Transport Assessment

Proposed Residential Development, Cross Key Street, Manchester

Cross Keys Estates Ltd

Prepared by:

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Making Sustainability Happen

Revision Record

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Basis of Report

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1.0 Introduction

Background

1.1 SLR Consulting Ltd has been commissioned by Cross Keys Estates Ltd to provide transport and highways advice in support of a full planning application for a car-free development comprising 104 residential units.

1.2 The site is located within the jurisdiction of Manchester City Council who are both the Local Planning and Local Highway Authorities.

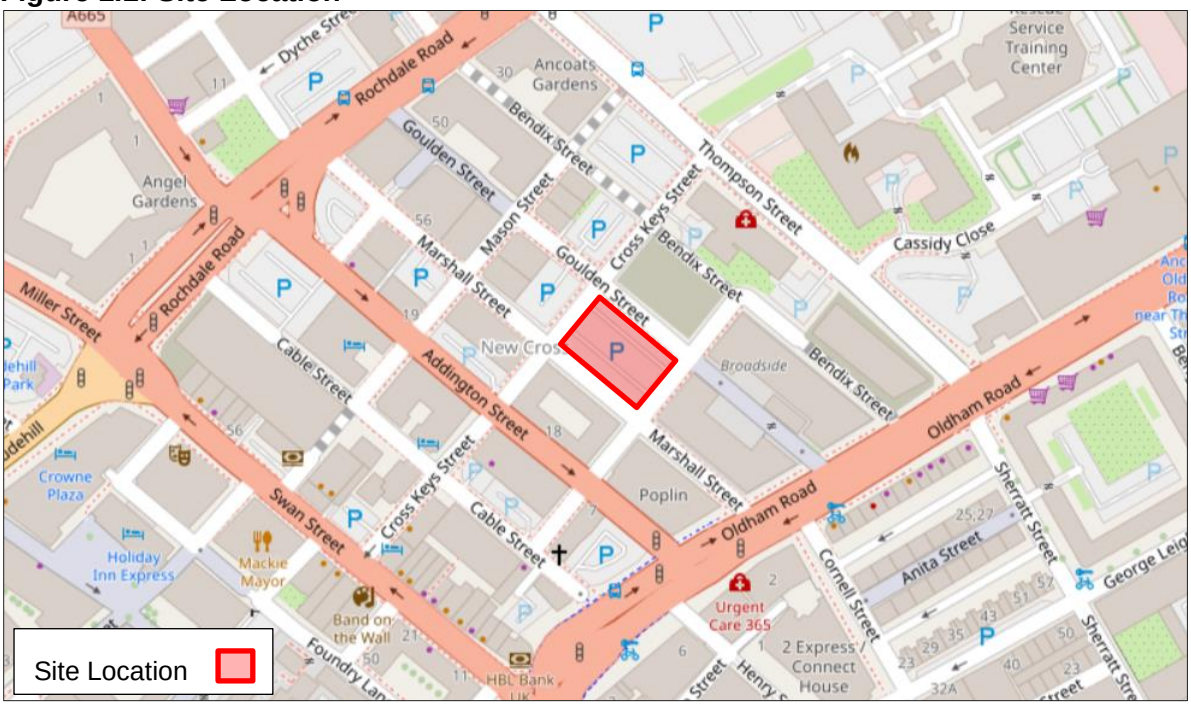
Site Location

1.3 The site is situated approximately 1-kilometre north-east of Manchester City Centre in an area referred to as Cross Key which has seen a number of vacant sites come forward for redevelopment as residential or hotel use.

1.4 To the north, the site is bound by Goulden Street, with Chadderton Street bordering the site to the east. Marshall Street bounds the site to the south, with Cross Keys Street bounding the site to the west.

1.5 The location of the site is shown in **Figure 1.1.**

Figure 1.1: Site Location



Source: Open Street Map

1.6 The site currently accommodates off-street parking. This consists of approximately 50 car parking spaces.

1.7 A planning application (Ref: 140133/FO/2024) was considered by Manchester City Council in 2024 for up to 99 apartments on the site. In considering the application, it was agreed that the proposal would not have a detrimental impact on highway operations and is in close proximity to public transport including the Shudehill Metrolink station and Victoria Rail Station.

Scope of the Report

1.8 The latest planning application proposes a total of 104 apartments that will be car-free, given the accessible location that the site is in.

1.9 This Transport Assessment has been prepared with reference industry best practice and guidance to inform Planning and Highways Officers at Manchester City Council of all current traffic and transportation matters associated with the application.

1.10 Following this introductory section, this Transport Assessment comprises of the following sections:

- **Section 2** describes both the national and local planning policies pertinent to the proposals;
- **Section 3** provides a review of the site's accessibility in relation sustainable travel opportunities;
- **Section 4** sets out the site's baseline conditions, including its existing use, a review of the local highway network and accident statistics;
- **Section 5** outlines the development proposals;
- **Section 6** provides an assessment of the development's trip forecasts;
- **Section 7** sets out a Travel Plan Strategy; and
- **Section 8** summarises the Transport Assessment and provides a conclusion.

2.0 Policy Context

National Planning Policy

National Planning Policy Framework

2.1 The latest National Planning Policy Framework (NPPF) was published in December 2024 by the Ministry of Housing, Communities and Local Government, replacing the previous versions published in 2012, 2018, 2019, 2021 and December 2023.

2.2 The NPPF sets out the government's planning policies for England and how these are expected to be applied. At the heart of the Framework is a presumption in favour of sustainable development.

2.3 The recent updates to the NPPF still emphasise addressing transport issues early in the planning process using a vision-led approach to identify appropriate transport solutions.

2.4 Paragraph 110 highlights the importance of promoting sustainable locations by reducing the need for travel and providing diverse transport options. However, it acknowledges that opportunities for sustainable transport solutions differ between urban and rural settings, which should be considered during both planning and decision-making stages.

2.5 As part of promoting sustainable transport, paragraph 115 of the revised NPPF states that in assessing applications for development, it should be ensured that:

- Sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;
- Safe and suitable access to the site can be achieved for all users;
- The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code48; and
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.

2.6 Paragraph 116 goes on to state 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.

Local Planning Policy

Manchester City Council Core Strategy

2.7 Manchester City Council adopted the Core Strategy in 2012. This is a key document of Manchester's Local Development Framework and sets out a number of strategic policies that will guide the development of the city.

2.8 Policy SP1 sets out the spatial principles that will guide development to 2027. One of these principles is that new development will maximise the potential of the City's transport infrastructure, in particular promoting walking, cycling and the use of public transport.

2.9 In addition, the policy goes on to state that developments in all parts of the city should 'improve access to jobs, services, education and open space by being located to reduce the need to travel and provide good access to sustainable transport provision'.

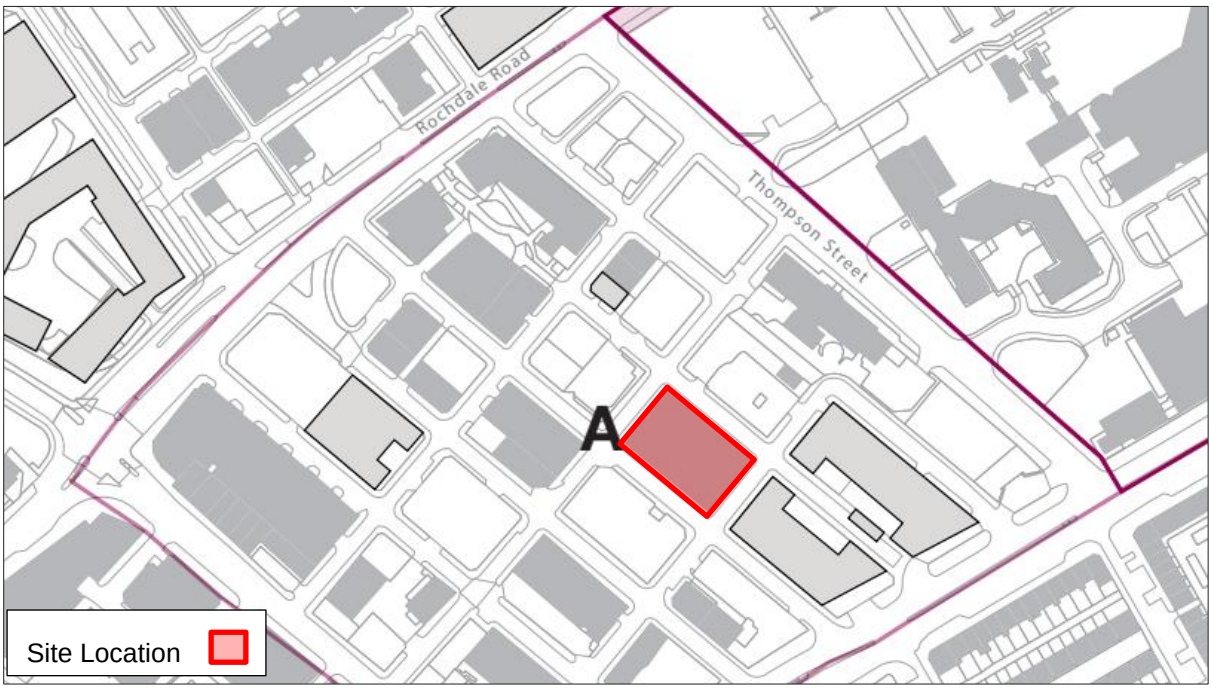
2.10 Policy T1 of the Core Strategy concerns sustainable transport. It states that the Council will support proposals that improve choice by developing alternatives to the private car. It is also stated that the Council will take account of the needs of pedestrians and disabled people, cyclists and public transport, amongst access for general peak / off-peak traffic.

2.11 Policy T2 states that the Council will actively manage the pattern of development to ensure that new development is located to ensure good access to the city's main economic drivers.

New Cross Neighbourhood Development Framework

2.12 Development in New Cross is shaped by the New Cross Neighbourhood Development Framework which was adopted by Manchester City Council in 2015 before being updated in 2016. The site is located within Zone A of the Framework, as shown in **Figure 2.1**.

Figure 2.1: Site Location in the New Cross Neighbourhood Development Framework



Source: New Cross Neighbourhood Development Framework

2.13 The Framework identifies that Manchester has a pressing need for new homes which is required to support the future economic growth and emerging neighbourhoods such as New Cross have the potential to become a key differentiator.

2.14 As such, this document is considered a material consideration in determining all planning applications relevant to the area.

Manchester Residential Quality Guidance

2.15 Manchester City Council's Executive Committee approved the Manchester Residential Quality Guidance in 2016. This is also a material consideration in the determination of planning applications.

2.16 This document outlines the considerations, qualities, and opportunities that will help to deliver high quality residential development as part of successful and sustainable neighbourhoods across Manchester. It therefore contains guidance for developers in relation to design standards, and new proposals are expected to comply with the guidance.

2.17 The guidance states that residential development within Manchester should aim to offer true modal choice, prioritising walking and cycling in the first instance as a key component in developing sustainable neighbourhoods and healthy communities.

2.18 It goes on to state that the sustainable development of Manchester depends on reducing dependence on the car, suggesting that residential development should consider the manner in which they encourage access to the wider public transport network.

Greater Manchester Transport Strategy 2040

2.19 The Greater Manchester Local Transport Plan (LTP) is moving on from LTP3 and there are two Draft Consultation Documents that aim to set the future transport strategy. The first document is the Greater Manchester Transport Strategy 2040 which sets out the Vision for transport in Manchester over that period and the second document is the Delivery Plan 1: 2016/17-2021/22.

2.20 The vision is 'for Greater Manchester to have 'World class connections that support long-term, sustainable economic growth and access to opportunity for all'. The Transport Vision aims are as follows:

- Supporting Sustainable Economic growth;
- Protecting Our Environment;
- Improving Quality of Life for All; and
- Developing an Innovative City Region.

Places for Everyone

2.21 The Places for Everyone Plan was adopted by nine of the Greater Manchester Authorities, including Manchester City Council in March 2024. In relation to transport, the Plan aims to deliver connectivity by ensuring both an integrated and accessible transport system. It is supported by the Transport 2040 Delivery Plan.

2.22 Objective 6 surrounds promoting the sustainable movement of people, goods and information, where it is stated that the Plan will help enhance the existing transport network, focus new development within 800m of sustainable transport hubs and ensure new development is designed to encourage and enable active and sustainable travel. This objective also aims to expand the existing transport network to facilitate new areas of sustainable and inclusive growth.

2.23 Policies contained in the Places for Everyone Plan that are applicable to the proposed development largely comprise JP-Strat2 and JP-Strat14. Policy JP-Strat2 states that investing in the City Centre will be a priority in addressing current network capacity issues and to enable the future expansion of the rapid transit public transport network across Greater Manchester.

2.24 Policy JP-Strat14 states that the existing sustainable and integrated transport network will be improved so that half of all daily trips can be made by public transport, cycling and walking, especially those shorter journeys around neighbourhoods. It is aimed that this will lead to the creation of a much larger, integrated, rapid transit network incorporating bus, Metrolink, train and rail services. This policy will likely focus on supported by policies that focus new development in locations close to existing and proposed public transport connections.

3.0 Accessibility by Sustainable Modes of Travel

Access to Local Amenities

3.1 The site is situated in close proximity to an extensive range of amenities, given its city centre location. This provides the opportunity for staff and visitors to undertake journeys on foot for a variety of purposes, and by association removes the need for travel by private car. A summary of key facilities located within the 2km pedestrian catchment is provided in **Table 3.1**.

Table 3.1: Local Amenities

Amenity	Name	Location	Distance from Site	Approximate Journey Time on Foot
Education	Metropolitan University Manchester	Oxford Road	2km	25 minutes
	University of Manchester		2.7km	34 minutes
Library	Manchester Central Library	St Peter's Square	1.3km	16 minutes
Bank	Metrobank	Market Street	850m	11 minutes
Bus Stop	A62 Oldham Street		180m	2 minutes
	Oldham Street		350m	4 minutes
	Thompson Street		180m	2 minutes
	A664 Rochdale Road		260m	3 minutes
Light Rail (Metrolink)	Shudehill	Shudehill	500m	6 minutes
National Rail	Manchester Victoria	Victoria Station Approach	750m	9 minutes
	Manchester Piccadilly	Piccadilly	1.3km	16 minutes
Sports Facility	Sugden Sports Centre	Sidney Street	2.3km	29 minutes
Outdoor Space	St Michaels Meadow Park	Old Mount Street	450m	6 minutes
Postal Facility	Angel Square Post Office	Angel Square	400m	5 minutes
Pharmacy	Superdrug Pharmacy	Piccadilly	750m	9 minutes
Medical Centre	Cheetham Hill Medical Centre	Victor Street	1km	12 minutes
Convenience Store	Premier Metro Store	Shudehill	400m	5 minutes

Note: Measurements taken from Google Maps observations and journey times on foot based on a speed of 80 metres per minute

Active Travel

Walking

3.2 The site is very well located to encourage journeys to be undertaken on foot. A walk distance of 2km or around 25 minutes (assuming an average walk speed of 80m per minute) is described by the Institute of Highways and Transportation (IHT) as a suggested maximum walking distance for commuting trips. The more recent CIHT document 'Planning for Walking' (2015) states that 80% of journeys shorter than a mile, approximately 1.6km, are made wholly on foot.

3.3 This would cover the vast majority of Manchester City Centre as well as Cheetham Hill to the north. Walking can also be promoted as part of a multi-modal journey, particularly in conjunction with public transport, as further discussed in this section. This means that many of the city's amenities including employment, retail and leisure facilities are accessible on foot, along with public transport interchanges.

3.4 The site is located in close proximity to numerous footways and public transport nodes providing connections between the site and nearby residential areas within the city centre and further afield. Accessibility by public transport is detailed further within this section.

3.5 To support pedestrian trips in the local area and to and from nearby transport nodes, footways are provided on all local roads, including Cross Keys Street, Thompson Street and the A665 Addington Street, as shown in **Figure 3.1**.

Figure 3.1: Local Footway Provision

Footway and dropped kerbs / tactile paving provision on Marshall Street and Mason Street

Footway provision on Cross Keys Street

Dropped kerbs and tactile paving provided on the A665 Addington Street

3.6 The footways bordering the site all have a width of 2 metres and are street lit. Pedestrians benefit from a continuous footway provision to the A62 Oldham Road / A665 Ring Road signalised junction via the A665 Addington Street / A62 Oldham Road signalised junction.

3.7 As shown in **Figure 3.2**, this junction includes extensive footway provision, featuring dropped kerbs and tactile paving, along with a dedicated cycle lane. As such, the junction is key in facilitating the safe crossing of both pedestrians and cyclists when travelling from the site's location and the city centre.

Figure 3.2: Local Signalised Junction Featuring Active Travel-Friendly Infrastructure

A665 Addington Street / A62 Oldham Road Signalised Junction

A62 Oldham Road / A665 Ring Road Signalised Junction

3.8 In order to facilitate pedestrian and cyclist movement, signalised arrangements are also located at both the Rochdale Road / A665 Ring Road junction and the A62 Oldham Road / A665 Ring Road / A665 Great Ancoats Street junction.

3.9 The footways provided on the A665 Addington Street connect to those at the aforementioned A62 Oldham Road / A665 Addington Street signalised junction. Adjacent to this junction is a bus stop that is reachable via a short walking distance. The services available at this bus stop are detailed further in this section.

3.10 A continuous footway link is also provided along Cross Keys Street to the Cross Keys Street / A665 Ring Road junction. This route can also be undertaken by both pedestrians and cyclists in accessing the city centre.

Cycling

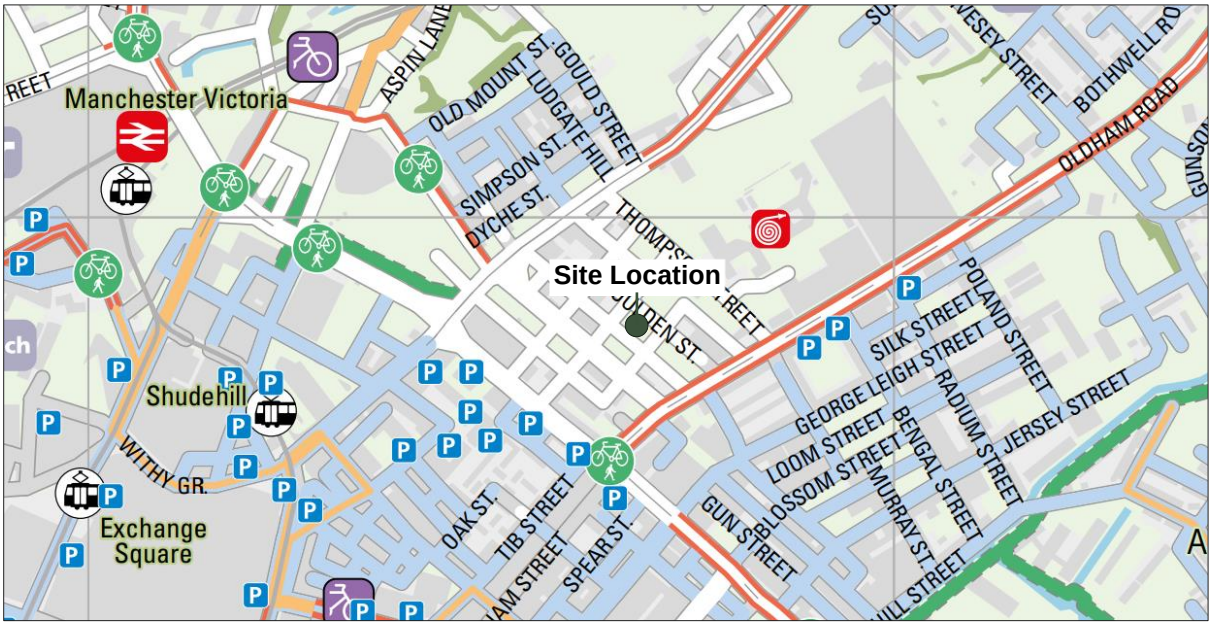
3.11 The area surrounding the site is relatively flat which is conducive to cycling. An on-road route with cycle facilities is located on the A62 Oldham Road, as shown in **Figure 3.3**. This is supported by the aforementioned cycle infrastructure provided at the A62 Oldham Road / A665 Addington Street signalised junction.

Figure 3.3: Cycle Lane on the A62 Oldham Road

3.12 Many of the roads to the south of the site are subject to a 20 miles per hour limit which is of benefit to the safety of cyclists.

3.13 Traffic-free routes of a good surface are located to the west of the site. There are also numerous Toucan crossings and cycle parking facilities in proximity to the site, as shown in **Figure 3.4**.

Figure 3.4: Local Cycle Infrastructure



Source: TfGM Manchester Cycle District Map

3.14 Cycling is increasingly being recognised as a viable alternative to the car and there has been sustained growth in cycling as both a mode of travel and leisure activity. The DfT's 'Local Transport Note 1/20 Cycling Infrastructure Design' states that, "two out of every three personal trips are less than five miles in length – an achievable distance to cycle for most people".

3.15 Cycling is generally considered suitable for distances of up to 3 miles (4.8km) for regular journeys in urban areas, and 5 miles (8km) for commuting journeys. Using these guidelines, a 5km cycle distance would equate to a journey of around 25 minutes using a leisurely cycle speed of 12km per hour.

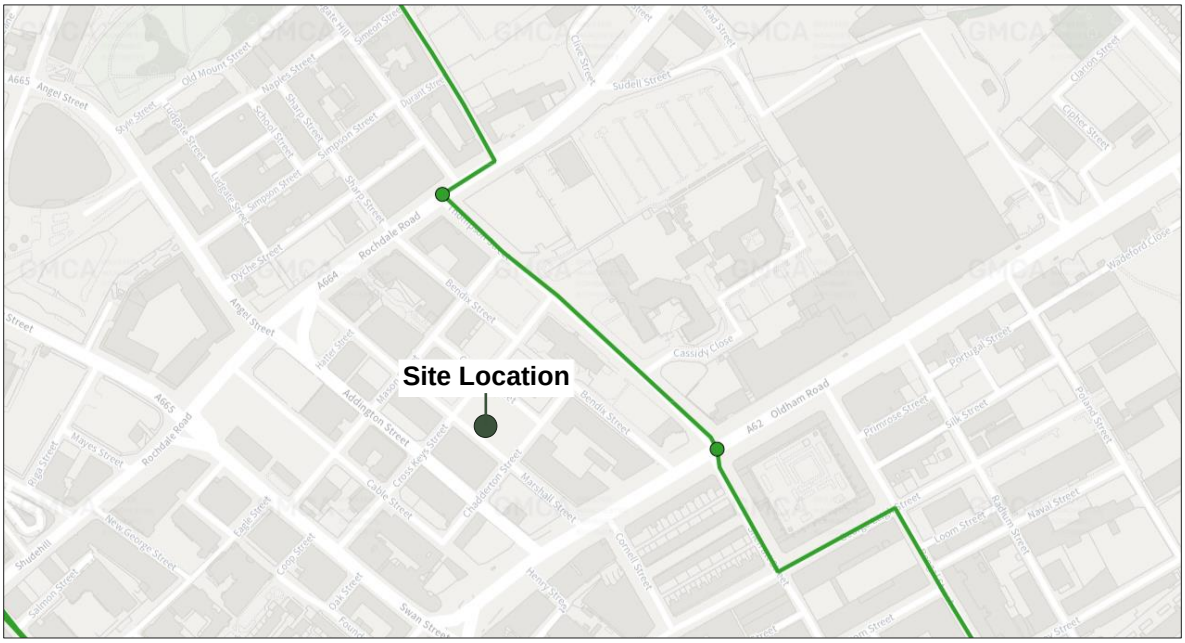
3.16 Based upon the above guidance this catchment represents the lower threshold of the potential cycle catchment of the site. An indicative 5 kilometre cycle catchment would reach Crumpsall to the north, Newton Heath to the west, Longsight to the south and Salford and Trafford to the west.

3.17 The aspirations for improvements to pedestrian and cycle connections that form part of the Bee Network have also been reviewed, referencing TfGM's Bee Network interactive network map.

3.18 The Bee Network is a proposal for Greater Manchester to have the UK's largest joined up network for walking and cycling. It is a decade-long plan to connect every neighbourhood in the city region starting with 1,000 miles of walking and cycling network planned, as well as 1,400 new crossing points proposed.

3.19 As shown in **Figure 3.5**, the local network will comprise a 'Beeway' on Thompson Street located 100 metres from the site. This will provide both a pleasant and formalised way to navigate this part of the network by bicycle.

Figure 3.5: Emerging Bee Network



Source: Manchester Merging Bee Network Map

Shared Travel

Public Bus Services

3.20 The site is located a short walking distance to numerous bus stops as noted in **Table 3.1**. These are located on the A62 Oldham Street, Oldham Street, Thompson Street and A664 Rochdale Road and can be accessed using the extensive network of footways provided around the site.

3.21 The bus stops located on the A62 Oldham Street and the A664 Rochdale Road provide both shelter and seating arrangements, along with a flag post displaying service information. The bus stops provided on Oldham Street and Thompson Street provide flag posts only.

3.22 The range of bus services are available at these stops are shown in **Table 3.2**.

Table 3.2: Local Bus Services

Service No.	Route	Approximate Frequency (service per hour)					
		Mon-Fri				Sat	Sun
		AM Peak	Midday	PM Peak	Evening		
17	Rochdale to Manchester	4	4	4	4	4	4
18	Eccles to Manchester Airport	2	1	2	1	1	Every 2 hours
56	Shudehill to Higher Blackley	2	2	2	2	2	1
76	Oldham to Manchester	4	5	5	5	5	2
81	Oldham to Manchester	2	2	1	1	1	1
83	Sholver to Manchester	2	2	2	2	3	1
84	Huddersfield to Manchester	5	5	5	2	5	4
112	Middleton to Manchester	6	4	3	3	3	2
114	Boarshaw to Manchester	2	3	2	1	2	1
117	Greengate to Manchester	2	2	2	1	2	1
118	North Manchester General Hospital to Manchester	4	2	2	2	3	2
119		1	4	4	2	2	2
156	Shudehill to Higher Blackley	2	2	2	2	2	1
163	Bury to Manchester	4	4	4	3	4	4
181	Shaw to Manchester	2	2	2	2	2	1
182		2	2	2	2	2	1
216	Ashton-under-Lyme to Manchester	4	4	4	4	4	4
230		3	3	3	2	3	2
231		1	1	1	1	1	1

Source: TfGM's Bee Network Website

3.23 As shown in **Table 3.2**, approximately 53 services in the AM peak period and 50 in the PM peak period are accessible per hour within a short walk of the site during the AM peak period. It can also be seen that approximately 49 services per hour are accessible per hour on Saturdays.

3.24 The site is also located 500 metres from Shudehill Bus Station which provides access to a range of frequent bus services that cater for trips across Greater Manchester. Here the Manchester Free Bus can be boarded, as discussed next.

Manchester Free Bus

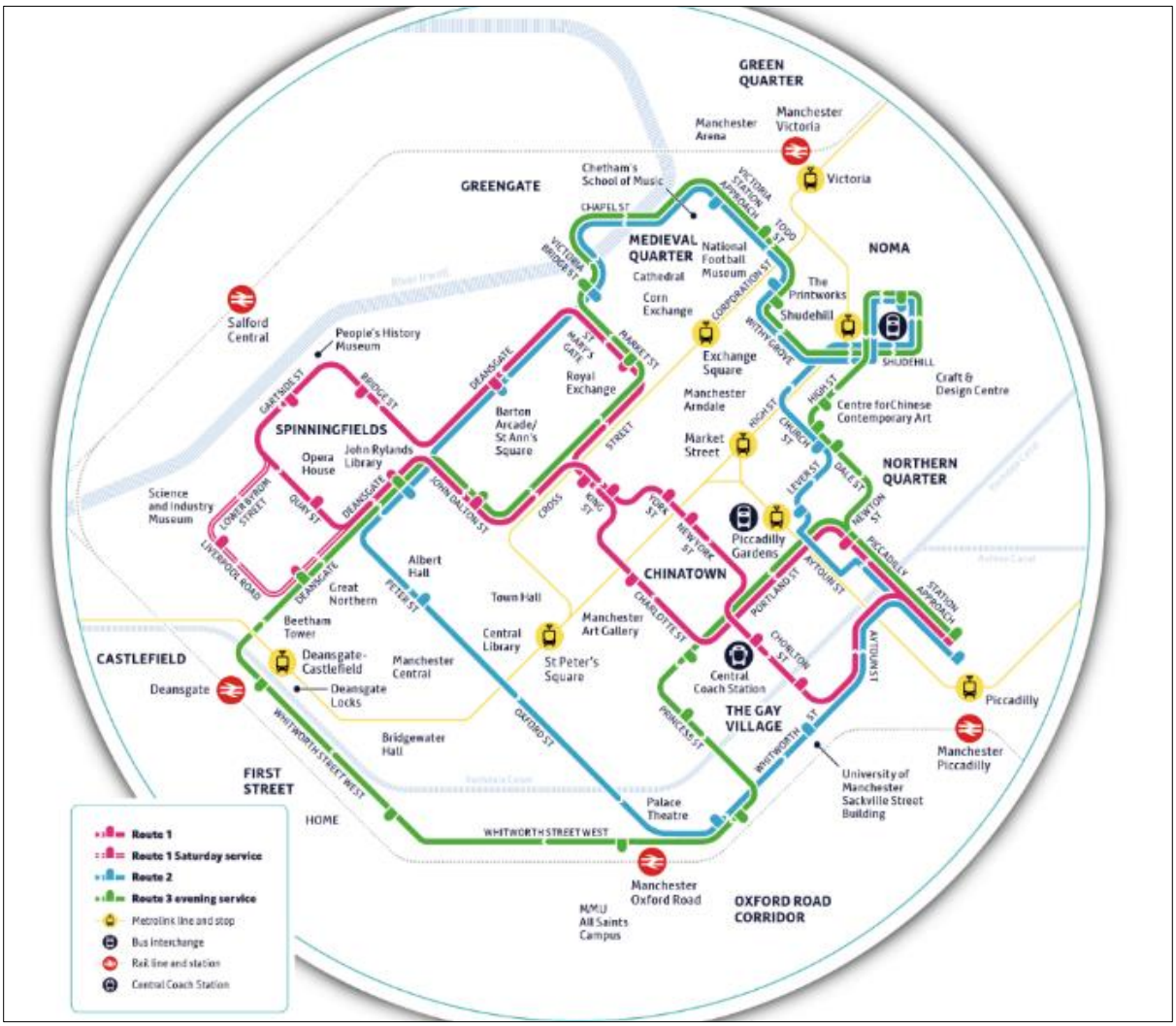
3.25 The Manchester Freebus operates across Manchester City Centre. Such buses are highly branded and are instantly recognisable, running on around a 10 or 12-minute frequency. High quality stops are provided along the service routes with clear branded images on bus stop plates.

3.26 Three routes all pass through the city centre's main commercial, financial and cultural districts. These are named Route 1, 2 and 3.

3.27 Route 2 can be boarded at Shudehill Bus Station, with all services boardable at Piccadilly Gardens a 750-metre distance from the site.

3.28 An extract of the Manchester Free Bus Route Map is provided in **Figure 3.6**.

Figure 3.6: Manchester Free Bus Map



Source: TfGM Manchester Free Bus

Manchester Metrolink

3.29 Shudehill is the site's nearest Metrolink stop, with a journey time on foot equating to 6 minutes.

3.30 Services to Bury, Altrincham, Manchester Airport, Piccadilly and Victoria can all be boarded at this stop.

3.31 Metrolink services operate on around a 12-minute frequency in each direction on Monday to Sunday. All lines operate between 06:00 and 00:00, with the Airport line (Victoria to Manchester Airport) operating from 03:00 from Deansgate Castlefield.

3.32 Given the high frequency of Metrolink services, number of routes and tram stops that are accessible from the site, it is considered that these would offer a feasible travel alternative as part of a linked sustainable mode trip.

3.33 All Metrolink stops provide shelters, seating and real-time journey information. All Metrolink trams and stations also provide disabled access in the form of step-free access, tactile paving and dropped kerbs. The existing Metrolink services currently cover a broad area of Manchester and its outlying residential districts.

National Rail

3.34 The site's nearest national rail station is Manchester Victoria, which can be reached via a journey time on foot of 9 minutes.

3.35 This station is operated by Northern and provides regular services to Blackburn, Chester, Rochdale, Southport, Leeds, Liverpool, Newcastle, Clitheroe, Stalybridge, Wigan and Saltburn. Services also stop at numerous local destinations on route to these locations.

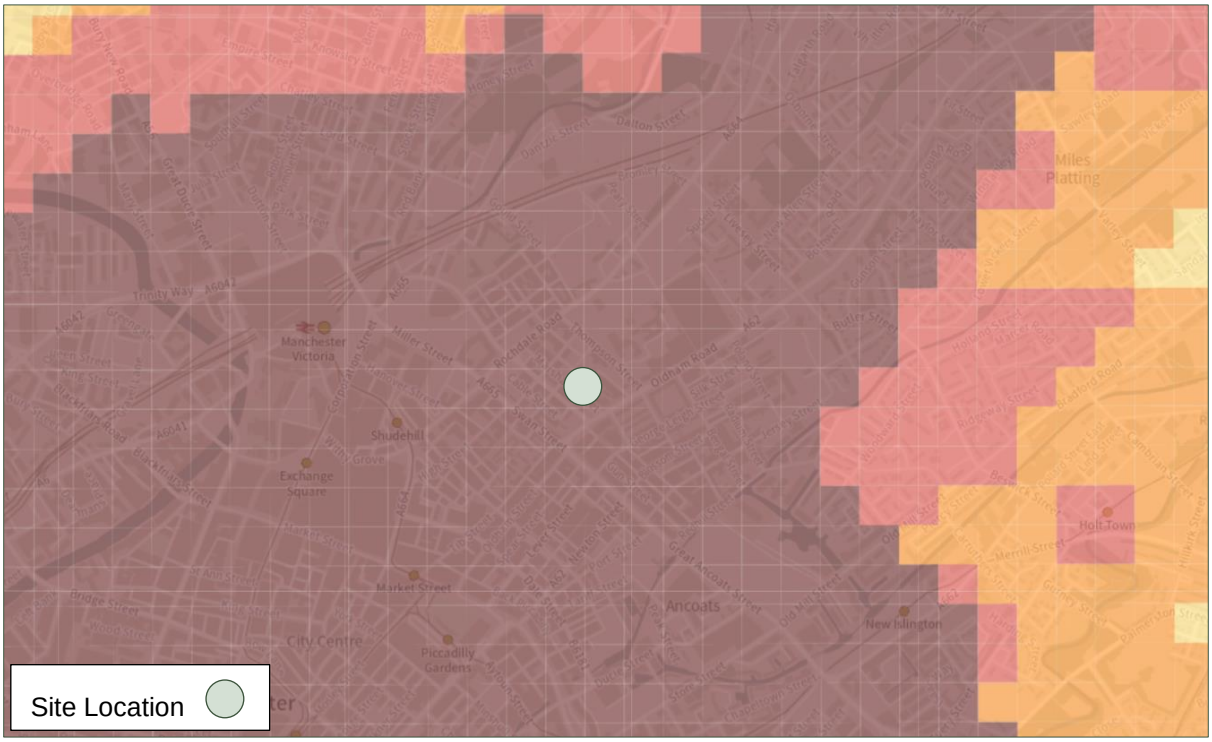
3.36 A total of 38 covered cycle spaces are located at this station and Northern allow cyclists to board services creating the opportunity for linked rail / bicycle trips.

Greater Manchester Accessibility Level

3.37 Transport for Greater Manchester publish the accessibility to public transport, and this is known as the Greater Manchester Accessibility Level (GMAL). GMAL is a useful guide to measure a sites accessibility using public transport and helps support that noted regarding the opportunity to travel by both bus and rail from the site.

3.38 The site's location in relation to the Greater Manchester Accessibility Level map is shown in **Figure 3.7**.

Figure 3.7: GMAL Rating



Source: TfGM GMAL Map

3.39 As shown in **Figure 3.7**, the site is located in Accessibility Level 8 which translates as an area of 'Very High' public transport accessibility. This is the highest possible GMAL rating and confirms the excellent opportunity the site offers for travel by public transport services.

4.0 Baseline Conditions

Existing Use

4.1 The site currently accommodates off-street parking. This consists of approximately 50 car parking spaces which are accessed via existing drop kerbs on Cross Keys Street.

Local Highway Network

4.2 The site is bordered by Cross Keys Street, Marhsall Street, Chadderton Street and Goulden Street. All are of a good surface condition, with street-lit footways provided on both sides. Footways border the site on all sides.

4.3 Cross Keys Street forms the northern arm of a priority crossroads junction with Marhsall Street adjacent to the site's north-west boundary.

4.4 Cross Keys Street continues southwards where it provides access to the A665 Addington Street.

4.5 The A665 Addington Street provides a one-way arrangement, facilitating access to the A62 Oldham Road via a signalised arrangement. From this part of the local highway network, Manchester's inner ring road can be accessed via a further signalised arrangement.

Collision Statistics

4.6 A review of collision records for the local highway network has been undertaken using data available on the Greater Manchester Reported Road Accident Database. This is managed by Transport for Greater Manchester and is updated annually.

4.7 The analysis has been undertaken for the most recent five-year period (2019 to 2024) and is provided in **Figure 4.1**.

Figure 4.1: Collision Map

Source: Greater Manchester Reported Road Accident Database

4.8 As shown in **Figure 4.1**, the road network in the immediate vicinity benefits from a very good recent accident record, with no reported collisions occurring on the highway network bordering the site.

4.9 Three collisions have occurred over the latest available 5 year period at the A665 Addington Street / Cross Keys priority crossroads junction. These collisions were classed as slight and serious in severity.

4.10 It can be concluded that there are no known highway features that contribute to the occurrence of accidents that would need to be addressed as part of this application, and the accident record in the vicinity of the site does not present any grounds for concern in the context of the development proposals.

Local Car Parking Opportunities

4.11 The extent of local car parking opportunities in the vicinity of the site has been analysed.

4.12 There are over 780 spaces of public parking available within an estimated 12-minute walk of the site, as detailed in **Table 4.1**.

Table 4.1: Public Car Parking Opportunities Within a 12-Minute Walk

Car Parking Spaces within a 12-Minute Walk of the Site			
Public Car Park	**Total Car Parking Space Provision**	**Distance**	**Estimated Walking Journey Time**
NCP Port Street	3	550m	8 minutes
NCP Crown Industrial Estate	22	550m	8 minutes
NCP Gould Street	10	600m	8 minutes
NCP Jersey Street	130	750m	9 minutes
NCP Lomax Street	15	800m	10 minutes
NCP Store Street	406	1km	12 minutes
NCP Piccadilly Plaza	160	1km	12 minutes
NCP Skip Place	28	1km	12 minutes
NCP Cheetham Hill Road	10	1km	12 minutes
Total	**784**		

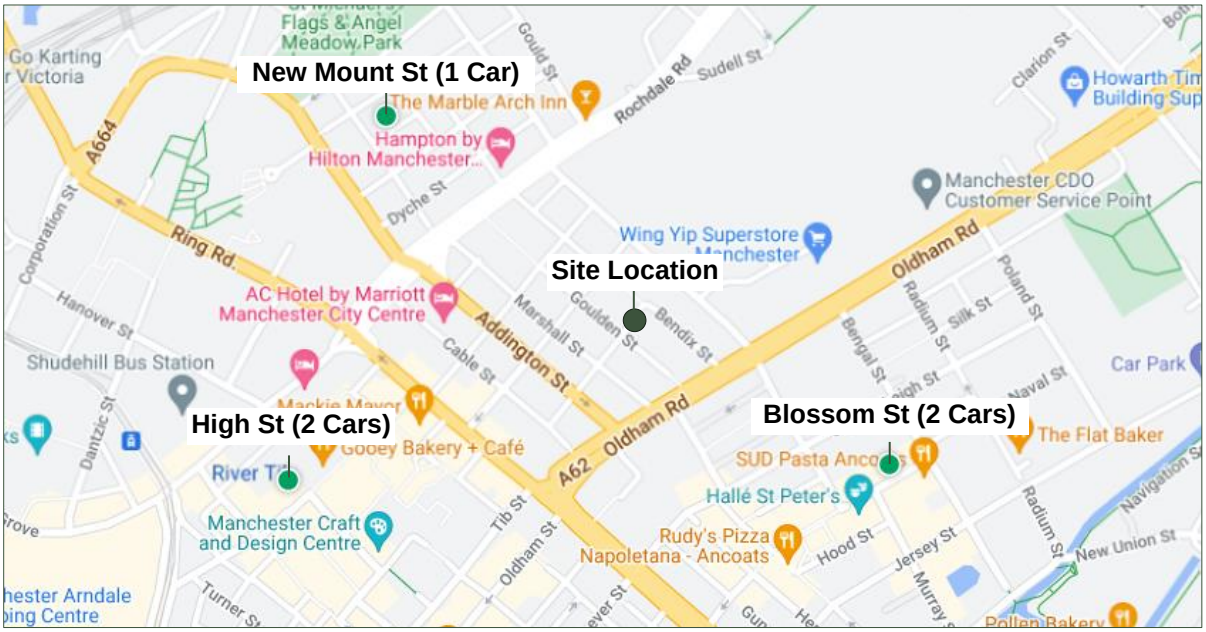
Source: NCP 'Find a Car Park' Online Mapping Tool

4.13 As shown in **Table 4.1**, there are numerous opportunities for residents to park in a range of public car parks located to the north of Manchester City Centre, and as such a short walk from the site.

Car Club

4.14 The site is located in proximity to three existing car club locations. These are situated on New Mount Street, Blossom Street and High Street, as shown in **Figure 4.2**.

Figure 4.2: Enterprise Car Club Locations



Source: Enterprise Car Club Interactive Map

4.15 All three are operated by Enterprise Car Club and can be reserved via dedicated app, online or by phone.

4.16 Cars are parked in their own designated bays and can be reserved for as long as needed. At the end of the reservation, the car is returned to the same designated bay it was picked up from and as such a parking space is always made available.

4.17 The walking distances from the site to each respective car club location and associated journey time on foot (based on a walking speed of 80-metres per minute) are as follows:

- New Mount Street – 400 metres, equating to a 5-minute journey on foot;
- Blossom Street – 700 metres, equating to a 9-minute journey on foot; and
- High Street – 550 metres, equating to a 7 minute journey on foot.

4.18 It is therefore shown that a total of 5 car club spaces are available within a reasonable walking distance of the site.

5.0 Development Proposals

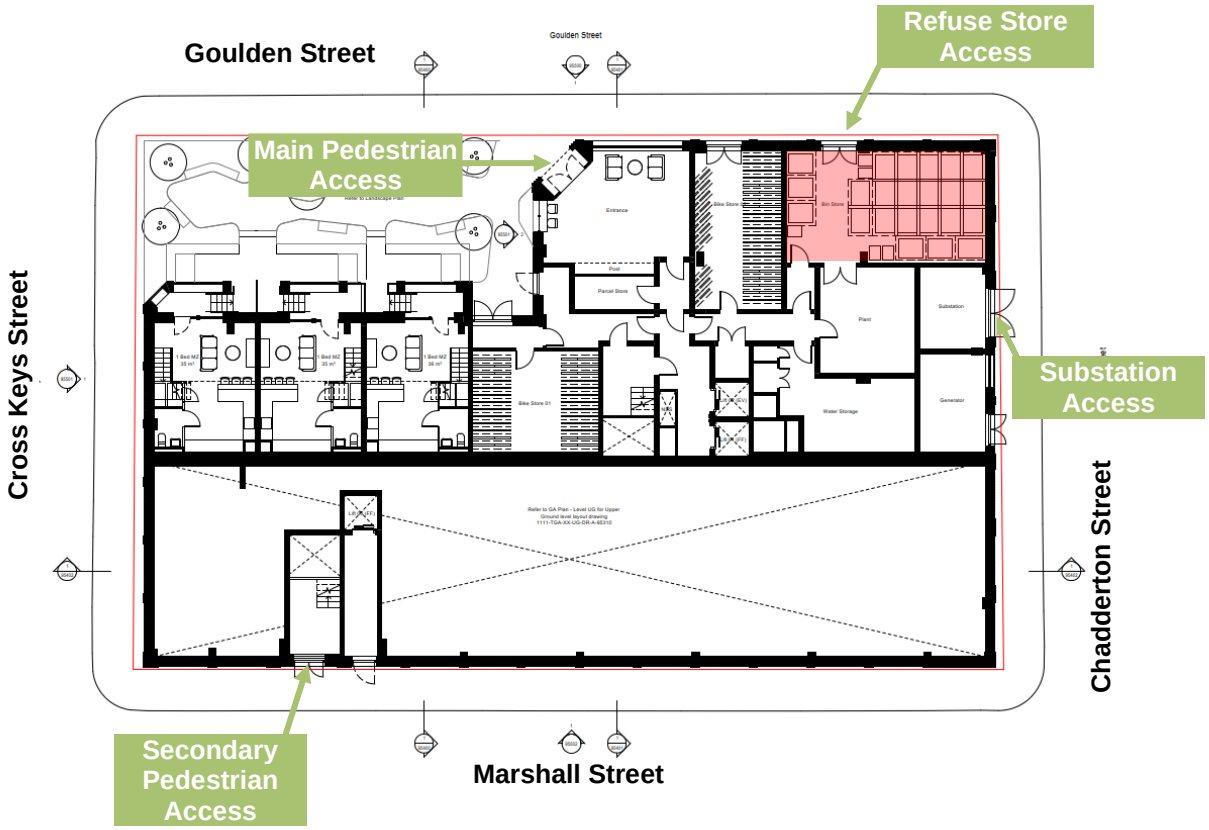
Development Scale

5.1 The latest planning application proposes a total of 104 apartments. The proposals are car-free, given the accessible location that the site is in.

Access

5.2 The building's proposed access arrangements are shown in **Figure 5.1**, with the proposed ground floor layout shown in more detail in **Appendix A**.

Figure 5.1: Access Proposals



5.3 Pedestrian access is provided from both Goulden Street via a reception area and Marshall Street. Access to the building will be achieved using the aforementioned footway network as set out in Section 4. Access to the building's refuse store is provided from Goulden Street.

Parking

5.4 The development will not provide any parking for residents. The development will be car-free with no car parking provided and will therefore accord with Policy T2 of the Manchester City Council Core Strategy.

5.5 If needed, there is an abundance of public parking spaces available within a short walk of the site, as previously noted.

5.6 Two secure cycle parking stores will be provided at ground level, as indicated in red in **Figure 5.1**. A collective capacity of 104 bicycle parking spaces will be provided, equivalent to a cycle parking provision of 100%.

5.7 The cycle parking provision outlined above is vital to delivering a sustainable development as cycle parking and mobility is a key factor in those living centrally being able to access facilities and enjoy the city and access the many amenities previously identified.

Refuse Collections and Servicing

Refuse Collections

5.8 It is expected that the area's existing refuse collection regime will serve the building. This will comprise a refuse vehicle temporarily stopping on Goulden Street, before using Chadderton Street to access Marshall Street and Cross Keys Street. The local road network is able to accommodate this vehicle, as is the existing situation.

Servicing

5.9 Servicing trips will generally arrive via the main reception accessed from Goulden Street. Servicing to the building will be managed appropriately as to avoid any conflicts with deliveries made by larger vehicles.

5.10 Measures will be taken regarding pedestrian safety / amenity and servicing will be made with a minimum amount of noise and no use of the horn at any time. As such, vehicles will manoeuvre on-site with as little noise as possible, and drivers will ensure they:

- Engage gears quietly;
- Keep engine revs to a minimum;
- Apply brakes gently;
- Close driver's door quietly; and
- Engine off when not in use.

6.0 Development Trip Forecasts

Residential Trip Forecasts

6.1 Given the absence of dedicated car parking provision and the site's highly sustainable city centre location, the scheme is unlikely to generate a significant number of vehicle trips to the except for refuse and servicing trips. This section therefore details the trip generating characteristics and any associated effects on the wider network.

6.2 Though the development is car-free and would predominantly generate trips by sustainable travel modes, it is still deemed useful to determine the trip generation of the proposed development in order to gather a full traffic assessment.

6.3 As such, the total person trip forecasts for the development based on the provision of 104 units have initially been derived via reference to the TRICS (7.11.4) trip rate database using either in Town Centres Edge of Town Centre development sites.

6.4 The full TRICS output files are contained in **Appendix B**. The trip rates and resultant total person trip generation are presented in **Table 5.1**.

Table 6.1: Total Person Trip Generation

Peak Period	Trip Rate Per Unit		Trip Generation (104 Units)		
	Arr	Dep	Arr	Dep	2-way
Morning Peak Period (08:00-09:00)	0.121	0.632	13	66	78
Evening Peak Period (17:00-18:00)	0.475	0.217	49	23	72

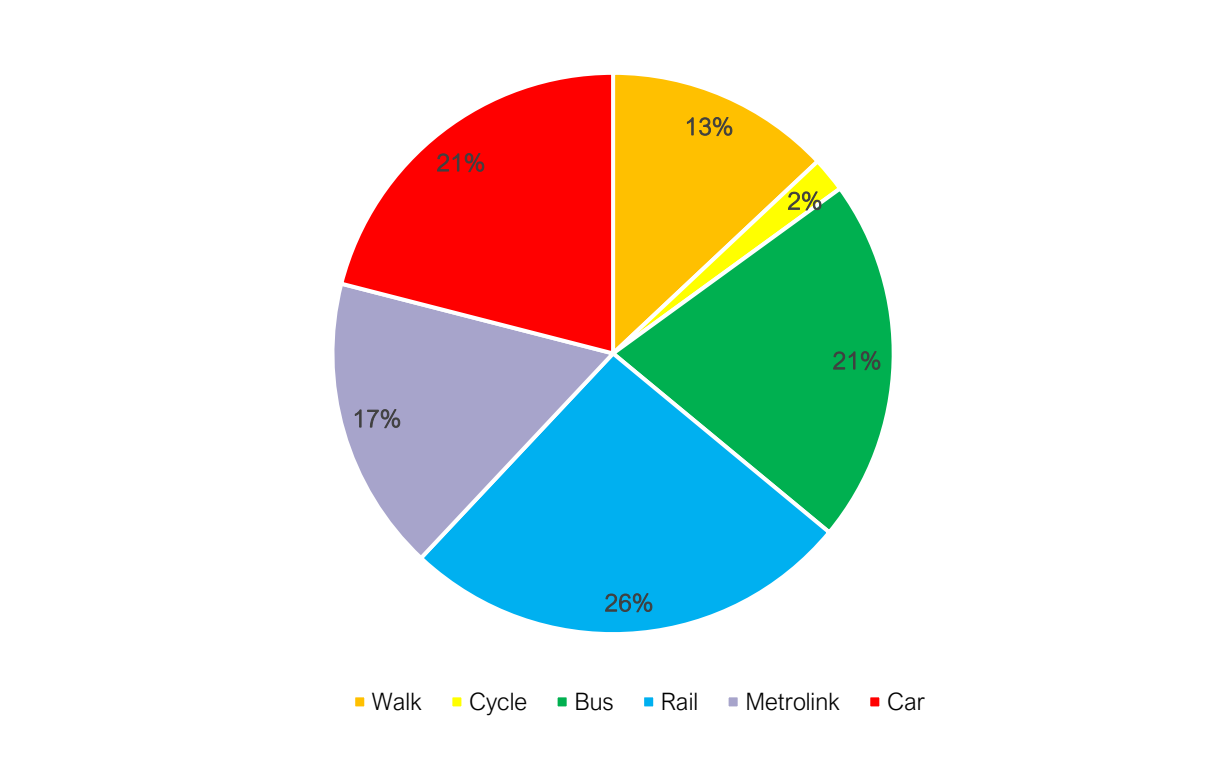
Source: TRICS (7.11.4)

6.5 As can be seen in **Table 6.1**, a total of 78 person trips are forecast during the morning peak period, with 72 person trips forecast during the evening peak period. This is considered to be a negligible increase (i.e. +3/4 trips) from the trips forecast associated with the previous scheme for 99 apartments.

6.6 The modal share for this car free development, for type of use and in this location, is expected to be overwhelmingly by modes other than the car.

6.7 As a starting point for forecasting the modal share of trips, we have used the TfGM's Transport Statistics 2019 report for access to and from the 'Key Centre' (Manchester City Centre) as shown in **Figure 6.1.**

Figure 6.1: Transport for Greater Manchester General City Centre Mode Share



6.8 This mode share has been applied to the total person trip forecasts set out in **Table 6.1** for the weekday morning and evening peak period with the results presented in **Table 6.2**.

Table 6.2: City Centre Mode Share Applied to Person Trips

	Walk		Cycle		Bus		Rail		Metrolink		Car	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Morning Peak Period (08:00-09:00)	2	9	0	1	3	14	3	17	2	11	3	14
Evening Peak Period (17:00-18:00)	6	3	1	0	10	5	13	6	8	4	10	5

6.9 As shown in **Table 6.2**, the proportion of trips generated by the development will be dispersed across the various modes available to residents living at the development.

6.10 Based on the figures provided in the Transport for Greater Manchester General City Centre Mode Share, the analysis shows that 17 car trips will be generated by the proposals during the morning peak period of 08:00-09:00 and 15 car trips will be generated by the development during the evening peak period (17:00-18:00).

6.11 This is considered robust based on the site's excellent accessibility credentials and the notion that many residents will both live and work in the city centre and as such do not need to own a car. It is also expected that a proportion of these car trips will be made by visitors to the development and staff working there, for example reception, management and maintenance.

6.12 In any case, there are numerous opportunities to park in a range of public car parks located to the north of Manchester City Centre, and as such a short walk from the site.

Servicing Trip Forecasts

6.13 A forecast of service and delivery vehicle trips has been undertaken for the development, again using TRICS forecasting the light and heavy goods vehicles (LGVs and HGVs).

6.14 For reference, HGVs have a weight greater than 7.5t. The service vehicle trip rates are also contained in **Appendix B**.

6.15 The development is expected to generate around 3 LGV deliveries and around 1 HGV delivery during busiest level of activity which would be mid-morning (11:00 to 12:00).

6.16 As the proposed development will be located within the New Cross Neighbourhood, deliveries are likely to be made as part of a combined service route so each building would be serviced in turn.

6.17 It is expected that many of these would be coordinated with other buildings which would significantly reduce the number of new trips to the area.

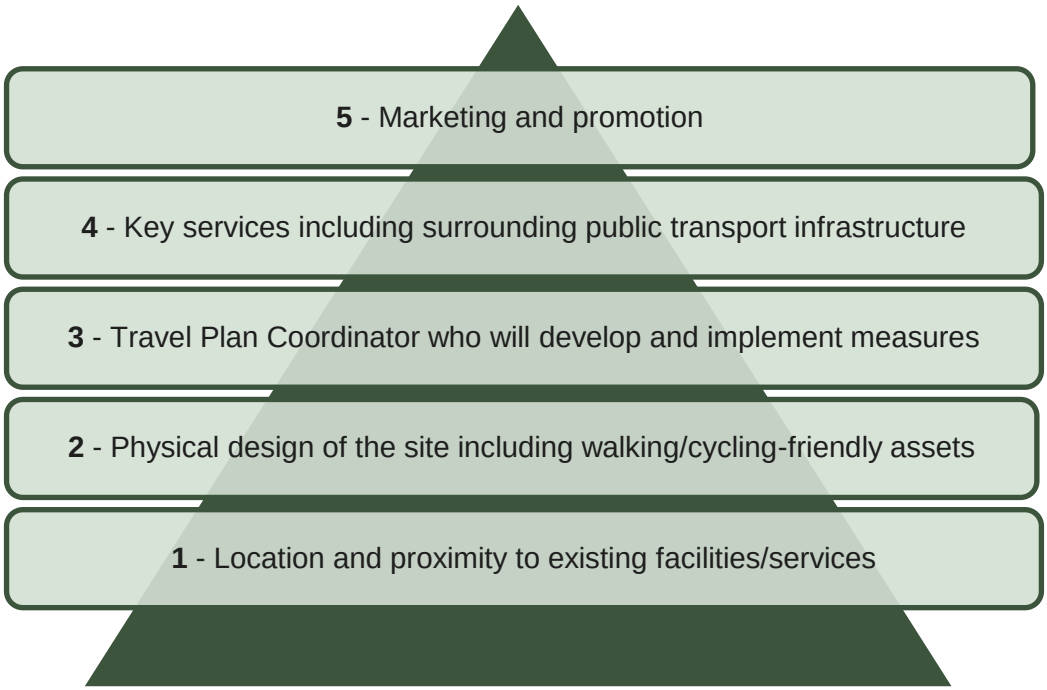
7.0 Travel Plan Strategy

Purpose of the Strategy

7.1 A key element of the proposals is the implementation of a Travel Plan Strategy.

7.2 A Travel Plan can be thought of as a pyramid of measures. The Strategy is built from the bottom up, with decisions and actions at each level creating the conditions that provide the foundation for success at the next level up. A diagrammatical explanation of this approach is provided in **Figure 7.1**.

Figure 7.1: Travel Strategy Pyramid



7.3 Going forward, the Strategy will continue to consider the characteristics of the site such as its surrounding transport infrastructure and the nature of its operation. It will be ensured that the Plan remains a flexible document which can and will be adapted and updated over time.

Objectives

7.4 The objectives of the Strategy focus the following:

- Objective 1 - To increase the awareness of the advantages and potential for travel by more environmentally friendly modes such as active travel and public transport; and
- Objective 2 – Ensure a package of measures is established that facilitate sustainable travel.

Administration

7.5 Following completion of the development, the Developer will appoint a Travel Plan Coordinator. This individual is likely to be a member of the building management team and their contact details will be provided to the Council at the earliest convenience. This individual will provide the liaison in implementing the plan and will speak to outside organisations in all matters regarding travel.

Sustainable Travel Measures

7.6 In order to achieve the two main objectives, the preliminary sustainable travel measures are likely to consist of the following:

- Measure 1 – Provide Travel Information Packs for residents;
- Measure 2 – Implement initiatives to raise the awareness of sustainable travel and provide public transport information;
- Measure 3 – Personalised Journey Planning;
- Measure 4 - Promote Local Car Clubs; and
- Measure 5 – Promote cycling / ensure cycle parking facilities are maintained and kept safe.

Travel Information Packs

7.7 As the development becomes occupied a Travel Information Pack will be provided to residents. The pack will include information on measures and incentives to encourage awareness of the variety of travel options available to residents given the site's highly accessible location.

7.8 The Travel Information Pack will be easily accessible for residents and as such will be available to view as either a hard copy or online.

7.9 Travel Information Packs usually contain a plan for nearby local amenities. This will build upon those recognised in this Transport Assessment as being within a walkable distance. Such information will be supported by live Google Maps and travel websites such as 'Get Me There' for ease of use amongst residents.

7.10 Information will also include details on the intentions of the Strategy, as well as contact details for the Travel Plan Coordinator. Up to date information on walking and cycling routes in the area and information on current public transport services near the development will be provided.

7.11 Information provided will remain reviewed and updated. It is an important principle in the implementation of this information to make sure residents are aware of the variety of public transport and active travel options available to them from the very start.

7.12 To build on the locational advantages of the site, it is recommended that a Travel Information Pack is made available for each new apartment upon first occupation.

Raising Awareness of Sustainable Travel

7.13 Residents will be provided with a link to TfGM's 'Journey Planner' Tool, https://tfgm.com/plan-ajourney, that will allow them to plan trips and map out potential alternatives using sustainable modes and how to pay contactless.

7.14 Residents will also be made aware of the location of cycle parking facilities in order to encourage use of this mode. Such information will also be provided on the 'Welcome Wall' and based on the TfGM cycle mapping: https://tfgm.com/cycling/cycle-maps.

7.15 Travel Information will be given in numerous forms, such as useful websites, cycle and walking maps for the surrounding areas and the Welcome Wall will include recommendations for apps to help travel by sustainable modes including:

- https://tfgm.com/;
- https://www.traveline.info/;
- https://www.nationalrail.co.uk/;
- https://citymapper.com/manchester; and
- https://transitapp.com/region/manchester.

7.16 There are local and national organisations that promote sustainable walking and cycling, often campaigning and organising walks and rides. Events that would be promoted could include Bike Week, given the site's proposed healthy cycle parking provision.

Personalised Journey Planning

7.17 Personalised Journey Planning may be implemented by the Travel Plan Coordinator at the site should demand warrant this. This would comprise the Travel Plan Coordinator providing personalised timetable information on specific services, tailored to individual queries.

Promote Local Car Clubs

7.18 The proposed development is not expected to generate significant demand for local car clubs. However, as it is 'car-free', the presence of local car clubs will be promoted for completeness. The car club spaces disused in Section 4 will therefore be promoted.

Other Potential Initiatives

7.19 It would be the responsibility of the Travel Plan Coordinator to provide residents information on these events using displays on notice boards.

7.20 Further information on these are provided via the following links:

- Available Transport for Greater Manchester initiatives that residents can take advantage of:
  - https://tfgm.com/cycling/confidence;
- A journey planner for residents wishing to travel by bicycle - https://www.cyclestreets.net/;
- Information on riding a bicycle and how to use local facilities to support cycle trips amongst residents - https://tfgm.com/cycling-and-walking;
  - https://www.cyclinguk.org/bikeweek;
  - https://www.livingstreets.org.uk/;
  - https://gmwalkfest.co.uk/; and
  - https://gmwalking.co.uk/walking-groups/.

7.21 Local public transport services will also be promoted on the 'Welcome Wall'. Information provided on the bus routes described in Section 4 will be regularly checked to ensure such information comes from the latest timetables.

7.22 Such information will help residents become more confident when using these bus services. Any major service changes to public transport services will also be communicated to residents this way.

Coordination of the Strategy

Tasks

7.23 Various tasks will be undertaken by the Travel Plan Coordinator. They will carry out an annual review of the Strategy considering the following:

- Check Travel Information Packs have been distributed amongst residents;
- Check information provided in the Travel Information Packs regarding pedestrian, cycle and public transport is up-to-date and any timetable information provided is current; and
- Action any relevant feedback received from residents.

Monitoring Progress of the Travel Plan

7.24 To enable the success of the Strategy, the Travel Plan Coordinator will be responsible for ongoing monitoring to an agreed timetable.

7.25 Each year, on or about the anniversary of the Travel Plans adoption, the Travel Plan Coordinator will review the Travel Plan to assess its success and to identify the potential for future refinement. potential new initiatives.

Ensure Communication with Residents

7.26 Communicating the Strategy will be vital to its success. Examples of communication tools and promotional techniques are as follows:

- Printed materials - Local Service Leaflets or Brochures / Summary of incentives for residents / information on the 'Welcome Wall'. Various notice boards located in communal areas; and

- Electronic media - Travel Information Pack / Travel Information-related emails to residents when necessary.

8.0 Summary and Conclusion

Summary

8.1 SLR Consulting Ltd has been commissioned by Cross Keys Estates Ltd to provide transport and highways advice in support of a full planning application for a car-free development comprising 104 residential units.

8.2 The site benefits from excellent levels of accessibility by sustainable transport modes being located within a short walk of Manchester City Centre and associated public transport interchanges.

8.3 The high public transport accessibility of the site is reflected in the highest possible GMAL rating of 8, Further the development is concluded to be fully in accordance with national and local planning policy guidance, which encourages travel by non-car modes.

8.4 Off-street public car parks are located close to the site that would cater for any car trips occasionally generated by the development. As such, it is concluded that the development would not result in an increase in traffic flows in the immediate vicinity of the site, or have a detrimental impact upon operation of the wider surrounding road network;

8.5 The development is not expected to generate a significant amount of servicing trips as it will be located within the New Cross Neighbourhood and deliveries are likely to be made as part of a combined service route.

8.6 A Travel Plan Strategy has been included in order take full advantage of the site's accessibility credentials and to further improve the management of travel by providing a clear strategy towards the use of sustainable modes.

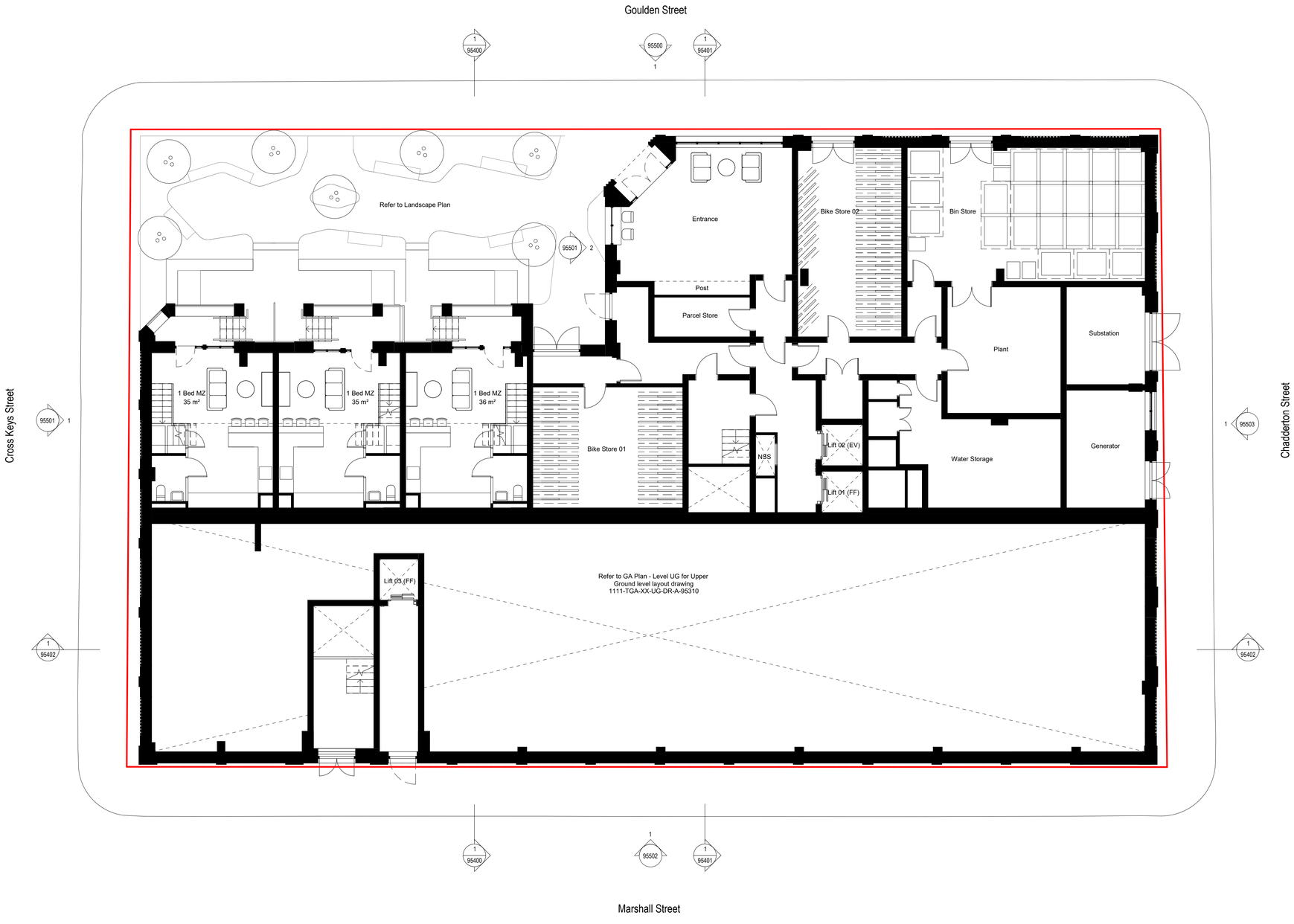
Conclusions

8.7 This Transport Assessment has demonstrated that the proposed development site is in a highly sustainable location, in accordance with local and national policy, with opportunities to actively promote the use of sustainable travel modes.

8.8 The NPPF 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'.

8.9 This report concludes that the development would not have an unacceptable impact on highway safety, and that the residual cumulative impact cannot be considered severe. On this basis it is concluded that the development is acceptable from a transport perspective.

Appendix A Proposed Ground Floor Layout



0m 5m 10 m

N

General Notes

Use figured dimensions only. Do not scale off this drawing. All dimensions must be set out and checked by the contractor on site prior to commencement of construction. Any variations between drawings and site must be reported to TGA before work proceeds.

Drawings to be read in conjunction with Architectural Specification, Structural Engineer's Drawings and Specifications, Mechanical & Electrical Engineer's Drawings and Specifications, all Supplemental Information, including but not limited to; Detailed Fire Strategy, Acoustic Report, Thermal Report & Overheating Report.

No portion of the Works to commence without acceptance of the required submittals by the Employer.

Main Contractor to submit relevant documents to building regulation and legislation approval authorities as required to comply with the Specification.

Bin Store Schedule

Type	Quantity	Bin Litres	Total Bin Litres
240l - Food Waste	5	240	1,200
1100l - Commingled Recycling	6	1100	6,600
1100l - General Waste	11	1100	12,100
1100l - Pulpable Recycling	6	1100	6,600
Total: 28			26,500

Bike Store Schedule

Description	No. of Bike Racks	No. of Bike Spaces
Double Stacked	47	94
Single Vertical	10	10
Bike Store Total: 57		104

Rev	Description	Date	By
P01	Planning Issue	07.05.24	BG
P02	Internal layouts revised	17.05.24	BG
P03	Planning Issue	27.02.25	JB

Title
General Arrangement - Level 00

Drawing No.
1111-TGA-XX-00-DR-A-95300

Revision
P03

Status
Planning

Scale
1 : 100@A1

Project
Cross Keys Street

Client
CERT Property

TIM GROOM ARCHITECTS

Eastgate, 2 Castle Street, Manchester, M3 4LZ 0161 870 1152

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Appendix B TRICS Output Files

Calculation Reference: AUDIT-529504-240222-0210

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	CT	CENTRAL BEDFORDSHIRE	3 days
	HF	HERTFORDSHIRE	1 days
	PO	PORTSMOUTH	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	1 days
10	WALES		
	CO	CONWY	1 days
11	SCOTLAND		
	HI	HIGHLAND	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 Dwellings
Actual Range:	16 to 175 (units:)
Range Selected by User:	6 to 184 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/18 to 19/04/23

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:

Monday	2 days
Tuesday	4 days
Wednesday	2 days
Thursday	1 days

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

Selected survey types:

Manual count	9 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:

Edge of Town Centre	9

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:

Development Zone	1
Residential Zone	4
Built-Up Zone	3
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	7 days - Selected
Servicing vehicles Excluded	2 days - Selected

Secondary Filtering selection:

Use Class:

C3	9 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®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	6 days

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

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	3 days
125,001 to 250,000	3 days
250,001 to 500,000	2 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	4 days
1.1 to 1.5	4 days
1.6 to 2.0	1 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	2 days
No	7 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	9 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 CO-03-C-01 BLOCKS OF FLATS CONWY
MOSTYN BROADWAY
LLANDUDNO

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 37
Survey date: MONDAY *26/03/18* *Survey Type: MANUAL*

2 CT-03-C-01 BLOCKS OF FLATS CENTRAL BEDFORDSHIRE
WING ROAD
LEIGHTON BUZZARD
LINSLADE
Edge of Town Centre
Residential Zone
Total No of Dwellings: 175
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

3 CT-03-C-02 BLOCKS OF FLATS CENTRAL BEDFORDSHIRE
STANBRIDGE ROAD
LEIGHTON BUZZARD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

4 CT-03-C-03 BLOCKS OF FLATS CENTRAL BEDFORDSHIRE
COURT DRIVE
DUNSTABLE

Edge of Town Centre
No Sub Category
Total No of Dwellings: 146
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

5 HF-03-C-03 BLOCK OF FLATS HERTFORDSHIRE
SHENLEY ROAD
BOREHAMWOOD

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 91
Survey date: THURSDAY *14/11/19* *Survey Type: MANUAL*

6 HI-03-C-02 BLOCK OF FLATS HIGHLAND
KING STREET
NAIRN

Edge of Town Centre
Residential Zone
Total No of Dwellings: 16
Survey date: WEDNESDAY *19/04/23* *Survey Type: MANUAL*

7 MS-03-C-04 BLOCK OF FLATS MERSEYSIDE
HOY DRIVE
NEWTON-LE-WILLOWS
EARLESTOWN
Edge of Town Centre
Residential Zone
Total No of Dwellings: 24
Survey date: MONDAY *12/04/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8	PO-03-C-01 CROSS STREET PORTSMOUTH	BLOCKS OF FLATS		PORTSMOUTH
	Edge of Town Centre Built-Up Zone			
	Total No of Dwellings:		90	
	Survey date: TUESDAY		*05/06/18*	*Survey Type: MANUAL*
9	SF-03-C-05 FORE STREET IPSWICH IPSWICH WATERFRONT	BLOCKS OF FLATS		SUFFOLK
	Edge of Town Centre Development Zone			
	Total No of Dwellings:		69	
	Survey date: WEDNESDAY		*23/06/21*	*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.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.52

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	79	0.038	9	79	0.169	9	79	0.207
08:00 - 09:00	9	79	0.065	9	79	0.208	9	79	0.273
09:00 - 10:00	9	79	0.072	9	79	0.079	9	79	0.151
10:00 - 11:00	9	79	0.065	9	79	0.087	9	79	0.152
11:00 - 12:00	9	79	0.080	9	79	0.096	9	79	0.176
12:00 - 13:00	9	79	0.099	9	79	0.103	9	79	0.202
13:00 - 14:00	9	79	0.072	9	79	0.069	9	79	0.141
14:00 - 15:00	9	79	0.055	9	79	0.073	9	79	0.128
15:00 - 16:00	9	79	0.110	9	79	0.077	9	79	0.187
16:00 - 17:00	9	79	0.139	9	79	0.076	9	79	0.215
17:00 - 18:00	9	79	0.172	9	79	0.092	9	79	0.264
18:00 - 19:00	9	79	0.215	9	79	0.115	9	79	0.330
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.182			1.244			2.426

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:	16 - 175 (units:)
Survey date date range:	01/01/18 - 19/04/23
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	79	0.004	9	79	0.004	9	79	0.008
08:00 - 09:00	9	79	0.000	9	79	0.000	9	79	0.000
09:00 - 10:00	9	79	0.001	9	79	0.001	9	79	0.002
10:00 - 11:00	9	79	0.000	9	79	0.000	9	79	0.000
11:00 - 12:00	9	79	0.004	9	79	0.003	9	79	0.007
12:00 - 13:00	9	79	0.000	9	79	0.001	9	79	0.001
13:00 - 14:00	9	79	0.000	9	79	0.000	9	79	0.000
14:00 - 15:00	9	79	0.001	9	79	0.001	9	79	0.002
15:00 - 16:00	9	79	0.000	9	79	0.000	9	79	0.000
16:00 - 17:00	9	79	0.000	9	79	0.000	9	79	0.000
17:00 - 18:00	9	79	0.000	9	79	0.000	9	79	0.000
18:00 - 19:00	9	79	0.000	9	79	0.000	9	79	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.010			0.020

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.52

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	79	0.066	9	79	0.404	9	79	0.470
08:00 - 09:00	9	79	0.128	9	79	0.615	9	79	0.743
09:00 - 10:00	9	79	0.152	9	79	0.225	9	79	0.377
10:00 - 11:00	9	79	0.172	9	79	0.197	9	79	0.369
11:00 - 12:00	9	79	0.165	9	79	0.206	9	79	0.371
12:00 - 13:00	9	79	0.238	9	79	0.245	9	79	0.483
13:00 - 14:00	9	79	0.192	9	79	0.182	9	79	0.374
14:00 - 15:00	9	79	0.152	9	79	0.190	9	79	0.342
15:00 - 16:00	9	79	0.344	9	79	0.192	9	79	0.536
16:00 - 17:00	9	79	0.356	9	79	0.193	9	79	0.549
17:00 - 18:00	9	79	0.470	9	79	0.228	9	79	0.698
18:00 - 19:00	9	79	0.539	9	79	0.265	9	79	0.804
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.974			3.142			6.116

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.

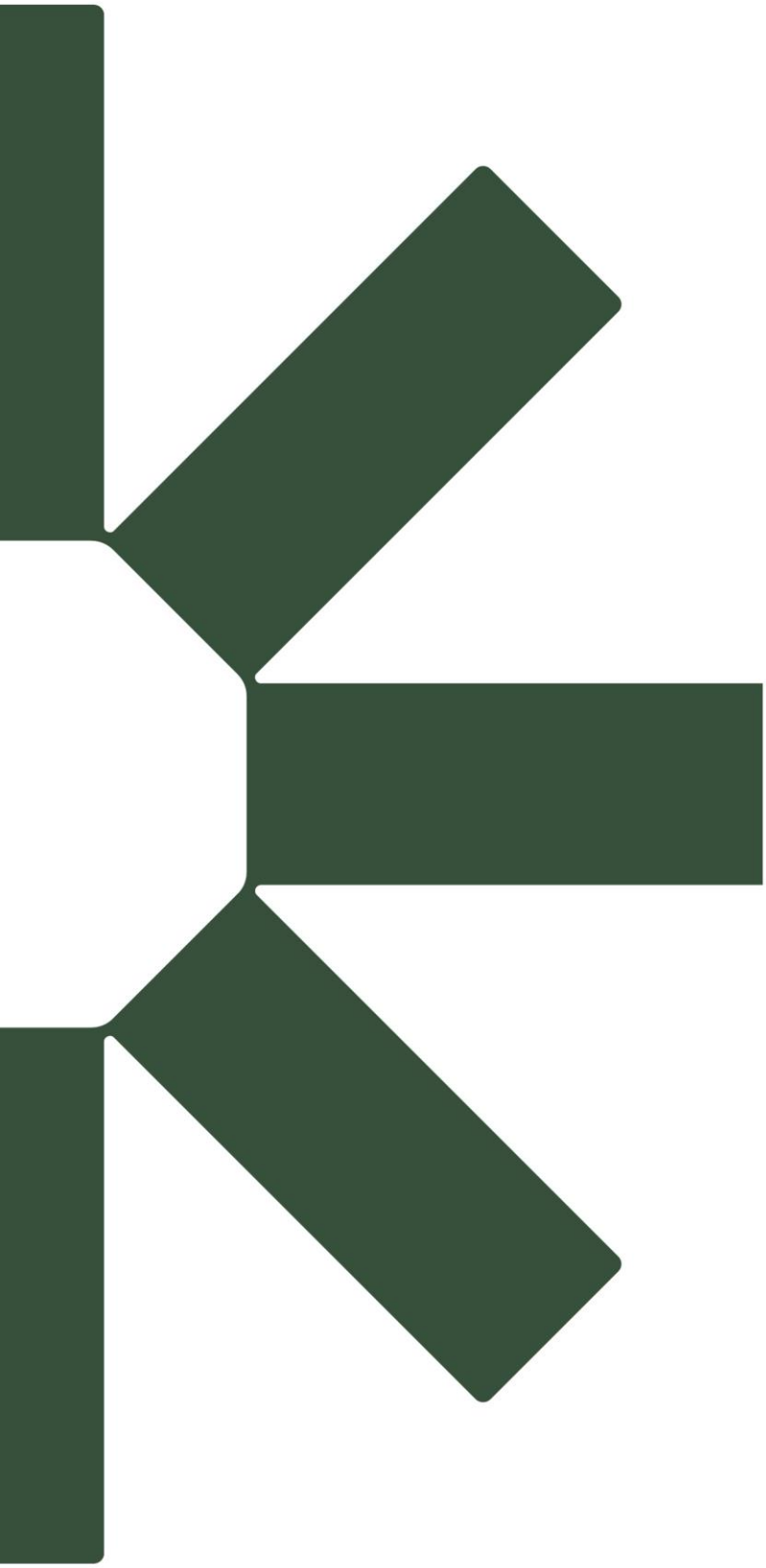
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	79	0.006	9	79	0.010	9	79	0.016
08:00 - 09:00	9	79	0.008	9	79	0.014	9	79	0.022
09:00 - 10:00	9	79	0.011	9	79	0.007	9	79	0.018
10:00 - 11:00	9	79	0.011	9	79	0.017	9	79	0.028
11:00 - 12:00	9	79	0.015	9	79	0.017	9	79	0.032
12:00 - 13:00	9	79	0.013	9	79	0.018	9	79	0.031
13:00 - 14:00	9	79	0.008	9	79	0.013	9	79	0.021
14:00 - 15:00	9	79	0.008	9	79	0.007	9	79	0.015
15:00 - 16:00	9	79	0.018	9	79	0.011	9	79	0.029
16:00 - 17:00	9	79	0.014	9	79	0.013	9	79	0.027
17:00 - 18:00	9	79	0.013	9	79	0.004	9	79	0.017
18:00 - 19:00	9	79	0.004	9	79	0.003	9	79	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.129			0.134			0.263

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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