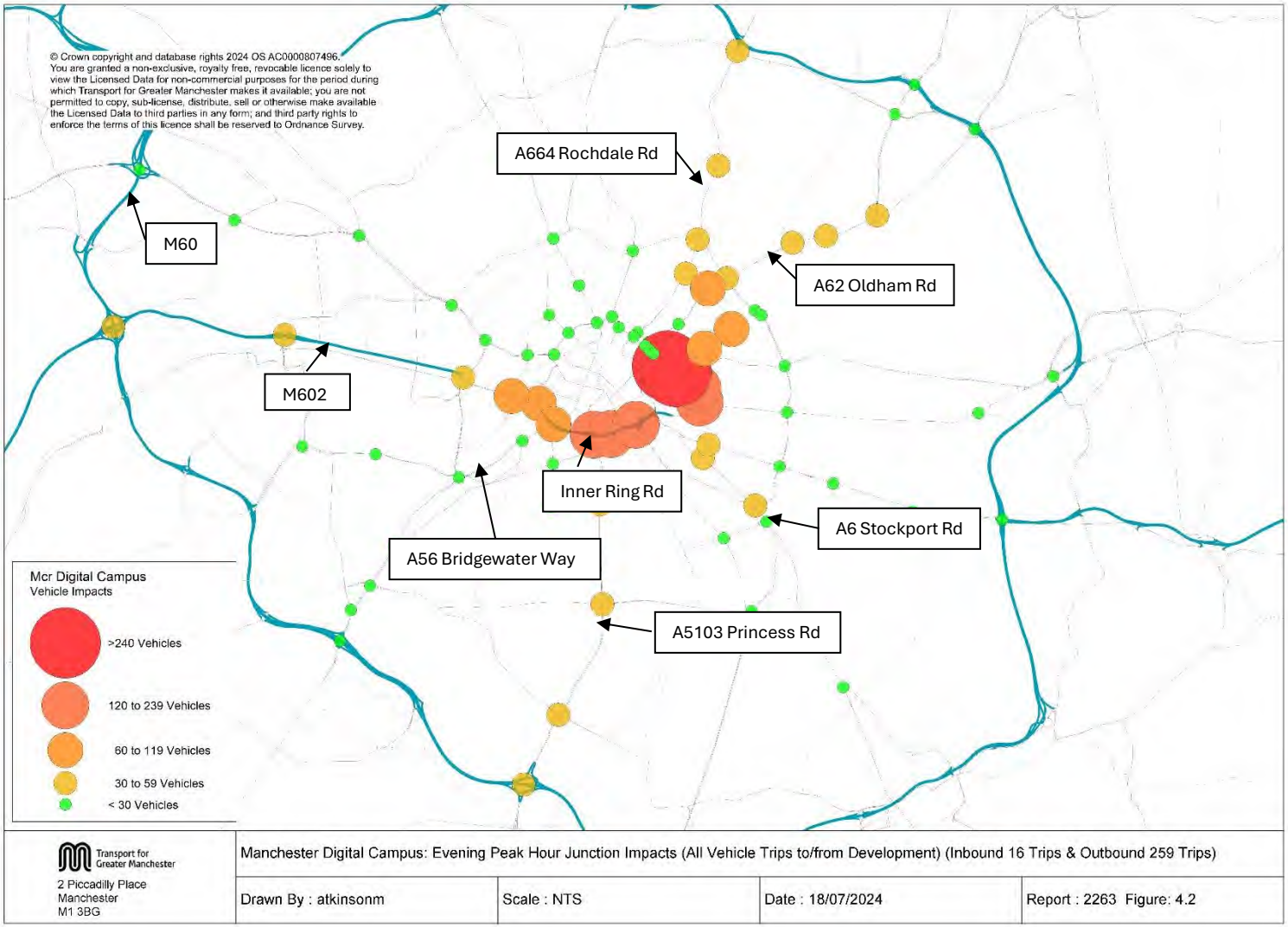
4.8 During the morning peak hour Figure 4.1 shows an impact along Regent Road, Princess Road, Stockport Road, Rochdale Road and Oldham Road. The analysis shows a noticeable impact on the southern side of the Inner Ring Road of circa 125 eastbound vehicles.

4.9 During the evening peak hour Figure 4.2 presents a similar pattern to the morning peak hour with noticeable impacts on Princess Road, Stockport Road and the Inner Ring Road. The analysis shows vehicles heading towards Rochdale Road and Oldham Road may seek to route via Ancoats. This impact is negated once the trips are distributed to/from car parks.

4.10 Due to the large number of development vehicles parking off-site, an additional distribution assignment was undertaken based upon localised car parks.

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A664 Rochdale Rd
M60
A62 Oldham Rd
M602
Inner Ring Rd
A6 Stockport Rd
A56 Bridgewater Way
A5103 Princess Rd
Mcr Digital Campus
Vehicle Impacts
>240 Vehicles
120 to 239 Vehicles
60 to 119 Vehicles
30 to 59 Vehicles
< 30 Vehicles
Transport for Greater Manchester
2 Piccadilly Place
Manchester
M1 3BG
Manchester Digital Campus: Morning Peak Hour Junction Impacts (All Vehicle Trips to/from Development) (Inbound 319 Trips & Outbound 22 Trips)
Drawn By : atkinsonm
Scale : NTS
Date : 18/07/2024
Report : 2263 Figure: 4.1


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A664 Rochdale Rd
M60
A62 Oldham Rd
M602
Inner Ring Rd
A6 Stockport Rd
A56 Bridgewater Way
A5103 Princess Rd
Mcr Digital Campus
Vehicle Impacts
>240 Vehicles
120 to 239 Vehicles
60 to 119 Vehicles
30 to 59 Vehicles
< 30 Vehicles
Transport for Greater Manchester
2 Piccadilly Place
Manchester
M1 3BG
Manchester Digital Campus: Evening Peak Hour Junction Impacts (All Vehicle Trips to/from Development) (Inbound 16 Trips & Outbound 259 Trips)
Drawn By : atkinsonm
Scale : NTS
Date : 18/07/2024
Report : 2263 Figure: 4.2

5. Car Park Choice Model

5.1 Due to the large number of vehicles parking off-site a car park choice model was built based upon cost/distance and availability of spaces. TfGM HFAS alongside Manchester City Council have been collaborating on a car park data collection program over the last few years.

5.2 The car park choice model took the initial highway assignment and assigned the vehicles to groups of car parks based on original routing and cost/distance plus availability of spaces. The cost and distance parameters were less than 15 minutes' walk to/from the development and less than £10 daily parking cost. Some more expensive car parks were included to represent a broad range of employees and visitors to the development.

5.3 The methodology resulted in vehicles travelling:

- Clockwise around the Inner Ring Road accessing car parks around Addington Street and the Northern Quarter/Ancoats
- Anticlockwise around the Inner Ring Road accessing car parks around Adair Street and the Northern Quarter/Ancoats
- Rochdale Road accessing car parks around Addington Street and the Northern Quarter/Ancoats
- Oldham Road accessing car parks around Addington Street, Poland Street and the Northern Quarter/Ancoats
- Pollard Street accessing car parks around Adair Street and the Northern Quarter/Ancoats

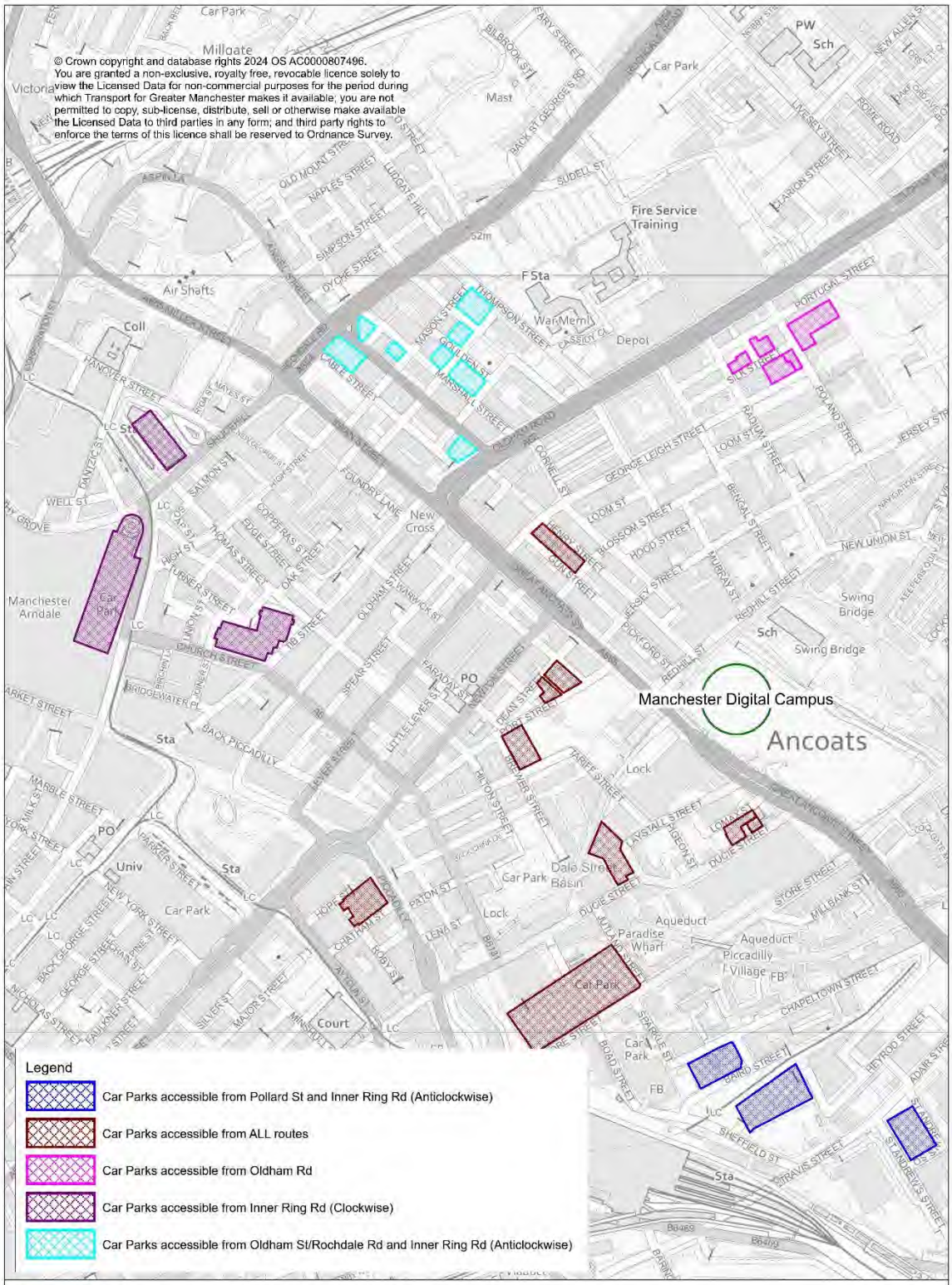
5.4 Figure 5.1 shows the car parks used in the car park choice model.

5.5 15 new car park surveys were commissioned by WS ATKINS and carried out in June 2024. The survey locations can be found in appendix 4.

5.6 The car park choice model shows that circa 650 spaces were available at 9am. The model distributed the majority of trips to car parks closest to the development based around Store Street and Adair St at the rear of Piccadilly train station.

5.7 The car park choice model demonstrates that within each grouping of car parks after the development trips have been assigned that there is still spare car park capacity.

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Manchester Digital Campus - Car Park Analysis

Transport for Greater Manchester 2 Piccadilly Place Manchester M1 3BG	Drawn By : atkinsonm	Date : 24/09/2024
	Scale : NTS	Report : 2263 Figure : 5.1

Table 5.1: Manchester Digital Campus (MDC) – Car Park Analysis

Reference	Description	Route	Avg. Price	Capacity	Spaces at 9am	AM MDC Trips	PM MDC Trips
MAN19	Sheffield St	Pollard St and East Only	£7	390	169	86	81
MAN100	St. Andrews Sq.						
MAN989	Baird St						
MAN2003	Radium St	Oldham Rd	£4	167	57	28	27
MAN2004	George Leigh St						
MAN2110	Poland St						
MAN2111	Silk St						
MAN2112	George Leigh St						
MAN8	Piccadilly	All Routes	£26	712	574	19	19
MAN14	Ducie St	All Routes	£8	830	171	133	132
MAN156	Ducie St						
MAN183	Port St						
MAN969	Store St						
MAN1311	Port St						
MAN1180	Port St						
MAN2008	Gun St						
MAN2116	Ducie St						
MAN1085	Thompson St	Rochdale Rd, Oldham Rd and West Only	£7	303	125	45	44
MAN1086	Goulden St						
MAN1088	Cross Keys St						
MAN1095	Cable St						
MAN1097	Cable St						
MAN2113	Goulden St						
MAN2214	Marshall St						
MAN26	Arndale	West Only	£20	2,172	1,638	4	4
MAN30	Northern Quarter						
MAN151	Printworks	West Only	£7	777	148	1	1

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6. Modelling Results

6.1 The following section reports on a defined area of interest (AOI) adjacent to the development. The AOI was agreed with Manchester City Council (MCC).

6.2 The AOI covers Great Ancoats Street between Cheetham Hill Road and Adair Street.

6.3 The figures show the final trip generation for the development with vehicle trips routed to/from the proposed development and to/from adjacent car parks.

6.4 Figure 6.1 and Figure 6.2 show the vehicle impact of the development on the AOI.

6.5 During the morning peak hour Figure 6.1 shows the impacts of the development are most keenly felt on the southern side of Great Ancoats Street between the Laystall Street and Adair Street. The impact on key junctions is between 120 to 240 extra vehicles.

6.6 This pattern matches the trip distribution/highway assignment exercise which shows the majority of the vehicles coming from the south of the Regional Centre and using the Inner Ring Road.

6.7 The key impacted junctions are Adair Street (216 vehicles), Store Street (149 vehicles) Pollard Street (136 vehicles) and Laystall Street (121 vehicles).

6.8 The Adair Street and Store Street junctions are heavily used by vehicles seeking to access car parks around the rear of Piccadilly train station. Pollard Street and Laystall Street are primarily impacted by vehicles heading towards car parks around the Northern Quarter/Ancoats.

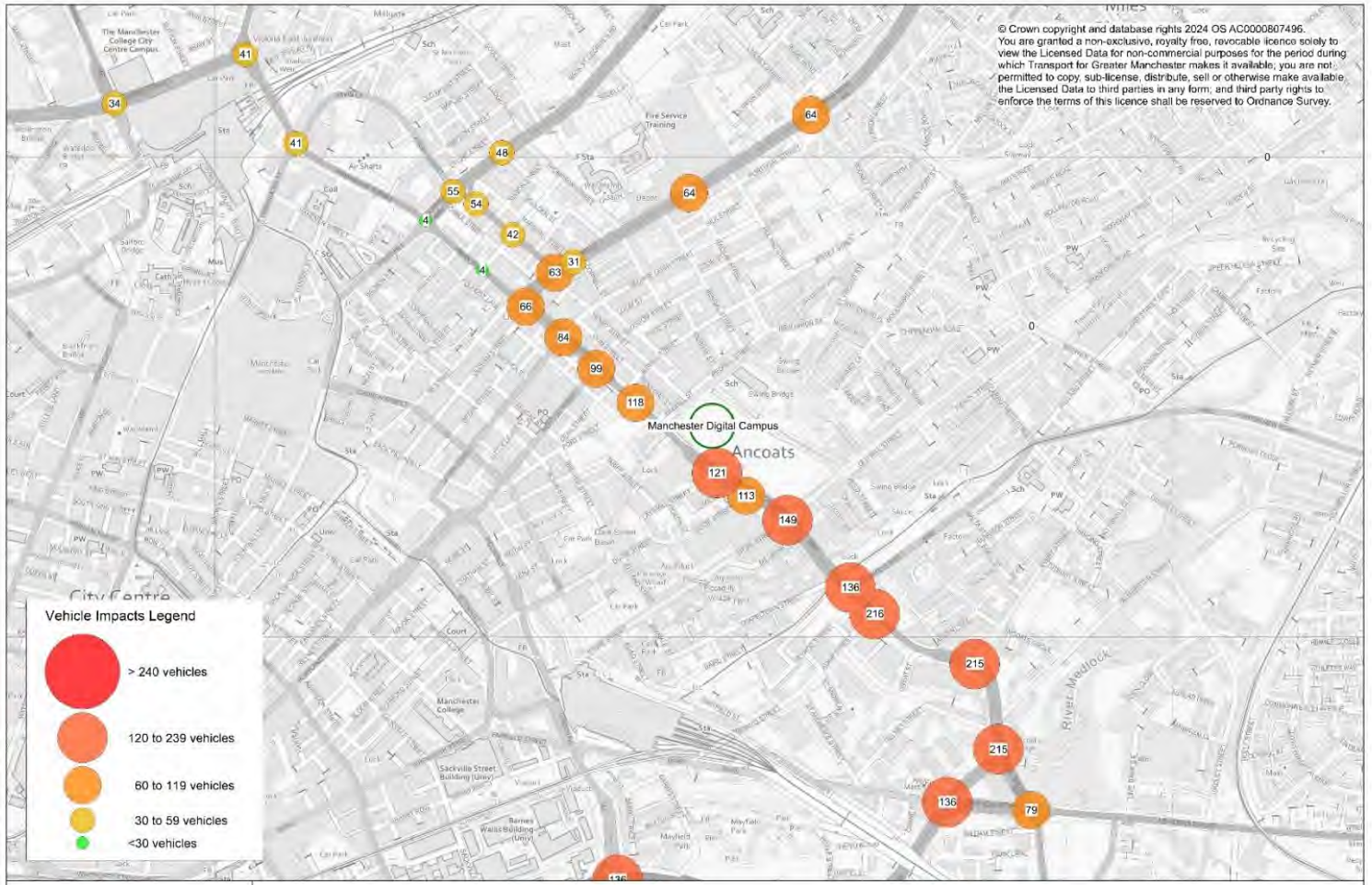
6.9 Due to the site access operating as a left in/left out arrangement and the bulk of the trips heading to the development are from the south this leads to circa 50 vehicles turning left onto Ducie Street before making their way through the Northern Quarter to turn right onto Great Ancoats Street via Port Street.

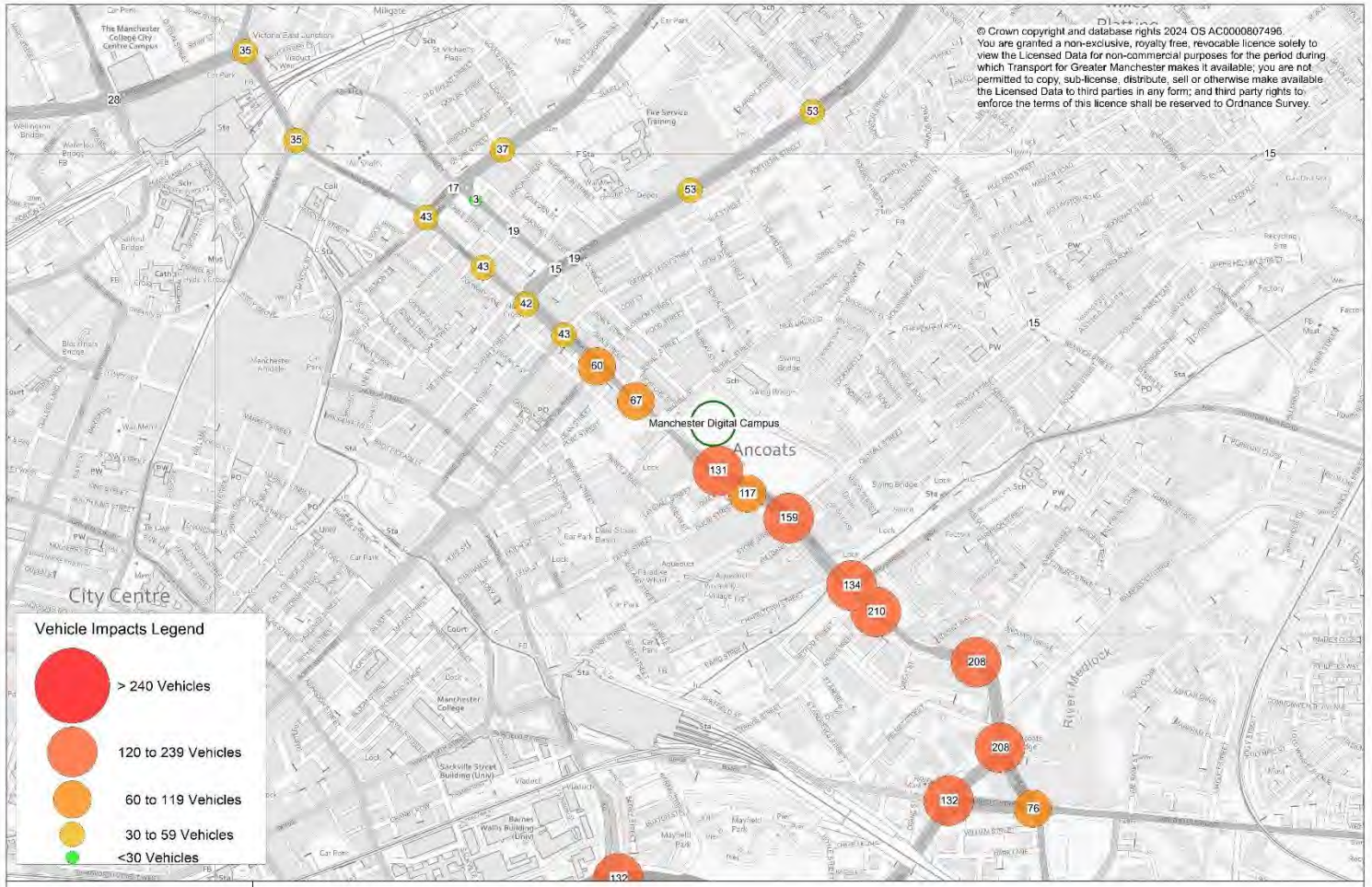
6.10 During the evening peak hour Figure 6.2 shows the impacts of the development on Great Ancoats Street are similar to the morning peak hour. The development impact on key junctions between Laystall Street and Adair Street is 120 to 240 extra vehicles.

6.11 The key impacted junctions are Adair Street (210 vehicles), Store Street (159 vehicles) Pollard Street (134 vehicles) and Laystall Street (131 vehicles).

6.12 The Adair Street and Store Street junctions are heavily used by vehicles leaving car parks around the rear of Piccadilly Train station. Pollard Street and Laystall Street are primarily impacted by vehicles heading away from car parks around the Northern Quarter and Ancoats.

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Manchester Digital Campus
Ancoats
City Centre
Vehicle Impacts Legend
> 240 vehicles
120 to 239 vehicles
60 to 119 vehicles
30 to 59 vehicles
<30 vehicles
Transport for Greater Manchester
2 Piccadilly Place
Manchester
M1 3BG
Manchester Digital Campus - Morning Peak Hour Junction Impacts
Drawn By : atkinsonm
Scale : NTS
Date : 25/09/2024
Report : 2263 Figure : 6.1


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Manchester Digital Campus
Ancoats
City Centre
River Medlock
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> 240 Vehicles
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2 Piccadilly Place
Manchester
M1 3BG
Manchester Digital Campus - Evening Peak Hour Junction Impacts
Drawn By : atkinsonm
Scale : NTS
Date : 25/09/2024
Report : 2263 Figure : 6.2

6.13 The following tables 6.1 and 6.2 show the impact of the development on key AOI junctions alongside the hourly flow. The tables show the hourly flow (based upon traffic survey data), the development trips alongside the % impact during the hour.

6.14 The traffic survey data (2023/20234) referred to in tables 6.1 & 6.2 is shown in appendix 5.

6.15 Table 6.1 shows the impact during the morning peak hour.

6.16 During the morning peak hour, the most impacted junctions are Adair Street, Store Street and Pollard Street. Adair Street is forecast to see an increase of 9% in the hourly vehicle flow, whilst Store Street and Pollard Street may see an increase of circa 7%.

6.17 Laystall Street, Newton Street and Lever Street may see increases of 5% in the hourly vehicle flow.

6.18 Table 6.2 shows the impact during the evening peak hour.

6.19 During the evening peak hour, the most impacted junctions are Adair Street, Store Street and Pollard Street. Pollard Street is forecast to see an increase of 10% in the hourly vehicle flow, whilst Adair Street and Store Street may see an increase of 8%.

6.20 Laystall St may see an increases of 5% in the hourly vehicle flow.

6.21 The modelling shows that the majority of the development traffic come from the south and routes towards the development anticlockwise along the Inner Ring Road with a cumulative build up between junctions.

6.22 Traffic from the south routes to/from the development seeking car parking around Adair Street and Store Street, whilst traffic heading from the north routes to/from the development seeking car parking around Addington Street and the NCP at Gun Street.

6.23 Appendix 6 shows the on-site development traffic diagrams and appendix 7 shows the off-site development traffic diagrams.

6.24 Appendix 8 shows the combined development traffic diagrams (on-site and off-site)

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Table 6.1 - Morning Peak Hour: AOI Junction Impacts			
Junction	AM Hourly Flow	AM MDC Trips	% Impact
Gt Ancoats St / Adair St	2,298	216	9%
Gt Ancoats St / Store St	2,166	149	7%
Gt Ancoats St / Pollard St	2,143	136	6%
Gt Ancoats St / Laystall St	2,422	121	5%
Gt Ancoats St / Newton St	1,836	99	5%
Gt Ancoats St / Lever St	1,805	84	5%
Gt Ancoats St / Oldham St	2,058	66	3%
Addington St / Oldham Rd	2,046	63	3%
Rochdale Rd / Addington St	1,807	55	3%
Inner Ring Rd / Corporation St	2,057	41	2%
Cheetham Hill Rd / Inner Ring Rd	1,661	41	2%
Rochdale Rd / Inner Ring Rd	1,789	4	0%
Gt Ancoats St / Ducie St	*1	113	*1
*1 – No Survey data available for Gt Ancoats St / Ducie St			

Table 6.2 - Evening Peak Hour: AOI Junction Impacts			
Junction	PM Hourly Flow	PM MDC Trips	% Impact
Gt Ancoats St / Adair St	2,685	210	8%
Gt Ancoats St / Store St	1,896	159	8%
Gt Ancoats St / Pollard St	1,386	134	10%
Gt Ancoats St / Laystall St	2,558	131	5%
Gt Ancoats St / Newton St	1,878	60	3%
Gt Ancoats St / Lever St	2,896	43	1%
Rochdale Rd / Ring Rd	2,099	43	2%
Gt Ancoats St / Oldham St	2,422	42	2%
Cheetham Hill Rd / Inner Ring Rd	1,933	35	2%
Inner Ring Rd / Corporation St	2,748	35	1%
Rochdale Rd / Addington St	2,086	17	0%
Addington St / Oldham Rd	2,209	15	0%
Gt Ancoats St / Ducie St	*2	116	*2
*2 – No Survey data available for Gt Ancoats St / Ducie St			

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7. Summary and Conclusions

7.1 This report outlines the results of modelling work undertaken to assess the proposed Manchester Digital Campus development on Great Ancoats Street.

7.2 Manchester Digital Campus is a new Government office complex in the city, bringing together a number of Civil Service departments with a focus around digital skills. This digital hub will be home for 7,000 civil servants, with capacity for almost 4,400 on-site at any one time.

7.3 The development has 50 on-site parking spaces and will require substantial off-site parking.

7.4 A comprehensive set of traffic data has been used in this report including 15 new car park surveys commissioned by WS ATKINS and carried out in June 2024.

7.5 Trip Generation has been undertaken by WS ATKINS for the morning peak hour (08:30-09:30) and evening peak hour (17:00-18:00). The following trips numbers were provided.

- Morning Peak Hour –373 two-way vehicle trips.
- Evening Peak Hour – 355 two-way vehicle trips.

7.6 Trip Distribution has been undertaken by TfGM HFAS. The trip distribution used 2011 ONS Census data. The distribution was based upon existing travel to work patterns for Middle Super Output Area (MSOA) Manchester 055.

7.1 Highway Assignment has been undertaken by TfGM HFAS. The highway assignment was based upon Google Route Planner. Due to the large number of development vehicles parking off-site an additional distribution assignment was based upon a Car Park Choice model.

7.2 The car park choice model took the initial highway assignment and assigned the vehicles to groups of car parks based on original routing to/from the development and cost/distance plus availability of spaces.

7.3 The car park choice model shows that circa 650 spaces were available at 9am. The model distributed the majority of trips to car parks closest to the development based around Store Street and Adair Street at the rear of Piccadilly train station.

7.4 The car park choice model demonstrates that after all the development trips have been assigned that there is still spare car park capacity.

7.5 During the morning peak hour, the modelling shows the impacts of the development are most keenly felt on the southern side of Great Ancoats Street between the Laystall Street and Adair Street. The impact on key junctions is between 120 to 240 extra vehicles per hour.

7.6 The key impacted junctions are Adair Street (216 vehicles), Store Street (149 vehicles) Pollard Street (136 vehicles) and Laystall Street (121 vehicles).

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7.7 The Adair Street and Store Street junctions are heavily used by vehicles seeking to access car parks around the rear of Piccadilly train station. Pollard Street and Laystall Street are primarily impacted by vehicles heading towards car parks.

7.8 The bulk of the trips heading to the development are from the south and the proposed site access is a left in/left out arrangement. This leads to circa 50 vehicles coming from the south turning left onto Ducie Street before routing through the Northern Quarter to turn right onto Great Ancoats Street via Port Street.

7.9 During the morning peak hour, the most impacted junctions are Adair Street, Store Street and Pollard Street. Adair Street is forecast to see an increase of 9% in the hourly vehicle flow, whilst Store Street and Pollard Street may see an increase of circa 7%.

7.10 During the evening peak hour, the analysis shows the impacts of the development on Great Ancoats Street are similar to the morning peak hour.

7.11 The key impacted junctions during the evening peak hour are Adair Street (210 vehicles), Store Street (159 vehicles) Pollard Street (134 vehicles) and Laystall Street (131 vehicles).

7.12 During the evening peak hour, the most impacted junctions are Adair Street, Store Street and Pollard Street. Pollard Street is forecast to see an increase of 10% in the hourly vehicle flow, whilst Adair Street and Store Street may see an increase of 8%.

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Appendices

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Appendix 1 – (Trip Distribution)

Appendix 1– Trip Distribution (MSOA Level)		
Area	**Number**	**%**
E02001049 : Manchester 005	72	0.7%
E02001052 : Manchester 008	67	0.7%
E02001087 : Manchester 043	66	0.7%
E02001169 : Salford 013	66	0.7%
E02001051 : Manchester 007	66	0.7%
E02001083 : Manchester 039	65	0.6%
E02001046 : Manchester 002	65	0.6%
E02001073 : Manchester 029	64	0.6%
E02001047 : Manchester 003	62	0.6%
E02001059 : Manchester 015	56	0.6%
E02001045 : Manchester 001	56	0.6%
E02001176 : Salford 020	54	0.5%
E02001074 : Manchester 030	53	0.5%
E02001184 : Salford 028	52	0.5%
E02001167 : Salford 011	51	0.5%
E02001086 : Manchester 042	51	0.5%
E02001081 : Manchester 037	49	0.5%
E02001177 : Salford 021	49	0.5%
E02001170 : Salford 014	48	0.5%
E02001055 : Manchester 011	48	0.5%
E02001078 : Manchester 034	46	0.5%
E02001050 : Manchester 006	46	0.5%
E02001053 : Manchester 009	45	0.4%
E02001089 : Manchester 045	43	0.4%
E02001065 : Manchester 021	42	0.4%
E02001048 : Manchester 004	42	0.4%
E02001090 : Manchester 046	41	0.4%
E02001064 : Manchester 020	39	0.4%
E02001172 : Salford 016	39	0.4%
E02001071 : Manchester 027	38	0.4%
E02001084 : Manchester 040	38	0.4%
E02001072 : Manchester 028	38	0.4%
E02001082 : Manchester 038	37	0.4%
E02001161 : Salford 005	37	0.4%
E02001088 : Manchester 044	36	0.4%
E02001164 : Salford 008	35	0.3%
E02001061 : Manchester 017	35	0.3%
E02001056 : Manchester 012	35	0.3%
E02001057 : Manchester 013	35	0.3%
E02001067 : Manchester 023	33	0.3%
E02001093 : Manchester 049	33	0.3%
E02001066 : Manchester 022	32	0.3%
E02001075 : Manchester 031	32	0.3%
E02006915 : Manchester 058	32	0.3%
E02001085 : Manchester 041	31	0.3%
E02001077 : Manchester 033	31	0.3%
E02001080 : Manchester 036	30	0.3%
E02001070 : Manchester 026	29	0.3%
E02001063 : Manchester 019	28	0.3%
E02001069 : Manchester 025	28	0.3%

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E02001174 : Salford 018	27	0.3%
E02001178 : Salford 022	26	0.3%
E02001166 : Salford 010	26	0.3%
E02001168 : Salford 012	24	0.2%
E02001079 : Manchester 035	24	0.2%
E02001091 : Manchester 047	23	0.2%
E02001165 : Salford 009	23	0.2%
E02001179 : Salford 023	23	0.2%
E02006913 : Manchester 056	23	0.2%
E02001076 : Manchester 032	22	0.2%
E02001163 : Salford 007	21	0.2%
E02001068 : Manchester 024	20	0.2%
E02001185 : Salford 029	20	0.2%
E02001092 : Manchester 048	19	0.2%
E02001186 : Salford 030	19	0.2%
E02006912 : Manchester 055	19	0.2%
E02006902 : Manchester 054	18	0.2%
E02001062 : Manchester 018	18	0.2%
E02001094 : Manchester 050	18	0.2%
E02006914 : Manchester 057	17	0.2%
E02001159 : Salford 003	17	0.2%
E02001175 : Salford 019	17	0.2%
E02006916 : Manchester 059	16	0.2%
E02006917 : Manchester 060	16	0.2%
E02001095 : Manchester 051	16	0.2%
E02001162 : Salford 006	16	0.2%
E02001160 : Salford 004	14	0.1%
E02001171 : Salford 015	14	0.1%
E02001182 : Salford 026	14	0.1%
E02001183 : Salford 027	14	0.1%
E02001096 : Manchester 052	13	0.1%
E02001097 : Manchester 053	13	0.1%
E02001157 : Salford 001	13	0.1%
E02001158 : Salford 002	13	0.1%
E02001173 : Salford 017	13	0.1%
E02001181 : Salford 025	9	0.1%
E02001180 : Salford 024	7	0.1%

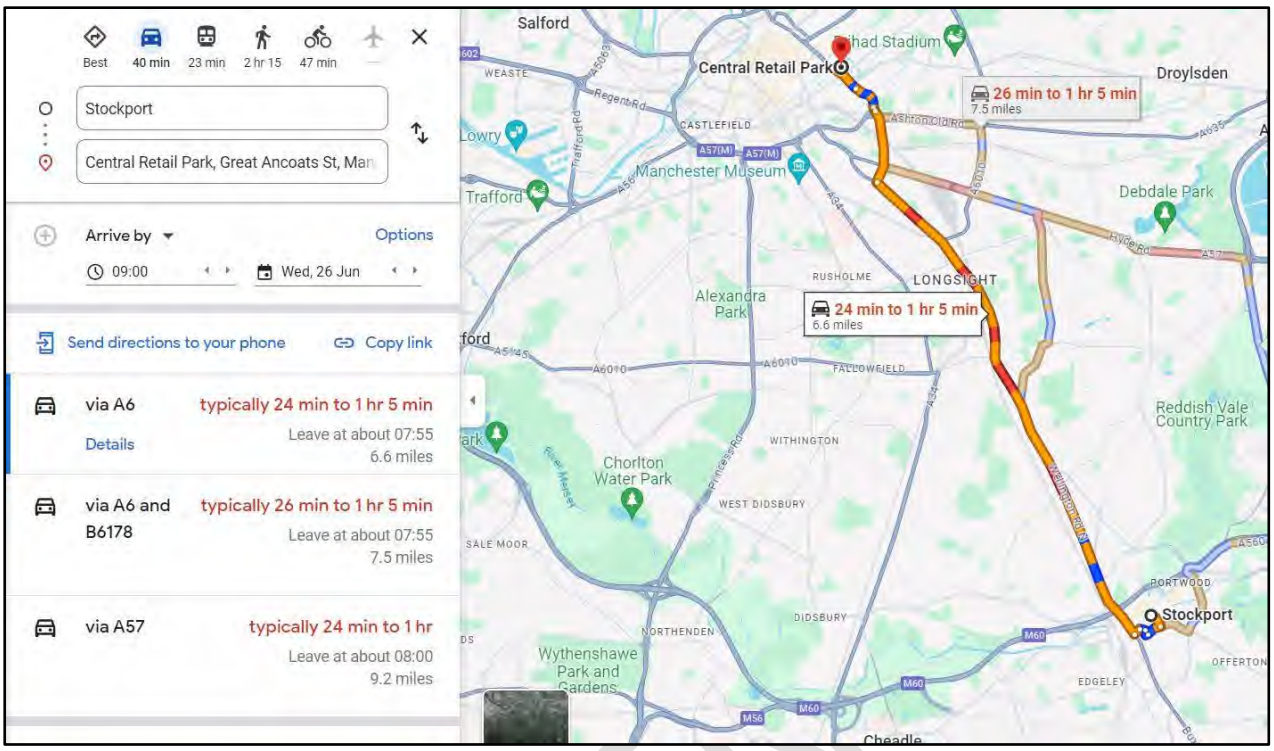
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Appendix 2 – Trip Distribution (District Level)		
Area	**Number**	**%**
Manchester (Total)	2,110	21%
Salford (Total)	801	8%
Trafford	769	8%
Stockport	762	8%
Tameside	695	7%
Bury	675	7%
Oldham	659	7%
Rochdale	555	6%
Bolton	359	4%
Cheshire East	334	3%
Wigan	323	3%
Yorkshire and The Humber	261	3%
Warrington	235	2%
East Midlands	147	1.5%
Rossendale	137	1.4%
Cheshire West and Chester	135	1.3%
West Midlands	105	1.0%
Liverpool	83	0.8%
St. Helens	70	0.7%
Wales	63	0.6%
Pendle	60	0.6%
Chorley	59	0.6%
Sefton	59	0.6%
Halton	57	0.6%
Blackburn with Darwen	57	0.6%
Hyndburn	45	0.4%
Wirral	40	0.4%
South Ribble	36	0.4%
Knowsley	35	0.3%
Ribble Valley	34	0.3%
South-East	31	0.3%
Burnley	31	0.3%
Preston	29	0.3%
West Lancashire	29	0.3%
London	20	0.2%
Wyre	18	0.2%
East	17	0.2%
Blackpool	15	0.1%
Lancaster	15	0.1%
North-East	15	0.1%
South-West	13	0.1%
Fylde	12	0.1%
South Lakeland	6	0.1%
Copeland	5	0.0%
Eden	4	0.0%
Barrow-in-Furness	3	0.0%
Allerdale	2	0.0%
Carlisle	1	0.0%

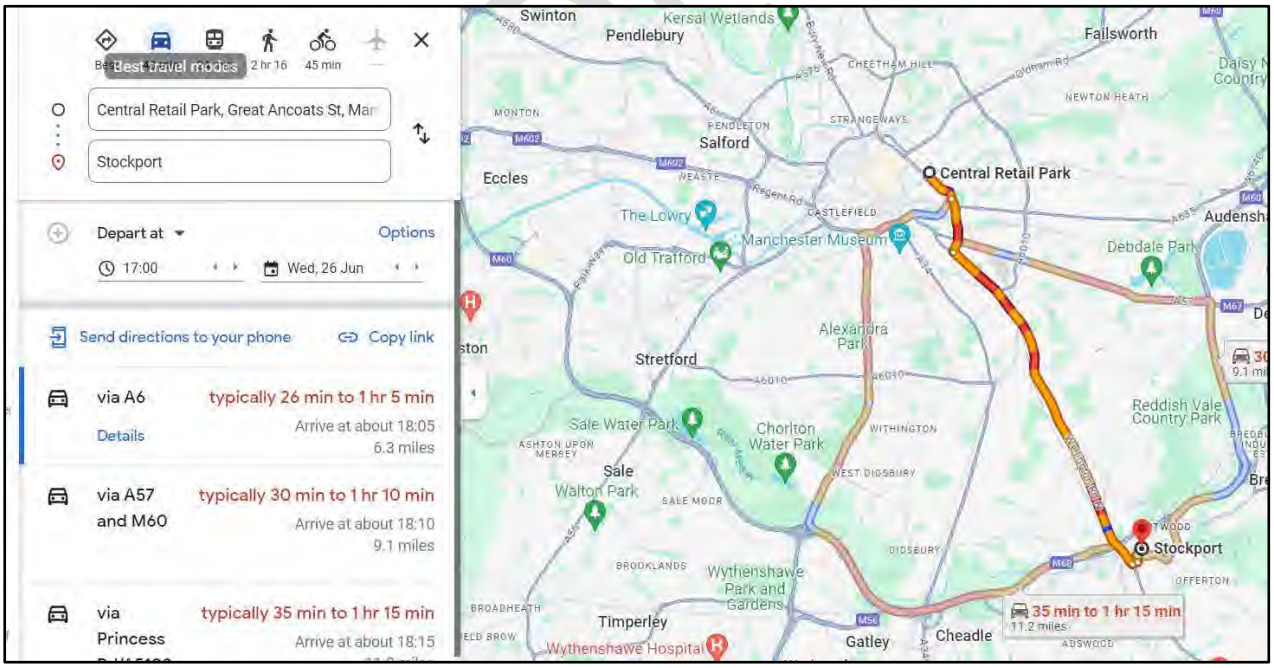
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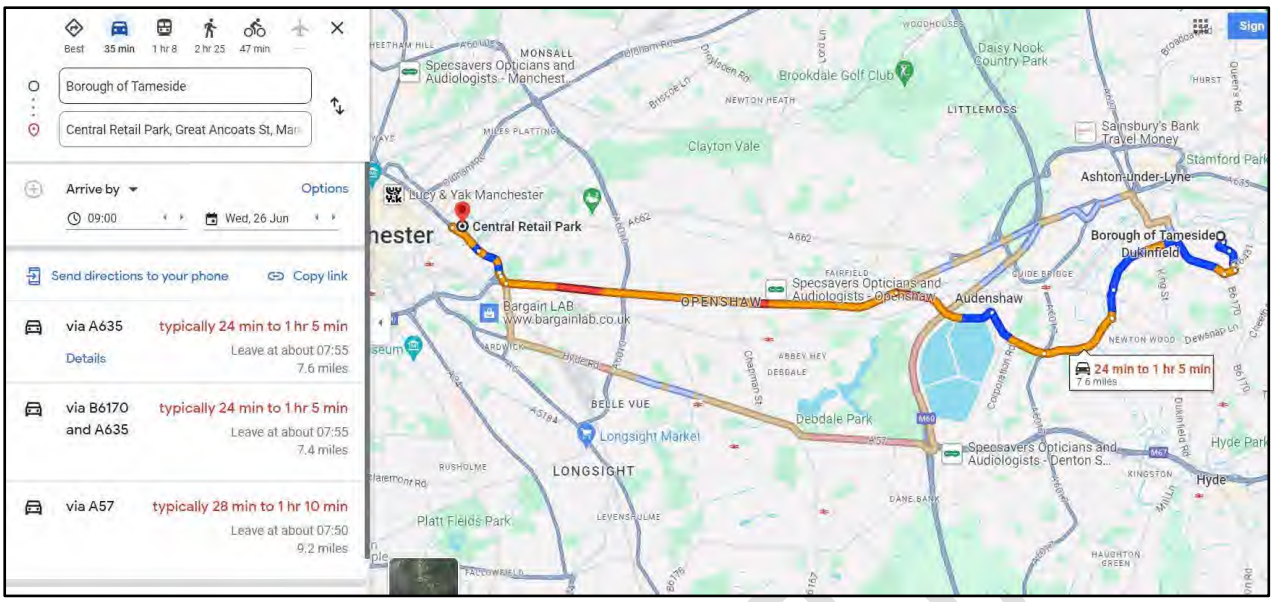
Appendix 3 – (Highway Assignment)



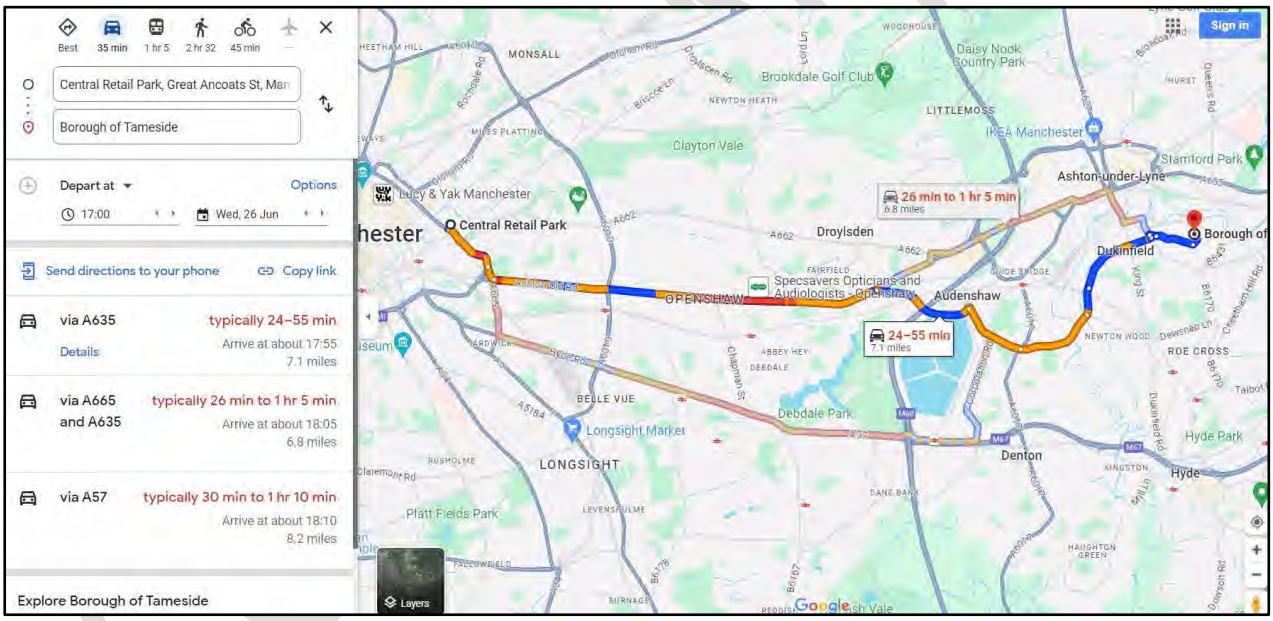
Stockport (Inbound)



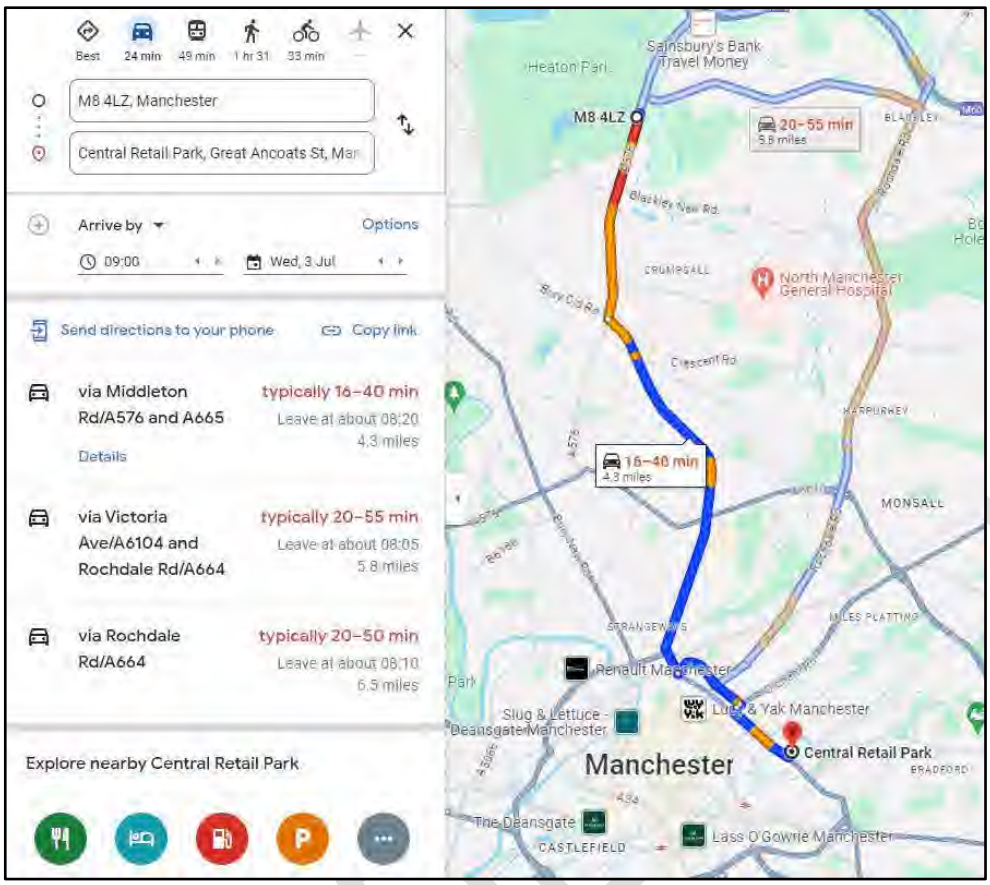
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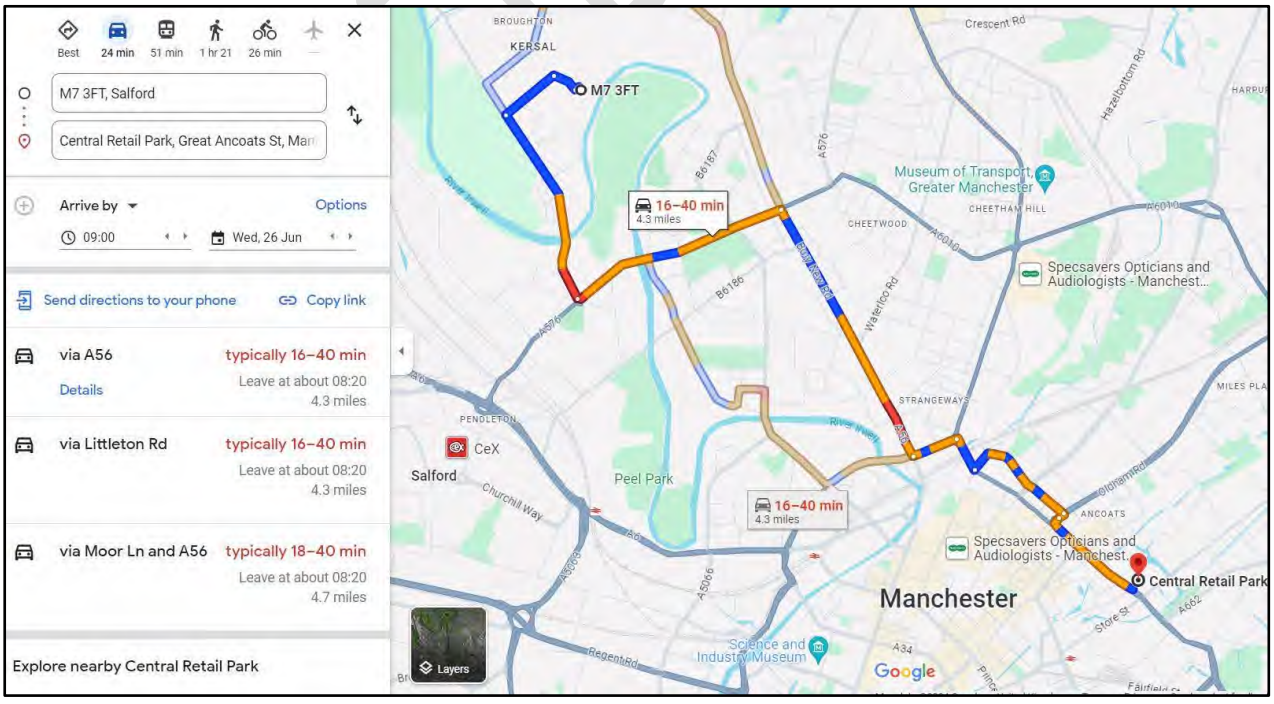
Tameside (Inbound)



Tameside (Outbound)



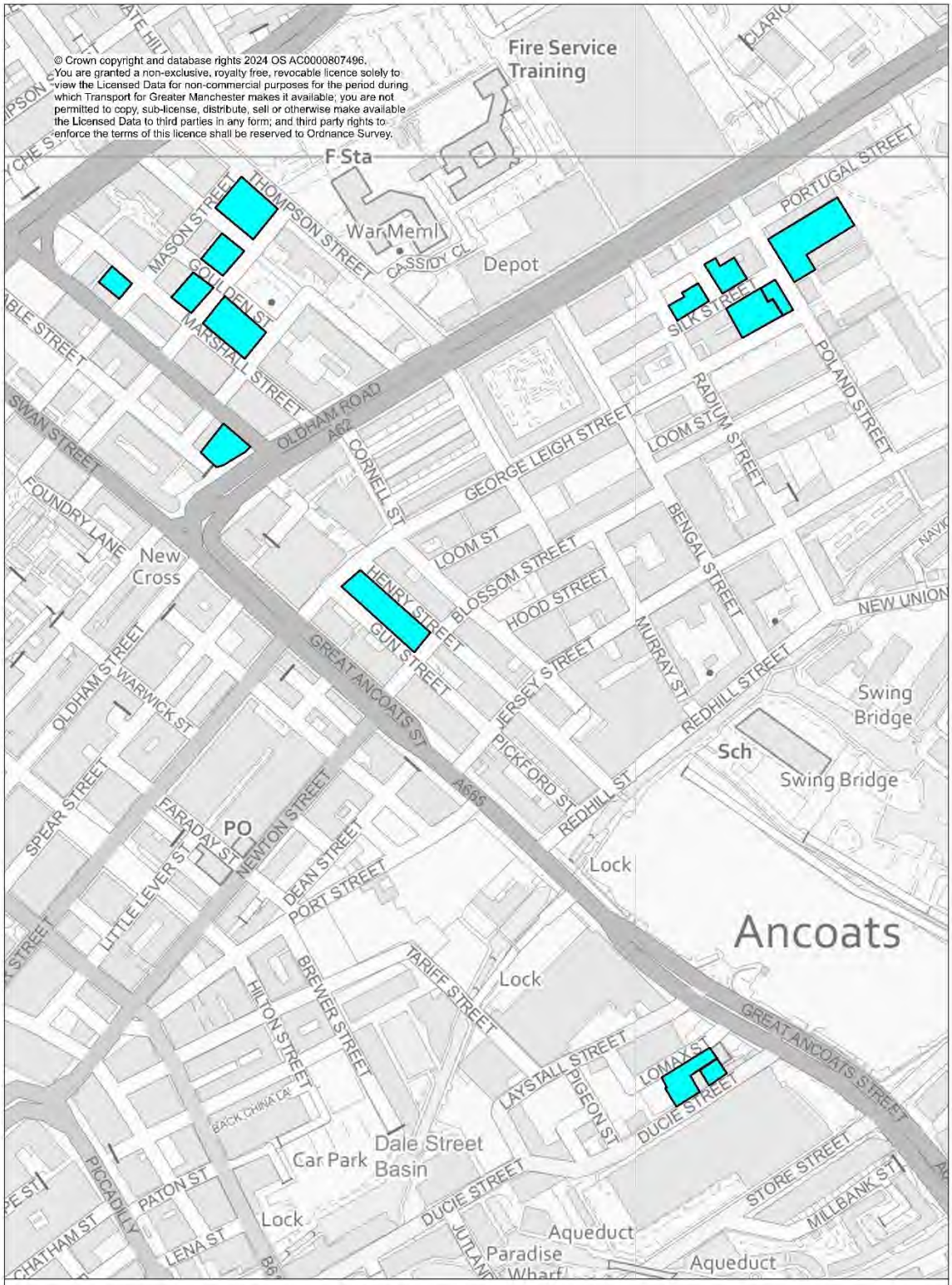
Manchester 004 (Inbound)



Salford 011 (Outbound)

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Appendix 4 – (Car Park Survey Locations)

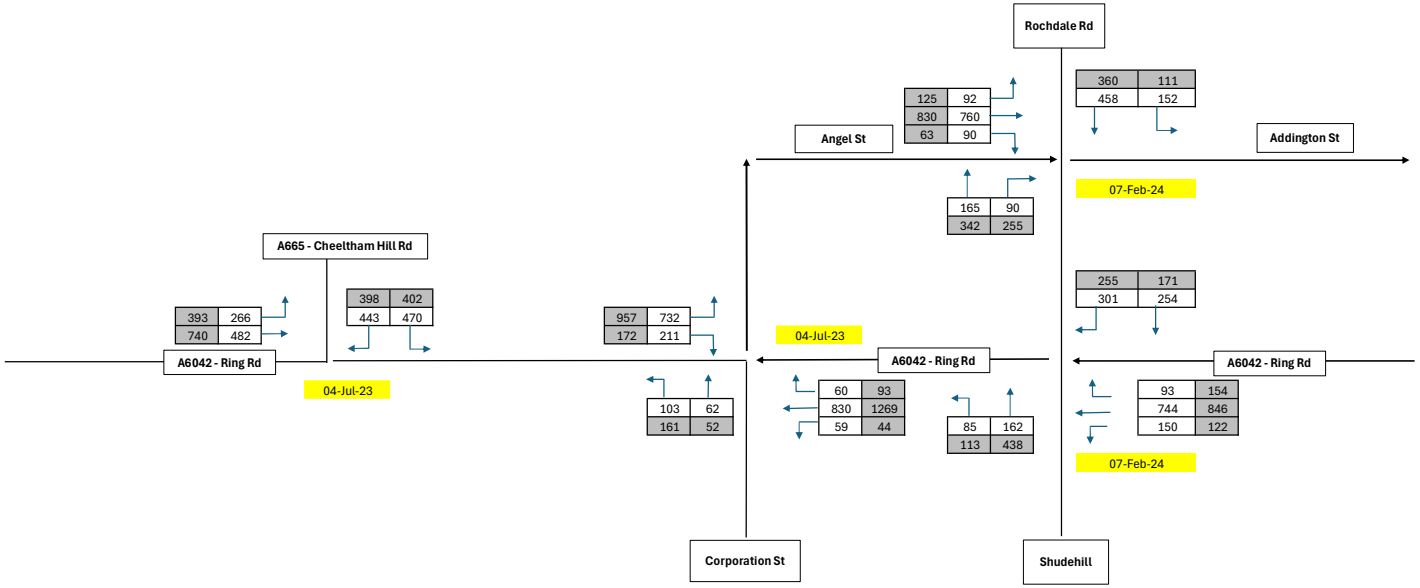


Manchester Digital Campus - Car Park Surveys (26/06/24 : 7am-7pm)

Transport for Greater Manchester 2 Piccadilly Place Manchester M1 3BG	Drawn By : atkinsonm	Date : 26/09/2024
	Scale : NTS	Report : 2263

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Appendix 5 – (Traffic Survey Diagrams)



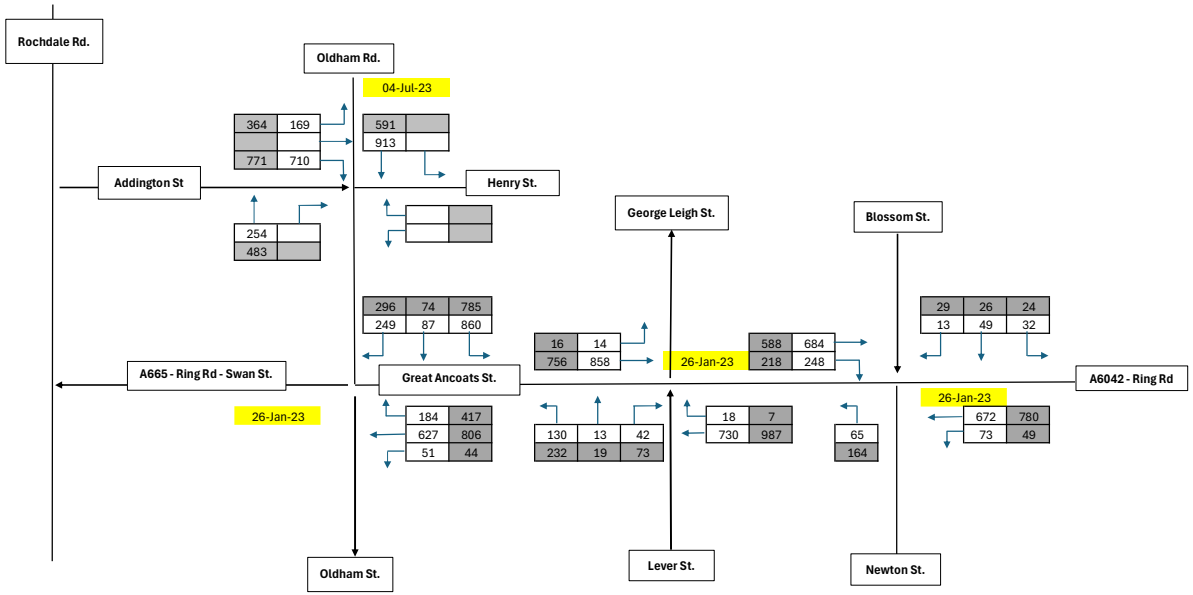
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 5.1: Survey Data (All Vehicles)

Project: Manchester Digital Campus

Transport for Greater Manchester



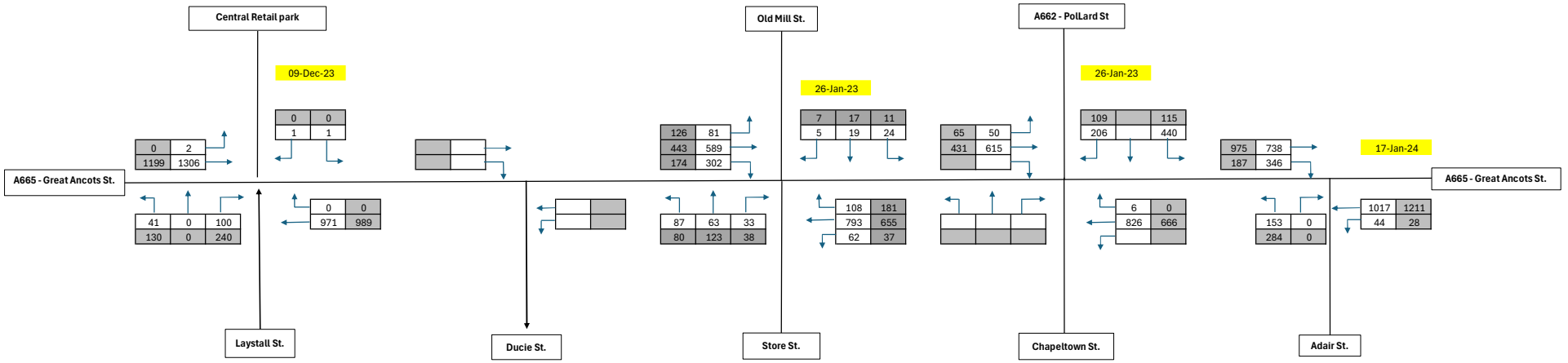
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 5:2: Survey Data (All Vehicles)

Project: Manchester Digital Campus

Transport for Greater Manchester



Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

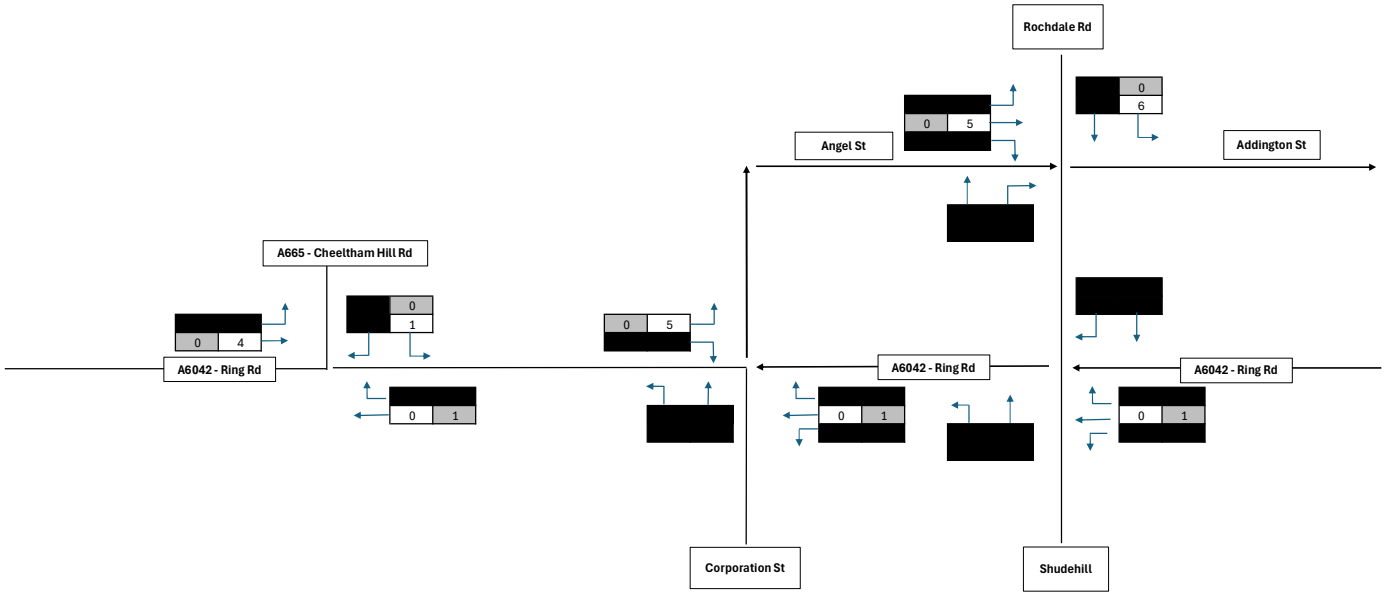
Appendix 5:3: Survey Data (All Vehicles)

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Appendix 6 - (On-Site Development Traffic Diagrams)



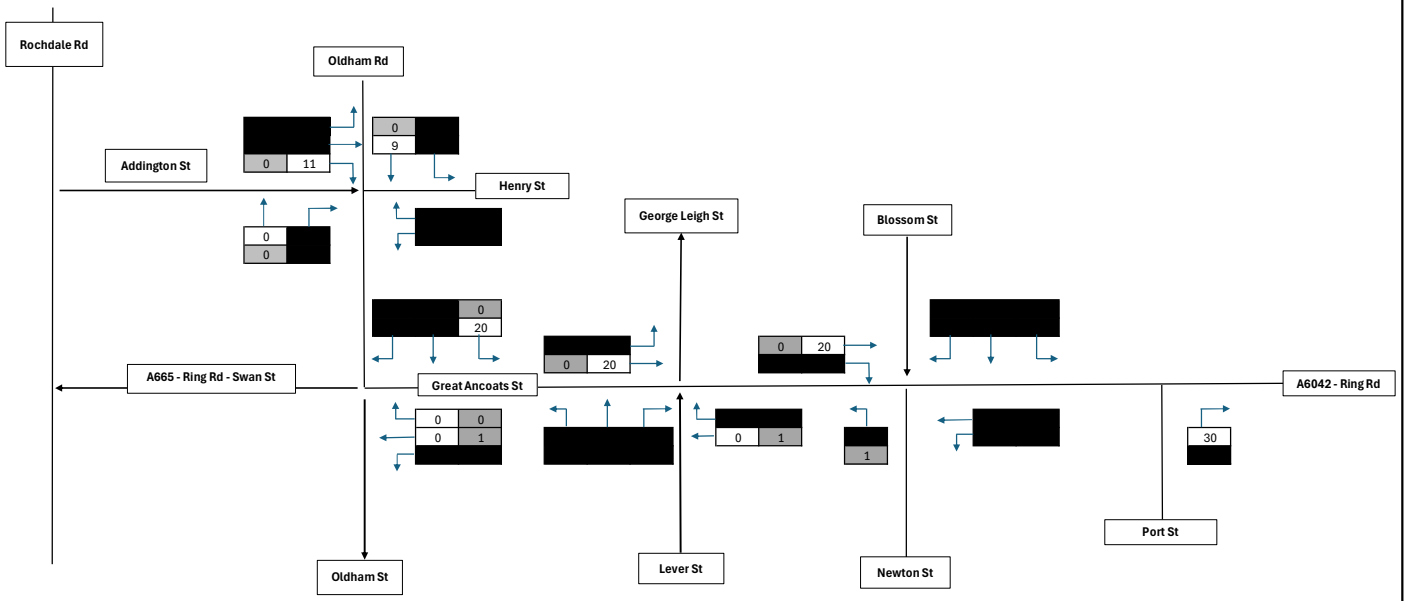
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 6:1: On-Site Development Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester



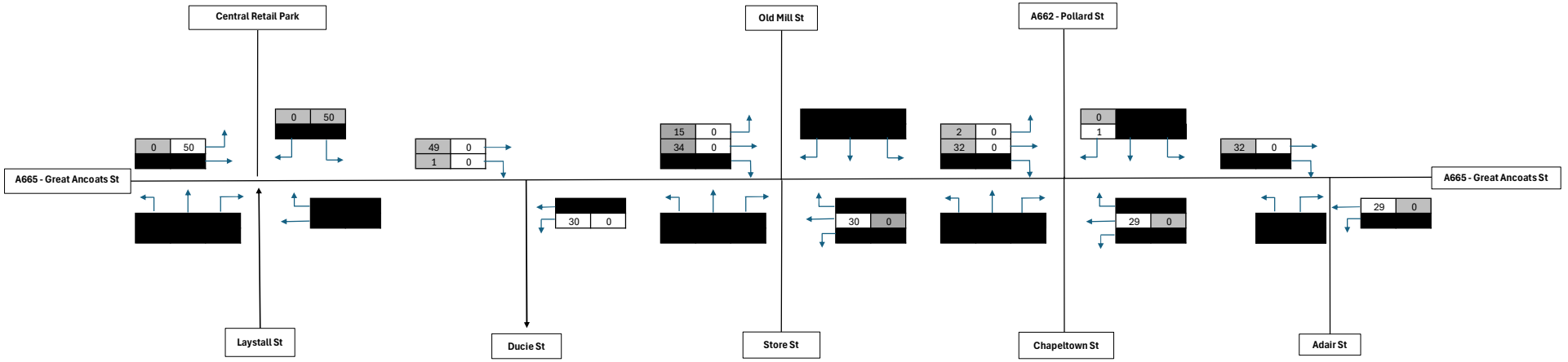
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 6:2: On-Site Development Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester



Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

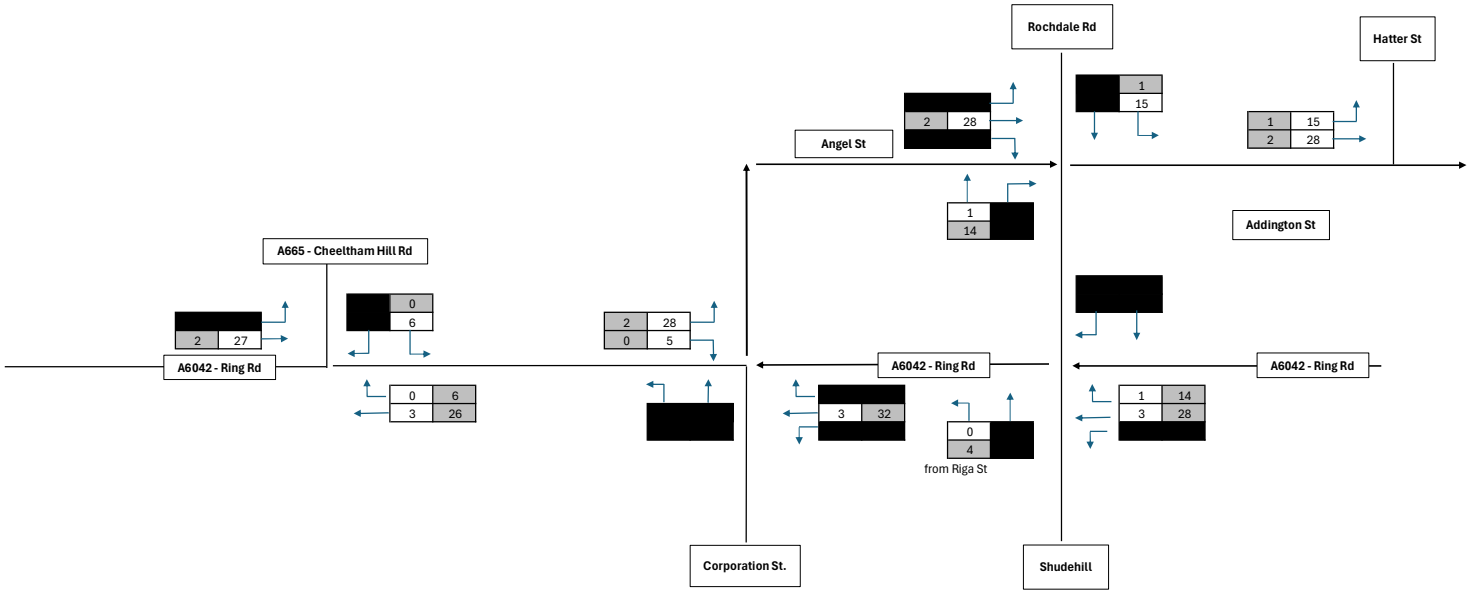
Appendix 6:3: On-Site Development Flows (Cars)

Project: Manchester Digital Campus

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Appendix 7 - (Off-Site Development Traffic Diagrams)



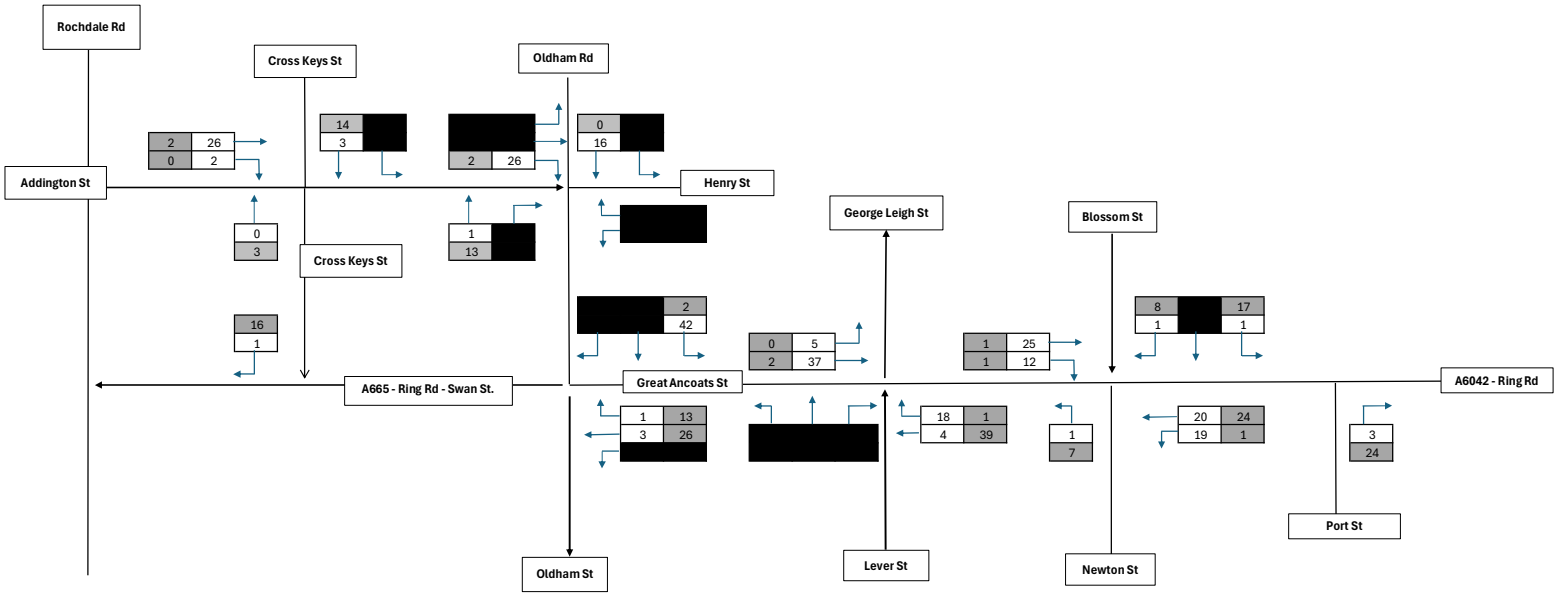
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 7:1: Off-Site Development Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester



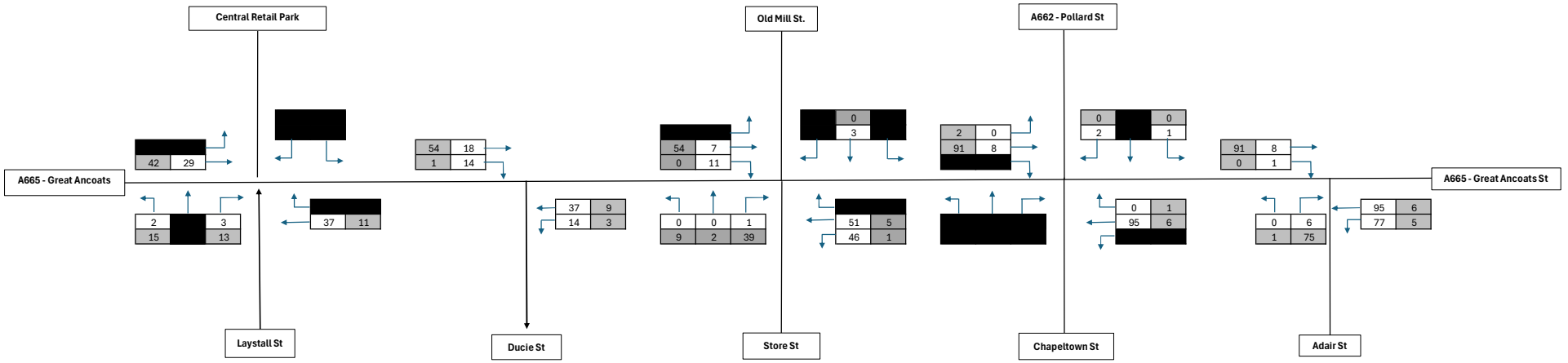
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 7:2: Off-Site Development Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester



Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

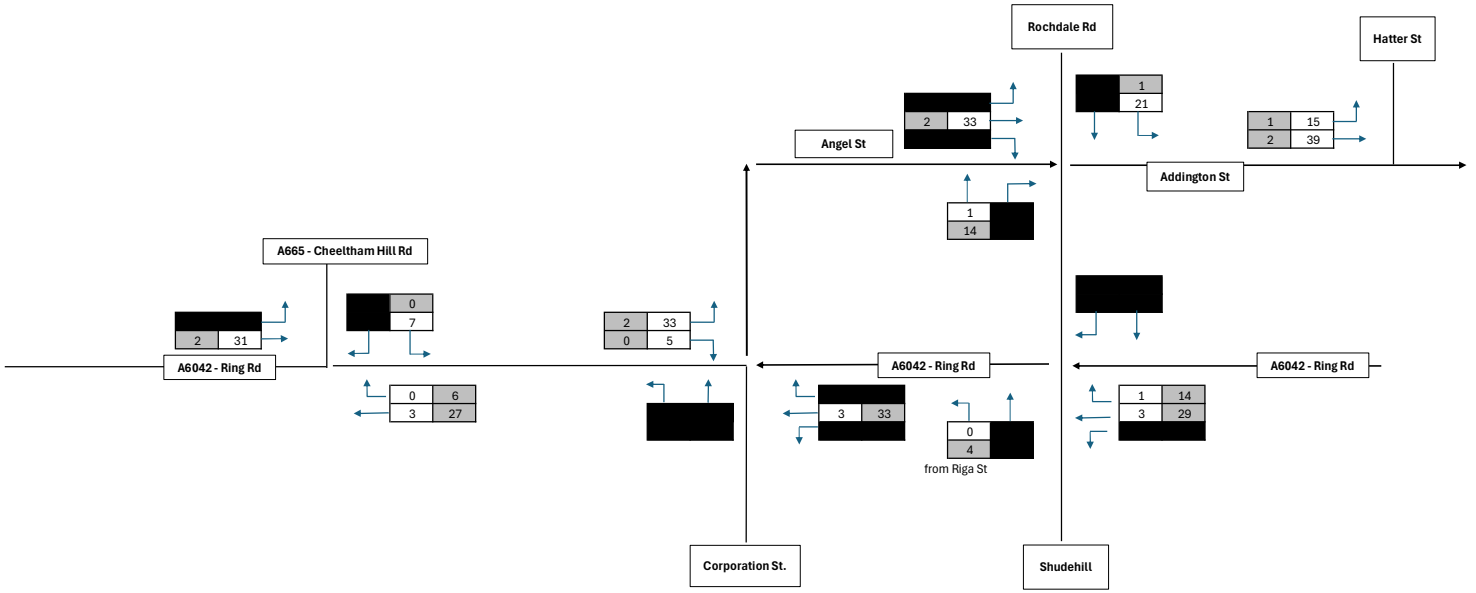
Appendix 7:3: Off-Site Development Flows (Cars)

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Appendix 8 - (ALL Development Traffic Diagrams)



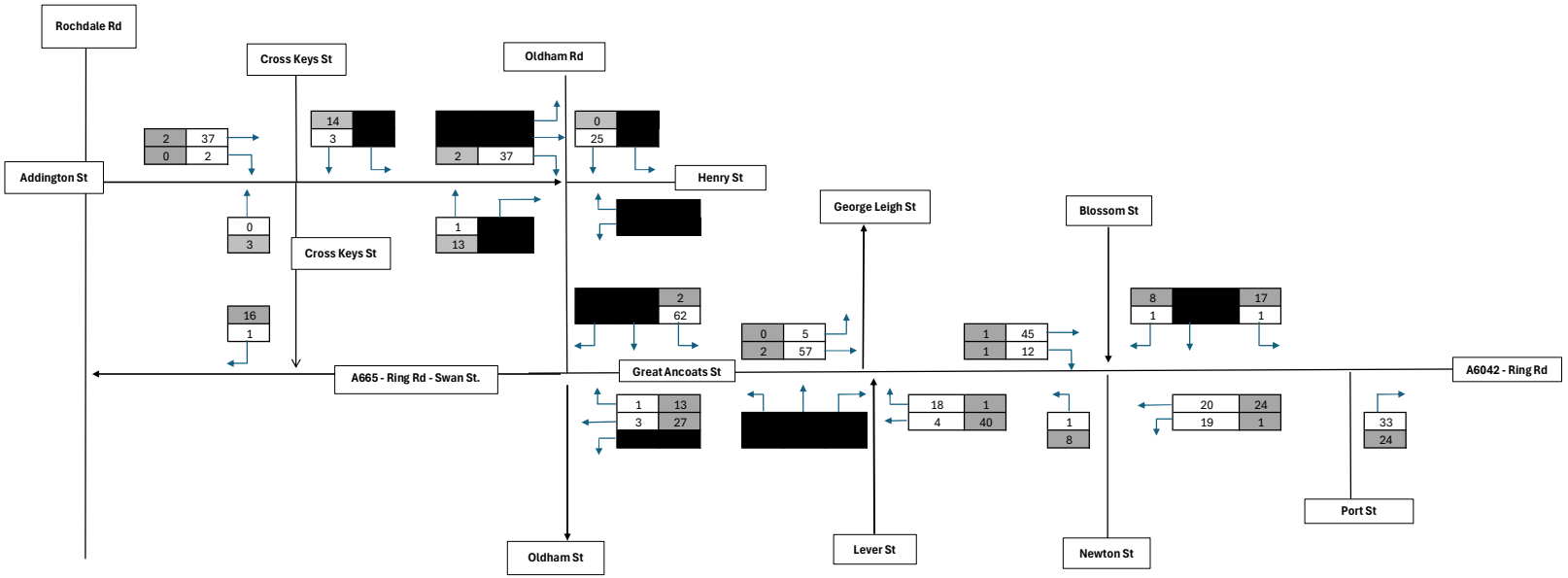
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 8:1: All Development Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester



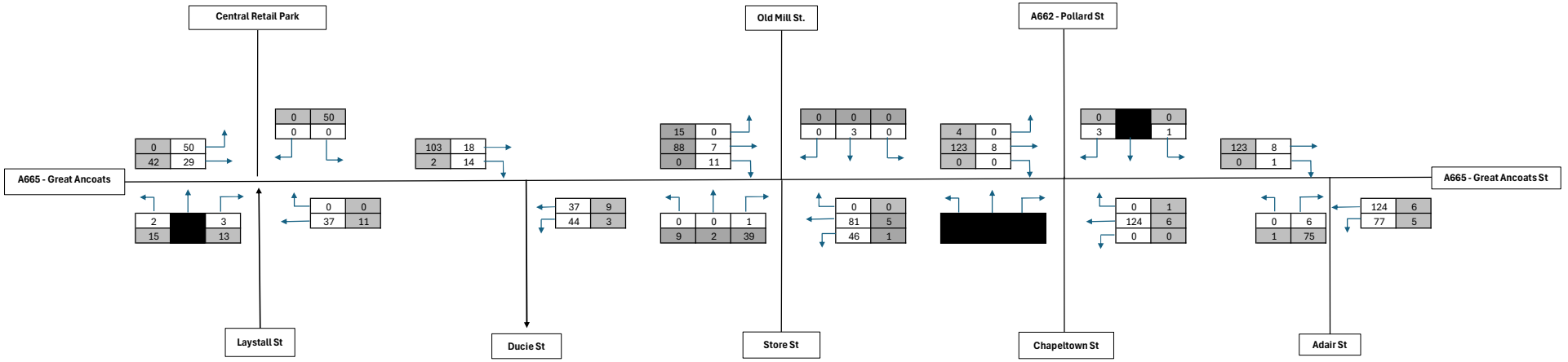
Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 8:2: All Development Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester



Time Periods:	
AM	PM
08:30-09:30	17:00-18:00

Figure:

Appendix 8:3: All Development Model Flows (Cars)

Project: Manchester Digital Campus

Transport for Greater Manchester

AtkinsRéalis

AtkinsRéalis Manchester
3 Piccadilly Place,
M1 3BN,
Manchester,
United Kingdom

T: +44 1612 453400

www.atkinsrealis.com