



Proposed Residential Development and Partial Change of Use

Virgil Street, Manchester

Highways Technical Note

Prepared for



Generation Limited

March 2024
3156-01-HTN02



Document Control

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1.0 INTRODUCTION

1.1 Preamble

- 1.1.1 Axis have been appointed by Generation Limited to provide highways and transport advice to accompany a planning application which comprises the development of 4 dwellings, and the partial change of use of an existing commercial building from B8 storage and distribution use to Class E(g)(i) (office) use, on land located to the east of Virgil Street, in Old Trafford, Stretford, Manchester.
- 1.1.2 The purpose of this Highway Technical Note (HTN) is to inform Trafford Metropolitan Borough Council (TMBC), which is the relevant Local Planning Authority (LPA) and Local Highway Authority (LHA), of the anticipated highways and transportation implications associated with the proposed development.

1.2 Report Structure

- 1.2.1 Following this introductory section, the structure of this report is set out as follows:
- i) **Chapter 2** describes the existing conditions on and around the site, including reference to the extant use, the site's planning history, the local highway network, parking conditions, and a review of the accident record on the local highway network;
 - ii) **Chapter 3** provides a high-level review of the accessibility of the site by non-car travel modes;
 - iii) **Chapter 4** provides a description of the proposed development, including reference to the site access, servicing and parking arrangements;
 - iv) **Chapter 5** sets out the forecast trip generation of the proposed development; and
 - v) **Chapter 6** provides the summary and conclusions.

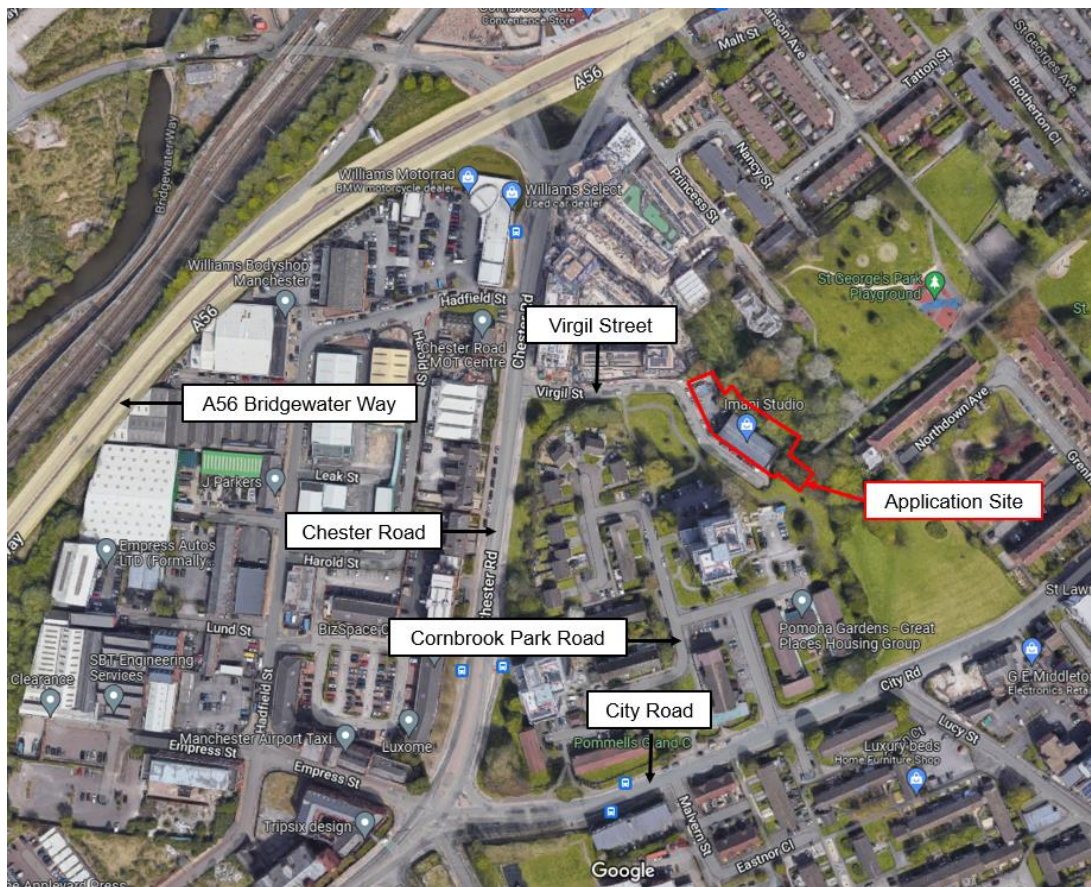


2.0 EXISTING CONDITIONS

2.1 Site Location

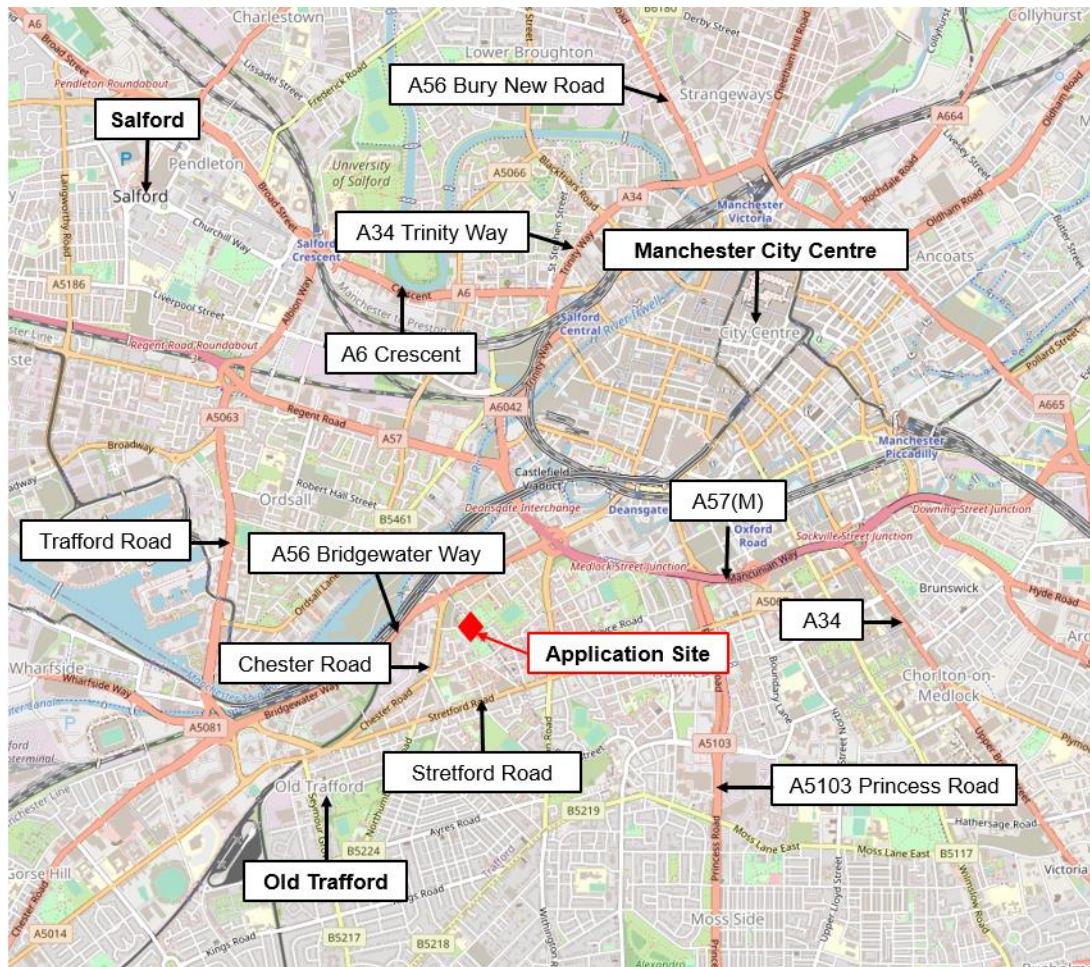
- 2.1.1.1 The application site is located on land on the eastern side of Virgil Street, approximately 2km (as the crow flies) to the south-west of Manchester City Centre.
- 2.1.1.2 The location of the site is shown on **Image 2.1** in the context of the local highway network.

Image 2.1 – Site Location – Local Context



- 2.1.2 The location of the site is shown on **Image 2.2** in relation to the wider highway network.

Image 2.2 – Site Location – Wider Context



2.2 Existing Use

- 2.2.1 The site currently accommodates a two-storey commercial building which is occupied by offices on the ground floor and B8 use storage space on the first floor. The site also accommodates a car park with 14 spaces which is located on land immediately to the north of the existing building.
- 2.2.2 Access to the site can currently be achieved via a dropped kerb gated access off Virgil Street, to the north-west of the application site.

2.3 Site Planning History

- 2.3.1 In May 2023, a planning application was submitted to TMBC for the following development at the application site (Ref. 111037/FUL/23):

“Erection of four houses with ground floor parking and associated amenity space along with the change of use of Palmer House to Class E (g) with associated external alterations and the construction of a new car park and amenity space.”

- 2.3.2 During the course of the application, the LHA at TMBC provided a consultation response, dated 20th June 2023. In summary, the LHA did not raise any objections to the planning application on highway grounds, subject to an appropriate condition being attached to the grant of any future planning permission in order to secure the need to provide a Construction Management Statement.
- 2.3.3 The LHA did however request within their consultation response that a wholly independent Stage 1 Road Safety Audit (RSA) should be submitted with the planning application. Axis therefore commissioned Highways Associates, an independent firm who specialises in RSA's, to undertake an independent Stage 1 RSA of the proposals.
- 2.3.4 The full RSA (dated 1st August 2023) is contained in **Appendix A**, alongside Axis' design team response which was subsequently prepared. This is discussed later in this report in **Section 4.2**.
- 2.3.5 Notwithstanding the above, on 3rd August 2023, planning permission was refused by TMBC, albeit not on highway grounds.

2.4 Local Highway Network

Virgil Street

- 2.4.1 Virgil Street is a cul-de-sac which abuts the application site to the north. It is an adopted road which routes in an easterly direction for approximately 80m from its priority-controlled ghost island right turn junction with Virgil Street after which it curves in a southerly direction towards the application site. It is subject to a 30mph speed limit.
- 2.4.2 Within the vicinity of the application site, Virgil Street has a carriageway width of approximately 6.4m. A footway extends the full length of Virgil Street along its northern / eastern side.



- 2.4.3 On its southern side, a circa 2m wide footway extends approximately 55m from Chester Road which links to a footpath connecting to the residential properties located off Holly Bank Close, Cornbrook Park Road and Cornbrook Court.
- 2.4.4 A scheme of Traffic Regulation Orders (TROs) has recently been put forward as part of the neighbouring 'Botanica' residential development, which is located on the corner of Chester Road and Virgil Street. Condition 7 of the approved planning application for the Botanica development (reference 97274/VAR/19) required, amongst other things, a detailed plan and schedule of the provision and extent of TROs.
- 2.4.5 An application to discharge Condition 7 of application 97274/VAR/19 was approved in July 2019. Drawing Number SK21896-004 Rev B was listed as an approved drawing within the associated Decision Notice, which shows the following TROs along the full length of Virgil Street:
- i) Double yellow lines (parking prohibited) along the northern side; and
 - ii) Single yellow line (no waiting 8am – 6pm Mon-Sat) on the southern side.
- 2.4.6 Drawing Number SK21896-004 Rev B, a copy of which is contained in **Appendix B** to the rear of this report, also shows a series of new white line markings and double yellow lines along Chester Road.
- 2.4.7 To date, the new white markings and double yellow lines have been implemented along Chester Road. With regards to the TROs along Virgil Street, TMBC have recently made a draft TRO, which was advertised in November / December 2023.
- 2.4.8 A copy of the draft TRO is contained in **Appendix C**, and review of the accompanying Consultation Plan shows the following restrictions along Virgil Street:
- i) Proposed new 'No Waiting At Any Time' restriction along the majority of the southern side; and
 - ii) Proposed new 'No Waiting At Any Time' and 'No Waiting Mon - Sun 8am - 6pm' restrictions along the northern side.

Chester Road

- 2.4.9 Chester Road is a local distributor road which extends between its signalised crossroads junction with the A56 Bridgewater Way / Cornbrook Road to the north of the application site, and its junction with the A56 to the east of the A56 / Trafford Road / White City Circular gyratory junction.
- 2.4.10 Within the vicinity of the application site, Chester Road comprises a single lane two-way carriageway with a circa 1.5m wide on-road cycle lanes on both sides along with wide (2m+) footways.
- 2.4.11 TROs in the form of double yellow lines are present along both sides of Chester Road and it is subject to a 30mph speed limit.

2.5 Highway Safety

- 2.5.1 Personal Injury Accident (PIA) data for the highway network adjacent to the site has been obtained from the online CrashMap resource (www.crashmap.co.uk). Data has been extracted for the most recently available complete 3-year period, which is 2020 to 2022 inclusive. The location and severity of the accidents are shown on **Image 2.3**.



Image 2.3 – Crashmap Extract, 2020-2022 Inclusive



2.5.2 **Image 2.3** shows that the following accidents have been recorded within the general vicinity of the application site between 2020 and 2022 inclusive:

- i) 1 'slight' accident at the Chester Road / Hadfield Street junction, approximately 50m to the north of Virgil Street;
- ii) 4 'slight' accidents at the A56 / Chester Road / Cornbrook Road signalised crossroads junction, approximately 150m to the north of Virgil Street; and
- iii) 1 'slight' accident along City Road, approximately 220m to the south of Virgil Street.

2.5.3 The data shows that no accidents have been recorded along Virgil Street or at its junction with Chester Road between 2020 and 2022 (inclusive), and a total of 6 accidents have been recorded within the general vicinity of the application site along City Road, Chester Road, and at its junction with the A56.

- 2.5.4 Review of the evidence above suggests that between 2 accidents have been recorded per year within the vicinity of the site, on average, in the most recently available 3-year period (2020-2022 inclusive). This does not lead to any cause for concern or demonstrate a discernible pattern that could be affected by the modest number of trips that will be generated by the proposed development (see **Chapter 4**).



3.0 ACCESSIBILITY OF THE SITE BY SUSTAINABLE MODES OF TRAVEL

3.1 Introduction

3.1.1 Paragraph 109 of the National Planning Policy Framework (NPPF) states that:

“Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.”

3.1.2 To demonstrate the site’s compliance with the above, this section of the report examines the accessibility of the site by non-car modes of transport through consideration of the following modes of transport:

- i) Accessibility on foot;
- ii) Accessibility by cycle; and,
- iii) Accessibility on public transport.

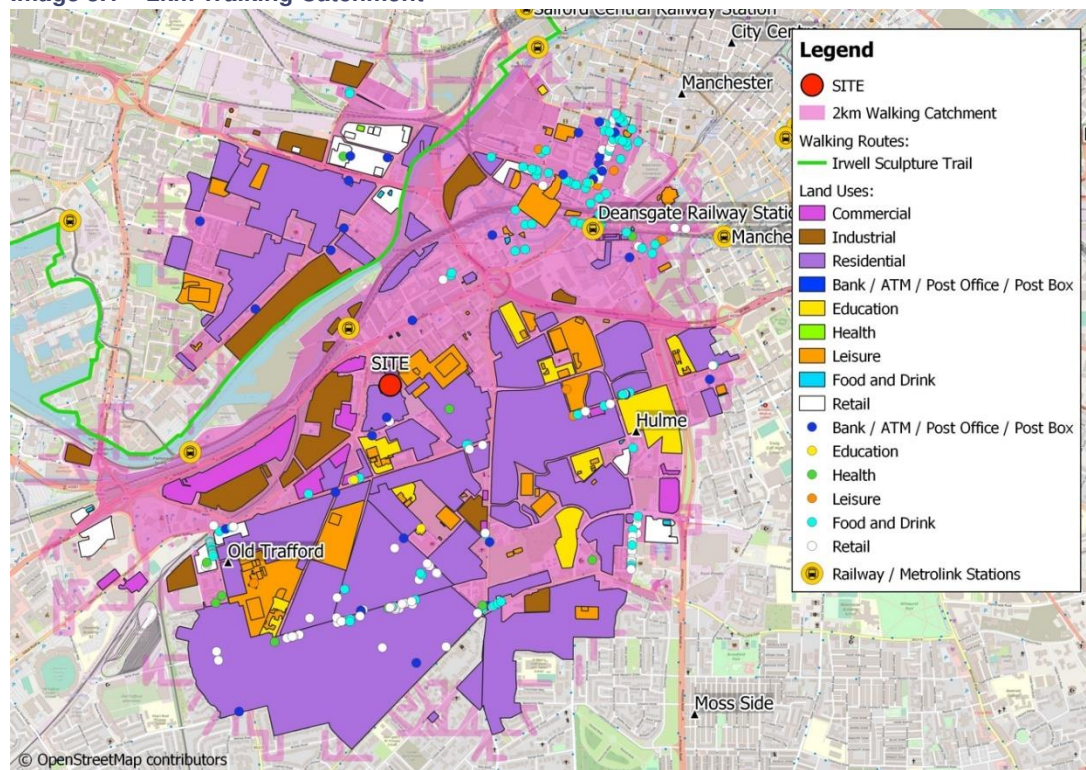
3.2 Pedestrian Accessibility

3.2.1 The Chartered Institution of Highways and Transportation (CIHT, formerly IHT) in their document, *‘Providing for Journeys on Foot’*, recognises that although acceptable walking distances will vary between individuals and circumstances, for commuting, school and sight-seeing trips, a walk distance of 2km can be considered as the ‘preferred maximum’.

3.2.2 With regards to the above, **Image 3.1** shows a 2km walking catchment measured from the centre of the proposal site. This provides an indication of the areas which can be reached within a 24-minute walk of the site, assuming an average walk speed of 1.4m/s.



Image 3.1 – 2km Walking Catchment



3.2.2.1 **Image 3.1** shows that the 2km walking catchment incorporates Old Trafford, Castlefield, Hulme and parts of Manchester City Centre, which collectively provide a very wide range of amenities relating to health, education and leisure, alongside a range of employment uses.

3.2.3 The site is also located within walking distance of numerous public transport facilities, including bus stops, tram stops and railway stations. Deansgate Railway Station can be accessed within a circa 20-minute walk (or 1.4km walk distance) of the site, whilst Cornbrook tram stop is located within only a circa 7-minute walk (500m walk distance) of the site.

3.2.3.1 The local highway network is also considered to provide safe and realistic connections to the local amenities surrounding the site, given the high standard of footway infrastructure, street lighting and pedestrian crossings. There are pedestrian refuge islands along Chester Road at either side of Virgil Street and there are also signal controlled pedestrian crossing facilities at the junctions surrounding the site, which are equipped with dropped kerbs and other pedestrian crossing facilities.

3.2.4 Natural surveillance is also provided by the surrounding residential, retail and commercial land uses which front the streets adjacent to the site, and which could also be used by prospective residents.

3.2.5 It can be reasonably expected that the proposed Class E(g)(i) (office) floorspace within the existing commercial building will draw the majority of its workforce from the surrounding local areas, who will be able to commute on foot or utilise the local public transport facilities.

3.2.6 With regards to the above, the site is therefore highly accessibly on foot.

3.3 Cycle Accessibility

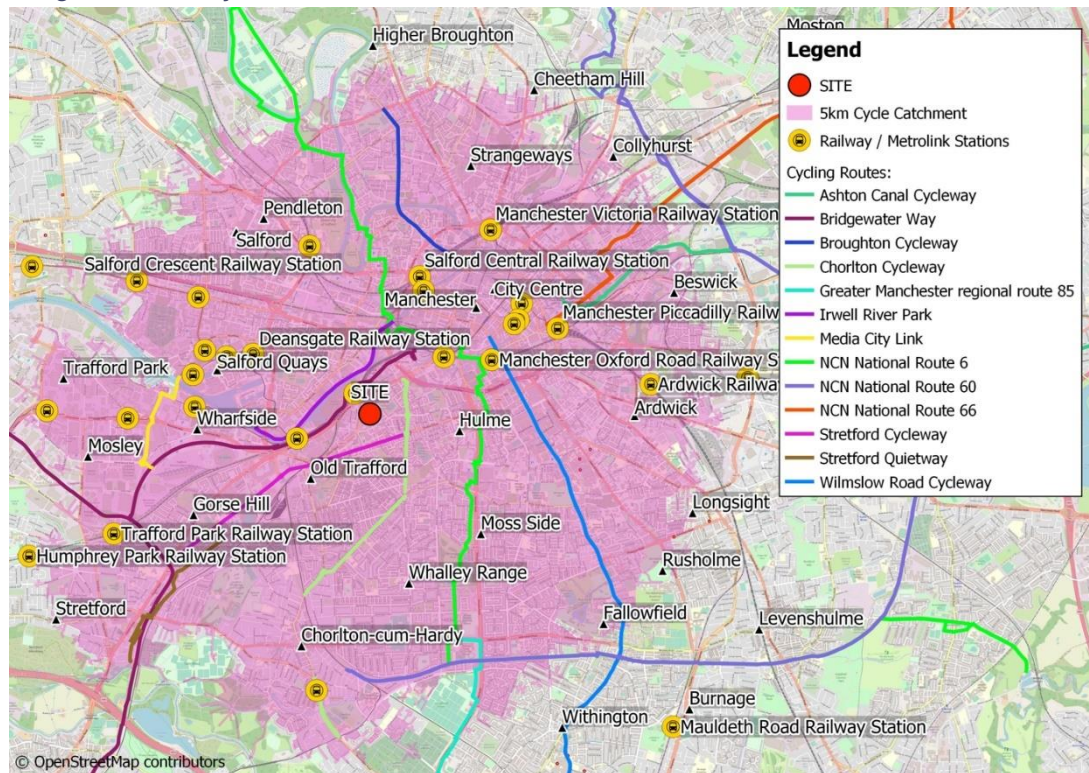
3.3.1.1 Previous transport guidance identifies that cycling represents a realistic and healthy alternative to the private car when making journeys up to 5km as a whole journey or as part of a longer journey by public transport.

3.3.1.2 The accessibility of the redevelopment has been assessed to determine reachable areas for a 5km bike journey from the centre of the site, which is equivalent to a typical cycle time of 25 minutes.

3.3.1.3 The 5km cycle catchment is shown on **Image 3.2**.



Image 3.2 – 5km Cycle Catchment

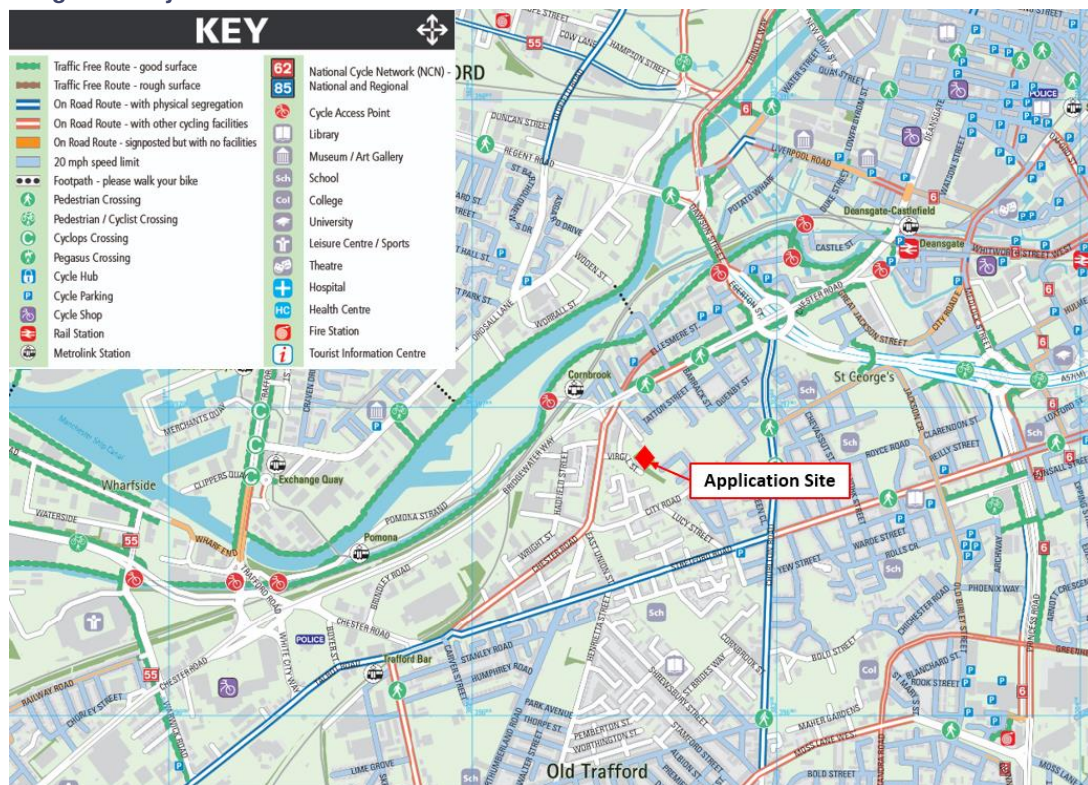


- 3.3.2 **Image 3.2** illustrates that the 5km cycle catchment incorporates the whole of Manchester City Centre as well as the surrounding areas of Salford, Ardwick, Old Trafford and Chorlton-cum-Hardy, amongst others.
- 3.3.3 The 5km catchment also incorporates nine railway stations including Deansgate, Manchester Victoria, Salford Central, Manchester Piccadilly, Manchester Oxford Road, Ardwick, Trafford Park, Salford Crescent and Humphrey Park. Moreover, a number of tram stops are also located with cycling distance to the site, and this therefore provides future residents and employees with the opportunity to undertake multi-modal journeys by cycle and by rail / tram.
- 3.3.4 **Image 3.2** also shows a number of designated cycling routes within the 5km catchment, the closest one being Bridgewater Way which is a recent regeneration project creating a 39-mile leisure route for walkers and cyclists along Bridgewater Way. The route runs from Broadheath to Manchester City Centre via Sale, Stretford and Trafford Park and to the Manchester Ship Canal at the boundary with Salford, with a direct link to the Trafford Centre. Many connections to surrounding routes and destinations are provided along the route.

3.3.5 Whilst not shown on **Image 3.2**, the 5km catchment also incorporates a significant portion of the Greater Manchester 'Beeway' Network, which has been introduced by Transport for Greater Manchester (TfGM) to encourage active travel, and which provides extensive cycling connections between the site and the surrounding areas of Greater Manchester.

3.3.6 There are multiple other local on and off-road cycle routes that surround the site, for example; along Chester Road, Stretford Road and the A56, as shown on **Image 3.3**.

Image 3.3 – Cycle Routes Around the Site



3.3.7 With regards to the above, the site is therefore considered to be very highly accessible by cycle.

3.4 Accessibility by Public Transport

Bus Accessibility

3.4.1 Guidance from the CIHT document, “*Guidelines for Planning for Public Transport in Development*”, recommends that the walk distance from a new development should ideally be 300m, or a maximum of 400m.

- 3.4.2 The bus stops nearest to the site are located along Chester Road, as shown on **Image 3.4**.

Image 3.4 – Location of Nearest Bus Stops to the Site



- 3.4.3 The bus stop located to the north of Virgil Street can be accessed within a circa 220m walk distance from the application site and the bus stops to the south of Virgil Street can be accessed within a circa 290m walk distance. The bus stops to the site are therefore within CIHT's lower walk distance threshold.
- 3.4.4 The bus stops nearest to the site are served by Bus No. 255 which routes between Manchester City Centre and Partington, stopping at Old Trafford, Stretford, Urmston and Flixton. This service runs every 30 minutes Monday – Sunday (inclusive).
- 3.4.5 The application site is therefore considered to be accessible by bus.

Accessibility by Rail

- 3.4.6 Deansgate Railway Station is the nearest railway station to the application site and can be accessed within an approximate 1.4km walk.

- 3.4.7 Deansgate Railway Station provides local services within and around Manchester City Centre, including Manchester Oxford Road, Hazel Grove and Manchester Airport.
- 3.4.8 Deansgate Railway Station also provides frequent services to destinations further afield within the north-west region, including Crewe, Liverpool Lime Street, Blackpool North and Southport.
- 3.4.9 Trains run throughout the day and evening, 7 days a week. A short connection from Deansgate to Manchester Oxford Road or Manchester Piccadilly Railway Stations facilitates journeys to further destinations such as London, Nottingham, Leeds, Hull and Sheffield.
- 3.4.10 The site is therefore considered to be well located to encourage journeys to be made by rail.

Metrolink / Tram Accessibility

- 3.4.11 The nearest Metrolink Station to the site is located at Cornbrook (500m walk distance).
- 3.4.12 Cornbrook is an interchange station which allows passengers to transfer between other Metrolink services. The services that utilise Cornbrook are set out as follows:
- i) Altrincham to Bury;
 - ii) Altrincham to Piccadilly;
 - iii) Ashton-under-Lyne to Eccles;
 - iv) Bury to Piccadilly;
 - v) Manchester Airport to Victoria;
 - vi) Media City UK to Ashton-under-Lyne;
 - vii) Cornbrook to Trafford Centre; and
 - viii) East Didsbury to Rochdale Town Centre.
- 3.4.13 **Table 3.1** summarises the typical frequencies of all tram lines, as provided by TfGM. It should be noted that for tram stops which have several services running through them (such as Cornbrook), the frequency of trams will increase accordingly.



Table 3.1 – Summary of Metrolink Service Frequencies

Day	Service Frequency for All Lines
Monday to Friday	06:00 to 19:00 every 10 minutes
Saturday	06:00 to 08:00 every 20 minutes
	08:00 to 20:00 every 10 minutes
	20:00 to 00:00 every 20 minutes
Sunday	07:00 to 23:00 every 15 minutes

3.4.14 The TfGM website also provides a range of online tools to help users plan their journeys via tram, such as live arrival / departure times, up to date maps of the Metrolink network, and live travel updates and disruptions.

3.4.15 Based on the above, the site is therefore highly accessible by tram.

3.5 Car Clubs

3.5.1 Car clubs are seen to be a cost-effective and sustainable tool that could also be promoted. Vehicles are booked for as long or as little as people need them, giving residents a more sustainable and cheaper alternative to car ownership.

3.5.2 Companies such as Enterprise Car Club (www.enterpriseclub.com) offer memberships in Manchester with a variety of cars parked in designated bays at many locations around the city.

3.5.3 The nearest location, with two designated cars and parking spaces, is located on Ellesmere Street, within a 500m walk distance from the site. It is also noted on Drawing Number SK21896-004 Rev B (**Appendix B**) that 2 car club bays have been proposed to be provided along Princess Street, which will be within a circa 300m walk distance from the site.

3.6 Accessibility Summary

3.6.1 With regards to the above, the site is very well located to facilitate journeys to the site to be made by sustainable modes of transport. The surrounding area is well equipped with pedestrian and cycle infrastructure and the site is located within walking distance of a range of public transport infrastructure.



- 3.6.2 Moreover, the Greater Manchester Accessibility Levels (GMAL) are a detailed and accurate measure of the accessibility of a point to public transport infrastructure, and ranks accessibility from 1 (low) to 8 (high). GMAL identifies the site to be in level 6, and therefore, confirms the sustainable credentials of the site.
- 3.6.3 As such, the site is therefore compliant with local and national policies that relate to the promotion of development with good access to sustainable travel modes.



4.0 DEVELOPMENT PROPOSALS

4.1 Introduction

- 4.1.1 This planning application is for the proposed development of 4No. 3-bed dwellings and the partial change of use of an existing commercial building from B8 use (storage and distribution) to Class E(g)(i) (office) use.
- 4.1.2 The 4 dwellings will be located on land immediately to the north-west of the existing commercial building, which is currently used as a car park.
- 4.1.3 The partial change of use will be to the first floor of the existing commercial building from B8 use storage floorspace to Class E(g)(i) (office) space. The gross floor area (GFA) of the proposed first floor office space is approximately 435m², which will be in addition to the existing 435m² GFA of office use on the ground floor. As a result of the proposed development, the total GFA of Class E(g)(i) (office) use at the site will therefore be 870m².
- 4.1.4 A new car park for the commercial building is proposed to the south-east of the building with space for 9 cars.
- 4.1.5 The proposed site layout plan is contained in **Appendix D**, to the rear of this report.
- 4.1.6 It should be noted the proposed development is very similar that that which was proposed under the previous planning application at the site (ref. 111037/FUL/23), in terms of the scale of the development, and the access, parking and servicing arrangements. As set out in **Section 2.3** of this report, the LHA had no objections in principle to the proposed development from a highways perspective.

4.2 Proposed Site Access Arrangements

- 4.2.1 With regards to the proposed dwellings, each will be accessed via a dropped kerb crossing directly from Virgil Street.
- 4.2.2 Access to the new car park associated with the commercial building will be accessed via a circa 3m wide kerbed bellmouth junction, also off Virgil Street. The width of the car park is considered to be appropriate when having regard to the size of the car park and the likely limited occasions when two vehicles would meet at the entrance. However, even on the very limited occasions when this does occur, a waiting vehicle



on Virgil Street is not considered to have an impact on its operation, given that it is a cul-de-sac with no through traffic.

- 4.2.3 The car park entrance will be gated; however, it should be noted that the gates will be opened in the morning for the duration of the day and then closed at night for security reasons. It is not considered necessary to set the gates back from the location shown on the basis that a car sitting on Virgil Street for the purpose of opening / closing the gates once per day would not cause any highway-related issues, especially given the location of the access at the end of the cul-de-sac.

Proposed Adoption Limits

- 4.2.4 The extent of the application site that is proposed to be offered to the LHA for adoption as part of the Section 38 (S38) agreement is illustrated on **Drawing Number 3156-01-ATR01 Rev A** in **Appendix E**.
- 4.2.5 During discussions with the LHA following the submission of the previous planning application (ref. 111037/FUL/23), the LHA confirmed that these adoption limits were acceptable in principle.

Stage 1 Road Safety Audit (RSA)

- 4.2.6 As set out in **Section 2.3** of this report, a Stage 1 RSA has previously been undertaken in respect of the proposals relating to application reference 111037/FUL/23. The Stage 1 RSA was undertaken in August 2023 by Highways Associates, an independent firm who specialises in RSA's.
- 4.2.7 Given the similarities between the development proposed as part of application reference 111037/FUL/23 and currently proposed development, it is considered that this RSA remains applicable and has therefore been considered in the context of this planning application.
- 4.2.8 The RSA, which is contained in **Appendix A**, raises only one problem / recommendation, which relates to the potential for conflicts to occur due to the presence of on-street parking along Virgil Street, within the vicinity of the proposed turning head and residential parking spaces. The RSA therefore recommends that advice is sought from the local authority and if necessary, implement parking restrictions to ensure sufficient access is maintained.



- 4.2.9 As set out in **Section 2.4** of this report, a TRO regime along Virgil Street is currently being progressed, and a draft TRO has recently been advertised by TMBC (see **Appendix C**). It should also be noted that the Applicant is committed to supporting the implementation of an appropriate TRO regime to Virgil Street that responds to the access requirements of the proposed development.

4.3 Proposed Car Parking Arrangements – Residential Use

- 4.3.1 TMBC's Supplementary Planning Document 3 (SPD3), '*Parking Standards and Design*' sets out TMBC's adopted parking standards for new development.
- 4.3.2 For C3 residential developments of between 2-3 bedrooms in Area Type B, a maximum of 2 spaces should be provided per dwelling.
- 4.3.3 As shown on the proposed site layout plan in **Appendix D**, each dwelling has 1 allocated parking space, each of which will be accommodated within a 5.3m x 3.5m single garage. The proposed garages exceed the minimum garage size of 4.8m x 2.4m for residential parking, as set out in section 7.3 of TMBC's SPD3.
- 4.3.4 Whilst the residential car parking provision is within TMBC's maximum parking standards, paragraph 5.1.2 of TMBC's SPD3 states:

"Where a developer seeks to provide a lower or higher level of parking than the standard set down in the Core Strategy this will need to be fully justified and will need to demonstrate what measures e.g. design, location or operation are to be taken to minimise the need for parking."

- 4.3.5 With respect to the above, the following sections demonstrate that the proposed level of parking for the proposed dwellings would be sufficient and would not result in overspill parking on the local highway network.

Local Car Ownership Levels – Census Data

- 4.3.6 The 2021 census data has been interrogated to determine the existing local car ownership levels around the site.
- 4.3.7 Data for the lower super output area (within which the site lies) has been obtained. This will therefore give an indication of how many cars might be owned by occupants of the proposed redevelopment.



- 4.3.8 **Table 4.1** below shows the area covered by this output area and the census data on car availability.

Table 4.1 – 2021 Census Data – Local Car Ownership Level

Car / Van Availability	E00181641	
All Households	250	
No Cars or Vans in Household	110	
1 Car or Van in Household	118	
2 Cars or Vans in Household	20	
3 Cars or Vans in Household	2	
All Cars or Vans in Household	164	
Percentage Car Ownership	66%	

- 4.3.9 The data demonstrates that car ownership is at only 66% within the local Census output area.
- 4.3.10 If this percentage is applied to the proposed redevelopment, comprising of 4 dwellings, this would give rise to a maximum parking demand of up to 3 spaces in total.
- 4.3.11 The provision of 1 space per dwelling (100% provision) is therefore considered to be sufficient to accommodate the anticipated car ownership levels of future occupiers.

Accessibility of the Site by Non-Car Travel Modes

- 4.3.12 As outlined in **Chapter 3**, the site is well located with very good access to local facilities within and surround Manchester City Centre and non-car modes of transport.
- 4.3.13 There are 3 bus stops located within less than a 300m walk distance to / from the site which provide good quality, frequent services to a range of destinations. Deansgate Railway Station and Cornbrook Tram Stop are also located within walking distance to the application site which also provide frequent services surrounding Manchester and connections to destinations nationally.

- 4.3.14 Moreover, the local highway network provides high quality pedestrian and cycle infrastructure in the form of footways, on and off-road cycle routes, pedestrian crossing points and street lighting.
- 4.3.15 In these circumstances, the requirement for car ownership is considerably reduced (as evidenced by Census data – see above) and the use of these more sustainable travel modes could be encouraged further still amongst prospective residents through Travel Plan measures that could be secured and developed by a suitably worded planning condition.

Government Research

- 4.3.16 The DCLG published a report entitled “*Residential Car Parking Research*” in May 2007. This document summarises the outcome of detailed Government research into typical car ownership levels at different types of residential development in different areas. The research summarised within this document is reproduced in **Table 4.2**.

Table 4.2 – DCLG’S 2001 Average Car Ownership Values

Table 2: 2001 Average Car Ownership Values ¹⁰												
2001	Remote Rural		Rural		Suburban		Urban		City Centre		Inner London	
Number of Rooms	Flats	Houses	Flats	Houses	Flats	Houses	Flats	Houses	Flats	Houses	Flats	Houses
1	X	X	X	X	0.4-0.9	X	0.4-0.8	X	0.3-0.6	X	0.4-0.6	X
2	X	X	0.6-1.0	X	0.6-0.9	X	0.5-0.7	X	0.4-0.6	X	0.5-0.6	X
3	0.7-0.9	0.8-1.1	0.6-1.0	0.9-1.2	0.6-0.8	0.8-1.1	0.5-0.7	0.7-1.0	0.4-0.6	0.6-0.9	0.6-0.6	0.7-0.9
4	0.7-1.0	1.0-1.2	0.7-1.1	1.0-1.2	0.7-0.9	0.9-1.1	0.7-0.8	0.8-1.0	0.5-0.8	0.6-0.9	0.7-0.8	0.8-0.9
5	1.2-1.5	1.2-1.4	1.0-1.4	1.2-1.5	0.9-1.2	1.0-1.4	0.8-1.0	0.9-1.2	0.7-0.9	0.8-1.1	0.8-0.9	0.9-1.1
6	1.2-1.8	1.3-1.6	1.3-1.8	1.4-1.7	1.0-1.5	1.1-1.5	0.9-1.3	1.0-1.3	0.8-1.2	0.9-1.2	0.9-1.0	1.0-1.2
7	X	1.6-1.8	X	1.6-1.9	X	1.4-1.8	X	1.2-1.6	X	1.1-1.4	X	1.1-1.3
8	X	1.8-2.2	X	2.0-2.3	X	1.7-2.1	X	1.5-1.8	X	1.3-1.7	X	1.3-1.6

‘Rooms’ do not include bathrooms, toilets, halls or landings, or rooms that can only be used for storage. All other rooms, for example, kitchens, living rooms, bedrooms, utility rooms and studies are counted.

- 4.3.17 As demonstrated in **Table 4.2**, a typical, urban 3-bedroomed houses with 4 ‘habitable’ rooms (i.e. 3-bedrooms and a shared living room / kitchen) is likely to have a car ownership level of only 0.8-1.0 cars per unit.
- 4.3.18 The proposed level of parking at the site therefore reflects the level of parking demand that typical urban houses have been found to give rise to the DCLG.

Local Parking Policy

- 4.3.19 In addition, the Civic Quarter Area Action Plan (CQAAP) was adopted on 25 January 2023 which sets out *‘a vision, masterplan and strategy for the comprehensive regeneration and future development of the Civic Quarter, with a presumption in favour of sustainable development at its heart’*.
- 4.3.20 Whilst the application site sits just outside of the CQAAP boundary, it is nonetheless considered that the general objectives of the document are applicable to the wider area.
- 4.3.21 Policy CQ10 of the CQAAP (Movement, Permeability and Parking) sets out a parking standard of just 0.2 spaces per dwelling which, when applied to the proposed 4 dwellings, would equate to a parking requirement of just 1 space.
- 4.3.22 When the above factors are considered, the evidence strongly indicates that the proposed residential car parking provision will be more than sufficient to cater for the proposed scheme.

4.4 Proposed Car Parking Arrangements – Commercial Use

- 4.4.1 TMBC's SPD3 sets out that for business development in Area Type B, a maximum of 1 space per 32m² Gross Floor Area (GFA) should be provided. When applied to the total proposed GFA of the office use of the site (i.e. 870m² in total, which is inclusive of the existing 435m² of office use on the ground floor and the proposed 435m² of office use on the first floor), this equates to a maximum parking requirement of up to 27 spaces.
- 4.4.2 If the standards are applied to the total proposed gross internal area (GIA) of the Class E(g)(i) (office) use of the site, which is 802m², then the maximum parking requirement is less (i.e. a requirement for up to 25 spaces).
- 4.4.3 As shown on the proposed site layout plan in **Appendix D**, a total of 9 car parking spaces are proposed, which therefore falls within TMBC's maximum standards.
- 4.4.4 With respect to paragraph 5.1.2 of TMBC's SPD3, the following sections demonstrate that the proposed level of parking for the existing and proposed commercial use would be sufficient and would work towards encouraging staff to utilise more sustainable, active modes of travel when accessing the application site.



Accessibility of the Site by Non-Car Travel Modes

- 4.4.5 As outlined above in relation to the residential parking provision, and in **Chapter 3**, the site is very sustainably located in relation to local residential areas and infrastructure that facilitates non-car modes of transport.
- 4.4.6 As such, this provides a realistic opportunity for staff to utilise these sustainable alternatives and thereby reduce the car parking demand associated with staff accordingly.
- 4.4.7 It is considered that the use of these existing sustainable travel modes could be encouraged further still amongst staff through Travel Plan measures that could be secured and developed by a suitably worded planning condition attached to the grant of any future planning permission for the proposed development.

Parking Surveys and Staff Travel Surveys

- 4.4.8 On 14, 15 and 16 December 2022, parking occupancy surveys were undertaken within the existing on-site car park which accommodates 14 car parking spaces.
- 4.4.9 The results of this survey are summarised in **Table 4.3**.

Table 4.3 – Parking Occupancy Survey Results of the On-site Car Park

Day	Time	Number of Cars Parked
Wednesday 14 th December 2022	09:00	0
	13:00	0
	17:00	2
Thursday 15 th December 2022	09:00	0
	13:30	4
	17:00	1
Friday 16 th December 2022	09:30	0
	13:30	1
	17:30	0

- 4.4.10 The results presented in **Table 4.3** demonstrate that a maximum demand of four cars has been observed at the existing site. At the time of surveys, the first floor was unoccupied and so only the ground floor offices were in operation.
- 4.4.11 Based on the assumption that the proposed first floor office space would generate a similar level of parking demand to the ground floor, then it can be demonstrated that the total existing and proposed Class E(g)(i) (office) use could generate up to around

eight cars, which is therefore one space below the proposed provision of nine spaces.

- 4.4.12 It should be noted that on Thursday 15th December 2022, at 13:30, one of the cars that was parked on the site was not associated with the occupier of the building and was parked indiscriminately. The actual car parking demand generated by the ground floor office space at this time was therefore three spaces, not four. Accounting for this, the maximum car parking demand associated with the existing and proposed Class E(g)(i) (office) use would equate to just six spaces, which is 3 spaces less than the proposed provision.
- 4.4.13 In addition to the above, a travel survey questionnaire was undertaken amongst seven members of staff at the existing site between February and March 2023.
- 4.4.14 The results of the survey indicate that 43% of staff currently cycle to work, 43% travel by car and 14% travel by taxi. The results therefore demonstrate that a proportion of staff associated with the ground floor office space currently utilise the alternative, sustainable modes of travel to the private car that are available when accessing the site, and it is not considered that the modal split amongst future staff of the proposed first floor office will be too dissimilar and could be further encouraged through Travel Plan measures, as set out earlier.
- 4.4.15 Furthermore, the surveys also indicate that 57% of the existing staff currently take part in remote / agile working between one and two days per week. Remote working further reduces the requirement for parking across the week and optimises the use of parking spaces by allowing several staff to park in the same spot on different days.

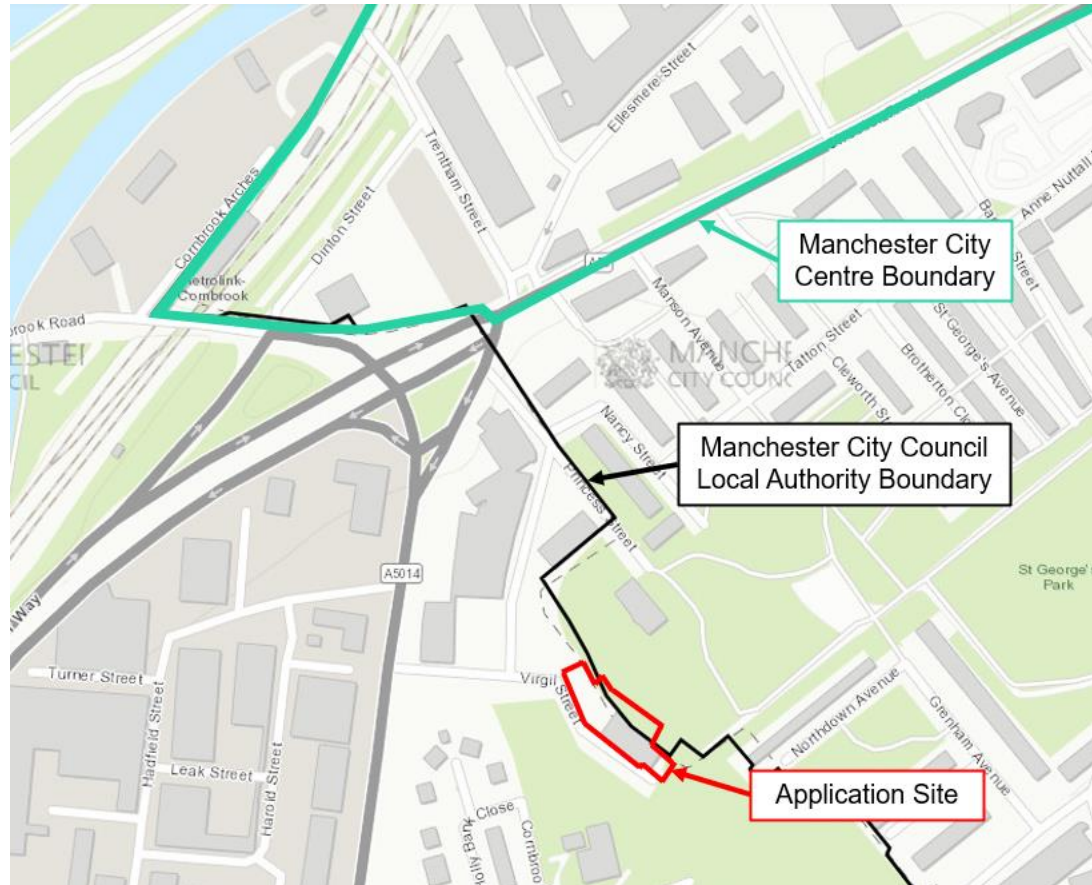
TMBC Parking Standards

- 4.4.16 TMBC's parking standards were adopted in February 2012 and are now therefore over 11 years old. It is therefore considered that the standards do not accurately reflect the latest trends, such as the rise in remote working following the Covid-19 pandemic (as evidenced above), and also the recent paradigm shifts in transport planning, such as the move away from a 'predict and provide' approach and toward a 'decide and provide' based approach, which recognises the importance of design in influencing more sustainable travel choices.

Local Parking Policy

- 4.4.17 Moreover, and as shown on **Image 4.1** below, it is noted that Virgil Street is located on the border of Manchester City Council's (MCC's) administrative boundary (shown in black) and within approximately 250m to the south of the Manchester City Centre defined boundary (shown in green).

Image 4.1 – MCC Administrative Boundary and Manchester City Centre Defined Boundary



- 4.4.18 Appendix B of Manchester City Council's (MCC's) Core Strategy 2012-2027 states:
- "Maximum standards for car parking do not apply to the City Centre as each development in the City Centre will be considered on a case-by-case basis."*
- 4.4.19 In addition, the CQAAP sets out that it seeks to seize the opportunity to encourage a modal shift to sustainable modes of transport and active travel, and one way of doing this is to remove the dominance of existing surface car parking in the area. Accordingly, the parking standards set out in Policy CQ10 of the CQAAP sets out the following:

'Car parking spaces for non-residential floorspace to be considered on a case-by-case basis whilst recognising the need to protect highway safety and residential amenity.'

4.4.20 It is therefore considered that the proposed parking provision accords with this local policy context by not providing excess parking spaces which, by definition, would be likely to encourage the use of the private car. Moreover, it is considered that the proposed parking provision would not have a detrimental impact on highway safety or residential amenity given the highly accessible location of the site.

4.4.21 It should be noted that the LHA raised no objection to the same level of parking provision proposed under application 111037/FUL/23 due to the site's relatively sustainable location, the availability of public transport links and the fact that the streets nearby will be protected by parking restrictions.

4.5 Proposed Cycle Parking Provision

4.5.1 TMBC's SPD3 sets out that for business use development, 1 cycle space per 300m² GFA, or a minimum of 2 cycle spaces, should be provided.

4.5.2 When applied to the total proposed office space (870m²), this equates to the requirement for 3 cycle parking spaces.

4.5.3 As shown on the proposed site layout plan in **Appendix D**, the proposed development includes 6 Sheffield hoops within a secure, gated area to the north of the car park, which provides space for 12 cycles to park. The proposed cycle parking provision therefore exceeds TMBC's minimum standards and will facilitate the ability for staff to travel to the site by cycle.

4.6 Waste Strategy and Refuse Collection

Access for Refuse Collection Vehicles

4.6.1 With regards to servicing, section 5.4 of TMBC's SPD3 states:

"Space to manoeuvre should be suitable for the type and quantity of vehicles which use the space. Vehicles should be able to safely exit the site in forward gear".

4.6.2 All refuse collection vehicles will service the site from the proposed turning head, which is located between the commercial building and the proposed dwellings.



During the discussions for the previous application, the LHA suggested that the turning head should ideally be located at the end of Virgil Street. However, the proposed location is considered to be more suitable as it allows for the most efficient use of space to provide car parking to the east of the site, and it also provides the required amount of manoeuvring space that is needed by a large refuse vehicle to safely and satisfactorily turn around, which would not be achievable if the turning head was placed at the end of Virgil Street. This arrangement was not ultimately objected to by TMBC when the previous application was determined.

- 4.6.3 **Drawing Number 3156-01-ATR01 Rev A** in **Appendix E** shows the ability of a large refuse vehicle to access the site safely and satisfactorily for the purpose of servicing the site. The refuse vehicle used in the tracking reflects that specification of vehicle that the LHA have advised are used in Trafford, specifically a 10.5m long x 2.55m wide Mercedes-Benz Econic 26 2630II 6x2 Rear-Steer Euro 6 Crew Cab Chassis-Cab.

Bin Storage and Collection

- 4.6.4 With regards to the proposed dwellings, bins will be stored in the private external areas to each property. On refuse collection days (once per week), residents will be responsible for transporting the bins from their dwelling to the front of their respective properties, from which refuse collection vehicles will collect the bins directly from Virgil Street. Residents will be responsible for returning their bins to their dwellings once collections have taken place.
- 4.6.5 The bin store for the commercial unit is located to the north-west of the commercial building. On bin collection days, a member of staff will be responsible for ensuring that the access to the bin store is unlocked and accessibility to the waste collection operatives. Following collection, a member of staff will also be responsible for ensuring that the bins are returned to and secured in the bin store.



5.0 FORECAST TRAFFIC IMPACT

5.1 Introduction

5.1.1 This Chapter provides an estimate of the number of trips likely to be generated by the proposed development with reference to the TRICS database (version 7.10.1) and draws conclusions on the likely traffic impact on the local highway network.

5.2 Traffic Generation of the Proposed Residential Dwellings

5.2.1 Average weekday trip rates have been derived for the TRICS land use category, 'Residential: Houses Privately Owned' to forecast the future levels of traffic generated by the proposed residential development. The selection criteria adopted is as follows:

- i) Mainland Britain sites only (excluding Greater London);
- ii) Selection by number of dwellings (between 6 & 20 units);
- iii) Weekday surveys only; and
- iv) 'Edge of Town Centre' and 'Suburban Area' sites only.

5.2.2 The full TRICS output is contained in **Appendix F** and the AM and PM peak hour vehicle trip rates and associated trip demand (based on the proposal for 4 dwellings) are summarised in **Table 5.1**.

Table 5.1 – Trip Rates and Trip Demand – Proposed Residential Development

	Vehicle Trip Rates (per 1 dwelling)			Vehicle Trip Generation (per 4 dwellings)		
	Arrive	Depart	Total	Arrive	Depart	Total
AM Peak Hour (08:00-09:00)	0.219	0.447	0.666	1	2	3
PM Peak Hour (17:00-18:00)	0.36	0.211	0.571	1	1	2

5.2.3 **Table 5.1** shows that, on average, the proposed residential development could generate a total of 3 two-way vehicle trips in the AM peak hour and 2 two-way vehicle trips in the PM peak hour. This equates to 1 two-way trip every 20 minutes in the AM peak hour and 1 two-way trip every 30 minutes in the PM peak hour, on average.

5.3 Traffic Generation of the Proposed Change of Use

- 5.3.1 This section sets out the traffic generation forecasts associated with the existing and proposed Class E(g)(i) office use.
- 5.3.2 To do so, reference has been made to average weekday peak hour trip rates obtained from surveys of schemes of a similar size and nature contained within the TRICS database.
- 5.3.3 The selection criteria that has been applied within TRICS is set out as follows:
- i) TRICS land use category – ‘Employment –Office’;
 - ii) Mainland Britain sites only (excluding Greater London);
 - iii) Selection by GFA (between 250m² and 2,000m²);
 - iv) Weekday surveys only; and
 - v) ‘Edge of Town Centre’ and ‘Suburban Area’ sites only.
- 5.3.4 Due to the fact that the proposed development features a constrained level of parking, a normal comparison with the TRICS-based trip rates from those sites will not yield representative traffic forecasts, because the TRICS-based comparator sites have a higher level of available parking provision.
- 5.3.5 Therefore, the peak hour traffic generation forecasts are based on an alternative methodology whereby the temporal proportions of trips observed at the TRICS comparator sites throughout the 3-hour morning and evening periods is applied to the number of parking spaces (9) that will be provided for the existing and proposed Class E(g)(i) office use space. This methodology essentially assumes that all of the parking spaces will be occupied over the AM period and will be discharged during the PM period.
- 5.3.6 This in turn will present traffic forecasts for the peak hours that are much more reflective of the likely peak hour traffic that would actually be generated by this particular development.
- 5.3.7 The full methodology is contained in **Appendix G** alongside the TRICS-based trip rates for the other multi-modal non-car modes of transport. Using this method, the resultant trip forecasts of the existing and proposed Class E(g)(i) office use are summarised in **Table 5.2**.



Table 5.2 – Forecast Traffic Generation – Existing and Proposed Office Use

Mode	AM Peak Hour (08:00-09:00)		PM Peak Hour (17:00-18:00)		Daily	
	Arrive	Depart	Arrive	Depart	Arrive	Depart
Vehicles	6	1	1	5	10	10
Cyclists	2	0	0	1	2	2
Pedestrians	3	0	1	2	26	27
Public Transport	1	0	0	2	3	2

5.3.8 As shown above, the existing and proposed Class E(g)(i) office use is forecast to generate 7 two-way vehicle movements in the AM peak hour (6 arrivals and 1 departure), and 6 two-way vehicle movements in the PM peak hour (1 arrival and 5 departures), on average.

5.3.9 This level of uplift is considered to be negligible and would not cause detriment to the safety or operation of the local highway network.

5.4 Total Traffic Generation Forecasts

5.4.1 Based on the above, the proposed development (inclusive of the 4No. dwellings and the existing and proposed Class E(g)(i) office use) is forecast to generate a total of 10 two-way vehicle trips in the AM peak hour and 8 two-way vehicle trips in the PM peak hour, on average.

5.4.2 This equates to just one additional two-way vehicle trips every 6 minutes in the AM peak hour and 1 additional two-way trip every 7-8 minutes in the PM peak hour, on average.

5.4.3 The forecast trip generating potential of the site is not therefore considered to give rise to any unacceptable impact on the local highway network.



6.0 SUMMARY AND CONCLUSIONS

6.1 Summary

- 6.1.1 Axis have been appointed by Generation Limited to provide highways and transport advice to accompany a planning application which comprises the development of 4 dwellings, and the partial change of use of an existing commercial building from B8 (storage and distribution) to Class E(g)(i) (office), on land located to the east of Virgil Street, in Old Trafford, Stretford, Manchester.
- 6.1.2 The site is located approximately 2km to the south-west of Manchester City Centre and currently accommodates a two-storey commercial building which is occupied by office uses on the ground floor and B8 use storage space on the first floor. The site also accommodates a car park with 14 spaces.
- 6.1.3 A review of the surrounding highway network has been undertaken in order to determine whether there are any existing highway safety issues. Personal Injury Accident (PIA) data has been analysed using Crashmap which indicates that there is no evidence of an existing highway safety issue within the general vicinity of the site within the most recently available complete 3-year period (2020-2022 inclusive).
- 6.1.4 A high-level review of the accessibility of the site by sustainable travel modes has been undertaken which demonstrates that the site is very well located in relation to local amenities and to public transport infrastructure and is therefore considered to facilitate journeys to the site to be made on foot, by cycle or by public transport.
- 6.1.5 The proposed dwellings will be located on the site of the existing car park. Each proposed dwelling will have three bedrooms and 1 car parking space which will be accessed via a dropped kerb crossing directly from Virgil Street.
- 6.1.6 A new car park is proposed to the south-east of the building with space for 9 cars. This car park will serve the commercial building and will be accessed via a circa 3m wide kerbed bellmouth arrangement from Virgil Street.
- 6.1.7 This HTN demonstrates that the proposed parking provision falls within TMBC's maximum parking standards and that it will be sufficient to cater for the anticipated parking demand whilst also according with local policy which supports the presumption in favour of sustainable development.



- 6.1.8 A total of 12 cycle parking spaces will be provided within a secure, gated area to the north of the proposed car park. This level of provision exceeds TMBC's minimum cycle parking standards and therefore facilitates cycling amongst staff when travelling to the site.
- 6.1.9 A turning head is also proposed within the application site to facilitate refuse collection and delivery vehicles accessing the site. A swept path analysis has been undertaken which demonstrates that a large refuse vehicle can turn around within the turning head safely and satisfactorily for the purpose of servicing the site.
- 6.1.10 The number of trips that could be generated by the proposed development has been forecast based on average trip rates derived from the industry-standard TRICS database. This demonstrates that the proposed development (including the proposed 4 dwellings and the existing and proposed Class E(g)(i) office space) is forecast to generate a total of 10 two-way vehicle trips in the AM peak hour and 8 two-way trips in the PM peak hour.
- 6.1.11 The forecast trip generating potential of the site is not therefore considered to give rise to any unacceptable impact on the local highway network.

6.2 Conclusion

- 6.2.1 With regards to the evidence presented within this report, the proposals are considered to pass the test set out in paragraph 115 of the NPPF which states that development should only be prevented or refused if the traffic impact on the road network would be 'severe'.
- 6.2.2 Thereby, it is considered that there should be no reason to withhold planning permission from a transport perspective.



Appendix A – Stage 1 RSA and Axis’ Design Team Response



Virgil Street, Manchester Proposed Access Works Stage 1 Road Safety Audit

Prepared by



Distribution List

1. Alex Bannister – AxisPed
2. File Copy

REPORT NUMBER 2023/AP/1937

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
FINAL	01/08/23	N Madhavan	R Sawczyn	NS Madhavan	For Issue

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3	ITEMS RAISED BY THIS AUDIT	4
4	AUDIT TEAM STATEMENT.....	5

Appendix A: Drawings and documents provided

Appendix B: Plan of items raised by this audit

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1 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit carried out on highway works relating to the provision of access works relating to a new residential development off Virgil Street Manchester including frontage access and turning head. The audit is written on the presumption that parking provision is in accordance with local authority guidelines and was carried out during July and August 2023.

1.2 The audit team consisted of:

Team Leader: Naresh Madhavan MCIHT, MSoRSA EU RSA Cert. Comp
Director
Highway Associates

Team Member: Robin Sawczyn BEng MCIHT MSoRSA
Senior Road Safety Engineer
Highway Associates

1.3 The audit took place at the offices of Highway Associates, Chester. The Road Safety Audit was undertaken in accordance with the Road Safety Audit Brief provided by Alex Bannister of AxisPed. The Road Safety Audit comprised an examination of the documents provided and these are listed in Appendix A.

The site was visited at the following times/conditions:

Day/Date	Time	Weather Con	Traffic Flow
Sun 30 th Jul 2023	09:30 – 10:10hrs	Wet/Cloudy	Ave

1.4 The terms of reference for this audit are as given in GG119, Design Manual for Roads and Bridges. The scheme has been examined and this report compiled only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

- 1.5 If relevant within this report the generic term “pedestrians” can include walking pedestrians, wheelchair users, dismounted cyclists, the blind, partially sighted, mobility impaired and people with prams or pushchairs. Highway Maintenance Operatives are also included within this term. Where a problem is specific to one or more of these vulnerable groups then appropriate reference will be made in the report.
- 1.6 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems identified. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG119, and in no way imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.
- 1.7 This Road Safety Audit makes allowance for the fact that strategic decisions on matters such as route choice, junction type, standard of provision and approved Departures from Standards already reflect an appropriate balance of a number of factors including road safety.
- 1.8 The Audit Team have not been made aware of any possible geometric departures or relaxations from standards.
- 1.9 The reader is reminded that a Road Safety Audit is not limited to the new works alone where there are features that are considered by the Audit Team to affect the general safety in the area. Section 3 of this report lists ‘Problems’ identified from the drawings and as a result of the site visit relating to the proposed changes to the highway layout that are directly, or indirectly, related to the area (e.g. features/matters within the proposed works or immediate surrounds which the Audit Team feel should be brought to the attention of the Designer or other organisations even though they might not pose an immediate risk associated with the proposed works), and which are considered by the Audit Team to warrant attention under the subject proposals, generally by the maintaining authority. On occasions there are more sensitive issues or issues that fall outside the audit brief but which are of such a nature that Auditors feel should be specifically brought to the attention of the authorities - such issues, if they arise, are usually dealt with in detail in separate correspondence.

2 ITEMS RAISED BY PREVIOUS AUDITS AND REPORTS

- 2.1 It is understood that no previous road safety audits have been undertaken in relation to this scheme.

3 ITEMS RAISED BY THIS AUDIT

3.1 General

3.1.1 PROBLEM

LOCATION: Throughout the scheme

SUMMARY: On-street parking could cause conflicts

Indiscriminate on-street parking was noted within the vicinity of the proposed turning head and parking space/garages. Should this continue if the development is implemented, concern is expressed that such parking could cause both access/obstruction issues for large emergency service and refuse vehicles and also reduce visibility for manoeuvring vehicles associated with the development increasing the potential for conflicts.

RECOMMENDATION

Advice from the local authority should be sought as to the nature of the problem. If necessary, parking restrictions should be implemented to ensure sufficient access is maintained.

3.2 Non Motorised Road User Provision

No comments at this stage

3.3 Road Signs and Markings

No comments at this stage

3.4 Lighting and Signals

No comments at this stage

3.5 Landscaping

No comments at this stage

3.6 Protective Aids

No comments at this stage

3.7 Surface Characteristics and Drainage

No comments at this stage

4 AUDIT TEAM STATEMENT

We certify that this Audit has been carried out in accordance with the guidelines in GG119.

AUDIT TEAM LEADER

Naresh Madhavan MCIHT MSoRSA EU RSA Cert. Comp
Director
Highway Associates
International House
Aviation Park
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Signed:



Date:

01/08/23

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Signed:



Date:

01/08/23

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Highway Associates

APPENDIX A

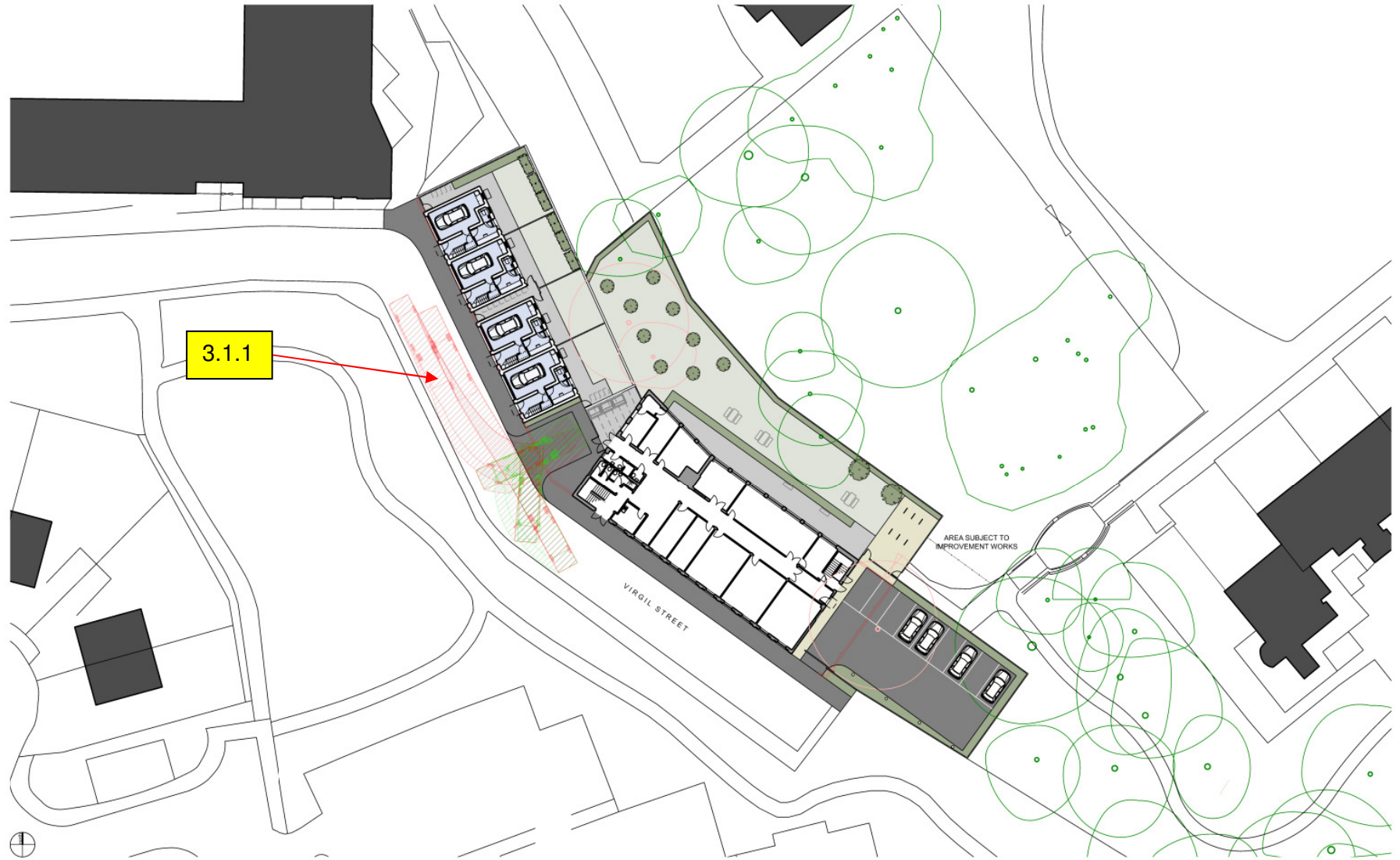
DRAWINGS AND DOCUMENTS PROVIDED

 App B - Proposed Site Plan.pdf

 App C - Dwg No 3156-01-ATR01 (Swept Path Analysis).pdf

APPENDIX B

PLAN OF ITEMS RAISED BY THIS AUDIT




nick moss architects

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 Rev P1 28.03.2023 Planning application issue

VIRGIL STREET
 0213
 PROPOSED SITE PLAN
 1:400 @ A3
 INFORMATION

AL(05)105 P1

RSA Ref No : 2023/AP/1937

RSA Stage : 1

RSA Auditors : Highway Associates

Response By: Alex Bannister (Senior Transport Planner, AXIS)

Paragraph No. in RSA Report	Brief Description of Problem	Problem Accepted (Yes/No)	Recommended Measure Accepted (Yes/No)	Design Team Response
3.1.1	On-street parking along Virgil Street, within the vicinity of the proposed turning head and residential parking spaces, could cause conflicts	Yes	Yes	As detailed in the RSA, it is noted that on-street parking along Virgil Street, within the vicinity of the proposed turning head and parking spaces/garages, could cause both access / obstruction issues for large emergency service vehicles and refuse vehicles, and could also reduce visibility for manoeuvring vehicles associated with the proposed development. The recommendation to to seek advice from the local authority and, if necessary, the implementation of parking restriction Traffic Regulation Orders (TROs) along Virgil Street is accepted. As set out in the submitted Transport Statement, Axis have already sought confirmation from the Local Highway Authority (LHA) regarding the details of the draft TRO scheme along Virgil Street, which is associated with the neighbouring Botanica residential development. In any event, the Applicant is committed to supporting the implementation of an appropriate TRO regime to Virgil Street that responds to the access requirements of the development.



Stage 1 Road Safety Audit - Design Team Response Form

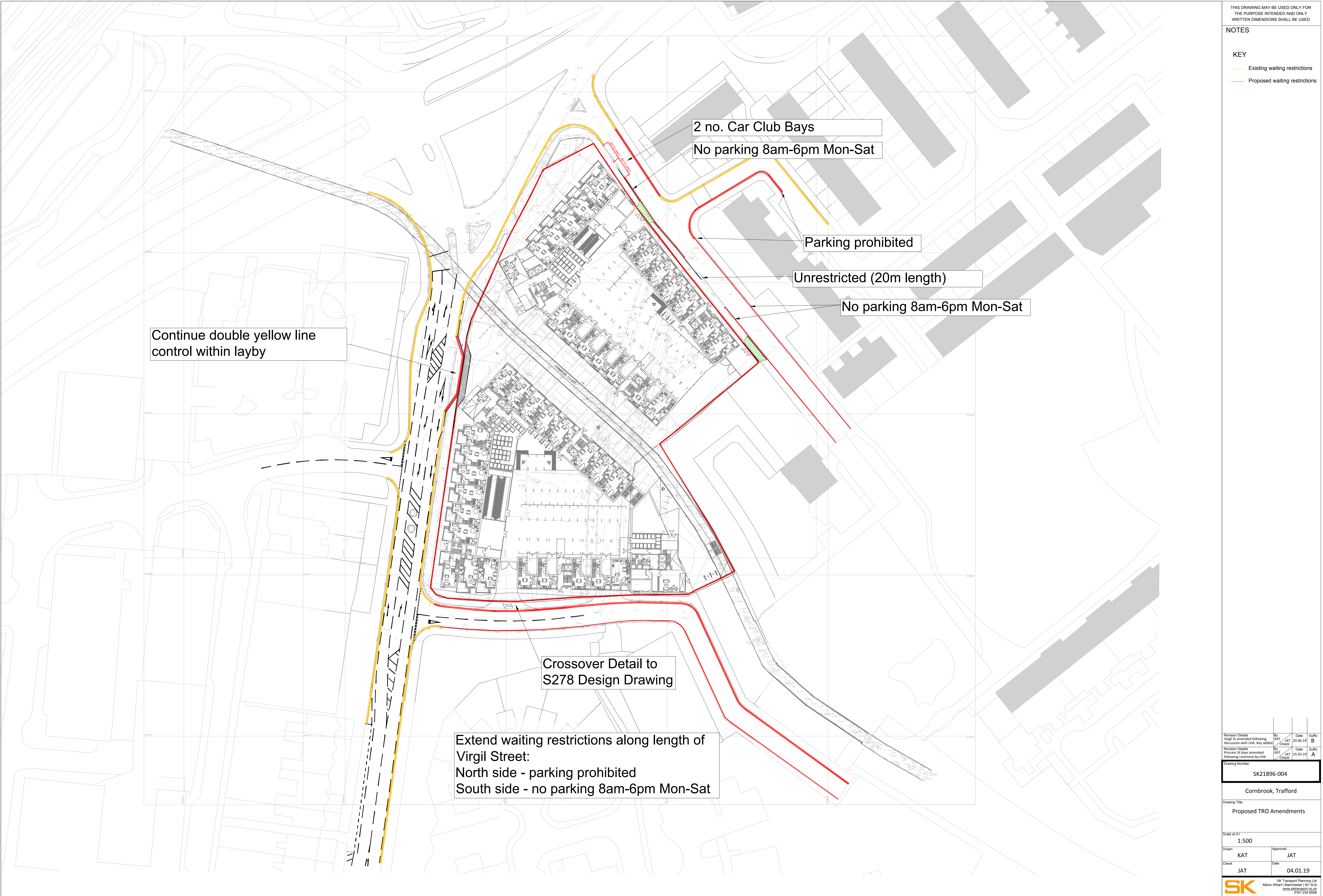
August 2023

Axis Project Ref 3156-01

Proposed Residential Development and Partial Change of Use, Virgil Street, Manchester

Appendix B – Drawing Number SK21896-004 Rev B





THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

NOTES

- KEY
- Existing waiting restrictions
 - Proposed waiting restrictions

Revision Details	By	Date	Suffix
Virgil St amended following discussion with LHA. Key added	KAT	JAT 20.06.19	B
Revision Details	By	Date	Suffix
Proposed SI bays amended following comment by LHA	KAT	JAT 25.03.19	A

Drawing Number SK21896-004

Cornbrook, Trafford

Drawing Title Proposed TRO Amendments

Scale at A1 1:500

Drawn	KAT	Approved	JAT
Check	JAT	Date	04.01.19

Appendix C – Draft TRO



BOROUGH OF TRAFFORD (PROHIBITION OF WAITING AND LOADING AND PROVISION OF PARKING) ORDER 2001 (AMENDMENT NO 250) ORDER 202?

NOTICE IS HEREBY GIVEN that Trafford Borough Council proposes to make an Order under the Road Traffic Regulation Act 1984.

The effect of the Order will be to amend the Borough of Trafford (Prohibition of Waiting and Loading and Provision of Parking) Order 2001, as amended, ("the 2001 Order") by the introduction of the following provisions:

- | | | | |
|----|---|--------|----|
| a) | No waiting at any time | Code - | 7A |
| b) | No Waiting Mon- Sun: 8:00am- 6:00pm | Code - | 7C |
| c) | No waiting, Monday - Saturday, 8am to 6pm | Code - | 6C |

on the lengths of roads specified in Schedules 1a & 1b hereto, by the addition, to the Schedule to the 2001 Order, of the lengths of road specified in Schedules 1a & 1b below.

Schedule 1a – Proposed

Street	Side	From	To	Code
Leys Road, Timperley	East	a point 13 metres northeast of its junction with Park Road	a point 5 metres south of its junction with Carlisle Drive	6C

Schedule 1b - Proposed

Street	Side	From	To	Code
Virgil Street, Old Trafford	North	Its junction with Chester Road	A point 31 metres east of its junction with Chester Road.	7A
Virgil Street, Old Trafford	North	A point 31 metres east of its junction with Chester Road	A point 71 metres east of its junction with Chester Road.	7C
Virgil Street, Old Trafford	North	A point 71 metres east of its junction with Chester Road	A point 124 metres southeast of its junction with Chester Road.	7A
Virgil Street, Old Trafford	North	A point 124 metres southeast of its junction with Chester Road	A point 147 metres southeast of its junction with Chester Road.	7C
Virgil Street, Old Trafford	North	A point 147 metres southeast of its junction with Chester Road	Its cul-de-sac end, including its cul-de-sac end	7A
Virgil Street, Old Trafford	South	Its junction with Chester Road	A point 35 metres east of its junction with Chester Road.	7A
Virgil Street, Old Trafford	South	A point 51 metres east of its junction with Chester Road	Its cul-de-sac end, including its cul-de-sac end	7A
Princess Street, Old Trafford	North east	A point 16 metres southeast of its junction with Chester Road	A point 8 metres southeast of its junction with Nancy Street	7A
Princess Street, Old Trafford	North east	A point 8 metres southeast of its junction with Nancy Street	A point 30 metres southeast of its junction with Nancy Street	7C
Princess Street, Old Trafford	South west	A point 10 metres southeast of its junction with Chester Road	A point 86 metres southeast of its junction with Chester Road	7C

A copy of the Draft Order, together with statements of reasons may be inspected at Altrincham and Stretford Libraries during their normal opening hours. The Notice and plans can also be viewed on-line at: www.trafford.gov.uk/trafficregulationorders

Any objections to the proposals, together with the grounds on which they are made, should be sent, in writing, to the address below or by e-mail to traffordtraffic@amey.co.uk by 19th December 2023.

Dated: 28th November 2023

One Trafford/Trafford Council,
Traffic Section,
Tatton House,
Caldey Road,
Manchester,
M23 9LF

Abbreviated for papers

BOROUGH OF TRAFFORD (PROHIBITION OF WAITING AND LOADING AND PROVISION OF PARKING) ORDER 2001 (AMENDMENT NO 250) ORDER 202?

NOTICE IS HEREBY GIVEN that Trafford Borough Council proposes to make an Order under the Road Traffic Regulation Act 1984.

The effect of the Order will be to amend the Borough of Trafford (Prohibition of Waiting and Loading and Provision of Parking) Order 2001, as amended, ("the 2001 Order") by the introduction of restrictions on lengths of Leys Road, Timperley, Virgil Street and Princess Street, Old Trafford

A copy of the Draft Order, together with statements of reasons may be inspected at Altrincham and Stretford Libraries during their normal opening hours. The Notice and plans can also be viewed on-line at: www.trafford.gov.uk/trafficregulationorders

Any objections to the proposals, together with the grounds on which they are made, should be sent, in writing, to the address below or by e-mail to traffordtraffic@amey.co.uk by 19th December 2023.

Dated: 28th November 2023

One Trafford/Trafford Council, Traffic Section, Tatton House, Caldey Road, Manchester, M23 9LF

BOROUGH OF TRAFFORD (PROHIBITION OF WAITING AND LOADING AND PROVISION OF PARKING) ORDER 2001 (AMENDMENT NO 250) ORDER 202?

Trafford Borough Council in exercise of its powers under Sections 1, 2, 4, 32, 35, 45, 46, 47, 49 and 53 of the Road Traffic Regulation Act 1984, as amended, (the Act of 1984) and Part IV of Schedule 9 to the Act of 1984 and of all other enabling powers and after consultation with the Chief Officer of Police for Greater Manchester in accordance with Part III of Schedule 9 to the Act of 1984, hereby makes the following Order:

PART I - GENERAL

1. This Order shall come into operation on 2? and may be cited as the Borough of Trafford (Prohibition of Waiting and Loading and Provision of Parking Order 2001)(Amendment No 250) Order 202?.
2. This Order forms an amendment to the provisions of the Borough of Trafford (Prohibition of Waiting and Loading and Provision of Parking) Order 2001, as amended, ("the 2001 Order").
3. The Interpretation Act 1978 shall apply for the interpretation of this Order as it applies for the interpretation of an Act of Parliament.
4. The expressions, definitions and interpretations specified in Article 4 of the 2001 Order shall apply equally to this Order.

PART II - AMENDMENTS

5. The 2001 Order is hereby amended to include the lengths of roads specified in Schedule 1 to this Order, with the following provisions denoted by the corresponding codes:-

i) No waiting at any time	Code	-	7A
ii) No Waiting Mon- Sun: 8:00am- 6:00pm	Code	-	7C
iii) No waiting, Monday - Saturday, 8am to 6pm	Code	-	6C
6. The provisions of Articles 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 16A, 17, 18, 19, 20, 21, 22, 23 and 24 of the 2001 Order, as amended, apply to the lengths of road specified in Schedule 1 to this Order.
8. Save as amended by this Order the provisions of the 2001 Order remain in force.

SCHEDULE

Schedule 1a – Proposed

Street	Side	From	To	Code
Leys Road, Timperley	East	a point 13 metres northeast of its junction with Park Road	a point 5 metres south of its junction with Carlisle Drive	6C

Schedule 1b - Proposed

Street	Side	From	To	Code
Virgil Street, Old Trafford	North	Its junction with Chester Road	A point 31 metres east of its junction with Chester Road.	7A
Virgil Street, Old Trafford	North	A point 31 metres east of its junction with Chester Road	A point 71 metres east of its junction with Chester Road.	7C
Virgil Street, Old Trafford	North	A point 71 metres east of its junction with Chester Road	A point 124 metres southeast of its junction with Chester Road.	7A
Virgil Street, Old Trafford	North	A point 124 metres southeast of its junction with Chester Road	A point 147 metres southeast of its junction with Chester Road.	7C
Virgil Street, Old Trafford	North	A point 147 metres southeast of its junction with Chester Road	Its cul-de-sac end, including its cul-de-sac end	7A
Virgil Street, Old Trafford	South	Its junction with Chester Road	A point 35 metres east of its junction with Chester Road.	7A
Virgil Street, Old Trafford	South	A point 51 metres east of its junction with Chester Road	Its cul-de-sac end, including its cul-de-sac end	7A
Princess Street,	North	A point 16 metres southeast of its	A point 8 metres southeast of its	7A

STATEMENT OF REASONS

Following receipt of complaints from local residents, the One Trafford Partnership alongside the Council's Environmental Team have investigated the complaints relating to a vehicle consistently parking on the existing single yellow line on the eastern side of Leys Road between Carlisle Drive and Park Road, Timperley.

As a result of that investigation, it is proposed to add an additional length of restriction into the existing on-street parking consolidation order. It is anticipated that there should be no negative effects as they have been established on the ground, with no queries, for a number of years.

STATEMENT OF REASONS

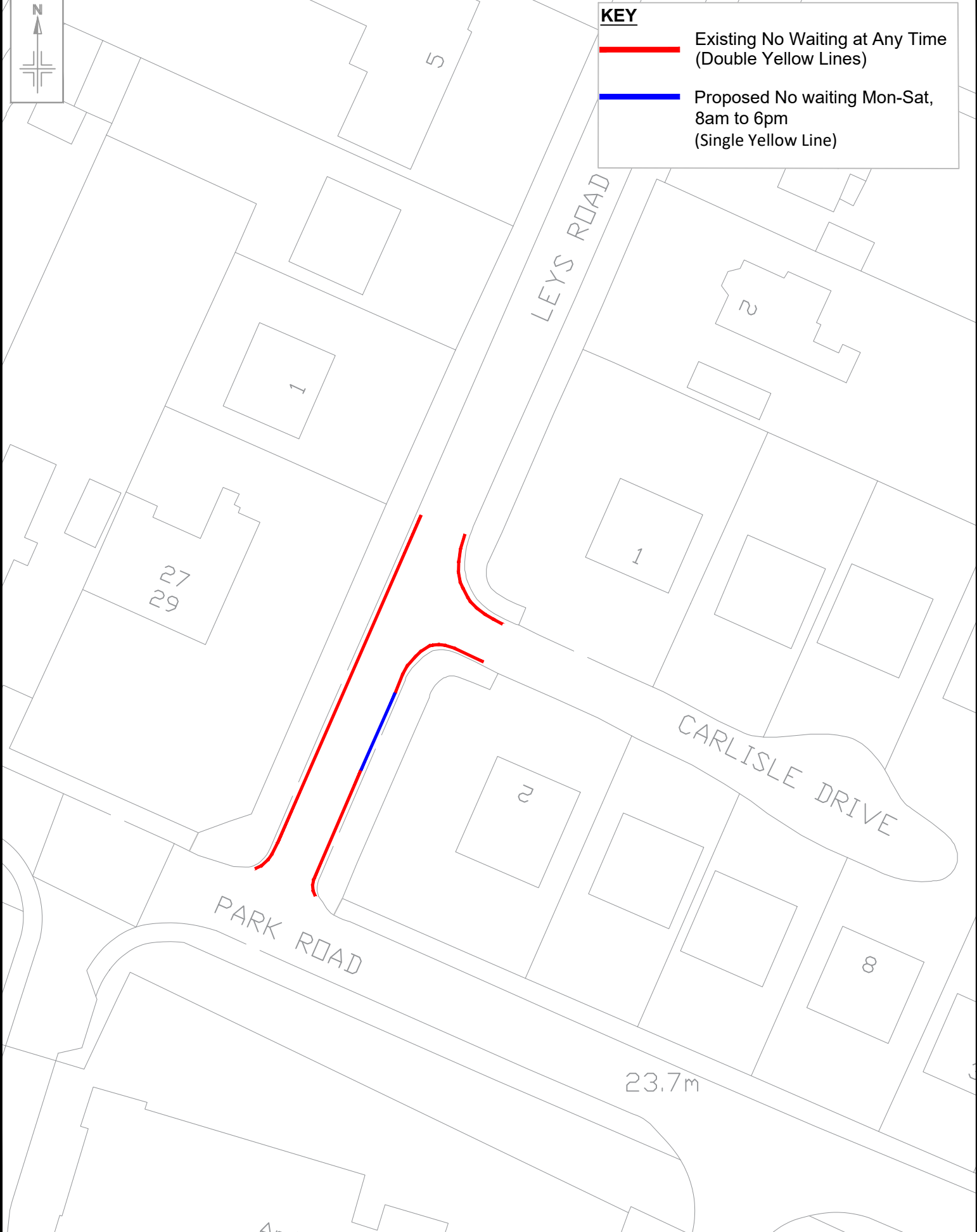
Works at Cornbrook Park, Old Trafford, consisted of the demolition of existing site buildings and the construction of five residential blocks, with parking available within the development.

The Council granted planning permission under ref number 90991/FUL/17 for the development on the land bound by Bridgewater Way, Chester Road, Virgil Street and Princess Street, Old Trafford, however that planning permission requires works to the highway to prevent further parking issues in the area.

It is considered that the proposed waiting restrictions would help improve access for all vehicles, including emergency services.

**KEY**

-  Existing No Waiting at Any Time (Double Yellow Lines)
-  Proposed No waiting Mon-Sat, 8am to 6pm (Single Yellow Line)



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Notes:
No Dimensions to be scaled from this drawing. All Dimensions are to be checked on site.

REV.	DATE	REVISION DETAILS	DRAWN	CHECKED	APPROVED

PROJECT & TITLE
Leys Road, Timperley
Proposed Waiting Restrictions



Excellence
Investment
Efficiency



TRAFFORD COUNCIL
working with
amey

DRAWN WL	CHECKED SW	APPROVED KH
SCALE NTS	DRAWING NO. E9279-01	REVISION 1
DATE Apr '23	FILE PATH R:\BUI\Env\BET&T\CAD Photographs\	



- KEY**
- Proposed new 'No Waiting Mon - Sun 8am - 6pm' restriction.
 - Proposed new 'No Waiting At Any Time' restriction.
 - Existing road markings to remain.
 - Manchester City Council area.

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Trafford Borough Council OS Licence No. 100023172 2019

Rev	Rev details	Drwn	Chkd	Appd	Date
Designed:	AK				Date: 06/04/23
Drawn:	AK				Date: 06/04/23
Checked:	WL				Date: 06/04/23
Approved:	KH				Date: 06/04/23

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Client **ONE TRAFFORD**

Excellence
Investment
Efficiency

Project Name

E9239- CORNBROOK DEVELOPMENT, TRAFFORD

Drawing Title

CONSULTATION PLAN

Original Drg Size : A3	Scale : NTS
Dimensions : -	
Drawing Status CONSULTATION PLAN	Suitability
Drawing No E9239- 001	Revision 0

Appendix D – Proposed Site Plan





nick moss architects

29 Bow Lane
Manchester
M2 4FW

www.nickmossarchitects.com

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revisions + notes:

Rev P1 28.03.2023
Rev P2 07.06.2023
Rev P3 19.01.2024
Rev P4 05.03.2024

Planning application issue
Scale added
Amended to terraced homes
Planting bed introduced against fence to street in northwest corner.



project:
VIRGIL STREET
job number:
0213
title:
PROPOSED SITE PLAN
scale:
1:400 @ A3
issued for:
INFORMATION
drawing number:
AL(05)105 P4

Appendix E – Drawing Number 3156-01- ATR01 Rev A





- Site Boundary
- Approximate Adopted Highway Boundary from Trafford Council's online Adopted Highway Map
- Extent of Application Site to be offered up for adoption by Trafford Council

Design Vehicles:

Mercedes Eonic 2630 LL 6x2 RS

Overall Length	10.500m
Overall Width	2.550m
Overall Body Height	2.670m
Min Body Ground Clearance	0.436m
Track Width	2.550m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	8.280m

Jaguar S-Type

Overall Length	4.939m
Overall Width	1.878m
Overall Body Height	1.474m
Min Body Ground Clearance	0.259m
Max Track Width	1.544m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.000m

0344 8700 007
axis.co.uk

Client
Generation Limited

Project
Virgil Street, Manchester

Drawing Title
Swept Path Analysis

Scale
1:250 @A3

Date
16-05-2023

Dwg no
3156-01-ATR01

Status
Preliminary

Drawn
AB

Checked
LK

Appendix F – TRICS Outputs – Proposed Residential Use



Axis 76 Water Lane Wilmslow

Licence No: 339901

Calculation Reference: AUDIT-339901-230516-0549

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLESSelected regions and areas:

04	EAST ANGLIA	
	PB PETERBOROUGH	1 days
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	PS POWYS	1 days
11	SCOTLAND	
	AG ANGUS	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 6 to 17 (units:)
 Range Selected by User: 6 to 20 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 06/06/22

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

Selected survey days:

Monday	2 days
Tuesday	4 days
Wednesday	1 days
Friday	3 days

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

Selected survey types:

Manual count	10 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 undertaken using machines.

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	8

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	X days - Selected
Servicing vehicles Excluded	10 days - Selected

Secondary Filtering selection:

Use Class:

C3	10 days
----	---------

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	3 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	6 days
1.1 to 1.5	4 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	10 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	10 days
-----------------	---------

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

Axis 76 Water Lane Wilmslow

Licence No: 339901

LIST OF SITES relevant to selection parameters

1	AC-03-A-02	DETACHED		CHESHIRE WEST & CHESTER
	WHITCHURCH ROAD			
	CHESTER			
	BOUGHTON HEATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	11		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
2	AG-03-A-01	BUNGALOWS/DET.		ANGUS
	KEPTIE ROAD			
	ARBROATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	7		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
3	MS-03-A-03	DETACHED		MERSEYSIDE
	BEMPTON ROAD			
	LIVERPOOL			
	OTTERSPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	15		
	Survey date: FRIDAY	21/06/13		Survey Type: MANUAL
4	NY-03-A-13	TERRACED HOUSES		NORTH YORKSHIRE
	CATTERICK ROAD			
	CATTERICK GARRISON			
	OLD HOSPITAL COMPOUND			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	10		
	Survey date: WEDNESDAY	10/05/17		Survey Type: MANUAL
5	PB-03-A-03	DETACHED		PETERBOROUGH
	PETERBOROUGH			
	THORPE PARK ROAD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	9		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
6	PS-03-A-01	MIXED HOUSES		POWYS
	BRYN GLAS			
	WELSHPOOL			
	Edge of Town Centre			
	Residential Zone			
	Total No of Dwellings:	16		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL
7	SF-03-A-04	DETACHED & BUNGALOWS		SUFFOLK
	NORMANSTON DRIVE			
	LOWESTOFT			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	7		
	Survey date: TUESDAY	23/10/12		Survey Type: MANUAL
8	ST-03-A-06	SEMI-DET. & TERRACED		STAFFORDSHIRE
	STANFORD ROAD			
	WOLVERHAMPTON			
	BLAKENHALL			
	Edge of Town Centre			
	No Sub Category			
	Total No of Dwellings:	17		
	Survey date: FRIDAY	09/05/14		Survey Type: MANUAL

Axis 76 Water Lane Wilmslow

Licence No: 339901

LIST OF SITES relevant to selection parameters (Cont.)

9	TW-03-A-02	SEMI-DETACHED	TYNE & WEAR
	WEST PARK ROAD		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL
10	WK-03-A-01	TERRACED/SEMI/DET.	WARWICKSHIRE
	ARLINGTON AVENUE		
	LEAMINGTON SPA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	6	
	Survey date: FRIDAY	21/10/11	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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Total People to Total Vehicles ratio (all time periods and directions): 1.80

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	10	11	0.105	10	11	0.342	10	11	0.447
08:00 - 09:00	10	11	0.219	10	11	0.447	10	11	0.666
09:00 - 10:00	10	11	0.132	10	11	0.184	10	11	0.316
10:00 - 11:00	10	11	0.175	10	11	0.149	10	11	0.324
11:00 - 12:00	10	11	0.167	10	11	0.272	10	11	0.439
12:00 - 13:00	10	11	0.281	10	11	0.272	10	11	0.553
13:00 - 14:00	10	11	0.254	10	11	0.281	10	11	0.535
14:00 - 15:00	10	11	0.193	10	11	0.211	10	11	0.404
15:00 - 16:00	10	11	0.263	10	11	0.219	10	11	0.482
16:00 - 17:00	10	11	0.281	10	11	0.175	10	11	0.456
17:00 - 18:00	10	11	0.360	10	11	0.211	10	11	0.571
18:00 - 19:00	10	11	0.281	10	11	0.246	10	11	0.527
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.711			3.009			5.720

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

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

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Parameter summary

Trip rate parameter range selected:	6 - 17 (units:)
Survey date date range:	01/01/10 - 06/06/22
Number of weekdays (Monday-Friday):	10
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TAXIS**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	10	11	0.000	10	11	0.000	10	11	0.000
08:00 - 09:00	10	11	0.026	10	11	0.026	10	11	0.052
09:00 - 10:00	10	11	0.000	10	11	0.000	10	11	0.000
10:00 - 11:00	10	11	0.009	10	11	0.009	10	11	0.018
11:00 - 12:00	10	11	0.009	10	11	0.009	10	11	0.018
12:00 - 13:00	10	11	0.009	10	11	0.009	10	11	0.018
13:00 - 14:00	10	11	0.009	10	11	0.009	10	11	0.018
14:00 - 15:00	10	11	0.009	10	11	0.000	10	11	0.009
15:00 - 16:00	10	11	0.009	10	11	0.018	10	11	0.027
16:00 - 17:00	10	11	0.000	10	11	0.000	10	11	0.000
17:00 - 18:00	10	11	0.000	10	11	0.000	10	11	0.000
18:00 - 19:00	10	11	0.009	10	11	0.009	10	11	0.018
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.089			0.089			0.178

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES 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	10	11	0.009	10	11	0.009	10	11	0.018
08:00 - 09:00	10	11	0.035	10	11	0.035	10	11	0.070
09:00 - 10:00	10	11	0.009	10	11	0.009	10	11	0.018
10:00 - 11:00	10	11	0.000	10	11	0.000	10	11	0.000
11:00 - 12:00	10	11	0.000	10	11	0.000	10	11	0.000
12:00 - 13:00	10	11	0.000	10	11	0.000	10	11	0.000
13:00 - 14:00	10	11	0.000	10	11	0.000	10	11	0.000
14:00 - 15:00	10	11	0.000	10	11	0.000	10	11	0.000
15:00 - 16:00	10	11	0.000	10	11	0.000	10	11	0.000
16:00 - 17:00	10	11	0.000	10	11	0.000	10	11	0.000
17:00 - 18:00	10	11	0.009	10	11	0.009	10	11	0.018
18:00 - 19:00	10	11	0.000	10	11	0.000	10	11	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.062			0.062			0.124

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS**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	10	11	0.000	10	11	0.044	10	11	0.044
08:00 - 09:00	10	11	0.000	10	11	0.009	10	11	0.009
09:00 - 10:00	10	11	0.000	10	11	0.009	10	11	0.009
10:00 - 11:00	10	11	0.009	10	11	0.009	10	11	0.018
11:00 - 12:00	10	11	0.009	10	11	0.009	10	11	0.018
12:00 - 13:00	10	11	0.000	10	11	0.000	10	11	0.000
13:00 - 14:00	10	11	0.009	10	11	0.000	10	11	0.009
14:00 - 15:00	10	11	0.000	10	11	0.000	10	11	0.000
15:00 - 16:00	10	11	0.035	10	11	0.000	10	11	0.035
16:00 - 17:00	10	11	0.026	10	11	0.000	10	11	0.026
17:00 - 18:00	10	11	0.009	10	11	0.000	10	11	0.009
18:00 - 19:00	10	11	0.009	10	11	0.009	10	11	0.018
19:00 - 20:00	1	7	0.000	1	7	0.000	1	7	0.000
20:00 - 21:00	1	7	0.000	1	7	0.000	1	7	0.000
21:00 - 22:00	1	7	0.000	1	7	0.000	1	7	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.106			0.089			0.195

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTS**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	10	11	0.149	10	11	0.386	10	11	0.535
08:00 - 09:00	10	11	0.333	10	11	0.649	10	11	0.982
09:00 - 10:00	10	11	0.175	10	11	0.228	10	11	0.403
10:00 - 11:00	10	11	0.202	10	11	0.175	10	11	0.377
11:00 - 12:00	10	11	0.202	10	11	0.281	10	11	0.483
12:00 - 13:00	10	11	0.377	10	11	0.368	10	11	0.745
13:00 - 14:00	10	11	0.272	10	11	0.325	10	11	0.597
14:00 - 15:00	10	11	0.263	10	11	0.254	10	11	0.517
15:00 - 16:00	10	11	0.395	10	11	0.289	10	11	0.684
16:00 - 17:00	10	11	0.360	10	11	0.281	10	11	0.641
17:00 - 18:00	10	11	0.439	10	11	0.254	10	11	0.693
18:00 - 19:00	10	11	0.342	10	11	0.316	10	11	0.658
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.509			3.806			7.315

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES 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	10	11	0.070	10	11	0.105	10	11	0.175
08:00 - 09:00	10	11	0.088	10	11	0.211	10	11	0.299
09:00 - 10:00	10	11	0.035	10	11	0.070	10	11	0.105
10:00 - 11:00	10	11	0.044	10	11	0.114	10	11	0.158
11:00 - 12:00	10	11	0.105	10	11	0.096	10	11	0.201
12:00 - 13:00	10	11	0.096	10	11	0.123	10	11	0.219
13:00 - 14:00	10	11	0.132	10	11	0.167	10	11	0.299
14:00 - 15:00	10	11	0.123	10	11	0.114	10	11	0.237
15:00 - 16:00	10	11	0.193	10	11	0.105	10	11	0.298
16:00 - 17:00	10	11	0.132	10	11	0.061	10	11	0.193
17:00 - 18:00	10	11	0.237	10	11	0.096	10	11	0.333
18:00 - 19:00	10	11	0.105	10	11	0.079	10	11	0.184
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.360			1.341			2.701

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL BUS/TRAM PASSENGERS**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	10	11	0.026	10	11	0.000	10	11	0.026
08:00 - 09:00	10	11	0.000	10	11	0.000	10	11	0.000
09:00 - 10:00	10	11	0.000	10	11	0.000	10	11	0.000
10:00 - 11:00	10	11	0.000	10	11	0.000	10	11	0.000
11:00 - 12:00	10	11	0.000	10	11	0.000	10	11	0.000
12:00 - 13:00	10	11	0.018	10	11	0.000	10	11	0.018
13:00 - 14:00	10	11	0.000	10	11	0.000	10	11	0.000
14:00 - 15:00	10	11	0.000	10	11	0.000	10	11	0.000
15:00 - 16:00	10	11	0.000	10	11	0.009	10	11	0.009
16:00 - 17:00	10	11	0.000	10	11	0.000	10	11	0.000
17:00 - 18:00	10	11	0.000	10	11	0.018	10	11	0.018
18:00 - 19:00	10	11	0.000	10	11	0.000	10	11	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.044			0.027			0.071

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS**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	10	11	0.026	10	11	0.000	10	11	0.026
08:00 - 09:00	10	11	0.000	10	11	0.000	10	11	0.000
09:00 - 10:00	10	11	0.000	10	11	0.000	10	11	0.000
10:00 - 11:00	10	11	0.000	10	11	0.000	10	11	0.000
11:00 - 12:00	10	11	0.000	10	11	0.000	10	11	0.000
12:00 - 13:00	10	11	0.018	10	11	0.000	10	11	0.018
13:00 - 14:00	10	11	0.000	10	11	0.000	10	11	0.000
14:00 - 15:00	10	11	0.000	10	11	0.000	10	11	0.000
15:00 - 16:00	10	11	0.000	10	11	0.009	10	11	0.009
16:00 - 17:00	10	11	0.000	10	11	0.000	10	11	0.000
17:00 - 18:00	10	11	0.000	10	11	0.018	10	11	0.018
18:00 - 19:00	10	11	0.000	10	11	0.000	10	11	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.044			0.027			0.071

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Total People to Total Vehicles ratio (all time periods and directions): 1.80

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	10	11	0.246	10	11	0.535	10	11	0.781
08:00 - 09:00	10	11	0.421	10	11	0.868	10	11	1.289
09:00 - 10:00	10	11	0.211	10	11	0.307	10	11	0.518
10:00 - 11:00	10	11	0.254	10	11	0.298	10	11	0.552
11:00 - 12:00	10	11	0.316	10	11	0.386	10	11	0.702
12:00 - 13:00	10	11	0.491	10	11	0.491	10	11	0.982
13:00 - 14:00	10	11	0.412	10	11	0.491	10	11	0.903
14:00 - 15:00	10	11	0.386	10	11	0.368	10	11	0.754
15:00 - 16:00	10	11	0.623	10	11	0.404	10	11	1.027
16:00 - 17:00	10	11	0.518	10	11	0.342	10	11	0.860
17:00 - 18:00	10	11	0.684	10	11	0.368	10	11	1.052
18:00 - 19:00	10	11	0.456	10	11	0.404	10	11	0.860
19:00 - 20:00	1	7	0.000	1	7	0.000	1	7	0.000
20:00 - 21:00	1	7	0.000	1	7	0.000	1	7	0.000
21:00 - 22:00	1	7	0.000	1	7	0.000	1	7	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.018			5.262			10.280

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

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

Appendix G – TRICS Outputs and Traffic Generation Calculations – Existing and Proposed Office Use



Axis 76 Water Lane Wilmslow

Licence No: 339901

Calculation Reference: AUDIT-339901-230516-0548

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

MULTI-MODAL TOTAL VEHICLESSelected regions and areas:

02 SOUTH EAST	
BH BRIGHTON & HOVE	1 days
WS WEST SUSSEX	1 days
04 EAST ANGLIA	
NF NORFOLK	1 days
05 EAST MIDLANDS	
DY DERBY	1 days
06 WEST MIDLANDS	
WK WARWICKSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
NY NORTH YORKSHIRE	1 days
08 NORTH WEST	
GM GREATER MANCHESTER	1 days
09 NORTH	
CB CUMBRIA	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 280 to 1590 (units: sqm)
 Range Selected by User: 250 to 2000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 23/11/22

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

Selected survey days:

Monday	3 days
Tuesday	1 days
Wednesday	1 days
Thursday	1 days
Friday	2 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 undertaken using machines.

Selected Locations:

Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	1

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	1
Residential Zone	3
Built-Up Zone	1
No Sub Category	2

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	7 days - Selected
Servicing vehicles Excluded	3 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	8 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	3 days
25,001 to 50,000	3 days

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

Population within 5 miles:

25,001 to 50,000	2 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	3 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	6 days
1.1 to 1.5	2 days

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

Travel Plan:

No	8 days
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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	8 days
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This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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LIST OF SITES relevant to selection parameters

1	BH-02-A-05	OFFICES	BRIGHTON & HOVE
	ROMAN ROAD		
	HOVE		
	Edge of Town Centre		
	Residential Zone		
	Total Gross floor area:	280 sqm	
	Survey date: WEDNESDAY	04/07/18	Survey Type: MANUAL
2	CB-02-A-02	OFFICE	CUMBRIA
	PORT ROAD		
	CARLISLE		
	Edge of Town Centre		
	Industrial Zone		
	Total Gross floor area:	925 sqm	
	Survey date: FRIDAY	24/06/16	Survey Type: MANUAL
3	DY-02-A-02	REAL ESTATE DEVELOPERS	DERBY
	PRIME PARKWAY		
	DERBY		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	594 sqm	
	Survey date: THURSDAY	21/10/21	Survey Type: MANUAL
4	GM-02-A-10	ACCOUNTANTS	GREATER MANCHESTER
	CHORLEY NEW ROAD		
	BOLTON		
	HEATON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	500 sqm	
	Survey date: MONDAY	19/04/21	Survey Type: MANUAL
5	NF-02-A-02	FINANCIAL PLANNERS	NORFOLK
	NORTH QUAY		
	GREAT YARMOUTH		
	Edge of Town Centre		
	Commercial Zone		
	Total Gross floor area:	894 sqm	
	Survey date: MONDAY	11/09/17	Survey Type: MANUAL
6	NY-02-A-03	DISTRICT COUNCIL OFFICES	NORTH YORKSHIRE
	STATION ROAD		
	RICHMOND		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	1590 sqm	
	Survey date: FRIDAY	06/05/22	Survey Type: MANUAL
7	WK-02-A-02	OFFICES	WARWICKSHIRE
	WHITEHALL ROAD		
	RUGBY		
	Edge of Town Centre		
	Residential Zone		
	Total Gross floor area:	540 sqm	
	Survey date: MONDAY	14/11/22	Survey Type: MANUAL
8	WS-02-A-05	SOCIAL HOUSING COMPANY	WEST SUSSEX
	NORTH STREET		
	WORTHING		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	830 sqm	
	Survey date: TUESDAY	17/05/22	Survey Type: MANUAL

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

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL VEHICLES**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Total People to Total Vehicles ratio (all time periods and directions): 1.65

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 - 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	8	730	0.599	8	730	0.068	8	730	0.667
08:00 - 09:00	8	730	2.345	8	730	0.291	8	730	2.636
09:00 - 10:00	8	730	0.890	8	730	0.445	8	730	1.335
10:00 - 11:00	8	730	0.394	8	730	0.325	8	730	0.719
11:00 - 12:00	8	730	0.222	8	730	0.274	8	730	0.496
12:00 - 13:00	8	730	0.394	8	730	0.753	8	730	1.147
13:00 - 14:00	8	730	0.719	8	730	0.667	8	730	1.386
14:00 - 15:00	8	730	0.274	8	730	0.445	8	730	0.719
15:00 - 16:00	8	730	0.188	8	730	0.548	8	730	0.736
16:00 - 17:00	8	730	0.205	8	730	0.821	8	730	1.026
17:00 - 18:00	8	730	0.274	8	730	1.575	8	730	1.849
18:00 - 19:00	8	730	0.051	8	730	0.325	8	730	0.376
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.555			6.537			13.092

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

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

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Parameter summary

Trip rate parameter range selected:	280 - 1590 (units: sqm)
Survey date range:	01/01/15 - 23/11/22
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TAXIS**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 - 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	8	730	0.017	8	730	0.017	8	730	0.034
08:00 - 09:00	8	730	0.103	8	730	0.086	8	730	0.189
09:00 - 10:00	8	730	0.051	8	730	0.068	8	730	0.119
10:00 - 11:00	8	730	0.000	8	730	0.000	8	730	0.000
11:00 - 12:00	8	730	0.017	8	730	0.017	8	730	0.034
12:00 - 13:00	8	730	0.017	8	730	0.017	8	730	0.034
13:00 - 14:00	8	730	0.034	8	730	0.034	8	730	0.068
14:00 - 15:00	8	730	0.000	8	730	0.000	8	730	0.000
15:00 - 16:00	8	730	0.000	8	730	0.000	8	730	0.000
16:00 - 17:00	8	730	0.000	8	730	0.000	8	730	0.000
17:00 - 18:00	8	730	0.103	8	730	0.103	8	730	0.206
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.342			0.342			0.684

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

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

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Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL OGVS**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 - 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	8	730	0.000	8	730	0.000	8	730	0.000
08:00 - 09:00	8	730	0.000	8	730	0.000	8	730	0.000
09:00 - 10:00	8	730	0.000	8	730	0.000	8	730	0.000
10:00 - 11:00	8	730	0.000	8	730	0.000	8	730	0.000
11:00 - 12:00	8	730	0.000	8	730	0.000	8	730	0.000
12:00 - 13:00	8	730	0.017	8	730	0.017	8	730	0.034
13:00 - 14:00	8	730	0.000	8	730	0.000	8	730	0.000
14:00 - 15:00	8	730	0.000	8	730	0.000	8	730	0.000
15:00 - 16:00	8	730	0.000	8	730	0.000	8	730	0.000
16:00 - 17:00	8	730	0.000	8	730	0.000	8	730	0.000
17:00 - 18:00	8	730	0.000	8	730	0.000	8	730	0.000
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.017			0.034

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

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

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL CYCLISTS**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 - 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	8	730	0.017	8	730	0.000	8	730	0.017
08:00 - 09:00	8	730	0.188	8	730	0.000	8	730	0.188
09:00 - 10:00	8	730	0.000	8	730	0.000	8	730	0.000
10:00 - 11:00	8	730	0.000	8	730	0.000	8	730	0.000
11:00 - 12:00	8	730	0.017	8	730	0.017	8	730	0.034
12:00 - 13:00	8	730	0.000	8	730	0.017	8	730	0.017
13:00 - 14:00	8	730	0.000	8	730	0.000	8	730	0.000
14:00 - 15:00	8	730	0.017	8	730	0.017	8	730	0.034
15:00 - 16:00	8	730	0.000	8	730	0.017	8	730	0.017
16:00 - 17:00	8	730	0.000	8	730	0.017	8	730	0.017
17:00 - 18:00	8	730	0.000	8	730	0.154	8	730	0.154
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.239			0.239			0.478

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

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

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL VEHICLE OCCUPANTS**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 - 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	8	730	0.667	8	730	0.086	8	730	0.753
08:00 - 09:00	8	730	2.636	8	730	0.205	8	730	2.841
09:00 - 10:00	8	730	0.941	8	730	0.513	8	730	1.454
10:00 - 11:00	8	730	0.445	8	730	0.359	8	730	0.804
11:00 - 12:00	8	730	0.240	8	730	0.308	8	730	0.548
12:00 - 13:00	8	730	0.462	8	730	0.890	8	730	1.352
13:00 - 14:00	8	730	0.821	8	730	0.753	8	730	1.574
14:00 - 15:00	8	730	0.342	8	730	0.479	8	730	0.821
15:00 - 16:00	8	730	0.188	8	730	0.616	8	730	0.804
16:00 - 17:00	8	730	0.222	8	730	0.907	8	730	1.129
17:00 - 18:00	8	730	0.171	8	730	1.763	8	730	1.934
18:00 - 19:00	8	730	0.051	8	730	0.377	8	730	0.428
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.186			7.256			14.442

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL PEDESTRIANS**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 - 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	8	730	0.034	8	730	0.000	8	730	0.034
08:00 - 09:00	8	730	0.359	8	730	0.017	8	730	0.376
09:00 - 10:00	8	730	0.222	8	730	0.154	8	730	0.376
10:00 - 11:00	8	730	0.257	8	730	0.531	8	730	0.788
11:00 - 12:00	8	730	0.445	8	730	0.257	8	730	0.702
12:00 - 13:00	8	730	0.582	8	730	0.856	8	730	1.438
13:00 - 14:00	8	730	0.787	8	730	0.565	8	730	1.352
14:00 - 15:00	8	730	0.086	8	730	0.103	8	730	0.189
15:00 - 16:00	8	730	0.051	8	730	0.086	8	730	0.137
16:00 - 17:00	8	730	0.051	8	730	0.240	8	730	0.291
17:00 - 18:00	8	730	0.068	8	730	0.274	8	730	0.342
18:00 - 19:00	8	730	0.000	8	730	0.017	8	730	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.942			3.100			6.042

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

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

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Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL BUS/TRAM PASSENGERS**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 - 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	8	730	0.000	8	730	0.000	8	730	0.000
08:00 - 09:00	8	730	0.154	8	730	0.000	8	730	0.154
09:00 - 10:00	8	730	0.068	8	730	0.000	8	730	0.068
10:00 - 11:00	8	730	0.017	8	730	0.000	8	730	0.017
11:00 - 12:00	8	730	0.000	8	730	0.017	8	730	0.017
12:00 - 13:00	8	730	0.000	8	730	0.017	8	730	0.017
13:00 - 14:00	8	730	0.000	8	730	0.000	8	730	0.000
14:00 - 15:00	8	730	0.000	8	730	0.000	8	730	0.000
15:00 - 16:00	8	730	0.000	8	730	0.000	8	730	0.000
16:00 - 17:00	8	730	0.000	8	730	0.017	8	730	0.017
17:00 - 18:00	8	730	0.000	8	730	0.154	8	730	0.154
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.239			0.205			0.444

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL RAIL PASSENGERS**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 - 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	8	730	0.000	8	730	0.000	8	730	0.000
08:00 - 09:00	8	730	0.017	8	730	0.000	8	730	0.017
09:00 - 10:00	8	730	0.068	8	730	0.000	8	730	0.068
10:00 - 11:00	8	730	0.034	8	730	0.000	8	730	0.034
11:00 - 12:00	8	730	0.000	8	730	0.000	8	730	0.000
12:00 - 13:00	8	730	0.000	8	730	0.000	8	730	0.000
13:00 - 14:00	8	730	0.000	8	730	0.000	8	730	0.000
14:00 - 15:00	8	730	0.000	8	730	0.000	8	730	0.000
15:00 - 16:00	8	730	0.000	8	730	0.034	8	730	0.034
16:00 - 17:00	8	730	0.000	8	730	0.000	8	730	0.000
17:00 - 18:00	8	730	0.000	8	730	0.034	8	730	0.034
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.119			0.068			0.187

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PUBLIC TRANSPORT USERS
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 - 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	8	730	0.000	8	730	0.000	8	730	0.000
08:00 - 09:00	8	730	0.171	8	730	0.000	8	730	0.171
09:00 - 10:00	8	730	0.137	8	730	0.000	8	730	0.137
10:00 - 11:00	8	730	0.051	8	730	0.000	8	730	0.051
11:00 - 12:00	8	730	0.000	8	730	0.017	8	730	0.017
12:00 - 13:00	8	730	0.000	8	730	0.017	8	730	0.017
13:00 - 14:00	8	730	0.000	8	730	0.000	8	730	0.000
14:00 - 15:00	8	730	0.000	8	730	0.000	8	730	0.000
15:00 - 16:00	8	730	0.000	8	730	0.034	8	730	0.034
16:00 - 17:00	8	730	0.000	8	730	0.017	8	730	0.017
17:00 - 18:00	8	730	0.000	8	730	0.188	8	730	0.188
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.359			0.273			0.632

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL PEOPLE**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Total People to Total Vehicles ratio (all time periods and directions): 1.65

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 - 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	8	730	0.719	8	730	0.086	8	730	0.805
08:00 - 09:00	8	730	3.354	8	730	0.222	8	730	3.576
09:00 - 10:00	8	730	1.301	8	730	0.667	8	730	1.968
10:00 - 11:00	8	730	0.753	8	730	0.890	8	730	1.643
11:00 - 12:00	8	730	0.702	8	730	0.599	8	730	1.301
12:00 - 13:00	8	730	1.044	8	730	1.780	8	730	2.824
13:00 - 14:00	8	730	1.609	8	730	1.318	8	730	2.927
14:00 - 15:00	8	730	0.445	8	730	0.599	8	730	1.044
15:00 - 16:00	8	730	0.240	8	730	0.753	8	730	0.993
16:00 - 17:00	8	730	0.274	8	730	1.181	8	730	1.455
17:00 - 18:00	8	730	0.240	8	730	2.379	8	730	2.619
18:00 - 19:00	8	730	0.051	8	730	0.394	8	730	0.445
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			10.732			10.868			21.600

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL CARS**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 - 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	8	730	0.513	8	730	0.017	8	730	0.530
08:00 - 09:00	8	730	2.122	8	730	0.154	8	730	2.276
09:00 - 10:00	8	730	0.770	8	730	0.222	8	730	0.992
10:00 - 11:00	8	730	0.325	8	730	0.257	8	730	0.582
11:00 - 12:00	8	730	0.137	8	730	0.222	8	730	0.359
12:00 - 13:00	8	730	0.325	8	730	0.667	8	730	0.992
13:00 - 14:00	8	730	0.633	8	730	0.582	8	730	1.215
14:00 - 15:00	8	730	0.222	8	730	0.377	8	730	0.599
15:00 - 16:00	8	730	0.154	8	730	0.496	8	730	0.650
16:00 - 17:00	8	730	0.154	8	730	0.770	8	730	0.924
17:00 - 18:00	8	730	0.171	8	730	1.455	8	730	1.626
18:00 - 19:00	8	730	0.034	8	730	0.308	8	730	0.342
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.560			5.527			11.087

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL LGVS**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 - 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	8	730	0.068	8	730	0.034	8	730	0.102
08:00 - 09:00	8	730	0.103	8	730	0.051	8	730	0.154
09:00 - 10:00	8	730	0.068	8	730	0.154	8	730	0.222
10:00 - 11:00	8	730	0.051	8	730	0.068	8	730	0.119
11:00 - 12:00	8	730	0.068	8	730	0.034	8	730	0.102
12:00 - 13:00	8	730	0.034	8	730	0.051	8	730	0.085
13:00 - 14:00	8	730	0.051	8	730	0.051	8	730	0.102
14:00 - 15:00	8	730	0.051	8	730	0.068	8	730	0.119
15:00 - 16:00	8	730	0.034	8	730	0.034	8	730	0.068
16:00 - 17:00	8	730	0.051	8	730	0.051	8	730	0.102
17:00 - 18:00	8	730	0.000	8	730	0.000	8	730	0.000
18:00 - 19:00	8	730	0.017	8	730	0.017	8	730	0.034
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.596			0.613			1.209

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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL MOTOR CYCLES**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 - 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	8	730	0.000	8	730	0.000	8	730	0.000
08:00 - 09:00	8	730	0.017	8	730	0.000	8	730	0.017
09:00 - 10:00	8	730	0.000	8	730	0.000	8	730	0.000
10:00 - 11:00	8	730	0.017	8	730	0.000	8	730	0.017
11:00 - 12:00	8	730	0.000	8	730	0.000	8	730	0.000
12:00 - 13:00	8	730	0.000	8	730	0.000	8	730	0.000
13:00 - 14:00	8	730	0.000	8	730	0.000	8	730	0.000
14:00 - 15:00	8	730	0.000	8	730	0.000	8	730	0.000
15:00 - 16:00	8	730	0.000	8	730	0.017	8	730	0.017
16:00 - 17:00	8	730	0.000	8	730	0.000	8	730	0.000
17:00 - 18:00	8	730	0.000	8	730	0.017	8	730	0.017
18:00 - 19:00	8	730	0.000	8	730	0.000	8	730	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.034			0.068

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.

1. The TRICS Database v7.10.1 was interrogated with the following criteria:

Land Use: Employment
 Sub-Land Use: Offices
 Survey type: Multi-modal sites only
 Regions: All except Greater London and Ireland / Northern Ireland
 Selection by: Gross Floor Area (GFA)
 Min / max range: 280sqm to 1,590sqm
 Date range: 01/01/2015 to 23/11/2022
 Periods: Weekdays only
 Locations: Edge of Town Centre and Suburban Areas
 Other: None

2. Due to the fact that the existing and proposed B1 use will feature a constrained level of parking of 1 space per 96sqm, the comparison with the TRICS-based trip rates from those sites will not yield representative traffic forecasts because the TRICS-based comparator sites typically have a much higher level of available parking provision (1 space per 25sqm).

Therefore, the peak hour traffic generation forecasts are based on an alternative methodology whereby the temporal proportions of trips observed at the TRICS comparator sites throughout the morning and evening periods is applied to the number of parking spaces that will be provided at the proposed development, as follows:

	Arrival Trip Rates	Proportion (%) of peak period	Departures Trip Rates	Proportion (%) of peak period	Arrival to Departure (%)	Departure to Arrival (%)
07:00-08:00	0.599	16%	0.068	8%	90%	10%
08:00-09:00	2.345	61%	0.291	36%	89%	11%
09:00-10:00	0.89	23%	0.445	55%	67%	33%
16:00-17:00	0.205	39%	0.821	30%	20%	80%
17:00-18:00	0.274	52%	1.575	58%	15%	85%
18:00-19:00	0.051	10%	0.325	12%	14%	86%

3. The proposed development features 9 car parking spaces. Therefore, for robustness, if it is assumed that all of these spaces would be occupied during the 3-hour AM period, and all these spaces discharged again during the PM period, then the traffic flows throughout these periods would be as follows (note - departures during the AM period are based on the relationship between the TRICS arrivals and departures in that period and vice-versa for departures in the PM period):

	Arrivals	Departures
07:00-08:00	1	0
08:00-09:00	6	1 (Peak hour)
09:00-10:00	2	1
16:00-17:00	1	3
17:00-18:00	1	5 (Peak hour)
18:00-19:00	0	1

4. With regard to non-car modes of transport, the average trip rates are taken from the attached TRICS results:-

Mode	WEEKDAY AM PEAK (0800 to 0900)		WEEKDAY PM PEAK (1700 to 1800)		DAILY (0700 to 1900)	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Cyclists	0.188	0.000	0.000	0.154	0.239	0.239
Pedestrians	0.359	0.017	0.068	0.274	2.942	3.100
Public Transport	0.171	0.000	0.000	0.188	0.359	0.273

5. The total GFA of the existing and proposed B1 office use will be: 870 sqm

6. The estimated trip generation for each transport mode is therefore as follows:-

Mode	WEEKDAY AM PEAK (0800 to 0900)		WEEKDAY PM PEAK (1700 to 1800)		DAILY (0700 to 1900)	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Vehicles	6	1	1	5	10	10
Cyclists	2	0	0	1	2	2
Pedestrians	3	0	1	2	26	27
Public Transport	1	0	0	2	3	2



axis

Forecast Trip Generation - Existing and Proposed Office Use

March 2024

Proposed Residential Development and Partial Change of Use, Virgil Street,
Manchester

Job No. 3156-01