Bendix Street, New Cross

Transport Statement

191210/SK21855/TS01(-03)

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1 Introduction

1.1 SK has been instructed by Mulbury Homes (Central) Limited to prepare a Transport Statement (TS) in support of a planning application for a residential development in the New Cross area of Manchester City Centre.

1.2 The Site sits in the New Cross Neighbourhood Development Framework (NDF). The New Cross NDF sets out guidance for future development in the area and is supported by the New Cross Public Realm Strategy published in 2017, that sets out the future movement and public realm strategy to serve the area. The NDF designates the Site as being within 'Zone A'.

1.3 The Site is a gateway plot to the New Cross NDF area and is currently occupied by a commercial unit and commuter car park.

1.4 The Proposed Development seeks to deliver a block with 161 apartments, a 257sqm commercial unit, and 166sqm of residential amenity space. The ground floor layout is attached as Appendix A.

1.5 The Proposed Development and associated access strategy have been designed to allow the plot to come forward in isolation, without prejudicing the aspirations for New Cross as set out in the NDF.

1.6 Three separate planning applications are being submitted for three separate plots within the New Cross area (Goulden Street, Bendix Street and Oldham Road). The applications are being submitted separately but will run concurrently and the plots are all being progressed by Mulbury Homes. It is expected that all of the plots will be developed concurrently.

1.7 This report relates to Bendix Street. Reports in relation to Goulden Street and Oldham Road have been prepared and are submitted separately in support of the relevant planning application. Although the TS assesses the Bendix Street plot in isolation, it also includes a cumulative assessment of the impacts of all three plots as these are being developed concurrently.

1.8 The TS assesses the traffic, transport, parking and accessibility impact of the Proposed Development. The TS has been prepared in accordance with the guidance set out in Manchester City Council (MCC) SPD 'Guide to Development in Manchester' and 'Resident Quality Guidance', Transport for Greater Manchester (TfGM) 'Transport for Sustainable Communities' and relevant national guidance as outlined in the National Planning Policy Framework (NPPF), National Planning Practice Guidance (NPPG) and Department for Transport (DfT) 'Guidance on Transport Assessment'.

1.9 The scope of the TS was discussed and agreed with MCC, the Local Highway Authority, at a meeting held in July 2018.

1.10 Based on the above, the TS considers the following elements:

- Existing transport conditions
- NDF transport aspirations and movement strategy
- Future access, servicing, parking and sustainable transport measures
- Accessibility by sustainable modes of transport
- Forecast impact of the Proposed Development and compliance with local and national policy

2 Existing Situation

Site Location & Existing Use

2.1 Figure 2.1 shows that the Site is located to the north of the city centre in the New Cross area. New Cross sits between the two arterial routes; A62 Oldham Road and A664 Rochdale Road.

Figure 2.1: Site Location

2.2 The Site is bounded to the north east by Thompson Street, to the south by Oldham Road, to the south west by Bendix Street, and a building occupied by Turning Point to the north west.

2.3 The Site comprises circa 0.14ha of developed land. The Site is currently occupied by a commercial unit (257sqm) and a commuter car park (50 spaces). The commercial unit has a small parking area on its Oldham Road frontage, which is accessed from Thompson Street and Bendix Street. The commuter car park, to the rear of the Site, is accessed from continuous crossover arrangements onto Thompson Street and Bendix Street.

2.4 The Site is not located within a Conservation Area and does not contain any Listed Buildings or Structures. The nearest Listed Buildings are the Grade II listed 'Former Police and Ambulance Station', located approximately 110m to the north west of the Site, and Grade II Listed 'Victoria Square' on the opposite side of Oldham Road (circa 50m to the south east).

Local Highway Network

2.5 Vehicle access to the Site is currently provided from various locations on the Bendix Street and Thompson Street frontages.

2.6 Figure 2.2 shows the current highway network and circulation routes serving the New Cross area. This plan has been taken from MCC's New Cross Public Realm Strategy document (page 38).

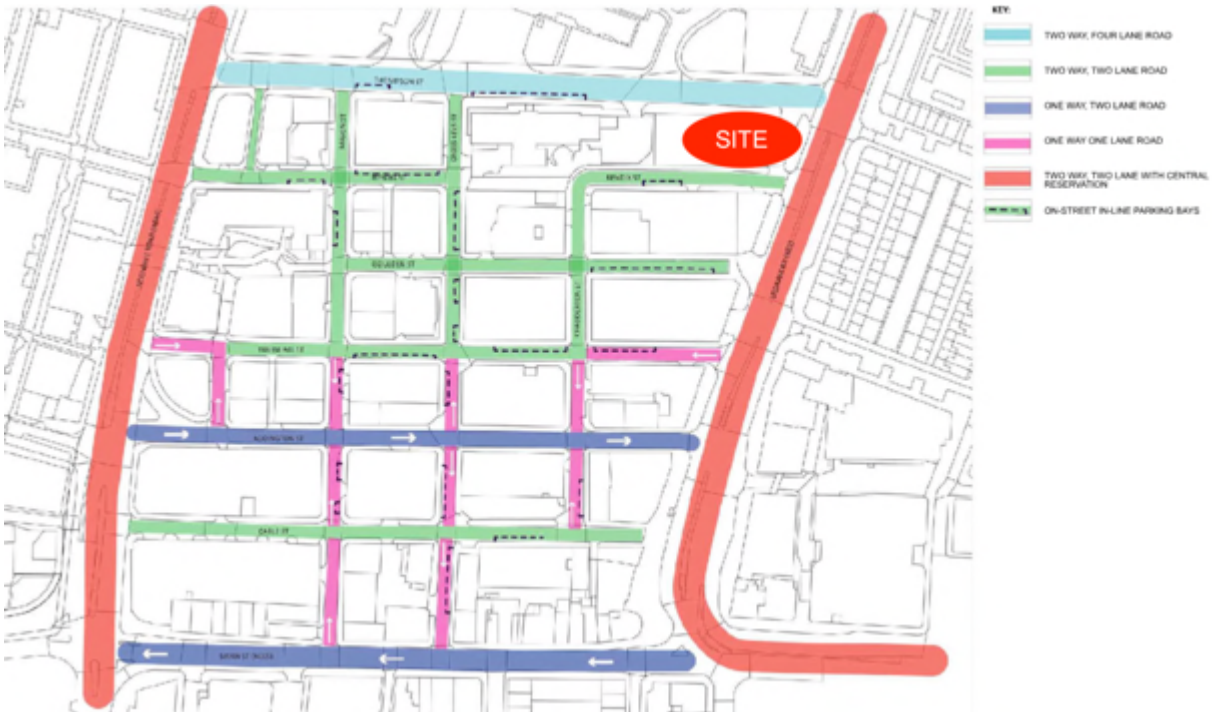

Figure 2.2: Existing Highway Network
[source: MCC 2017 Public Realm Strategy]

2.7 Figure 2.2 shows that access can currently be gained to the Site from Thompson Street, a two-way street that routes between Rochdale Road and Oldham Road.

2.8 Access can also be gained from Bendix Street, a two-way local access route. Bendix Street is circa 7m wide with footways of 2m or more along either carriageway edge. At the western end of Bendix Street bollards are in place to prevent vehicular movements through to Cross Key Street. Traffic has to continue southwards at this point on Chadderton Street.

2.9 Bendix Street meets Oldham Road to the east of the Site via a left-in/left-out priority arrangement. Traveling southwards on Chadderton Street from Bendix Street provides access to the wider New Cross area.

2.10 On-street parking is provided in the area, as shown in Figure 2.2. The parking is controlled by single yellow lines and parking bays. The parking controls restrict parking to designated bays between Monday and Friday (8am to 6pm) and Saturday (8am to 12.30pm). Parking is permitted for two hours only (no return within one hour) during the control period.

Public Car Parks

2.11 Table 2.1 shows the public car parks within a ten-minute walk of the Site.

Location	Operator	Walk Distance (m)	Walk Time (mins)	Spaces	Season Tickets	EV Charging
Ice Plant	NPG	270	4	79	✓	
Flint Glass Works	NPG	500	6	125	✓	
Northern Quarter	NCP	500	6	700	✓	✓
Printworks	NCP	650	8	777	✓	
Arndale	NCP	750	9	1383	✓	
Tariff Street	Citipark	800	10	232	✓	✓

Table 2.1: Public Car Parks

2.12 Table 2.1 shows that there are over 3,000 parking spaces within a ten-minute walk of the Site. All of these car parks offer season ticket arrangements for city centre residents.

Road Safety

2.13 The GMTU/TfGM accident database has been reviewed to allow an understanding of the road safety levels in the study area. Data for the most recent five-year period has been reviewed. This is shown on Figure 2.3.

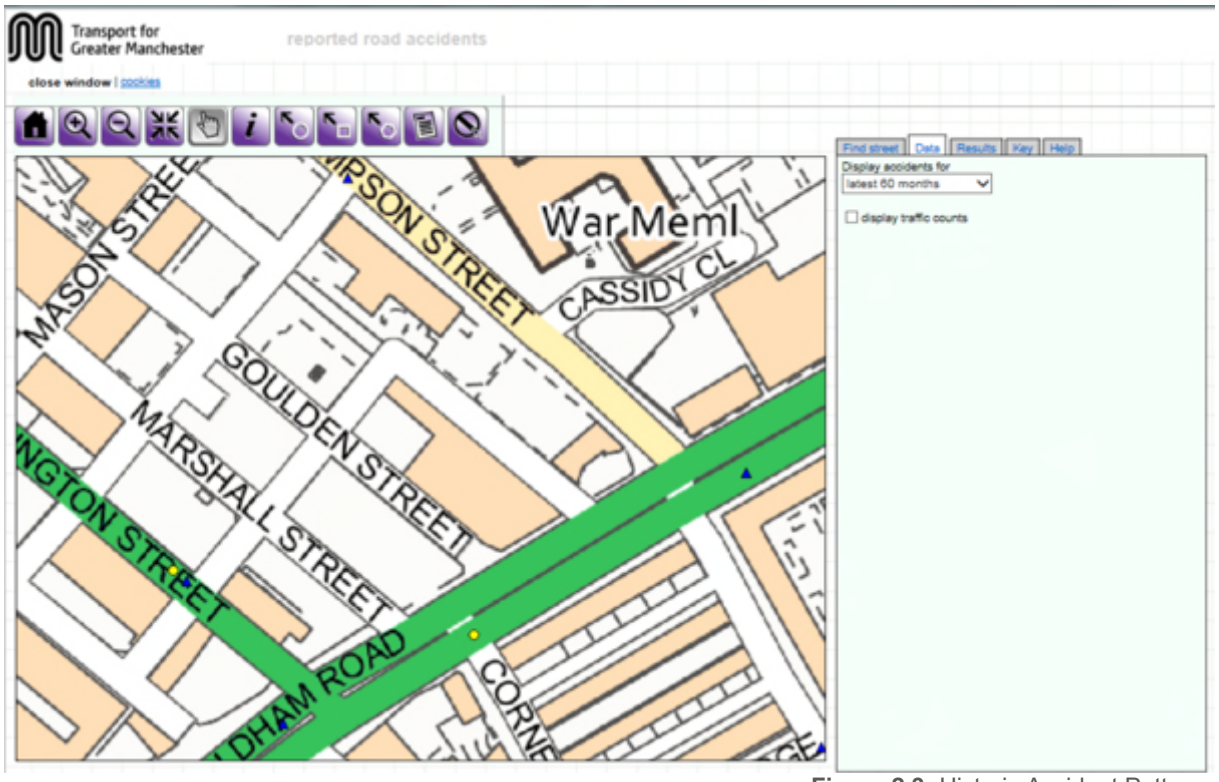

Figure 2.3: Historic Accident Patterns
[source: TfGM 2019 Accident Database]

2.14 The data shows that there have been no accidents on the local streets serving the Site.

Existing Site Traffic Flows

2.15 The TRICS database has been used to establish the trips associated with the existing commercial unit on the Site. TRICS industrial unit trip rates have been used in the forecast. This provides a conservative estimate of existing traffic flows as the commercial unit is currently occupied by a locksmiths and key cutting facility, with retail counter.

2.16 The TRICS output is attached as Appendix B, with a summary of the AM and PM peak hour flows provided in Table 2.3.

	Trip Rate (per 100sqm)			Existing Commercial Unit Traffic Flows		
	IN	OUT	TOTAL	IN	OUT	TOTAL
AM Peak	0.402	0.078	0.480	1	0	1
PM Peak	0.056	0.363	0.419	0	1	1

Table 2.3: Existing Commercial Unit Traffic Flows

2.17 To forecast the traffic flows associated with the commuter car park on the Site the parking surveys undertaken to inform the TA for the adjacent Balfour Beatty development site have been used. Table 2.4 shows the commuter car park trip rate derived from this parking survey and the resultant commuter car park flows for the Site.

	Trip Rate (per space)			Existing Commuter Car Park Traffic Flows		
	IN	OUT	TOTAL	IN	OUT	TOTAL
AM Peak	0.429	0.057	0.486	21	3	24
PM Peak	0.000	0.429	0.429	0	21	21

Table 2.4: Existing Commuter Car Park Traffic Flows

2.18 Table 2.5 shows the total traffic flows associated with current activity on the Site.

	Total Site Traffic Flows		
	IN	OUT	TOTAL
AM Peak	22	3	25
PM Peak	0	22	22

Table 2.5: Existing Site Traffic Flows

New Cross NDF Proposals

2.19 The New Cross NDF was adopted in 2015. The document has been prepared to guide the future development of New Cross to ensure the quality of new development and to set out the supporting public realm and highways required to create a sustainable and vibrant community.

2.20 The 2015 NDF document sets out the general principles in terms of transport and highways, including street hierarchy principles, on-street parking strategies and methods of dealing with severance effects created by the Inner Ring Road (IRR).

2.21 In 2017 MCC published the New Cross Public Realm Strategy. This document builds on the advice outlined in the NDF and provides further detail on the public realm materials, highways and circulation strategies to be brought forward to support development in the area. As part of this more detailed analysis of the practicability of including pedestrianised streets (e.g. Cross Keys Street and Goulden Street) was undertaken. Following swept path studies, it was decided that closing existing routes to vehicular traffic would require extensive turning head provision that would have a detrimental impact on the historic grid layout. It was also decided that the existing

grid pattern enables the ideal scenario of permeable and legible pedestrian routes. The later study removes the pedestrianised streets and replaces them with Pedestrian Priority Streets that futureproof the concept presented in the NDF to allow pedestrianisation to follow once the area is fully developed.

2.22 The study found that the existing circulation system (eg. one-way and two-way routes) serves the area well and sufficiently deters rat-running. In the Public Realm Strategy, the circulation system on the roads immediately abounding the Site is to be retained as existing.

2.23 The Public Realm Strategy identifies the following street hierarchy:

- Pedestrian Priority Streets
- Pedestrian Only Routes
- Two Lane Traffic Priority Streets
- Wide Traffic Priority Streets

2.24 The street hierarchy is shown on Figure 2.4. To assist with pedestrian and cycle movements, it is proposed that the area would be covered by a 20mph zone.

Figure 2.4: New Cross Street Hierarchy
[source: MCC 2017 Public Realm Strategy]

2.25 The Public Realm Strategy states that it is preferable to maintain on-street parking throughout the area, provided it doesn't compromise pedestrian routes, as it slows vehicle speeds. The report outlines indicative locations for the street parking and states that these are a guide only. MCC has advised it is currently reviewing Traffic Regulation Orders (TRO) and parking locations across the

study area. It is envisaged by MCC that the parking bays will be governed in the future by Pay & Display and timed restrictions will be brought into line with other areas of the city centre.

2.26 The advice in the New Cross Public Realm Strategy supersedes that set out in the NDF in relation to public realm and transport.

3 Proposed Development

Layout

3.1 The Proposed Development will construct 161 apartments, 147sqm of commercial floor space and 257sqm of amenity space.

3.2 The ground floor layout for the Proposed Development is shown in Appendix A.

Sustainable Access

3.3 The Proposed Development is in an accessible location within Manchester City Centre. As shown in the TfGM city centre survey data provided in Section 5, the majority of residents will work in key destinations in the Regional Centre. Leisure and retail trips will also be concentrated on the City Centre. This means that sustainable modes will form the dominate movement patterns.

3.4 To further reinforce this a Framework Travel Plan has been prepared and is attached as Appendix C. The measures proposed are commensurate with the location of the Proposed Development and good opportunities that already exist for sustainable trip making.

3.5 The main entrance to the building will be provided from Bendix Street. The landscape strategy for the Proposed Development will create footway enhancements and improved surfacing on routes abounding the Site, including the provision of dropped kerbs and tactile paving. The landscape strategy has been developed to fit with the requirements of the New Cross Public Realm Strategy. The landscape strategy has been developed to allow the Proposed Development to be brought forward in isolation of the rest of the New Cross NDF, and also to fit with MCC's wider aspirations.

3.6 Secure cycle storage areas are proposed within the building for use by future residents. The storage areas will provide capacity for 166 cycles for residents (103%) and five Sheffield stands (10 spaces) for visitors in external areas.

3.7 The applicant will also fund the Traffic Regulation Order (TRO) required to deliver a single car club bay to serve the Proposed Development, and the applicant's other Proposed Developments in New Cross. Following discussion with MCC, this car club bay is likely to be located centrally on Marshall Street to provide benefit for the whole area.

Car Parking

3.8 As agreed with MCC, the Proposed Development includes no on-site parking. A disabled parking space is provided adjacent to the main entrance on Bendix Street. The disabled parking bay proposal is attached as Appendix D. In line with the Council's policy, Blue Badge holders will also be able to park for free and without limit on duration restriction in any of the other street parking bays surrounding the Site.

3.9 To fit with the New Cross Public Realm Strategy the existing parking bays located on the southern side of Bendix Street are relocated to the northern side of the carriageway. The parking bay proposal is attached as Appendix D.

3.10 Reduced levels of parking at city centre residential developments is supported by NPPF and other local policies throughout the UK. Locally both TfGM and MCC support parking restraint at developments where accessibility levels are high, distances to key services are low and the travel requirements of future users can be adequately met. The restraint on parking will support the increasing demand for residents in the City Centre who choose to live without a car and also support MCC's commitment to become a zero carbon city by 2038.

3.11 In the unlikely event that a resident requires to store a car they will be able to purchase a season ticket from one of the several public car parks located within a ten-minute walk of the Site (shown in Section 2).

3.12 The existing parking controls in the area will restrict the practicability of a resident storing a car on-street and will deter overspill parking.

Servicing & Refuse Collection

3.13 Access to the bin store is also located off the Bendix Street frontage. An on-street loading bay is proposed on Bendix Street to formalise service access to the Site. The majority of vehicles servicing the Site will be transit and box van vehicles, but there is sufficient space on the highway to accommodate larger vehicles that occasionally require access such as removal vans and refuse vehicles. The loading bay layout is shown in Appendix D.

3.14 The Site currently generates activity associated with service vehicles and the routes surrounding the Site are already in use by large vehicles serving the area. The loading bay can be accessed using the following routes:

- Oldham Road – Marshall Street E – Chadderton Street – Bendix Street
- Rochdale Road - Marshall Street W – Chadderton Street – Bendix Street
- Addington Street – Cross Keys Street - Marshall Street W – Chadderton Street – Bendix Street

3.15 A swept path has been prepared for a large refuse vehicle to MCC specification (11m) and is attached as Appendix D.

3.16 A service management strategy will be adopted for the Proposed Development to assist in co-ordinating better deliveries and reducing service movements. The requirement for this will be dealt with by a suitably worded planning condition.

Construction Management Plan

3.17 A Construction Management Plan (CMP) will be prepared for the Proposed Development. The requirement to do this will be dealt with by a suitably worded planning condition.

4 Accessibility

Walking

4.1 The Proposed Development is well connected to key destinations by a comprehensive network of pedestrian routes, typical of its city centre location. Access to the city centre areas to the south of the Site can be gained either through the New Cross area or using the footway on Oldham Road. Existing crossing facilities are provided across the main highway, including at regular intervals on the Oldham Road corridor.

4.2 The landscape strategy for the Proposed Development will create footway enhancements and improved surfacing, including the provision of dropped kerbs and tactile paving. The landscape strategy has been developed to fit with the requirements of the New Cross Public Realm Strategy. The landscape strategy has been developed to allow the Proposed Development to be brought forward in isolation of the rest of the New Cross NDF, and also to fit with MCC's wider aspirations.

4.3 Two-thirds of all journeys in the UK are under-five miles and short distance trips offer the greatest opportunity for changes in travel behaviour. DfT best practice guidance states that walking has the potential to substitute for car trips under 2km, which equates to a 25-minute walk. As shown in Table 4.1, further guidance is provided in the Chartered Institute of Highways and Transportation (CHIT) document 'Providing for Journeys on Foot' on acceptable maximum distances to destinations to local service and town centre facilities.

Destination Type	Walk Distance (m)	Walk Time (mins)
Commuting/Education	2000	25
Local Centre/Local Retail	800	10
Other	1200	15

Table 4.1: IHT Walk Distances

4.4 Figure 4.1 shows 10, 15 and 25-minute walking isochrones from the Proposed Development, based on a walking speed of 4.8kph.

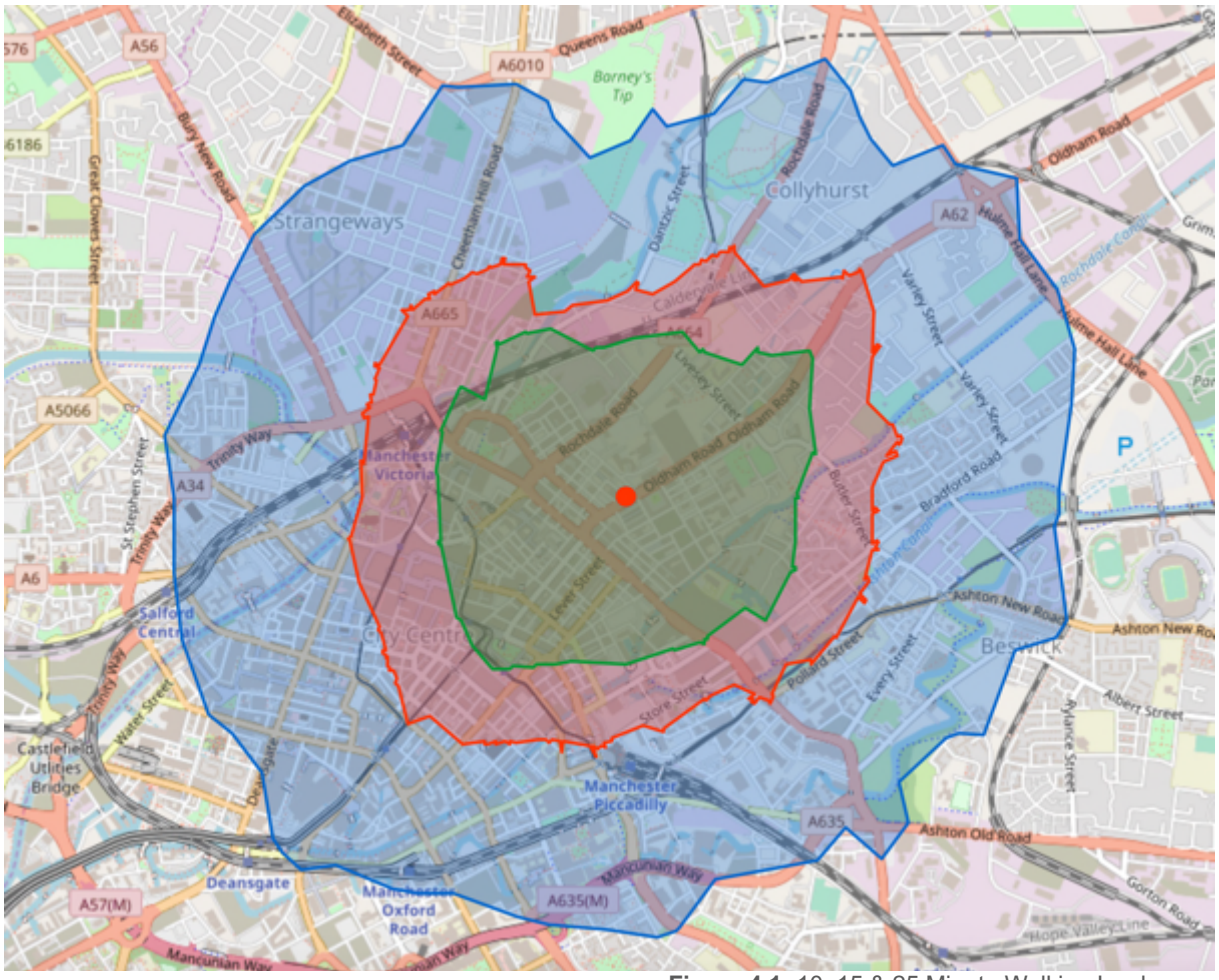

Figure 4.1: 10, 15 & 25 Minute Walking Isochrones

4.5 The walking isochrones shows that the Site is within a 10-minute walk of the NOMA area, Great Ancoats, the Northern Quarter, Shudehill, New Islington, Piccadilly Gardens and the Arndale. Within a 15-minute walk of the Site access can be gained to the Victoria Station, King Street, Piccadilly station, China Town and Deansgate. The remainder of the city centre and central areas of Salford are within a 25-minute walk of the Site.

4.6 The existing and future proposed pedestrian infrastructure surrounding the Site provides a good basis for future trips by residents to key destinations. The close proximity of the Site to a key city centre destinations and local area amenities, means that journeys on foot will be the dominant mode of travel for most residents.

4.7 The Proposed Development includes measures to promote pedestrian journeys from the Site, including enhancements to including enhancements to the pedestrian environment on the Proposed Development frontage and a Travel Plan.

Cycling

4.8 Figure 4.2 shows the Proposed Development relates well to existing formal and informal cycle routes on the Greater Manchester Cycle Network. Marked cycle routes are provided along the Oldham Road corridor linking to a toucan crossing at the junction with Swan Street. The local streets through New Cross are lightly trafficked and provide a suitable environment for cycle trips. These routes will be enhanced by the New Cross NDF proposals, including changes to the speed limit to 20mph.

4.9 The existing routes serving the Proposed Development provide a good basis for future trips on cycle and provide good linkages to the entire network, including routes through the City Centre and beyond.

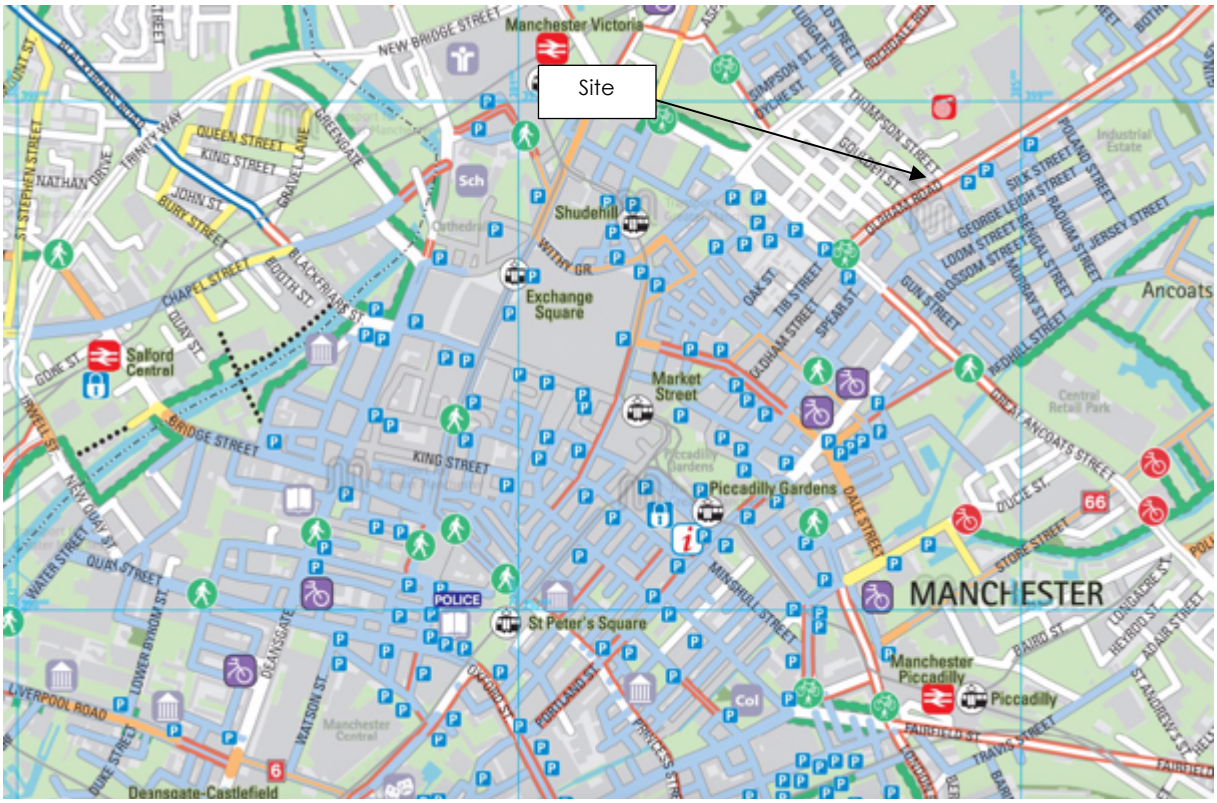

Figure 4.2: Greater Manchester Cycle Network
[source: TfGM 2019 Interactive Cycle Map]

4.10 Cycling England recommends 8km as a maximum cycling distance in the document 'Integrating Cycling into Development Proposals' and the CIHT document 'Planning for Cycling' states that cycling has the potential to substitute for car trips under five miles (8km). Figure 4.2 shows an 8km cycling catchment from the Site.

Figure 4.3: 5km Cycling Catchment

4.11 Figure 4.3 shows that all of the city centre can be accessed from the Site. Access can also be gained to major employment areas in Salford Quays, MediaCity:UK and Trafford Park.

4.12 TfGM offer free cycle training and maintenance sessions for adults for beginners and experienced cyclists, and provides safety tips and advice on the TfGM website. Details of regular cycle events, such the Summer Cycle Camp, Let's Ride Pop-Up and HSBC's Let's Ride Manchester are provided on the TfGM website. TfGM offer a cycle newsletter service is frequently updated with new route information and activities. This can be signed up for by using the TfGM website.

4.13 It is shown that opportunities exist for access by cycle from the Site to areas of the city and the Regional Centre using the existing Greater Manchester Cycle Network. The Proposed Development includes 103% cycle parking for residents and parking for visitors. Access by cycle will be promoted through the Travel Plan.

Public Transport

4.14 The nearest bus stops to the Proposed Development are located on Oldham Road and Thompson Street. The bus stops are less than a three-minute walk from the Site. Further bus stops are accessible on Rochdale Road, a four-minute walk from the Site.

4.15 TfGM's interactive bus tool shows that the nearest bus stops are served by around 1,400 buses per day (Monday to Friday) on Oldham Road and 2,500 buses per day (Monday to Friday) on Rochdale Road. These services provide comprehensive coverage of the City Centre and regional destinations, including: Rochdale; Milnrow; Oldham; Piccadilly; Failsworth; Saddleworth; and, East Manchester. The services also provide good coverage of early morning, evening and weekend periods.

4.16 In addition to the above the Site is located an eight-minute walk from Shudehill Interchange where access can be gained to other high frequency bus services that provide links to Salford and other areas of Manchester.

4.17 Metrolink tram services can also be accessed at Shudehill Interchange. Existing Metrolink services provide high-frequency services on the Altrincham, Eccles, East Didsbury, Mediacity, Ashton, the airport, Rochdale and Bury. Consent has recently been granted for the construction of the Trafford Park Line, which will provide connections from the city to Old Trafford, Trafford Park and the Trafford Centre.

4.18 The nearest mainline station to the Site is Victoria station, an 11-minute walk away. Access to good frequency train services connecting to Huddersfield, Blackpool, Liverpool, Newcastle, Wigan, Bolton and Leeds is provided from Victoria station.

4.19 The assessment shows that good opportunities exist for future residents to access key destinations in Greater Manchester by public transport. Existing public transport services and ticketing arrangements will be promoted through the Travel Plan.

Greater Manchester Accessibility Level (GMAL)

4.20 In line with TfGM guidance a Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the Proposed Development. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures AM Peak accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is a high level of accessibility.

Figure 4.4: Greater Manchester Accessibility Level
[source: MappingGM 2019]

4.21 Figure 4.4 shows that the Proposed Development has a GMAL of 8, the highest level of accessibility in Greater Manchester. This shows that residents can undertake movements to destinations outside the City Centre easily by public transport from day one of occupation of the development.

Casual Car Use

4.22 Enterprise Car Club offers a cost-effective, hassle-free and greener alternative to car ownership in accessible areas. The service offers pay by hour car hire, which provides residents with a more convenient and cost-effective alternative to car ownership for situations if a vehicle is required for occasional journeys. The Car Club also maintains larger vehicles and vans at locations across the city.

4.23 The Car Club offers pay as you go motoring, with vehicles available to hire for as little as 30 minutes per trip. The vehicles are available 24/7 and members of the scheme can easily access vehicles on demand by reserving on line. The Car Club can save motorists up to £3,500 a year on costs usually associated with fuel, insurance, servicing, MOT, cleaning and parking.

4.24 There are no car club vehicles currently located in the New Cross area. The applicant has agreed to fund the TRO costs associated with providing a single new car club bay within the New Cross area. The single bay will serve all three of the applicant's Proposed Developments in the area and is likely to be located on Marshall Street. The Travel Plan will promote the Enterprise Car Club scheme.

4.25 CarShareGM will be promoted to allow residents to hitch a lift with people living nearby making the same trips.

Transport Strategy

4.26 The assessment shows that the Proposed Development benefits from a very high level of accessibility by non-car modes, which will assist in allowing residents to actively travel without needing to own a car.

4.27 The existing infrastructure serving the Site forms a good basis for sustainable trip making from day one of occupation of the Proposed Development. To complement this and support sustainable living patterns the following transport strategy is proposed:

- On-site amenity and communal living facilities to reduce the need to travel
- Travel Plan
- 103% resident cycle parking provision
- 10 visitor cycle parking spaces
- Funding of the TRO required to provide a car club bay in New Cross
- Footway enhancements and improved surfacing on the Site frontage

5 Impact

Trip Forecast

5.1 The trip generation method is in line with that accepted by MCC at other development sites in the city centre.

5.2 The Proposed Development will not provide any parking on-site, other than a disabled parking bay on Bendix Street and funding for a car club bay. This, coupled with the fact that most residents in the city centre live without a car and even if they do own one they don't use it for commuting trips, will considerably limit traffic generated by the Site during the peak hours.

5.3 Notwithstanding this, a standard traffic forecast assessment has still been undertaken using the TRICS trip rates. This is to allow the activity associated with the limited level of Site parking, drop-off activity, service and refuse movements, and any movements that may be generated by residents who store a vehicle elsewhere, to be robustly considered in the assessment.

5.4 The TRICS land use has been set as flats privately owned, to provide a robust assessment. In line with best practice the forecast is cognisant of the location of the proposal. The TRICS output is attached as Appendix E.

5.5 Table 5.1 shows the TRICS survey sites resulting from the initial analysis.

Reference	Description	Town/City	Location	Units	Parking	Level
CB-03-C-01	Flats	Carlisle	Town Centre	40	43	108%
GM-03-C-02	Flats	Manchester	Town Centre	154	100	65%
GM-03-C-03	Flats	Manchester	Town Centre	20	14	70%
HI-03-C-01	Flats	Inverness	Town Centre	38	42	111%

Table 5.1: TRICS Survey Sites

5.6 It can be seen from Table 5.1 that all the TRICS survey sites have substantially more parking than the Proposed Development, with two of the sites providing over 100% parking.

5.7 To make a reasonable assessment within the limits of the TRICS data available, the surveys with over 100% parking provision have been removed from the analysis. The two retained survey sites, both in Manchester, provide between 60% and 75% parking on Site; a level that is still substantially higher than proposed at the Site. As a consequence, the forecast overestimates the traffic flows associated with the Proposed Development.

5.8 Table 5.2 shows the AM and PM peak hour trip rates to assess the impact of the Proposed Development.

	Person Trip Rate		Cycle Trip Rate		Pedestrian Trip Rate		Public Transport Trip Rate		Vehicle Trip Rate	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
AM	0.040	0.454	0.000	0.011	0.017	0.264	0.006	0.144	0.011	0.029
PM	0.667	0.184	0.023	0.000	0.408	0.167	0.207	0.017	0.023	0.006

Table 5.2: Development Trip Rates

5.9 Table 5.3 shows the resulting AM and PM peak hour trips generated by the Proposed Development.

	Person Trips		Cycle Trips		Pedestrian Trips		Public Transport Trips		Vehicle Traffic	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
AM	6	73	0	2	3	43	1	23	2	5
PM	107	30	4	0	66	27	33	3	4	1

Table 5.3: Development Trip Numbers

Traffic Impact

5.10 Table 5.4 compares the traffic flows associated with the existing activity and the Proposed Development.

	Existing Site Traffic			Development Traffic			Net Change		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	22	3	25	2	5	7	-21	2	-19
PM	0	22	22	4	1	5	4	-21	-18

Table 5.4: Net Traffic Impact

5.11 The assessment shows that the level of traffic generated by the Proposed Development is minimal. When this is compared to existing activity on the Site, there will be a reduction in traffic flows.

5.12 The assessment shows that the Proposed Development will not result in a severe impact on highway capacity or unreasonable effects on road safety levels.

Parking Impact

5.13 The Proposed Development is car-free and will provide a disabled parking bay on Chadderton Street.

5.14 The parking assessment examines the suitability of the Proposed Development to meet the needs of residents who don't own a car and sets out the strategy for supporting the proposed

parking level. The assessment has been undertaken in the context of NPPF, MCC policy and best practice. The assessment considers prevailing city centre car ownership patterns, accessibility level, impact on local streets and resident characteristics.

Manchester Car Ownership Trends

5.15 The intensification of population and activity in cities is having the effect of lowering per capita car ownership in a manner already seen in London. As car use becomes less necessary for day-to-day journeys the convenience of owning and using a car has reduced for many city centre dwellers.

5.16 The Independent Transport Commission ('Traffic & Towns' 2015) has found that the rising costs of house purchase and rents means that discretionary income available for buying, storing and maintaining a car in the city centre has been squeezed, particularly when this is considered relative the amount of time the vehicle is used. Transport for London ('A Car Club Strategy for London' 2015) show that vehicles owned by city centre residents are only used on average for 4.6 hours per week. Meaning that the vehicle is parked for 97% of the time. This fact is making residents re-assess owning a car as, although affordable for these resident types, the perceived cost of owning and maintaining a car simply to use for occasional journeys is higher (e.g. a higher cost per use). This has had a discernible effect on city centre car ownership levels, particularly when examined against other types of areas.

5.17 This is supported by a recent study undertaken by the Commission on Travel Demand ('All Change' 2018), which states that changing demographics, shifting priorities, re-urbanisation and changes to when young people are learning to drive has had a very real impact on traffic patterns and miles travelled, particularly in metropolitan areas and city centres. The report states that previous travel trends and car ownership levels are not going to re-establish. It also states that previous transport planning based on growing car ownership is now of limited use, and that by planning differently new and more sustainable levels of travel demand can be created. This finding supports planning for people rather than cars, to ensure developments deliver places for people.

5.18 MCC's 'Our Manchester: The Manchester Strategy' states that Manchester is the best city to live without a car, outside London. The 2011 Census provides a picture of the ability of people to successfully live without a car and that appetite for this type of living. This is attributed to the compact nature of the city, favourable topography, increases in city centre living, and good quality infrastructure.

5.19 The Census showed that in 2011 59% of residents were living in the city centre without a car. A University of Salford PhD thesis undertaken in 2013, further supports this car ownership pattern. The thesis shows that although 90% of city centre residents hold a driving license, only 48% own a car and highlights again that a high proportion of residents choose to live without a car.

5.20 TfGM has provided information it gathers during the annual 'Greater Manchester Travel Diary Surveys' (TRADS 2017) for the city centre. This shows that 71% of city centre households do not own a car. It also shows that none of the residents surveyed use a car to travel to work, even when there is a car available for use.

5.21 A comparison of the Manchester data sources shows that car ownership levels are reducing and supports TfGM's own conclusions set out in the 'Greater Manchester Transport Strategy 2040' that there are changing attitudes to owning a car, largely brought about by increased urban densification and city centre living attitudes.

5.22 CIHT's recent guidance ('Better Planning, Better Transport, Better Places' 2019) supports a move from traditional predict and provide design to delivering places that are planned for people rather than vehicles. TfGM's Transport Strategy supports this and TfGM is currently being hailed as a trailblazer in rethinking transport policy and planning for reduced car use.

5.23 MCC has committed becoming a zero carbon city by 2038. Restraining parking on the Site will not only meet the accommodation needs of the increasing number of car-free residents but will also assist MCC in reaching this goal. This is because while there are a rising number of greener motoring alternatives, even these types of personal vehicles are not as beneficial to the environment of not owning a car.

Accessibility Level

5.24 The Site is in Manchester city centre. Existing walking and cycling infrastructure in the area is good, with crossings providing links to key destinations. Initial analysis shows that access can be easily gained to key services and amenities on foot or by cycle, within accepted walk/cycle distances.

5.25 The Site is served by over 1,400 buses per day on Oldham Road and over 2,500 buses per day on Rochdale Road. Access can be gained to tram services at Shudehill Interchange within a seven-minute walk of the Site and train services at Victoria station within a 10-minute walk. A Greater Manchester Accessibility Level calculation has been undertaken, which shows that the Site has a GMAL of 8. This is the highest level of accessibility in Greater Manchester.

5.26 The Proposed Development is underpinned by a number of measures that will assist residents to live with needing to own or use a car, including a Travel Plan, resident travel packs, funding for a new car club bay in the New Cross area and a high level of on-site cycle parking. Amenities are provided on Site reduce the need to travel off-site.

5.27 The accessibility of the Site is such that it is not necessary to own a car to successfully meet daily travel requirements.

Resident Characteristics

5.28 Local policy states that Manchester city centre is the best place to live without a car outside London and that a high proportion of residents already live in the city without a car. The parking strategy for the Proposed Development acknowledges this pattern of car ownership behaviour.

5.29 Unlike other land uses (such as retail, education and employment developments), the future residents have a choice of renting an apartment within the development in the knowledge of the parking strategy. If the potential resident owns a car and wants to live in a building where this can be accommodated on Site, the resident will choose a different place to live.

On-street Parking Impact

5.30 The local area is subject to on-street parking controls in the form of double yellow lines, single yellow lines and time restricted parking bays. The parking restrictions are in force between 8am and 6pm (Monday to Friday) and between 8am and 12.30pm on a Saturday. The marked bays are restricted to two hours parking with no return within one hour during the control period.

5.31 The parking restrictions, particularly the two-hour stay restriction, will assist in supporting the parking strategy for the Proposed Development, by limiting the practicability of storing a car on-street. The parking controls will limit overspill parking from the Proposed Development and will ensure that the proposal doesn't have an impact on road safety, parking capacity or amenity levels.

City Centre Precedents

5.32 Research shows that people choose homes that meet their specific characteristics and requirements, this includes finding accommodation with parking spaces if they own a car. This research also shows that residential developments that provide parking attract people with cars and residential developments without parking attract people that have different mobility priorities.

5.33 A successful city centre needs to be able to provide housing that meets both car owning and non-car owning resident needs. There are many city centre developments that cater for car owning households and although there are not currently any operational developments that cater specifically for the car-free market, this doesn't and shouldn't preclude these types of facilities coming forward. The provision of car-free and car-owning residential developments has worked successfully in London, including in areas with similar transport characteristics as the Site. This mix is readily supported by London Authorities without a requirement to source off-site parking.

5.34 There is a flurry of residential development in the city centre, most of which provides parking. However, precedents also exist in the city centre for residential developments that don't provide parking to cater for people who do not own a car.

Application	Status	Location	Units	Parking	Developer
117595/FO/2017	Consented	Talbot Mill	208	0%	Capital&Centric
116302/JO/2017	Consented	Edinburgh Castle	23	0%	First Step
111276/FO/2016	Consented	Port Street	135	0%	Mulbury
113363/FO/2016	Consented	Crusader Works	201	0%	Capital&Centric
118831/FO/2018	Consented	Boddingtons Phase 1	556	0%	Prosperity Capital

Table 5.5: Car-Free Precedents

5.35 All of the above consented developments have a similar, or worse, accessibility level as the proposal and on-street parking controls are in place at the majority to reinforce the car-free status of the Site. All of the consented developments include the provision of on-street disabled parking bays to serve the sites.

5.36 The consented car-free schemes provide a robust precedent for this type of development being appropriate in the city centre.

Resident Parking Strategy

5.37 The Proposed Development provides no parking spaces on Site. The applicant will deliver a disabled bay on Chadderton Street and fund the cost of the TRO required to introduce a car club bay in the New Cross area. The Travel Plan will also promote the use of the new car club vehicle in the area to meet casual car use needs.

5.38 In line with the research set out previously, the car-free nature of the Site will meet a specific need and pattern of declining private vehicle use and ownership in the City Centre. It will also assist MCC to reach its commitment of becoming a zero carbon city by 2038.

5.39 In the unlikely event that a resident owns a car, There are over 3,000 off-street, public parking spaces within a 10-minute walk of the Site. Season tickets are available at all of these car parks. In the unlikely event that a resident has a car, the resident will be able to purchase a season ticket. In the spirit of the Site's Travel Plan, the resident will be responsible for organising and purchasing parking season tickets.

Visitor Parking Strategy

5.40 Given the location of the Site, it is expected that most visitors will access on foot, by cycle or public transport.

5.41 Should a visitor arrive by car then they can use the short-stay parking bays located in the area or park in one of the public car parks near to the Site.

Existing Site Parking Activity

5.42 The Proposed Development is currently occupied by commercial uses and surface car parking. The surface parking is cheap with daily rates between £4.50. Parking in permanent parking areas serving this area of the Regional Centre is more appropriately priced at £14.00 for 3 to 4 hours and £25.00 for 4 to 24 hours. Nearly 3,000 parking spaces are provided nearby in permanent car parks.

5.43 The cheapness of the parking directly relates to the popularity of these types of car parks and fails to encourage drivers to use other modes to access the city centre. The over-use of the car that is encouraged by presence of cheap parking on the edge of the city centre has an impact on congestion, air quality and road safety levels. The availability of such parking is in direct contravention of the sustainable transport strategies set out by TfGM (pages 17 and 35 '2040 Greater Manchester Transport Strategy'), which seeks to constrain long-stay parking in central areas to support better travel choices and encourage greater network efficiency.

5.44 The removal of the cheap car parking will mean that commuters have to reconsider their parking location for the city centre. Given the price differential it is very likely that travel by car will become

unattractive once the real cost of parking is considered against the cost of using other modes. The removal of the temporary parking will result in a positive benefit to the wider area, which supports the policies set out by TfGM. It will also support MCC's aspiration to become a zero carbon city by 2038.

Cumulative Assessment

5.45 Three separate planning applications for the separate plots within the New Cross area (Goulden Street, Bendix Street and Oldham Road). The applications are being submitted separately but will run concurrently and the plots are all being progressed by Mulbury Homes. It is expected that all three will also be developed concurrently. Separate TS reports have been prepared for each plot.

5.46 Although this TS assesses the Bendix Street plot in isolation, it also includes a cumulative assessment of the impact of all three plots as these are being developed concurrently. The cumulative assessment considers the change in traffic that will occur when all three plots come forward, compared to the traffic generations associated with existing activity on each plot.

5.47 Table 5.6 shows the existing traffic flows associated with each plot.

	Goulden Street			Bendix Street			Oldham Road			Total Existing Traffic		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	0	0	0	22	3	25	16	2	19	39	5	44
PM	0	0	0	0	22	22	0	16	16	1	38	39

Table 5.6: Existing Site Traffic Flows

5.48 Table 5.7 shows the development traffic flows associated with each plot.

	Goulden Street			Bendix Street			Oldham Road			Total Development Traffic		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	1	2	3	2	5	6	2	4	6	4	11	15
PM	2	0	2	4	1	5	3	1	4	9	2	11

Table 5.7: Development Traffic Flows

5.49 Table 5.7 shows that cumulatively the residual traffic will not be significant and will not have a severe impact on highway operation or unacceptable effect on road safety. When the development traffic is considered in the context of existing cumulative traffic flows it will result in a reduction in traffic.

6 Policy Compliance

National Policy

6.1 The National Planning Policy Framework (NPPF) was originally published in 2012 and was revised in 2019. At the heart of NPPF is the presumption in favour of sustainable development that supports economic growth and vibrant communities. NPPF supports development that balances economic, social and environmental gains, while considering local circumstances and opportunities. NPPF supports development that balances economic, social and environmental gains, while considering local circumstances and opportunities. NPPF states that transport issues should be considered at an early stage so that potential impacts can be addressed and opportunities for public transport, walking and cycling are identified.

6.2 NPPF requires all developments that generate significant amounts of movement to be supported by a Transport Statement or Transport Assessment, and states at paragraph 108 that decisions should take account of whether:

a) "appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
b) safe and suitable access to the site can be achieved for all users; and
c) 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."

6.3 Paragraph 109 of 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"

6.4 The TS shows that the traffic impact of the Proposed Development both in isolation and cumulatively is not significant.

6.5 The proposal accords with NPPF and provides safe and suitable access to the development. The development includes measures that are commensurate with the scale, impact and nature of the proposal to facilitate and maximise access by sustainable modes and minimise the traffic impact of the proposal.

6.6 When considering appropriate levels of parking at a development, NPPF states at paragraph 105 that consideration should be given to the following criteria:

a) "the accessibility of the development;
b) the type, mix and use of development;
c) the availability of and opportunities for public transport trips;
d) local car ownership levels; and
e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles."

6.7 While NPPF states that parking can be constrained at developments where it will assist in managing the local road network or to optimise development density. A reduction in parking at the Proposed Development is appropriate for both of these reasons.

Local Policy

6.8 In 2017, the 'Local Transport Plan' (LTP3) was replaced by a future transport strategy for the Region produced by Transport for Greater Manchester (TfGM). The Strategy is outlined in two documents, the 'Greater Manchester Transport Strategy 2040' and the 'Delivery Plan 1: 2016/17-2021/22'.

6.9 The Strategy outlines the vision for transport and connectivity up to 2040 to support sustainable and economic growth across the Region. This includes improvements to walking, cycling and public transport environments, reductions in congestion effects, and support for planning for people rather than vehicles in the right locations.

6.10 In 2019 MCC published the draft 'Manchester Zero Carbon Framework 2020-2038'. This Framework seeks to support the city becoming a zero carbon city by 2038. MCC seeks to replace existing vehicles with zero emission alternatives and to ensure that walking, cycling and zero emission public transport become the mode of choice for the vast majority of residents, workers and visitors to the city. This will mean that new developments will need to be well connected to walking and cycling routes and provide access to public transport. While electric vehicle charging points are an important tool in the sustainable transport kit, they are not appropriate at a site that is car-free. This is because non-car modes are always environmentally better than even the greenest of personal cars.

6.11 MCC's Core Strategy sets out transport policy against which developments are considered. Policy SP1 (Spatial Principles) sets out a requirement for future development where the potential for access by walking, cycling and public transport can be maximised, emissions can be minimised, and the need to travel to can be reduced. This is supported by Policy T1 and T2.

6.12 Policy T1 (Sustainable Transport) seeks to encourage modal shift from car travel by supporting developments that are in accessible locations, enable active and equitable travel, reduce congestion, and can assist in meeting air quality policy objectives.

6.13 Policy T2 (Accessible Areas and Opportunities) supports development that is located to ensure good accessibility to the regional centre, the airport and national/international connections. The policy also requires developments to be accessible by walking, cycling and public transport.

6.14 The TA shows that the Site benefits from a very high level of accessibility by all modes and a very high GMAL score of 8. Measures are included as part of the development to support non-car living.

6.15 Policy T2 also outlines a requirement for developments to provide the appropriate level of parking that meets the realistic requirements of the users of the development. MCC's parking standards are outlined in appendix b of the Core Strategy. Paragraph 11.17 of this document states that:

6.16 Further guidance is provided in Transport for Greater Manchester's 'Transport for Sustainable Communities: A Guide for Developers' (2014). The TfGM policy document supports developments that:

- Maximise accessibility
- Reduce the need to travel by car
- Make the best use of existing infrastructure
- Encourage active travel

6.17 TfGM's guidance also states that developments should be in:

"…areas with good public transport links and most accessible locations… good pedestrian and cycle links to key local facilities… to provide low carbon access for short local journeys"

6.18 TfGM guidance also supports the introduction of restricted parking at new developments and identifies this as the most important method of influencing future travel behaviour.

6.19 The Proposed Development accords with relevant local and national policy requirements.

7 Conclusions

7.1 SK has been appointed to prepare a Transport Statement in support of a planning application for a residential development in the New Cross area of Manchester City Centre.

7.2 The Site is a gateway plot to the New Cross Neighbourhood Development Framework area and is currently occupied by a commercial unit and commuter car park.

7.3 The Proposed Development seeks to deliver a block with 161 apartments, commercial space and residential amenity space. The Proposed Development provides 103% resident cycle parking and five stands externally for use by visitors. The Proposed Development also includes a landscape strategy that includes pedestrian enhancements and improved surfacing on the Site's frontage.

7.4 The Transport Statement has been undertaken in line with local and national guidance, and the scope of the assessment has been agreed with Manchester City Council. The assessment considers the impact of the Proposed Development in the context of both existing transport infrastructure and the future situation as outlined in the New Cross Public Realm Strategy report.

7.5 The Transport Statement shows that the Proposed Development has an exceptional level of accessibility and is well located to encourage trips by non-car modes to both city centre and

regional destinations. The Site benefits from a very high level of accessibility by public transport with a GMAL level of 8, the highest in Greater Manchester.

7.6 A transport strategy has been developed for the Site that includes appropriate access solutions and facilities for pedestrians, cyclists and service vehicles, and measures to promote movements generated from the Proposed Development by non-car modes. These measures include the promotion of car club facilities to allow residents to meet occasional vehicle needs. The transport strategy also includes the promotion of local public car parks should a resident own a car.

7.7 One disabled parking bay will be delivered as part of the TRO scheme for Bendix Street. This level of provision has been agreed as appropriate with Manchester City Council. Blue Badge holders will also be able to parking for free and without duration restriction in any of the street parking bays surrounding the Site.

7.8 A new loading bay on Bendix Street will serve the development. As part of this proposal, existing parking bays are relocated to bring them into line with the guidance set out in the New Cross Public Realm Strategy. The applicant is also funding the TRO cost of introducing a new car club bay on Marshall Street to serve the Proposed Development and wider area.

7.9 The Transport Statement examines the changes in traffic flows that will result from the Proposed Development and the impact these vehicles will have on the local highway network and road safety levels. The assessment shows that the Proposed Development will not result in a significant impact on existing or future transport networks, when assessed using standard appraisal methods.

7.10 Three separate planning applications for three separate plots within the New Cross area. The applications are being submitted separately but will run concurrently and the plots are all being progressed by Mulbury Homes. It is expected that all three will be developed concurrently. This report relates to Bendix Street and separate reports in relation to Goulden Street and Oldham Road are to be submitted separately in support of the relevant planning application.

7.11 Although this report assesses the Bendix Street plot in isolation, it also includes a cumulative assessment of the impacts of all three plots as these are being developed concurrently. The cumulative assessment shows that delivering all three plots will not result in a substantial impact when tested against the requirements of NPPF.

7.12 It is concluded that the Proposed Development meets the requirements of local and national policy, and that the residual traffic, road safety and parking impact of the Proposed Development will not be significant when tested against NPPF. It is also demonstrated that the Proposed Development can be delivered in isolation of the New Cross Public Realm Strategy and does not compromise Manchester City Council's future aspirations for the area. It is also shown that the delivery of a car-free residential development in this location will meet current car ownership trends in the City Centre and assist the Council to meet its carbon target commitments.

Appendix A

TIM GROOM ARCHITECTS

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Dimensioning
Figured dimensions only to be taken from these designs and drawings. Work to annotated dimensions only. All dimensions to be checked on site. Architects to be informed immediately of any discrepancies before work proceeds. Drawings are to be read in conjunction with relevant specifications, structural engineers and service engineers' drawings. All data, dimensions and designs contained in this document are confidential to the copyright owner and may not be communicated to any third party save in accordance with a licence for the copyright owner or with the copyright owner's written permission and authority.

Rev	Description	Date
PA	PLANNING	09.12.19

0 1m 2 3 4 5 6 7 8 9 10m
SCALE BAR 1:100

Client
Mulbury City

Project
Bendix Street

Title
Ground Floor

Status
Planning

Project number
0324

Date
Dec 2019

Drawn by
AT

Checked by
GB

Scale
1 : 100@A1

Revision
PA

Drawing No.
0324-TGA-XX-00-DR-A-0300

09/12/2019 15:03:26

Appendix B

Calculation Reference: AUDIT-443201-160831-0839

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT

VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	HF	HERTFORDSHIRE	1 days
03	**SOUTH WEST**		
	BR	BRISTOL CITY	1 days
05	**EAST MIDLANDS**		
	DS	DERBYSHIRE	1 days
06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	2 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	WY	WEST YORKSHIRE	1 days
08	**NORTH WEST**		
	LC	LANCASHIRE	1 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days

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

Filtering Stage 2 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:	Gross floor area
Actual Range:	300 to 13350 (units: sqm)
Range Selected by User:	300 to 43325 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 19/10/15

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	1 days
Wednesday	1 days
Thursday	4 days

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

Selected survey types:

Manual count	8 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	1
Suburban Area (PPS6 Out of Centre)	7

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:

Industrial Zone	7
Commercial Zone	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.

Filtering Stage 3 selection:

Use Class:

B1	4 days
B2	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

10,001 to 15,000	1 days
15,001 to 20,000	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:

75,001 to 100,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	4 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	4 days
1.1 to 1.5	3 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:

No	8 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.

LIST OF SITES relevant to selection parameters

1 BR-02-C-01 MECH. ENGINEERS BRISTOL CITY
NOVERS HILL
BEDMINSTER
BRISTOL
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 1100 sqm
Survey date: MONDAY 19/10/09 Survey Type: MANUAL

2 DS-02-C-02 ENGINEERED PRODUCTS DERBYSHIRE
PONTEFRACT STREET

DERBY
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 2600 sqm
Survey date: THURSDAY 25/06/15 Survey Type: MANUAL

3 HF-02-C-01 INDUSTRIAL UNIT HERTFORDSHIRE
BRIDGE ROAD EAST

WELWYN GARDEN CITY
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 1800 sqm
Survey date: THURSDAY 17/07/08 Survey Type: MANUAL

4 LC-02-C-02 RECYCLING CO. LANCASHIRE
ESSEX STREET
RED SCAR IND ESTATE
PRESTON
Edge of Town Centre
Industrial Zone
Total Gross floor area: 8000 sqm
Survey date: THURSDAY 10/05/12 Survey Type: MANUAL

5 TW-02-C-01 INDUSTRIAL UNIT TYNE & WEAR
SHAFTESBURY AVENUE
TYNE POINT IND. ESTATE
JARROW
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 950 sqm
Survey date: THURSDAY 15/11/12 Survey Type: MANUAL

6 WM-02-C-01 METAL BEARINGS WEST MIDLANDS
FORGE LANE
MINWORTH
SUTTON COLDFIELD
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 4200 sqm
Survey date: TUESDAY 25/11/08 Survey Type: MANUAL

7 WM-02-C-02 ARDONPRINT WEST MIDLANDS
SYDNEY ROAD
SMALL HEATH
BIRMINGHAM
Suburban Area (PPS6 Out of Centre)
Commercial Zone
Total Gross floor area: 300 sqm
Survey date: WEDNESDAY 17/06/09 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8 WY-02-C-02 FLUID SYSTEMS WEST YORKSHIRE
BROWN LANE WEST
HOLBECK
LEEDS
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 13350 sqm
Survey date: MONDAY 19/10/15 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 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	13350	0.210	1	13350	0.000	1	13350	0.210
06:30 - 07:00	**1**	**13350**	**0.247**	1	13350	0.000	1	13350	0.247
07:00 - 07:30	8	4038	0.111	8	4038	0.019	8	4038	0.130
07:30 - 08:00	8	4038	0.214	8	4038	0.003	8	4038	0.217
08:00 - 08:30	8	4038	0.226	8	4038	0.028	8	4038	0.254
08:30 - 09:00	8	4038	0.176	8	4038	0.050	8	4038	0.226
09:00 - 09:30	8	4038	0.099	8	4038	0.053	8	4038	0.152
09:30 - 10:00	8	4038	0.087	8	4038	0.074	8	4038	0.161
10:00 - 10:30	8	4038	0.065	8	4038	0.040	8	4038	0.105
10:30 - 11:00	8	4038	0.056	8	4038	0.050	8	4038	0.106
11:00 - 11:30	8	4038	0.059	8	4038	0.037	8	4038	0.096
11:30 - 12:00	8	4038	0.037	8	4038	0.050	8	4038	0.087
12:00 - 12:30	8	4038	0.040	8	4038	0.053	8	4038	0.093
12:30 - 13:00	8	4038	0.065	8	4038	0.096	8	4038	0.161
13:00 - 13:30	8	4038	0.093	8	4038	0.074	8	4038	0.167
13:30 - 14:00	8	4038	0.087	8	4038	0.046	8	4038	0.133
14:00 - 14:30	8	4038	0.074	8	4038	0.059	8	4038	0.133
14:30 - 15:00	8	4038	0.077	8	4038	0.077	8	4038	0.154
15:00 - 15:30	8	4038	0.050	8	4038	0.149	8	4038	0.199
15:30 - 16:00	8	4038	0.093	8	4038	0.130	8	4038	0.223
16:00 - 16:30	8	4038	0.043	**8**	**4038**	**0.272**	**8**	**4038**	**0.315**
16:30 - 17:00	8	4038	0.050	8	4038	0.195	8	4038	0.245
17:00 - 17:30	8	4038	0.031	8	4038	0.214	8	4038	0.245
17:30 - 18:00	8	4038	0.025	8	4038	0.149	8	4038	0.174
18:00 - 18:30	8	4038	0.000	8	4038	0.046	8	4038	0.046
18:30 - 19:00	8	4038	0.000	8	4038	0.025	8	4038	0.025
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.315			1.989			4.304

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.*

Parameter summary

Trip rate parameter range selected:	300 - 13350 (units: sqm)
Survey date date range:	01/01/08 - 19/10/15
Number of weekdays (Monday-Friday):	8
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 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	13350	0.000	1	13350	0.000	1	13350	0.000
06:30 - 07:00	1	13350	0.000	1	13350	0.000	1	13350	0.000
07:00 - 07:30	8	4038	0.009	8	4038	0.003	8	4038	0.012
07:30 - 08:00	8	4038	0.003	8	4038	0.000	8	4038	0.003
08:00 - 08:30	**8**	**4038**	**0.012**	8	4038	0.006	8	4038	0.018
08:30 - 09:00	8	4038	0.009	**8**	**4038**	**0.012**	**8**	**4038**	**0.021**
09:00 - 09:30	8	4038	0.006	8	4038	0.009	8	4038	0.015
09:30 - 10:00	8	4038	0.003	8	4038	0.003	8	4038	0.006
10:00 - 10:30	8	4038	0.006	8	4038	0.009	8	4038	0.015
10:30 - 11:00	8	4038	0.006	8	4038	0.006	8	4038	0.012
11:00 - 11:30	8	4038	0.006	8	4038	0.006	8	4038	0.012
11:30 - 12:00	8	4038	0.009	8	4038	0.006	8	4038	0.015
12:00 - 12:30	8	4038	0.003	8	4038	0.006	8	4038	0.009
12:30 - 13:00	8	4038	0.009	8	4038	0.006	8	4038	0.015
13:00 - 13:30	8	4038	0.003	8	4038	0.006	8	4038	0.009
13:30 - 14:00	8	4038	0.009	8	4038	0.003	8	4038	0.012
14:00 - 14:30	8	4038	0.006	8	4038	0.003	8	4038	0.009
14:30 - 15:00	8	4038	0.006	8	4038	0.009	8	4038	0.015
15:00 - 15:30	8	4038	0.009	8	4038	0.012	8	4038	0.021
15:30 - 16:00	8	4038	0.006	8	4038	0.000	8	4038	0.006
16:00 - 16:30	8	4038	0.003	8	4038	0.009	8	4038	0.012
16:30 - 17:00	8	4038	0.006	8	4038	0.000	8	4038	0.006
17:00 - 17:30	8	4038	0.000	8	4038	0.006	8	4038	0.006
17:30 - 18:00	8	4038	0.000	8	4038	0.000	8	4038	0.000
18:00 - 18:30	8	4038	0.000	8	4038	0.000	8	4038	0.000
18:30 - 19:00	8	4038	0.000	8	4038	0.000	8	4038	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.129			0.120			0.249

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.

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Parameter summary

Trip rate parameter range selected:	300 - 13350 (units: sqm)
Survey date date range:	01/01/08 - 19/10/15
Number of weekdays (Monday-Friday):	8
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.

Calculation Reference: AUDIT-443201-160831-0824

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED

VEHICLES

Selected regions and areas:

08 NORTH WEST
GM GREATER MANCHESTER 2 days

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

Filtering Stage 2 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: Number of dwellings
Actual Range: 20 to 154 (units:)
Range Selected by User: 6 to 215 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 26/05/15

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:

Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	2 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

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:

Built-Up Zone	2

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.

Filtering Stage 3 selection:

Use Class:

C3	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

25,001 to 50,000	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	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	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:

No	2 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.

LIST OF SITES relevant to selection parameters

1 GM-03-C-02 BLOCK OF FLATS GREATER MANCHESTER
WHITWORTH STREET W.

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 154
Survey date: THURSDAY 13/10/11 Survey Type: MANUAL

2 GM-03-C-03 BLOCK OF FLATS GREATER MANCHESTER
FAIRFIELD STREET

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 20
Survey date: FRIDAY 14/10/11 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
CB-03-C-01	over 100% parking
HI-03-C-01	over 100% parking

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

VEHICLES

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	2	87	0.000	2	87	0.011	2	87	0.011
08:00 - 09:00	2	87	0.011	**2**	**87**	**0.029**	**2**	**87**	**0.040**
09:00 - 10:00	2	87	0.006	2	87	0.017	2	87	0.023
10:00 - 11:00	2	87	0.017	2	87	0.017	2	87	0.034
11:00 - 12:00	2	87	0.017	2	87	0.006	2	87	0.023
12:00 - 13:00	2	87	0.011	2	87	0.017	2	87	0.028
13:00 - 14:00	2	87	0.017	2	87	0.023	2	87	0.040
14:00 - 15:00	2	87	0.011	2	87	0.011	2	87	0.022
15:00 - 16:00	2	87	0.011	2	87	0.011	2	87	0.022
16:00 - 17:00	2	87	0.011	2	87	0.006	2	87	0.017
17:00 - 18:00	**2**	**87**	**0.023**	2	87	0.000	2	87	0.023
18:00 - 19:00	2	87	0.011	2	87	0.006	2	87	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.146			0.154			0.300

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.

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Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/08 - 26/05/15
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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

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	2	87	0.000	2	87	0.000	2	87	0.000
08:00 - 09:00	2	87	0.000	2	87	0.000	2	87	0.000
09:00 - 10:00	2	87	0.000	2	87	0.000	2	87	0.000
10:00 - 11:00	2	87	0.000	2	87	0.000	2	87	0.000
11:00 - 12:00	2	87	0.000	2	87	0.000	2	87	0.000
12:00 - 13:00	2	87	0.000	2	87	0.000	2	87	0.000
13:00 - 14:00	2	87	0.000	2	87	0.000	2	87	0.000
14:00 - 15:00	2	87	0.000	2	87	0.000	2	87	0.000
15:00 - 16:00	2	87	0.000	2	87	0.000	2	87	0.000
16:00 - 17:00	2	87	0.000	2	87	0.000	2	87	0.000
17:00 - 18:00	2	87	0.000	2	87	0.000	2	87	0.000
18:00 - 19:00	2	87	0.000	2	87	0.000	2	87	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			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.

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Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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Appendix C

Bendix Street, New Cross

Framework Travel Plan

191210/SK21855/FTP01(-03)

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Contents

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Project	Document	Rev	Notes	Authorised by	Signed	Date
SK21855	FTP01	00	Draft	L Speers	LGS	29/08/18
SK21855	FTP01	01	-	L Speers	LGS	29/02/19
SK21855	FTP01	02	-	L Speers	LGS	22/11/19
SK21855	FTP01	03	-	L Speers	LGS	10/12/19

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1 Introduction

Background

1.1 SK has been appointed by Mulbury Homes (Central) Limited to prepare a Framework Travel Plan a residential development in the New Cross area of Manchester City Centre.

1.2 The Site sits in the New Cross Neighbourhood Development Framework (NDF). The New Cross NDF sets out guidance for future development in the area and is supported by the New Cross Public Realm Strategy published in 2017, that sets out the future movement and public realm strategy to serve the area. The NDF designates the site as being within 'Zone A'.

1.3 The Site is a gateway plot to the New Cross NDF area and is currently occupied by a commercial unit and commuter car park.

1.4 A Transport Statement (TS) has been prepared to establish the impacts of the Proposed Development. This document should be referred to for full details of the existing characteristics of the transport network serving the Site, the Proposed Development layout and also the forecast impact.

Proposed Development Summary

1.5 The Proposed Development will construct 161 apartments, 147sqm of commercial floor space and 257sqm of amenity space. The ground floor layout for the Proposed Development is shown in Appendix A of the TS.

1.6 The Proposed Development is in an accessible location within Manchester City Centre. As shown in the TfGM city centre survey data provided in Section 5 of the TS, the majority of residents will work in key destinations in the Regional Centre. Leisure and retail trips will also be concentrated on the City Centre. This means that sustainable modes will form the dominate movement patterns.

1.7 The main entrance to the building will be provided from Bendix Street. The landscape strategy for the Proposed Development will create footway enhancements and improved surfacing on routes abounding the Site, including the provision of dropped kerbs and tactile paving. The landscape strategy has been developed to fit with the requirements of the New Cross Public Realm Strategy. The landscape strategy has been developed to allow the Proposed Development to be brought forward in isolation of the rest of the New Cross NDF, and also to fit with MCC's wider aspirations.

1.8 Secure cycle storage areas are proposed within the building for use by future residents. The storage areas will provide capacity for 166 cycles for residents (103%) and five Sheffield stands (10 spaces) for visitors in external areas.

1.9 The applicant will also fund the Traffic Regulation Order (TRO) required to deliver a single car club bay to serve the Proposed Development, and the applicant's other Proposed Developments in New Cross. Following discussion with MCC, this car club bay is likely to be located centrally on Marshall Street to provide benefit for the whole area.

1.10 As agreed with MCC, the Proposed Development includes no on-site parking. A disabled parking space is provided adjacent to the main entrance on Bendix Street. The disabled parking bay proposal is attached as Appendix E of the TS. In line with the Council's policy, Blue Badge holders will also be able to park for free and without limit on duration restriction in any of the other street parking bays surrounding the Site.

1.11 To fit with the New Cross Public Realm Strategy the existing parking bays located on the southern side of Bendix Street are relocated to the northern side of the carriageway.

1.12 Reduced levels of parking at city centre residential developments is supported by NPPF and other local policies throughout the UK. Locally both TfGM and MCC support parking restraint at developments where accessibility levels are high, distances to key services are low and the travel requirements of future users can be adequately met. The restraint on parking will support the increasing demand for residents in the City Centre who choose to live without a car and also support MCC's commitment to become a zero carbon city by 2038.

1.13 In the unlikely event that a resident requires to store a car they will be able to purchase a season ticket from one of the several public car parks located within a ten-minute walk of the Site (shown in Section 2 of the TS).

1.14 The existing parking controls in the area will restrict the practicability of a resident storing a car on-street and will deter overspill parking.

1.15 Access to the bin store is also located off the Bendix Street frontage. An on-street loading bay is proposed on Bendix Street for use by refuse vehicles and delivery vehicles (including removal vans). Further detail of this is set out in the TS.

Process

1.16 A Travel Plan is a tool for managing access to a site that aims to promote access by sustainable modes. It contains a package of measures designed to meet the objective to reduce car use generated from the site by supporting sustainable modes of transport and measures that will build on the location of a development site. In line with NPPF, the measures adopted should be commensurate with the scale of impact from the development and the level of intervention required to persuade users to adopt sustainable travel practices. In this instance, the Site is located in Manchester City Centre, with a good level of existing accessibility. This is reflected in the measures set out for adoption in the final Travel Plan.

1.17 Within a Travel Plan there is a need to set objectives, targets and indicators, the purpose of which is to monitor change and review policies to meet the needs of the users of the site. Future management and monitoring mechanisms are set out for adoption in the final Travel Plan.

1.18 The Travel Plan process is not a one-off, static event, but a constantly evolving strategy that should grow and adapt to meet the travel patterns and needs of the end users of the site. This interim version of the Travel Plan is the first stage of the process and outlines the aims and objectives and sets the level of intervention required to encourage and support sustainable living practices at the site.

1.19 The Framework Travel Plan draws on the following guidance and best practice, and sets out a commitment to the measures that will be adopted in the full Travel Plan on occupation of the Proposed Development.

- ‘National Planning Policy Framework’
- ‘Planning Practice Guidance’
- The Department for Environment, Transport & the Regions ‘Preparing your Organisation for Transport in the Future: The Benefits of Green Transport Plans’
- The Energy Efficiency Best Practice Programme ‘A Travel Plan Resource Pack for Employers’
- Department for Transport ‘Making Travel Plans Work’
- Department for Transport ‘Essential Guide to Travel Planning’
- Department for Transport ‘Effects of Smarter Choice Programme in Sustainable Travel Towns’
- Department for Transport ‘Smarter Choices – Changing the Way we Travel’
- Transport for Quality of Life ‘Tools for Travel Planning in Urban Areas’
- Highways Agency, TRAVELWISE et al ‘Soft Measures – Hard Facts’
- TfGM ‘Transport for sustainable communities: a guide for developers’
- TfGM ‘The Greater Manchester Transport Strategy 2040’
- TfGM Travel Plan toolkit website (accessed in September 2019)

Benefits

1.20 Travel Plans result in a variety of benefits to the occupiers of a development and the wider community, including:

- Promoting active and healthy lifestyles
- Reducing road safety and congestion issues
- Reducing carbon emissions and improving local air quality
- Ensuring that residents are fully aware of the travel options available to them
- Encouraging better travel behaviour

Aims & Objectives

1.21 The objective of the Framework Travel Plan is to support MCC's ambition for Manchester to be a carbon free city, with aims to support car-free living and sustainable mode take-up.

2 Audit

Location

2.1 Figure 2.1 shows that the Site is located to the north of the city centre in the New Cross area. New Cross sits between the two arterial routes; A62 Oldham Road and A664 Rochdale Road.

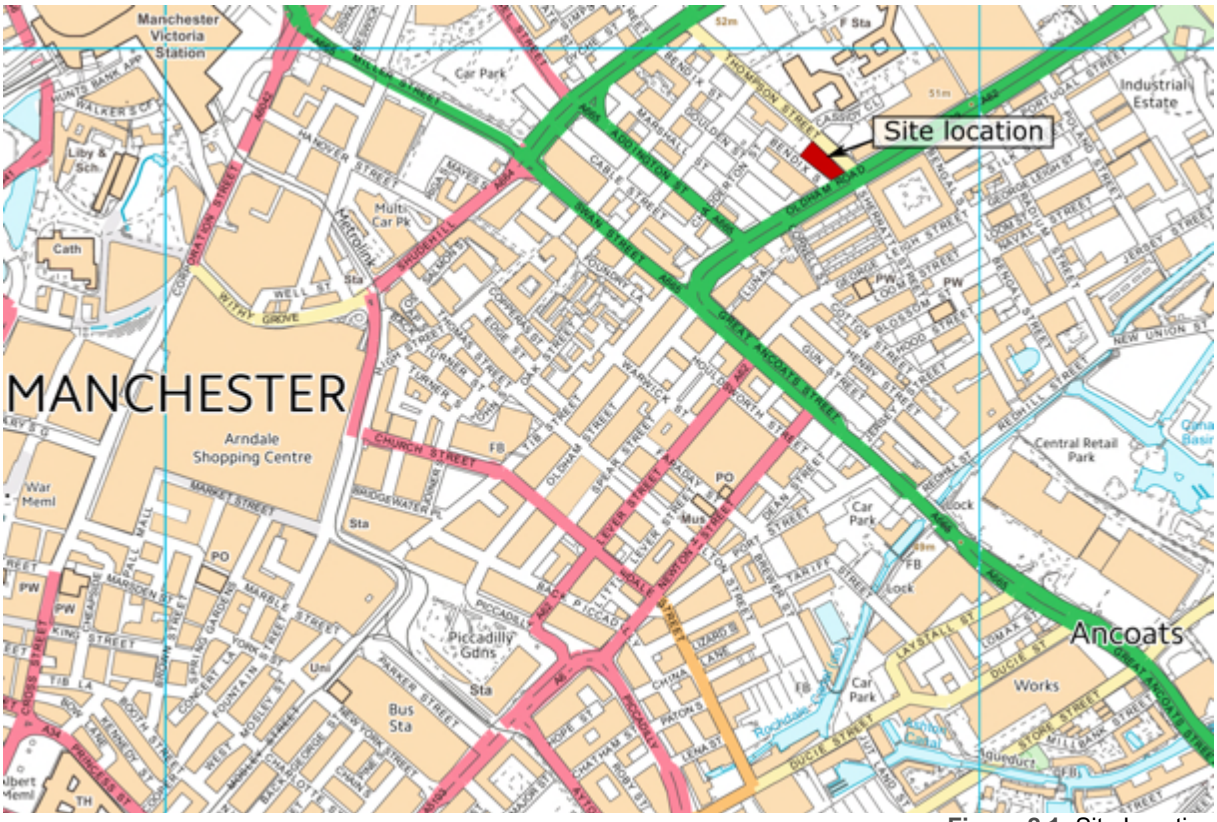


Figure 2.1: Site Location

2.2 The Site is bounded to the north by Marshall Street, to the east by Oldham Road, to the south by Addington Street, and to the west by Chadderton Street.

2.3 The Site is currently occupied by a commercial unit with a floor area of circa 845sqm and a car park with space for 30 vehicles.

Local Highway Network

2.4 Access to the existing car park is provided from a kerbed arrangement on Chadderton Street. Next to this is a smaller kerbed junction that provides access to a service strip to the rear of the commercial unit. This service strip is used as parking for the commercial unit.

2.5 Figure 2.2 shows the current highway network and circulation routes serving the New Cross area. This plan has been taken from MCC's New Cross Public Realm Strategy document (page 38).

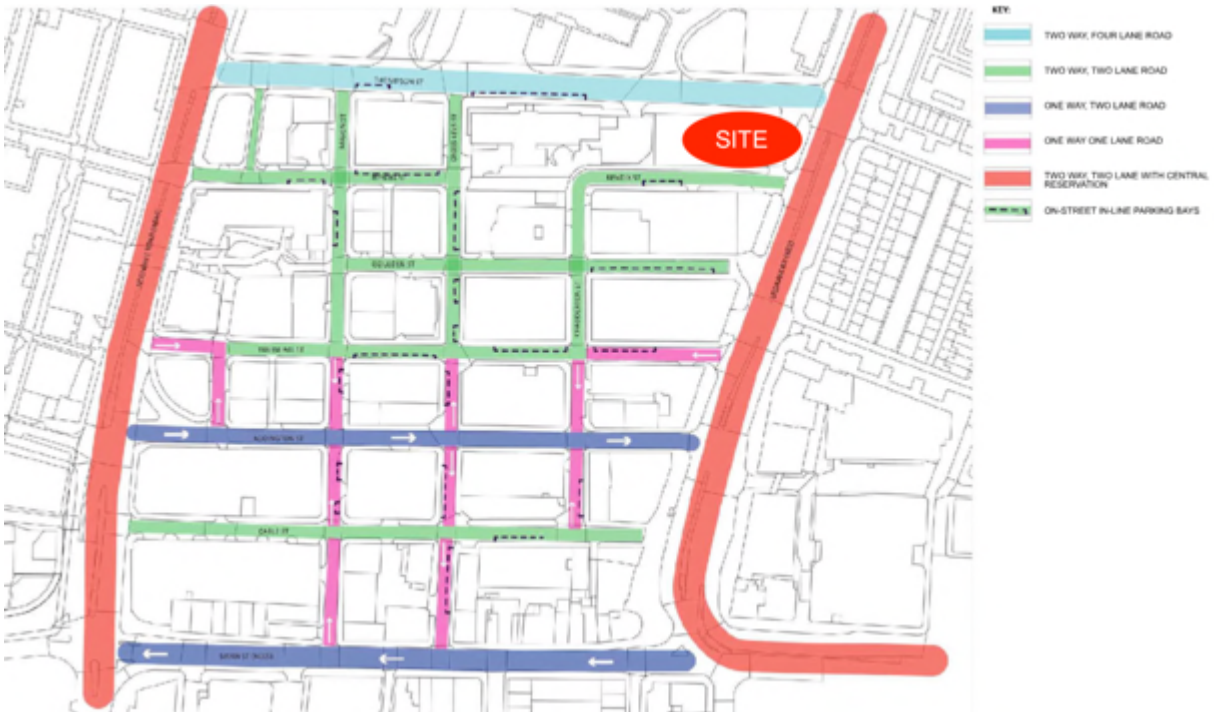


Figure 2.2: Existing Highway Network
[source: MCC 2017 Public Realm Strategy]

2.6 Chadderton Road on the western boundary of the Site is a one-way south route that connects to Addington Street at a priority junction. Addington Street forms part of the Inner Ring Road (IRR) and operates one-way east from Rochdale Road to Oldham Road. Addington Street meets Oldham Road and Rochdale Road at large signalised junction arrangements.

2.7 On the northern boundary of the Site, Marshall Street is a one-way west route from its junction with Oldham Road. A parking bay for seven vehicles is provided on the northern carriageway edge.

2.8 On-street parking is provided in the area, as shown in Figure 2.2. The parking is controlled by single yellow lines and parking bays. The parking controls restrict parking to designated bays between Monday and Friday (8am to 6pm) and Saturday (8am to 12.30pm). Parking is permitted for two hours only (no return in an hour) during the control period.

2.9 Table 2.1 shows the public car parks within a ten-minute walk of the Site.

Location	Operator	Walk Distance	Walk Time	Spaces	Season Tickets	EV Charging
		(m)	(mins)			
Ice Plant	NPG	260	4	79	✓	
Northern Quarter	NCP	350	4	700	✓	✓
Printworks	NCP	500	6	777	✓	
Arndale	NCP	600	8	1383	✓	
Flint Glass Works	NPG	600	8	125	✓	
Tariff Street	Citipark	700	9	232	✓	✓

Table 2.1: Public Car Parks

2.10 Table 2.1 shows that there are over 3,000 parking spaces within a ten-minute walk of the Site. All of these car parks offer season ticket arrangements for city centre residents.

Walking Network

2.11 The Proposed Development is well connected to key destinations by a comprehensive network of pedestrian routes, typical of its city centre location. Access to the city centre areas to the south of the Site can be gained either through the New Cross area or using the footway on Oldham Road. Existing crossing facilities are provided across the main highway, including at regular intervals on the Oldham Road corridor.

2.12 The landscape strategy for the Proposed Development will create footway enhancements and improved surfacing, including the provision of dropped kerbs and tactile paving. The landscape strategy has been developed to fit with the requirements of the New Cross Public Realm Strategy. The landscape strategy has been developed to allow the Proposed Development to be brought forward in isolation of the rest of the New Cross NDF, and also to fit with MCC's wider aspirations.

2.13 Two-thirds of all journeys in the UK are under-five miles and short distance trips offer the greatest opportunity for changes in travel behaviour. DfT best practice guidance states that walking has the potential to substitute for car trips under 2km, which equates to a 25-minute walk. As shown in Table 2.2, further guidance is provided in the Chartered Institute of Highways and Transportation (CHIT) document 'Providing for Journeys on Foot' on acceptable maximum distances to destinations to local service and town centre facilities.

Destination Type	Walk Distance (m)	Walk Time (mins)
Commuting/Education	2000	25
Local Centre/Local Retail	800	10
Other	1200	15

Table 2.2: IHT Walk Distances

2.14 Figure 2.3 shows 10, 15 and 25-minute walking isochrones from the Proposed Development, based on a walking speed of 4.8kph.

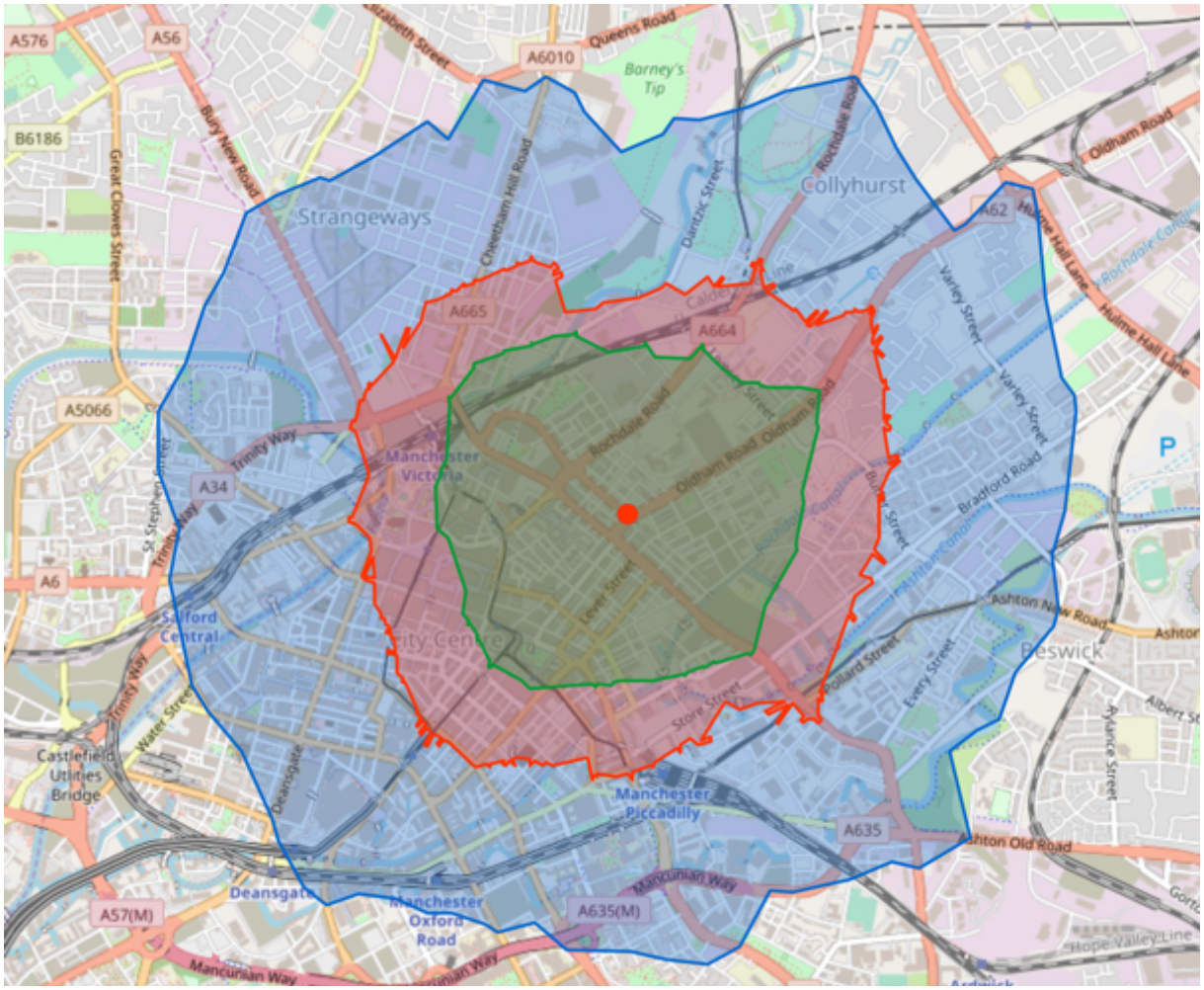


Figure 2.3: 10, 15 & 25 Minute Walking Isochrones

2.15 The walking isochrones shows that the Site is within a 10-minute walk of the NOMA area, Great Ancoats, the Northern Quarter, Victoria, Shudehill, Piccadilly Gardens and the Arndale. Within a 15-minute walk of the Site access can be gained to the King Street, Piccadilly station, China Town and Deansgate. The remainder of the city centre and central areas of Salford are within a 25-minute walk of the Site.

2.16 The existing and future proposed pedestrian infrastructure surrounding the Site provides a good basis for future trips by residents to key destinations. The close proximity of the Site to a key city centre destinations and local area amenities, means that journeys on foot will be the dominant mode of travel for most residents.

Cycling Network

2.17 Figure 2.4 shows the Proposed Development relates well to existing formal and informal cycle routes on the Greater Manchester Cycle Network. Marked cycle routes are provided along the Oldham Road corridor linking to a toucan crossing at the junction with Swan Street. The local streets through New Cross are lightly trafficked and provide a suitable environment for cycle trips. These routes will be enhanced by the New Cross NDF proposals, including changes to the speed limit to 20mph.

2.18 The existing routes serving the Proposed Development provide a good basis for future trips on cycle and provide good linkages to the entire network, including routes through the City Centre and beyond.

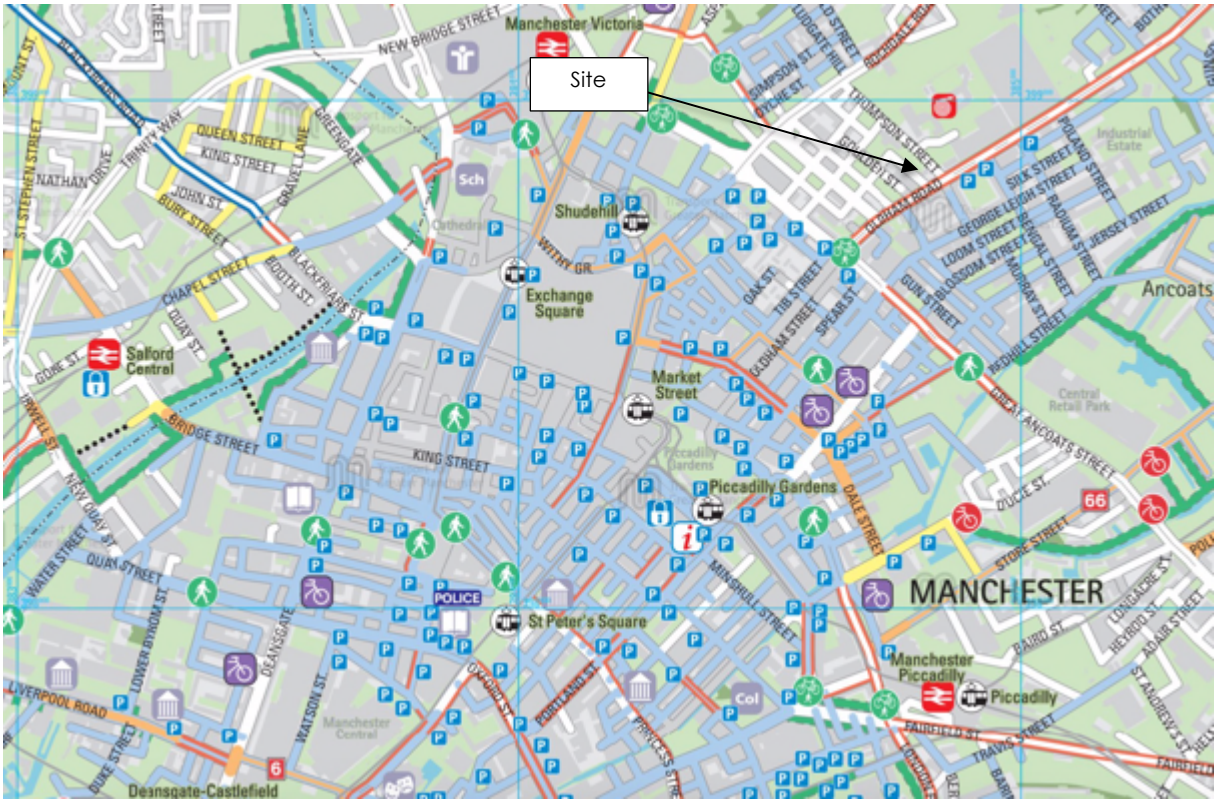


Figure 2.4: Greater Manchester Cycle Network
[source: TfGM 2019 Interactive Cycle Map]

2.19 Cycling England recommends 8km as a maximum cycling distance in the document 'Integrating Cycling into Development Proposals' and the CIHT document 'Planning for Cycling' states that cycling has the potential to substitute for car trips under five miles (8km). Figure 2.5 shows an 8km cycling catchment from the Site.

Figure 2.5: 5km Cycling Catchment

2.20 Figure 2.5 shows that all of the city centre can be accessed from the Site. Access can also be gained to major employment areas in Salford Quays, MediaCity:UK and Trafford Park.

2.21 TfGM offer free cycle training and maintenance sessions for adults for beginners and experienced cyclists, and provides safety tips and advice on the TfGM website. Details of regular cycle events, such the Summer Cycle Camp, Let's Ride Pop-Up and HSBC's Let's Ride Manchester are provided on the TfGM website. TfGM offer a cycle newsletter service is frequently updated with new route information and activities. This can be signed up for by using the TfGM website.

2.22 It is shown that opportunities exist for access by cycle from the Site to areas of the city and the Regional Centre using the existing Greater Manchester Cycle Network.

Public Transport Network

2.23 The nearest bus stops to the Proposed Development are located on Oldham Road and Thompson Street. The bus stops are less than three-minute walk from the Site. Further bus stops are accessible on Rochdale Road, a four-minute walk from the Site.

2.24 TfGM's interactive bus tool shows that the nearest bus stops are served by around 1,400 buses per day (Monday to Friday) and 2,500 buses per day (Monday to Friday) on Rochdale Road. These services provide comprehensive coverage of the City Centre and regional destinations, including: Rochdale; Milnrow; Oldham; Piccadilly; Failsworth; Saddleworth; and, East Manchester. The services also provide good coverage of early morning, evening and weekend periods.

2.25 In addition to the above the Site is located an eight-minute walk from Shudehill Interchange where access can be gained to other high frequency bus services that provide links to Salford and other areas of Manchester.

2.26 Metrolink tram services can also be accessed at Shudehill Interchange. Existing Metrolink

services provide high-frequency services on the Altrincham, Eccles, East Didsbury, Mediacity, Ashton, the airport, Rochdale and Bury. Consent has recently been granted for the construction of the Trafford Park Line, which will provide connections from the city to Old Trafford, Trafford Park and the Trafford Centre.

2.27 The nearest mainline station the Site is Victoria station, an 11-minute walk away. Access to good frequency train services connecting to Huddersfield, Blackpool, Liverpool, Newcastle, Wigan, Bolton and Leeds is provided from Victoria station.

2.28 In line with TfGM guidance a Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the Proposed Development. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures AM Peak accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is a high level of accessibility.

2.29 The Proposed Development has a GMAL of 8, the highest level of accessibility in Greater Manchester. This shows that residents can undertake movements to destinations outside the City Centre easily by public transport from day one of occupation of the development.

Casual Car Use

2.30 Enterprise Car Club offers a cost-effective, hassle-free and greener alternative to car ownership in accessible areas. The service offers pay by hour car hire, which provides residents with a more convenient and cost-effective alternative to car ownership for situations if a vehicle is required for occasional journeys. The Car Club also maintains larger vehicles and vans at locations across the city.

2.31 Enterprise Car Club offers pay as you go motoring, with vehicles available to hire for as little as 30 minutes per trip. The vehicles are available 24/7 and members of the scheme can easily access vehicles on demand by reserving on line. The Car Club can save motorists up to £3,500 a year on costs usually associated with fuel, insurance, servicing, MOT, cleaning and parking.

2.32 There are no car club vehicles currently located in the New Cross area.

New Cross NDF Proposals

2.33 The New Cross NDF was adopted in 2015. The document has been prepared to guide the future development of New Cross to ensure the quality of new development and to set out the supporting public realm and highways required to create a sustainable and vibrant community.

2.34 The 2015 NDF document sets out the general principles in terms of transport and highways, including street hierarchy principles, on-street parking strategies and methods of dealing with severance effects created by the Inner Ring Road (IRR).

2.35 In 2017 MCC published the New Cross Public Realm Strategy. This document builds on the advice outlined in the NDF and provides further detail on the public realm materials, highways and circulation strategies to be brought forward to support development in the area. As part of this more detailed analysis of the practicability of including pedestrianised streets (e.g. Cross Keys Street and Goulden Street) was undertaken. Following swept path studies, it was decided that closing existing routes to vehicular traffic would require extensive turning head provision that would have a detrimental impact on the historic grid layout. It was also decided that the existing grid pattern enables the ideal scenario of permeable and legible pedestrian routes. The later study removes the pedestrianised streets and replaces them with Pedestrian Priority Streets that futureproof the concept presented in the NDF to allow pedestrianisation to follow once the area is fully developed.

2.36 The study found that the existing circulation system (eg. one-way and two-way routes) serves the area well and sufficiently deters rat-running. In the Public Realm Strategy, the circulation system on the roads immediately abounding the Site is to be retained as existing.

2.37 The Public Realm Strategy identifies the following street hierarchy:

- Pedestrian Priority Streets

- Pedestrian Only Routes
- Two Lane Traffic Priority Streets
- Wide Traffic Priority Streets

2.38 The street hierarchy is shown on Figure 2.6. To assist with pedestrian and cycle movements, it is proposed that the area would be covered by a 20mph zone.

Figure 2.6: New Cross Street Hierarchy
[source: MCC 2017 Public Realm Strategy]

2.39 The Public Realm Strategy states that it is preferable to maintain on-street parking throughout the area, provided it doesn't compromise pedestrian routes, as it slows vehicle speeds. The report outlines indicative locations for the street parking and states that these are a guide only. MCC has advised it is currently reviewing Traffic Regulation Orders (TRO) and parking locations across the study area. It is envisaged by MCC that the parking bays will be governed in the future by Pay & Display and timed restrictions will be brought into line with other areas of the city centre.

2.40 The advice in the New Cross Public Realm Strategy supersedes that set out in the NDF in relation to public realm and transport.

3 Management

Travel Plan Co-ordinator

3.1 An effective Travel Plan needs a clear hierarchy of responsibility. The applicant has been closely involved in the development of the Interim Plan and is committed its successful implementation on completion of the Proposed Development.

3.2 The applicant, or their successor in title, will continue to have a regular overseeing role in the progress of the plan and is committed to funding the resources required for its implementation.

3.3 Travel Plan Co-ordinators play an important role in developing, implementing and managing Travel Plans. The Travel Plan Co-ordinator for the Proposed Development will be identified prior to occupation of the development and contact details provided to MCC.

3.4 The Co-ordinator will form the main point of contact for the local authority and residents. The Co-ordinator will also be responsible for raising awareness and marketing the Travel Plan and surveying its effectiveness and assessing this against the stated objectives and targets.

3.5 In summary, the Travel Plan Co-ordinator's general role and responsibilities will include:

- Implementing the Plan measures
- Providing a point of contact for site residents, the local community and MCC
- Publicising and raising awareness of local and national initiatives
- Preparing and issuing the travel packs
- Providing regular updates to residents on changes to local services and facilities
- Monitoring and surveying travel patterns
- Regularly reporting to MCC

Funding Mechanisms

3.6 The applicant is committed to the implementation and successful delivery of the Travel Plan's measures to meet the stated plan objectives.

3.7 The applicant has confirmed that it will fund the cost of time for the Travel Plan Coordinator to implement Plan measures, respond to resident issues, and undertake the annual survey and Plan review.

4 Travel Toolkit

Travel Plan Promotion

4.1 Good communication is a vital component of the Travel Plan to ensure that residents are fully aware of the options available to them. Research undertaken by DfT shows that promotion and marketing of Travel Plan's is one of the most important measures in encouraging people to travel sustainably and actively. This is particularly the case for a site such as this that occupies an exceptionally sustainable location with very good opportunities for non-car trip making from day one of the Proposed Development.

4.2 The Travel Plan Co-ordinator will be responsible for marketing and promoting the Travel Plan. The following measures will be used to promote the Travel Plan:

1. Travel packs for all new households
2. Promotion of local authority/local area travel campaigns/networks
3. Distribution of promotional materials

4.3 In summary, the travel packs will also provide:

1. Travel Plan Co-ordinator contact details
2. Website links to on-line and phone app journey planning software
3. Website links to cycle and walking route maps
4. Website links to bus maps and timetables

5. Details of current TfGM local initiatives (such as free adult cycle training, maintenance and cycle hire initiatives)
6. Paper copies of TfGM cycle and public transport maps (as available at the time of issue)

4.4 TfGM's personalised travel website, My TfGM, will be promoted to all residents so that they can see how easy it is to travel around the area on foot, cycle and public transport. The travel pack will be produced prior to occupation of the development.

4.5 The Travel Plan Co-ordinator will also be responsible for making residents aware of the many benefits for travelling more sustainably:

1. Improve health and wellbeing
2. Save money
3. Reduce traffic congestion
4. Increase physical activity and fitness
5. Improve air quality
6. Reduce carbon emissions
7. Meet new people

4.6 The Travel Plan will be officially 'launched' on occupation of the development. Following this, regular contact will be made with residents to inform them of any changes to public transport services and appraise them of any new smart travel initiatives in the local area. The Travel Coordinator will also promote local and national travel campaigns, including (but not limited to) the initiatives in Table 4.1.

Initiative	Date	Details	Contact
GM Walking Festival	May	A walking festival promoted by TfGM with new routes promoted across Greater Manchester for all ability levels	https://tfgm.com/walking/walking-festival-2019
Big Pedal	March	UK's biggest cycle/scoot to school event organised by Sustrans	www.bigpedal.co.uk
National Walking Month	May	Living Streets' initiative to encourage people to take to their feet	www.livingstreets.org.uk
Walk to School/Work Week	May	Raising awareness of benefits for walking to school and work	www.livingstreets.org.uk
Work Wise Week/National Work from Home Day	May	Raising awareness of smarter working amongst employees and employers	www.workwiseuk.org
World Environment Day	June	A global day for positive environmental action	www.unep.org
Bike Week	June	Promoting how cycling can be part of everyday life	www.bikeweek.org.uk
Green Transport Week	June	Raising awareness of the impact of travel to make people think about the way they travel	www.eta.co.uk/trust/green-transport-week
National Ride to Work Day UK	June	Raising awareness of using scooters and motorcycles	www.ridetoworkweek.co.uk
Cycle to Work Day	Sept	Aims to encourage everyone to take two wheels to work for just one day	www.cycletoworkday.org
European Mobility Week	Sept	European festival promoting sustainable transport and raising awareness of issues with the private car	www.mobilityweek.eu
World Car Free Day	Sept	Encourage people to live a day without using their cars	www.worldcarfree.net
National Liftshare Week	Oct	Encourage people to car share	www.liftshare.com
National Commute Smart Week	Nov	Raising awareness of smarter working practices	www.workwiseuk.org
Road Safety Week	Nov	Annual community event aimed at inspiring people to promote road safety	www.roadsafetyweek.org.uk

Table 4.1: Local & National Travel Plan Campaigns

Walking & Cycling

4.7 TfGM states that the growth in residential development in the Regional Centre has led to an urban renaissance that has reduced car ownership and use. This is because people can work and play within walkable distances of their front door. The Proposed Development is a continuation of this.

4.8 The Site is sustainably located in the City Centre, which means that not only can residents commute to work by non-car modes, but they can also easily access surrounding services and amenities using active and zero emission modes to meet their daily needs. These locational effects combined with Proposed Development amenity and commercial facilities to reduce the need to travel and reduce the requirement to own a car.

4.9 The Proposed Development includes 103% cycle parking for residents and ten visitor cycle parking spaces.

4.10 Information on local walking and cycling routes will be provided to each resident in the travel pack. The travel pack will include details of on-line and phone app journey planning software that is available from TfGM. In addition, website links will be provided to Walkit and CycleStreets journey planning software.

4.11 TfGM offer free cycle training and maintenance sessions for adults for beginners and experienced cyclists, and provides safety tips and advice on the TfGM website. Details of regular cycle events, such the Summer Cycle Camp, Let's Ride Pop-Up and HSBC's Let's Ride Manchester are

provided on the TfGM website. TfGM offer a cycle newsletter service is frequently updated with new route information and activities. This can be signed up for by using the TfGM website. These websites will be shared with residents.

4.12 The City Centre also benefits from a number of cycle hire facilities, including Bike & Go and Brompton Dock from various train stations across the country. Information on the bike hire schemes will be included in the travel pack.

4.13 Residents will also be made aware of tax exempt salary sacrifice cycle to work scheme operated by the Government, so that they can check if this is available with their employers.

Public Transport

4.14 Access can also be gained to the Site using existing public transport routes that are only a short walk away. The Site has a GMAL of 8 showing that existing routes provide an exceptional level of service to destinations across the city, Salford and the wider region. TfGM's policy supports locating developments in order to make the best use of existing infrastructure. Based on this and the existing highly accessible location of the Site, no improvements are required to make the Site accessible by public transport.

4.15 In addition to plans showing public transport routes, the travel packs will include information relating to phone app and on-line journey planning information available on TfGM.

4.16 Information will also be provided on season ticketing arrangements that are available for travel around the Northwest.

4.17 The Travel Plan Co-ordinator will be responsible for maintaining regular contact with TfGM to ensure that residents are aware of any significant service changes in the area.

Efficient Vehicle Use

4.18 The CIHT's simple rule has been applied to the layout and the transport strategy so that it has been planned for people rather than cars, so that it results in a place for people, rather than one dominated by traffic. This has clear knock benefits, including improved health and wellbeing of residents and air quality benefits, and reduced pressures on highway network operation, and reductions in emissions.

4.19 No parking is proposed at the Site, other than an on-street disabled parking bay to serve the Proposed Development. In line with the Council's policy, Blue Badge holders will also be able to parking for free and without limit on duration restriction in any of the street parking bays surrounding the Site.

4.20 It has been agreed with MCC that the Site offers a suitable opportunity for car-free development and, in line with the car ownership evidence presented in the TS, the majority of residents at the Site will not own a car. The car-free nature of the Proposed Development also means that the Site will contribute towards MCC's carbon reduction strategy.

4.21 The applicant will also fund the Traffic Regulation Order (TRO) required to deliver a single car club bay to serve the Proposed Development, and the applicant's other Proposed Developments in New Cross. Following discussion with MCC, this car club bay is likely to be located centrally on Marshall Street to provide benefit for the whole area. The Travel Plan will promote the Enterprise Car Club scheme.

4.22 CarShareGM will be promoted to allow residents to hitch a lift with people living nearby making the same trips.

4.23 Local and reputable taxi companies that provide real-time booking apps will also be promoted (such as Street Cars).

4.24 The travel pack will also include information on on-line food retail facilities that serve the area, such as Asda, Tesco and Ocado.

Removing Cheap Commuter Parking

4.25 The Proposed Development is currently occupied by commercial uses and surface car parking. The surface parking is cheap with daily rates between £4.50. Parking in permanent parking areas serving this area of the Regional Centre is more appropriately priced at £14.00 for 3 to 4 hours and £25.00 for 4 to 24 hours. Nearly 3,000 parking spaces are provided nearby in permanent car parks.

4.26 The cheapness of the parking directly relates to the popularity of these types of car parks and fails to encourage drivers to use other modes to access the city centre. The over-use of the car that is encouraged by presence of cheap parking on the edge of the city centre has an impact on congestion, air quality and road safety levels. The availability of such parking is in direct contravention of the sustainable transport strategies set out by TfGM (pages 17 and 35 '2040 Greater Manchester Transport Strategy'), which seeks to constrain long-stay parking in central areas to support better travel choices and encourage greater network efficiency.

4.27 The removal of the cheap car parking will mean that commuters have to reconsider their parking location for the city centre. Given the price differential it is very likely that travel by car will become unattractive once the real cost of parking is considered against the cost of using other modes. The removal of the temporary parking will result in a positive benefit to the wider area, which supports the policies set out by TfGM. It will also support MCC's aspiration to become a zero carbon city by 2038.

5 Monitoring

Travel Surveys

5.1 The best way to establish the effectiveness of a Travel Plan and parking demand is to survey the behaviour of residents when the Proposed Development is occupied. The travel surveys will enable the existing travel choices of residents to be established and against this the success of the measures in the plan can then be assessed.

5.2 The travel surveys will be undertaken within six months of the Proposed Development being occupied and the results from the survey will be then used to set the targets for the plan and to update the measures, if required. A Progress Report will be produced for issue to MCC.

Target Setting

5.3 In line with DfT guidance, action-based targets have been set for the Interim Travel Plan. Action-based target are based on the Travel Plan reaching set milestones or indicators.

5.4 The following action-based targets have been set:

1. To appoint the Travel Plan Co-ordinator one month prior to occupation
2. To produce the travel packs ready for issue on initial occupation of each unit

5.5 Quantifiable targets are also required that are specific, measurable, achievable and relevant. These targets are used to review and assess the impact of the Plan overtime. The final targets for the Plan will be set following the first travel surveys.

Surveys

5.6 Travel surveys will be undertaken of all households within six months of total occupancy. The survey will be conducted electronically using Survey Monkey or similar. A website link to the travel survey will be provided in the travel pack issued to each household.

5.7 Following the baseline survey, the Travel Plan will be updated with targets and these will be issued with the proposed actions for agreement with MCC.

5.8 A follow up survey will be undertaken two years after implementation of the actions. Then regular surveys (every five years) will be undertaken for the lifetime of the development, or otherwise until MCC decide that surveys are no longer required.

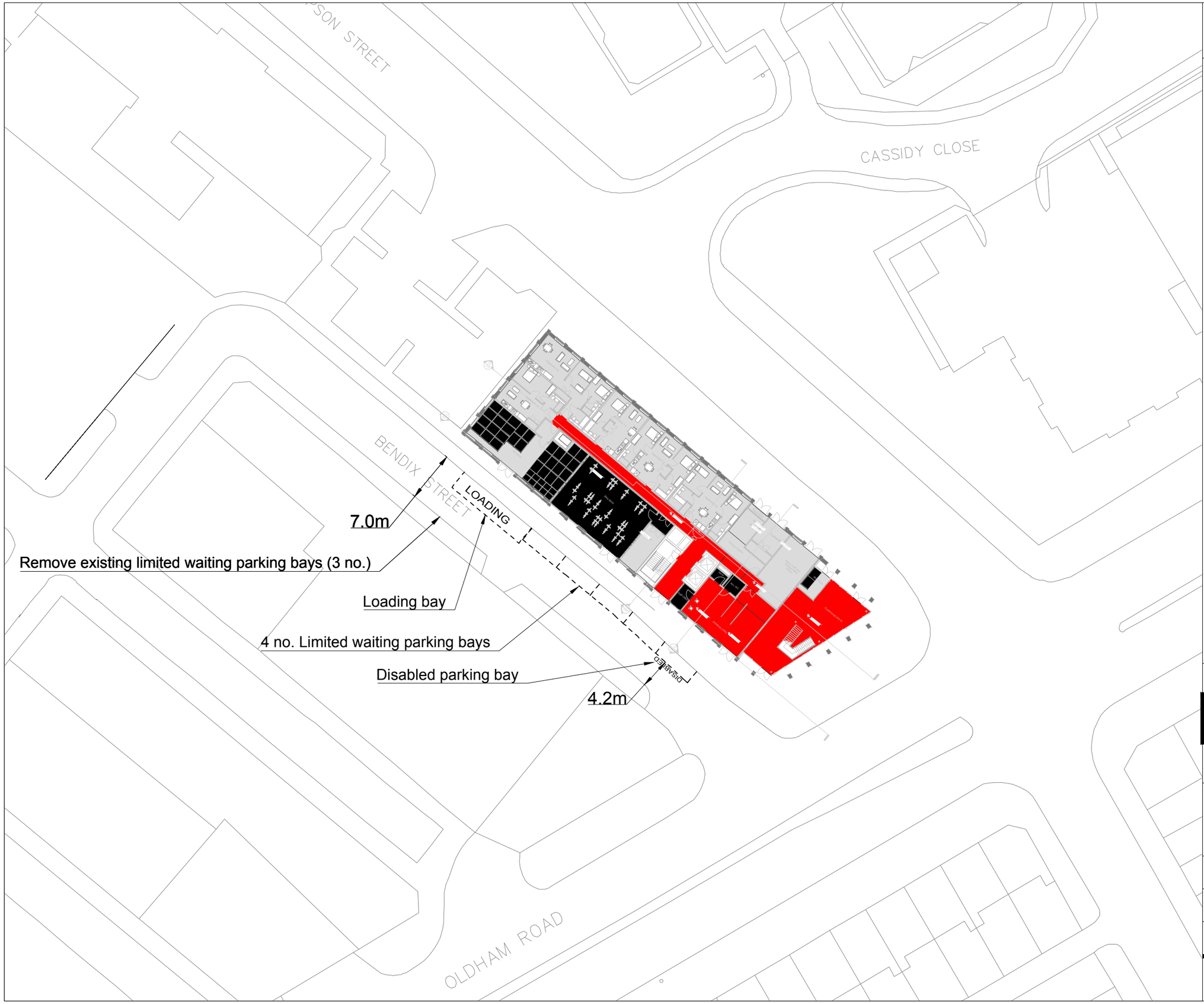
5.9 The targets will be reviewed and amended over time, as appropriate, following the initial survey.

Dissemination

5.10 Information concerning the Travel Plan will be annually reported to MCC following each travel survey and for the life of the Plan.

5.11 Information regarding the achievements of the Travel Plan and new measures being considered will also be distributed to local residents as part of the promotional strategy.

Appendix D



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NOTES

Layout subject to detailed design and confirmation of statutory undertakers' equipment.

Revision Details	By / Check	Date	Suffix

Drawing Number

SK21855-001

Bendix St, Manchester

Drawing Title

On-Street Bay Provision
General Arrangement

Scale at A3

1:500

Drawn	Approved
JAT	LGS
Check	**Date**
LGS	10.12.19

SK Transport Planning Ltd
Albion Wharf | Manchester | M1 5LN
www.sktransport.co.uk
0161 234 6509

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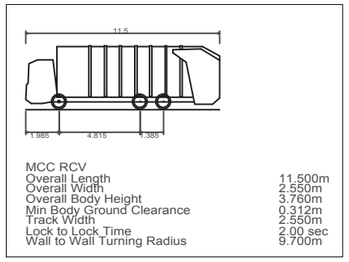
NOTES

Vehicle Profile



MCC RCV	
Overall Length	11.500m
Overall Width	2.550m
Overall Body Height	3.760m
Min Body Ground Clearance	0.312m
Track Width	2.550m
Lock to Lock Time	2.00 sec
Wall to Wall Turning Radius	9.700m

Revision Details	By / Check	Date	Suffix

Drawing Number

SK21855-002

Bendix St, Manchester

Drawing Title

Swept Path Analysis
MCC Refuse Collection Vehicle

Scale at A3

1:500

Drawn	Approved
JAT	LGS
Check	**Date**
LGS	10.12.19

SK Transport Planning Ltd
Albion Wharf | Manchester | M1 5LN
www.sktransport.co.uk
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Appendix E

Calculation Reference: AUDIT-443201-171023-1019

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED

MULTI-MODAL VEHICLES

Selected regions and areas:

08 NORTH WEST
GM GREATER MANCHESTER 2 days

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

Secondary 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: Number of dwellings
Actual Range: 20 to 154 (units:)
Range Selected by User: 6 to 154 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/09 to 09/11/16

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:
Thursday 1 days
Friday 1 days

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

Selected survey types:
Manual count 2 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

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:
Built-Up Zone 2

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.

Secondary Filtering selection:

Use Class:
C3 2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:
25,001 to 50,000 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 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 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:
No 2 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 2 days

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

LIST OF SITES relevant to selection parameters

1 GM-03-C-02 BLOCK OF FLATS GREATER MANCHESTER
WHITWORTH STREET W.

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 154
Survey date: THURSDAY 13/10/11 Survey Type: MANUAL

2 GM-03-C-03 BLOCK OF FLATS GREATER MANCHESTER
FAIRFIELD STREET

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 20
Survey date: FRIDAY 14/10/11 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
CB-03-C-01	too much parking
HI-03-C-01	too much parking

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL VEHICLES

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	2	87	0.000	2	87	0.011	2	87	0.011
08:00 - 09:00	2	87	0.011	**2**	**87**	**0.029**	**2**	**87**	**0.040**
09:00 - 10:00	2	87	0.006	2	87	0.017	2	87	0.023
10:00 - 11:00	2	87	0.017	2	87	0.017	2	87	0.034
11:00 - 12:00	2	87	0.017	2	87	0.006	2	87	0.023
12:00 - 13:00	2	87	0.011	2	87	0.017	2	87	0.028
13:00 - 14:00	2	87	0.017	2	87	0.023	2	87	0.040
14:00 - 15:00	2	87	0.011	2	87	0.011	2	87	0.022
15:00 - 16:00	2	87	0.011	2	87	0.011	2	87	0.022
16:00 - 17:00	2	87	0.011	2	87	0.006	2	87	0.017
17:00 - 18:00	**2**	**87**	**0.023**	2	87	0.000	2	87	0.023
18:00 - 19:00	2	87	0.011	2	87	0.006	2	87	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.146			0.154			0.300

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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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 TAXIS

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	2	87	0.000	2	87	0.000	2	87	0.000
08:00 - 09:00	2	87	0.000	2	87	0.000	2	87	0.000
09:00 - 10:00	2	87	0.000	2	87	0.000	2	87	0.000
10:00 - 11:00	2	87	0.000	2	87	0.000	2	87	0.000
11:00 - 12:00	2	87	0.000	2	87	0.000	2	87	0.000
12:00 - 13:00	2	87	0.000	2	87	0.000	2	87	0.000
13:00 - 14:00	**2**	**87**	**0.006**	**2**	**87**	**0.006**	**2**	**87**	**0.012**
14:00 - 15:00	2	87	0.000	2	87	0.000	2	87	0.000
15:00 - 16:00	2	87	0.000	2	87	0.000	2	87	0.000
16:00 - 17:00	2	87	0.000	2	87	0.000	2	87	0.000
17:00 - 18:00	2	87	0.000	2	87	0.000	2	87	0.000
18:00 - 19:00	2	87	0.000	2	87	0.000	2	87	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	2	87	0.000	2	87	0.000	2	87	0.000
08:00 - 09:00	2	87	0.000	2	87	0.000	2	87	0.000
09:00 - 10:00	2	87	0.000	2	87	0.000	2	87	0.000
10:00 - 11:00	2	87	0.000	2	87	0.000	2	87	0.000
11:00 - 12:00	2	87	0.000	2	87	0.000	2	87	0.000
12:00 - 13:00	2	87	0.000	2	87	0.000	2	87	0.000
13:00 - 14:00	2	87	0.000	2	87	0.000	2	87	0.000
14:00 - 15:00	2	87	0.000	2	87	0.000	2	87	0.000
15:00 - 16:00	2	87	0.000	2	87	0.000	2	87	0.000
16:00 - 17:00	2	87	0.000	2	87	0.000	2	87	0.000
17:00 - 18:00	2	87	0.000	2	87	0.000	2	87	0.000
18:00 - 19:00	2	87	0.000	2	87	0.000	2	87	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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 CYCLISTS

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	2	87	0.000	2	87	0.006	2	87	0.006
08:00 - 09:00	2	87	0.000	2	87	0.011	2	87	0.011
09:00 - 10:00	2	87	0.006	2	87	0.011	2	87	0.017
10:00 - 11:00	2	87	0.000	2	87	0.000	2	87	0.000
11:00 - 12:00	2	87	0.000	2	87	0.000	2	87	0.000
12:00 - 13:00	2	87	0.000	**2**	**87**	**0.017**	2	87	0.017
13:00 - 14:00	2	87	0.000	2	87	0.000	2	87	0.000
14:00 - 15:00	2	87	0.000	2	87	0.000	2	87	0.000
15:00 - 16:00	2	87	0.000	2	87	0.000	2	87	0.000
16:00 - 17:00	2	87	0.000	2	87	0.000	2	87	0.000
17:00 - 18:00	**2**	**87**	**0.023**	2	87	0.000	**2**	**87**	**0.023**
18:00 - 19:00	2	87	0.006	2	87	0.000	2	87	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.035			0.045			0.080

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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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 PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	2	87	0.000	2	87	0.029	2	87	0.029
08:00 - 09:00	2	87	0.017	2	87	0.264	2	87	0.281
09:00 - 10:00	2	87	0.023	2	87	0.224	2	87	0.247
10:00 - 11:00	2	87	0.069	2	87	0.069	2	87	0.138
11:00 - 12:00	2	87	0.103	2	87	0.138	2	87	0.241
12:00 - 13:00	2	87	0.190	2	87	0.195	2	87	0.385
13:00 - 14:00	2	87	0.190	2	87	0.132	2	87	0.322
14:00 - 15:00	2	87	0.155	2	87	0.109	2	87	0.264
15:00 - 16:00	2	87	0.149	2	87	0.138	2	87	0.287
16:00 - 17:00	2	87	0.305	**2**	**87**	**0.305**	**2**	**87**	**0.610**
17:00 - 18:00	**2**	**87**	**0.408**	2	87	0.167	2	87	0.575
18:00 - 19:00	2	87	0.190	2	87	0.000	2	87	0.190
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.799			1.770			3.569

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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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 PUBLIC TRANSPORT USERS

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	2	87	0.000	2	87	0.046	2	87	0.046
08:00 - 09:00	2	87	0.006	**2**	**87**	**0.144**	2	87	0.150
09:00 - 10:00	2	87	0.006	2	87	0.063	2	87	0.069
10:00 - 11:00	2	87	0.006	2	87	0.029	2	87	0.035
11:00 - 12:00	2	87	0.017	2	87	0.029	2	87	0.046
12:00 - 13:00	2	87	0.011	2	87	0.063	2	87	0.074
13:00 - 14:00	2	87	0.011	2	87	0.023	2	87	0.034
14:00 - 15:00	2	87	0.029	2	87	0.006	2	87	0.035
15:00 - 16:00	2	87	0.092	2	87	0.023	2	87	0.115
16:00 - 17:00	2	87	0.075	2	87	0.052	2	87	0.127
17:00 - 18:00	**2**	**87**	**0.207**	2	87	0.017	**2**	**87**	**0.224**
18:00 - 19:00	2	87	0.052	2	87	0.000	2	87	0.052
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.512			0.495			1.007

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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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 TOTAL PEOPLE

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	2	87	0.000	2	87	0.098	2	87	0.098
08:00 - 09:00	2	87	0.040	**2**	**87**	**0.454**	2	87	0.494
09:00 - 10:00	2	87	0.040	2	87	0.322	2	87	0.362
10:00 - 11:00	2	87	0.098	2	87	0.121	2	87	0.219
11:00 - 12:00	2	87	0.138	2	87	0.172	2	87	0.310
12:00 - 13:00	2	87	0.213	2	87	0.293	2	87	0.506
13:00 - 14:00	2	87	0.218	2	87	0.178	2	87	0.396
14:00 - 15:00	2	87	0.207	2	87	0.126	2	87	0.333
15:00 - 16:00	2	87	0.253	2	87	0.172	2	87	0.425
16:00 - 17:00	2	87	0.391	2	87	0.362	2	87	0.753
17:00 - 18:00	**2**	**87**	**0.667**	2	87	0.184	**2**	**87**	**0.851**
18:00 - 19:00	2	87	0.259	2	87	0.011	2	87	0.270
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.524			2.493			5.017

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.*

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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.