

2-4 Whitworth Street West BTR

Transport Statement

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Appendix A – Proposed Site Layout
Appendix B – Active Travel Scheme Drawings
Appendix C – TRICS Output

1.0 Introduction

1.1 Background

- 1.1.1 Curtins has been appointed by Glenbrook WWS Limited, Maizelands Limited and Arringford Limited (the Applicant) to provide transport and highways advice in relation to a planning application for a build-to-rent residential development at 2-4 Whitworth Street West in Manchester city centre.
- 1.1.2 The Applicant seeks to obtain Full Planning Permission for the demolition of existing low rise commercial units and erection of a 44-storey residential development with supporting residential amenity, providing 364 new apartments.
- 1.1.3 The proposed site layout is provided in **Appendix A**.

1.2 National Policy

- 1.2.1 The transport vision for the site is to create a sustainable development that promotes a car-free lifestyle, with active and sustainable modes of transport being the first choice for residents and visitors.
- 1.2.2 Paragraph 115 of the National Planning Policy Framework (2023) states that:

“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”
- 1.2.1 In addition to the NPPF, National Planning Practice Guidance (NPPG) clarifies the over-arching principles on Travel Plans, Transport Assessments and Transport Statements, provides potential benefits of the documents, and re-iterates the circumstances in which either document would usually be required.
- 1.2.2 The NPPG has been considered in the production of this TS and the accompanying Interim Travel Plan (Document Reference: **085996-CUR-XX-XX-T-TP-00002**). A Waste Management Strategy (Document Reference: **085996-CUR-XX-XX-T-TP-00003**) has also been prepared to support the planning application.
- 1.2.1 As demonstrated throughout this report, there are no identified existing highway safety issues, the development will be car-free, prioritising and encouraging more sustainable modes of travel, and therefore resulting in a limited number of vehicular trips generated during the network peak hours.
- 1.2.2 This TS demonstrates that the site is highly accessible by active and sustainable modes of travel. The development proposals therefore apply the principles set out in the NPPF and NPPG and will seek to create a sustainable development and make a positive contribution to the local area.

1.3 Purpose of the Report

- 1.3.1 This Transport Statement (TS) has been prepared to inform Highway Officers at Manchester City Council (MCC) as the Local Highway Authority (LHA) of the development proposals and their potential impact on the surrounding area from a transport and highways perspective.
- 1.3.2 The TS is supported by a range of appendices, with drawings showing the parking and servicing arrangements and swept path assessments. Additionally, the TS is supported by an Interim Travel Plan with measures and initiatives to encourage active and sustainable travel, and a Waste Management Strategy to ensure the safe and efficient operation of the site.

1.4 Scope of the Report

- 1.4.1 The scope of this report is consistent with local and national transport planning policy and guidance.
- 1.4.2 Curtins met with MCC Highways on 17th July 2024 and 9th September 2024, with a summary of the key points agreed below:
- A car-free development is supported by MCC Highways.
 - Small deliveries (LGVs), servicing of the sub-station, and resident move in/out are proposed via Cameron Street. A turning area for vehicles up to 7.5t would be provided at the south end of the street, sensitively within the landscaping area. A layby or on-street loading area would be provided on Cameron Street, either by this development or the approved development to the other side of Cameron Street. This was accepted in-principle by MCC Highways.
 - Larger delivery vehicles have been agreed in principle to use Hewitt Street, using the same loading area as refuse vehicles.
 - MCC Highways in-principle accepted the collection of waste from Hewitt Street, and Curtins agreed to prepare options for Hewitt Street;
 - The proposed strategy is a mix of public and private bin collections. This would be acceptable to MCC Highways;
 - MCC Highways Confirmed that they do not require a disabled space to be provided as part of this development. MCC Highways would seek the re-provision of Pay & Display bays that will be lost due to the stopping-up of Rowendale Street.
 - MCC Highways agreed that a 50% cycle store provision would be appropriate based on the central, accessible location. MCC Highways requested Sheffield stands be provided within the proposed public realm and that incentives for using Starling Bikes be considered.
 - MCC Highways agreed with the proposed scope of the planning submission – a Transport Statement, Interim Travel Plan, and Waste Management Strategy.

1.4.3 Further to this, a pre-application scoping response was received via email from Transport for Greater Manchester (TfGM) on 5th August 2024, which has been given due consideration in the preparation of this document.

1.4.4 On this basis, the TS contains the following:

- Details of the existing use and the development proposals, together with a proposed site layout plan;
- A review of highway safety within the vicinity of the site for the most recent five years;
- A review of accessibility by all modes of travel including walking, cycling, and public transport;
- Drawings showing the site access proposals for pedestrians and cyclists, drop-offs, and servicing and deliveries, including vehicle tracking;
- Justification for a car-free development, with details of disabled parking availability, car club vehicles, and cycle hire in the vicinity of the site; and
- Details of future trips and commentary on any highway impacts.

1.5 Structure of the Report

1.5.1 Following this introduction, **Section 2** of the report provides a comprehensive description of the existing site and its location. This includes the local highway network and facilities for pedestrians, cyclists and public transport users.

1.5.2 **Section 2** also reviews the local area in terms of highways safety by way of obtaining records of collisions adjacent to the site over the most recent five-year period available.

1.5.3 **Section 3** gives an overview of the development proposals including details on proposed pedestrian and cyclist access, parking justification, and a servicing and delivery strategy.

1.5.4 **Section 4** considers the site's accessibility by sustainable modes of transport, including walking, cycling and public transport.

1.5.5 **Section 5** outlines the traffic forecasting methodology used to establish the likely traffic generation associated with the development proposals, and the highway impact.

1.5.6 **Section 6** provides a report summary and conclusion.

2.0 Existing Situation

2.1 Site Location

2.1.1 The site is located in Manchester city centre, adjacent to Deansgate train station and opposite Deansgate-Castlefield tram stop. The site is bound by Whitworth Street West to the north, Cameron Street to the east, a railway viaduct to the south, and Bugle Street to the west. The site spans Rowendale Street, which will be stopped-up.

2.1.2 **Figure 2.1** below shows the site in a local context relating to the local highway network:

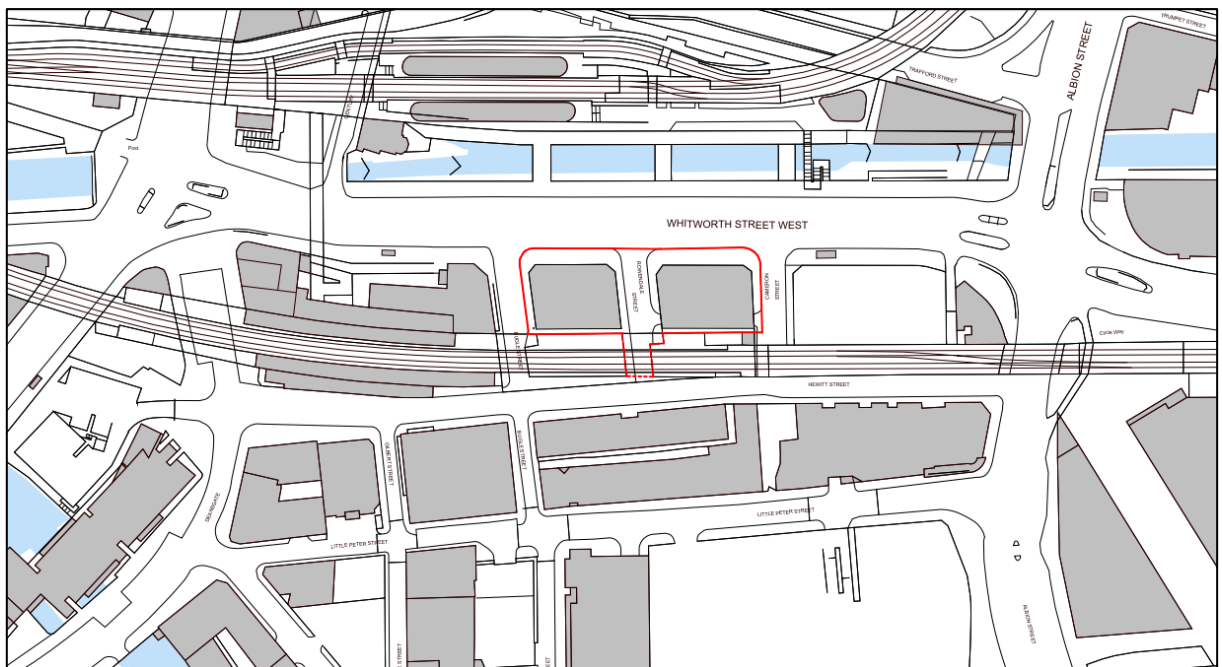


Figure 2.1 – Site Location

(Source: Sheppard Robson Architects, 2024)

2.2 Surrounding Highway Network

Whitworth Street West

2.2.1 On 5th August 2024, works commenced on MCC's 'Active Travel (ATF) City Centre Scheme section 2: Liverpool Road – Whitworth Street West', which will transform parts of Deansgate, Whitworth Street West, and Bridgewater Viaduct, including along the site frontage. The works are expected to complete in Spring 2025.

2.2.2 Before the works started, Whitworth Street West had a c. 14m-wide carriageway bordered by c. 2 – 5m-wide footway on the southern side (c. 4.5m along the site frontage) and a c. 5m-wide footway on the northern side. The carriageway was marked as one lane of general vehicular traffic in each direction

with some on-street car parking along each side, but there was sufficient width for two vehicles to pass in each direction along much of its length.

2.2.3 Cyclist facilities were limited to advanced stoplines at traffic signals and a narrow c. 1m-wide painted eastbound cycle lane for the final 60m before the junction with the A5103 Albion Street.

2.2.4 The scheme will improve facilities for active travel and buses, particularly cycling, on a key city centre route, and connect with other existing cycling facilities. Throughout the scheme area, there will be new continuous, segregated cycle lanes, improved crossing facilities for pedestrians and cyclists, wider footways, and rain gardens. General vehicular traffic will be restricted to eastbound only on Whitworth Street West between Deansgate and Albion Street (to provide a westbound bus lane), and Deansgate between Jackson's Row (Deansgate is already southbound only to the north) and Great Bridgewater Street. Some Pay & Display parking, disabled parking, loading bays and taxi ranks will be retained.

2.2.5 In addition to the existing c. 4.5m-wide footway, there is now an additional c. 1.8m-wide footway for the floating bus stop in front of 4 Whitworth Street West.

2.2.6 **Figure 2.2** below shows an extract of the scheme in the immediate vicinity of the site.

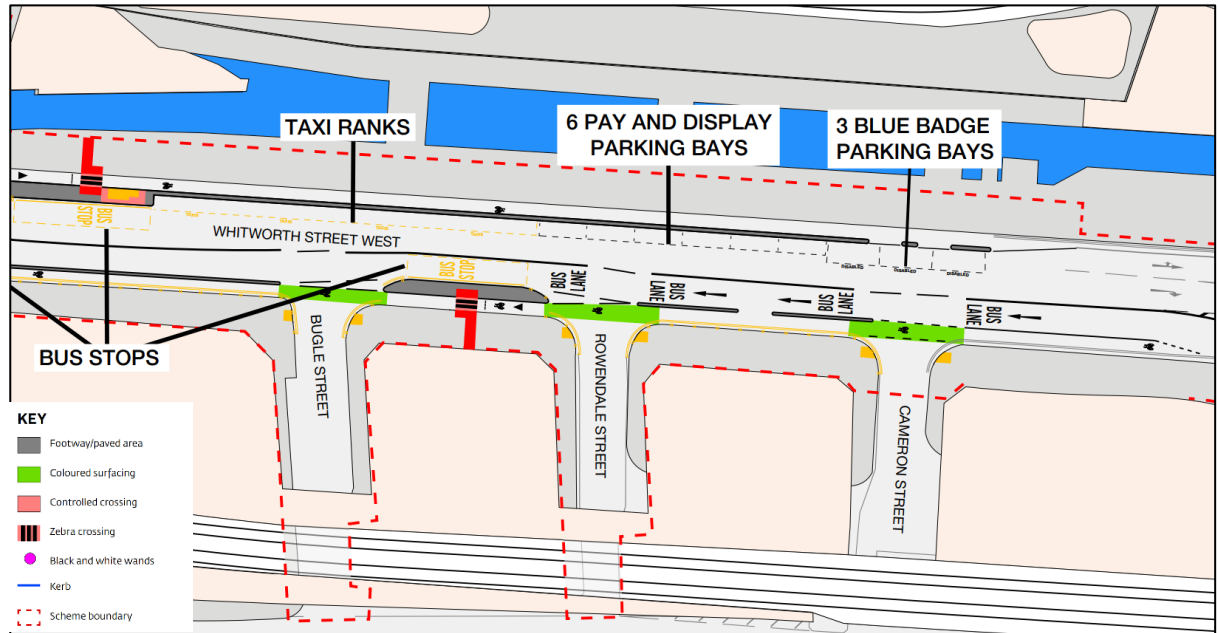


Figure 2.2 – Extract of Changes Adjacent to Site
(Source: MCC, 2024)

2.2.7 As of the week commencing 23rd September 2024, **Figures 2.3** and **2.4** below demonstrate the progress on the Active Travel Scheme along Whitworth Street West, while **Figures 2.5** and **2.6** illustrate the site itself.



Figure 2.3 – West Facing View of Whitworth Street West / Deansgate / Castle Street / Bridgewater Viaduct Junction



Figure 2.4 – East Facing View of Whitworth Street West



Figure 2.5 – South-West Facing View of Whitworth Street West and the Site



Figure 2.6 – South-East Facing View of Whitworth Street West and the Site

Hewitt Street

- 2.2.8 South of the site and the railway viaducts, Hewitt Street extends for approximately 220m and runs parallel to Whitworth Street West. The road links the rear entrance of the Deansgate Railway Station to the A5103 Albion Street, where vehicles can only turn left to the north and into Manchester city centre.
- 2.2.9 The road comprises a two-way, single carriageway of approximately 5m in width. There are existing Traffic Regulation Orders in the form of single yellow lines located along the length of the carriageway.
- 2.2.10 The road is subject to a speed limit of 20mph throughout, and is well lit. It is also complete with a footway of approximately 2m in width along the southern side of the road, with dropped kerbs at junctions.
- 2.2.11 On the other side of the road under the railway arches, there are small commercial/industrial units, which are occupied by car repair services, retail units, small offices, and a coffee shop. Hewitt Street is paved in a manner that suggests a level of shared surface (block paving).
- 2.2.12 Hewitt Street is unaffected by the Active Travel Scheme.

Rowendale Street/Bugle Street/Cameron Street

- 2.2.13 Rowendale Street, Bugle Street, and Cameron Street are all perpendicular to Whitworth Street West and Hewitt Street. They all provide a link between the north and south of the site and extend for approximately 45m in a south/north alignment (except for Bugle Street, which continues for an additional 35m south of the railway viaduct), terminating at priority-controlled T-junctions on both ends.
- 2.2.14 Bugle Street is primarily a private road which provides on-street parking for permit holders and also used to host a loading bay for the commercial building on 2 Whitworth Street West, which is currently vacant. The road is approximately 6.5m wide.
- 2.2.15 Rowendale Street shares similar characteristics with Bugle Street, with the exception that it has footways on both sides of the road and two Pay & Display parking bays operated by Manchester City Council (MCC). Traffic Regulation Orders in the form of single yellow lines are located along the rest of the road. There is also access to a shed for the commercial building on 4 Whitworth Street West, secured by a roller shutter.
- 2.2.16 The footways along Rowendale Street and Bugle Street are c. 2.0-2.5m wide, narrowing under the arches.
- 2.2.17 As shown by **Figure 2.6** earlier, part of Rowendale Street is currently occupied by a small Rosgal compound related to the construction of the Active Travel Scheme.
- 2.2.18 Cameron Street is similar to Rowendale Street and has three Pay & Display parking bays. However, as shown by **Figure 2.5** earlier, the road and the bays has been closed off for some time for construction works for a committed development (MCC planning reference 111003/FO/2016/C1). This application

was approved in April 2017, but has since expired. However, there is a reasonable prospect of an application of a similar nature coming forward for the site in the future.

2.2.19 As illustrated by **Figure 2.2** earlier, the changes brought about by the Active Travel Scheme to Bugle Street, Rowendale Street, and Cameron Street themselves are limited to uncontrolled crossings comprising dropped kerbs and tactile paving, and short sections of double yellow lines around the junction radii.

2.2.20 Rowendale Street is proposed to be permanently stopped-up to deliver the development proposals.

2.3 Highway Safety

2.3.1 Collision data for the highway network adjacent to the site has been obtained from the TfGM reported road incidents database for the most recent 60 months (i.e. five years). The details of the search are contained in **Figure 2.3** with the study area marked by a dashed line:

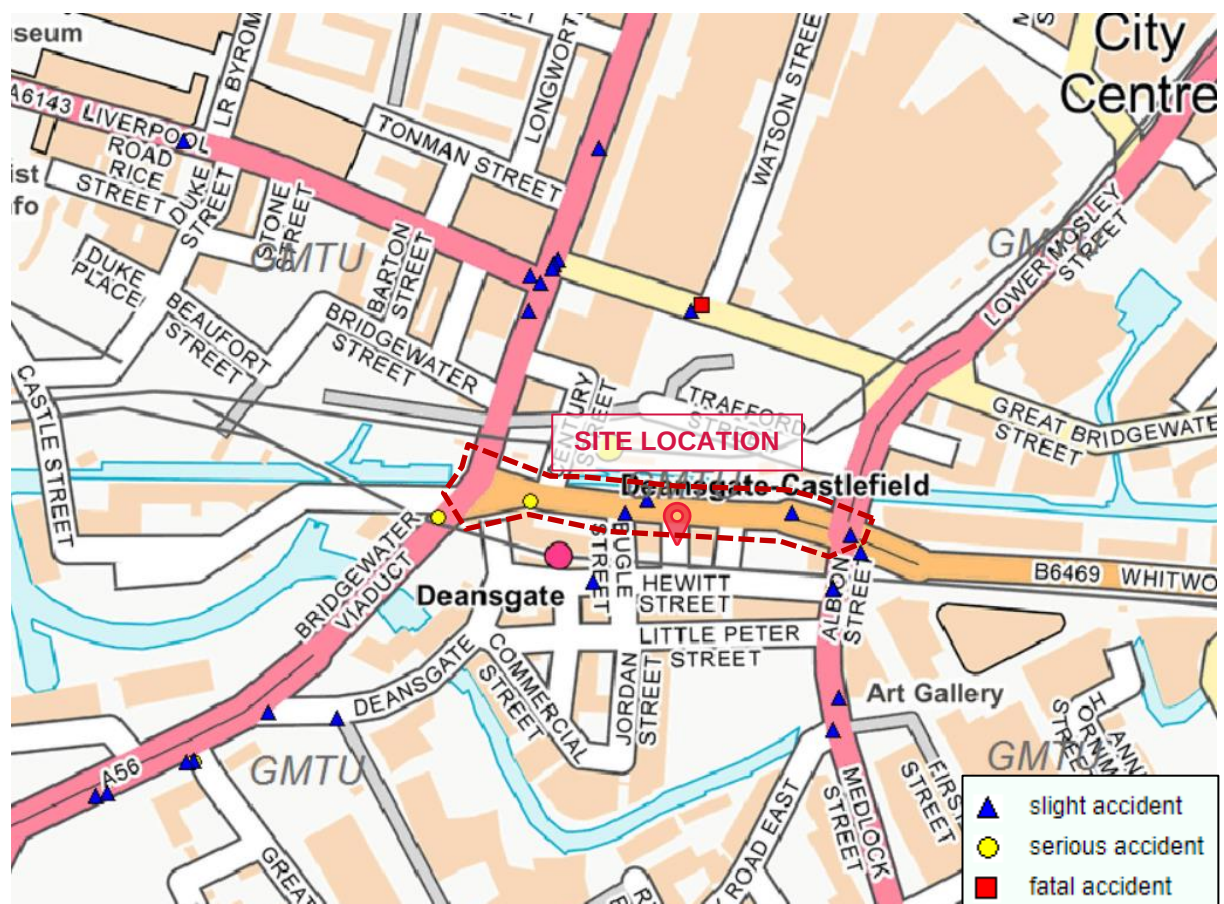


Figure 2.7 – Area Assessed for Collision Data (60 months)
(Source: TfGM)

2.3.2 There have been five incidents – comprising four 'slight' severity and one 'serious' – along Whitworth Street West between Deansgate and the A5103 in the latest five-year period. There are no notable clusters of collisions within the study area.

- 2.3.3 The number and severity of the recorded collisions are not considered to be high relative to the levels of vehicular traffic and pedestrian footfall along this key city centre route. Furthermore, the restrictions on general vehicular traffic (which will prevent any westbound general traffic on this section of Whitworth Street West, for example) and improved active travel infrastructure being introduced by the Active Travel Scheme will change the existing conditions and improve road safety in the area.
- 2.3.4 No significant correlations have been identified to suggest that highway condition, layout or design were significant contributory factors in any of the collisions. It is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development.

3.0 Development Proposals

3.1 Overview of Proposals

- 3.1.1 The proposed development will provide 364 residential units, comprising 120 one bed apartments, 218 two bed apartments, and 26 three bed apartments.
- 3.1.1 The development will provide additional public realm, including trees, benches, a rain garden, and hard landscaping, making for a more pleasant area to walk and stop along Whitworth Street West for both the residents and general public.
- 3.1.2 The proposed development is car-free owing to its highly accessible city centre location.
- 3.1.3 A key design element of the lower floor façade is the incorporation of a colonnade. This provides several advantages to the scheme:
- Emphasises the active frontage to Whitworth Street and enhances the ground floor pedestrian experience;
 - Relates the scale of the building to the streetscape;
 - Allows the tower to continue to the ground whilst creating a more human scale at street level;
 - Creates a generous pavement to enhance pedestrian experience on Whitworth Street, and brings the streetscape in and around the building;
 - Provides an additional, sheltered pedestrian route whilst maintaining an appropriate footway width beyond; and
 - Minimises the projection over previously developed footprint at high level (c. 2.0m) whilst maximising the use of the site.
- 3.1.4 **Figure 3.1** below provides an illustrative cross section of Whitworth Street West showing the proposed colonnades and footway.



Figure 3.1 – Illustrative Whitworth Street West Cross Section
(Source: Sheppard Robson, 2024)

- 3.1.5 As mentioned in **Section 2.3**, the existing footway (excluding the floating bus stop in front of 4 Whitworth Street West) along the site frontage on Whitworth Street West is c. 4.5m-wide.
- 3.1.6 The section of the existing footway that would be beneath the colonnade would be stopped up, with additional space provided for pedestrians that would be publicly accessible.
- 3.1.7 Although the official footway width will be reduced to between c. 2.0-2.5m, the effective width will be increased to c. 5.5m, benefitting existing users and those of the proposed development.
- 3.1.8 Rowendale Street would be stopped up in full to allow the two plots (2 and 4 Whitworth Street West) to be combined and would be built on. It is intended that the two existing Pay & Displays bays on Rowendale Street will be relocated to Whitworth Street West, within walking distance of the site. This has been agreed in-principle with MCC Parking.
- 3.1.9 The proposed site layout is provided in **Appendix A**.

3.2 Proposed Access

- 3.2.1 The main pedestrian entrance to the building will be located off Whitworth Street West.
- 3.2.2 Similar to pedestrians, cyclists will enter from the main entrance on Whitworth Street West and walk through the reception area to the ground floor bike store, as illustrated below. There will also be a door onto the southern side of the building from the bike store.

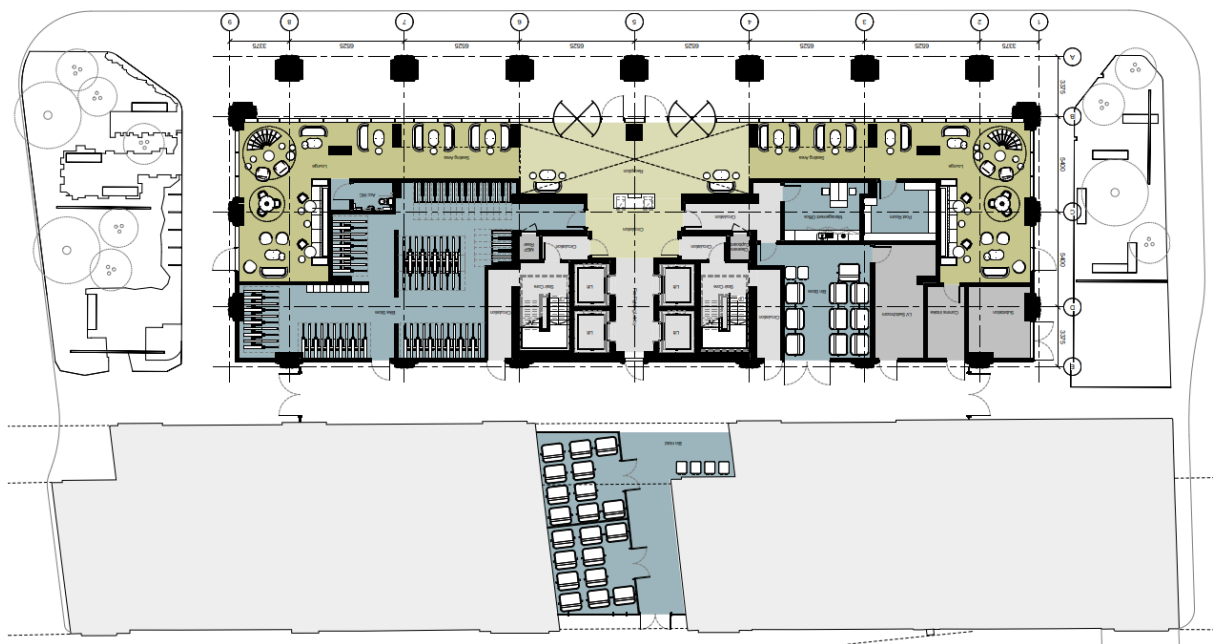


Figure 3.2 – Ground Floor Layout
(Source: Sheppard Robson, 2024)

- 3.2.3 As detailed in **Section 2.3**, and in **Appendix B**, following completion of the Active Travel Scheme, Whitworth Street West will be eastbound only for general vehicular traffic, with only buses, taxis and cycles able to travel in a westbound direction.
- 3.2.4 **Drawing 085996-CUR-00-XX-DR-TP-75003** at the rear of this report illustrates the proposed servicing arrangements and turning head, as well as the locations of potential loading bays on Bugle Street and Cameron Street which could be utilised for the proposed development.
- 3.2.5 Cyclists and waste operatives will also have access from Hewitt Street, as well as large deliveries.

3.3 Proposed Parking

Local Guidance

- 3.3.1 The Manchester Residential Design Guide (2017) has been considered in determining the provision of car and cycle parking. This states:

“For apartment schemes within the city centre, there are a number of variables that will affect parking demand within a particular development. In particular these are the tenure and price point of a development. ... the emerging build to rent sector is very much targeted at a younger demographic attracted to the city centre lifestyle and who have a higher potential and tendency to view car ownership as more of a constraint than a requirement.

In these scenarios, higher levels of cycle parking provision and car clubs will be appropriate. Clearly, car parking demand will also be influenced by the availability of public transport.

In accordance with the ‘comply or justify’ approach of this document, the following standards are required:

- *City Centre - Developments will be required to provide where possible, an appropriate level of car parking within the constraints of site specific circumstances and other requirements.”*

Proposed Car Parking Provision

- 3.3.2 The proposed development will be car-free. As noted in **Section 1.3**, MCC Highways has accepted, in-principle, the car-free provision during scoping discussions.
- 3.3.3 The site is highly accessible by sustainable modes of transport. It is likely that site residents and users will utilise the various public transport and cycle options available to access places of work and leisure within Greater Manchester, and the multitude of amenities that are available are within walking distance across the city centre. Therefore, the site is located in an enviable location to make use of existing and future sustainable modes of transportation without relying on car ownership.

- 3.3.4 This is in line with other city centre developments. Immediately adjacent to the site, planning permission was granted in 2016 for a residential tower at 10-12 Whitworth Street West which would provide no on-site off-street car parking (planning reference: 111003/FO/2016/C1).
- 3.3.5 As prospective residential occupiers come forward, they would be aware of the parking restrictions living in the proposed development would bring and would decide on whether to rent such a property. The absence of any on-site parking would also act as an initiative to encourage alternative modes of transport.

Nearby Car Parking Opportunities

- 3.3.6 Nonetheless, it is recognised that a small minority of residents may choose to own a car. These residents would be able to use several car parks within close proximity which offer long-term parking permits:
- Bridgewater Hall (280 spaces) – c. 200m / 2.5-minute walk
 - First Street (700 spaces) – c. 350m / 4.5-minute walk
 - New Jackson (390 spaces) – c. 550m / 7-minute walk

- 3.3.7 Following completion of the Active Travel Scheme, there will be some Pay & Display car parking spaces and a taxi rank on Whitworth Street West, directly opposite the site, as shown by the detailed scheme drawings in **Appendix B**.

Car Club

- 3.3.1 Some residents that do not own a car may require the use of a car on certain occasions. The Enterprise Car Club offers a cost-effective, hassle-free, and greener alternative to car ownership and traditional vehicle hire. The car club allows users to view the availability of cars at designated parking bays throughout the city via a mobile application, where they can unlock and start driving their selected car on the spot.
- 3.3.2 Cars can be reserved by the hour, day or even longer. The price of the journey depends upon the vehicle type, the duration of the reservation and the miles driven, but starts at around £8.63 an hour.
- 3.3.3 At the time of writing, the nearest Car Club bays are located at Whitworth Street West and Castle Street, both within a c. 300m walk and offering three spaces in total. **Figure 3.1** below shows additional nearby locations that Enterprise Car Club currently operate at.

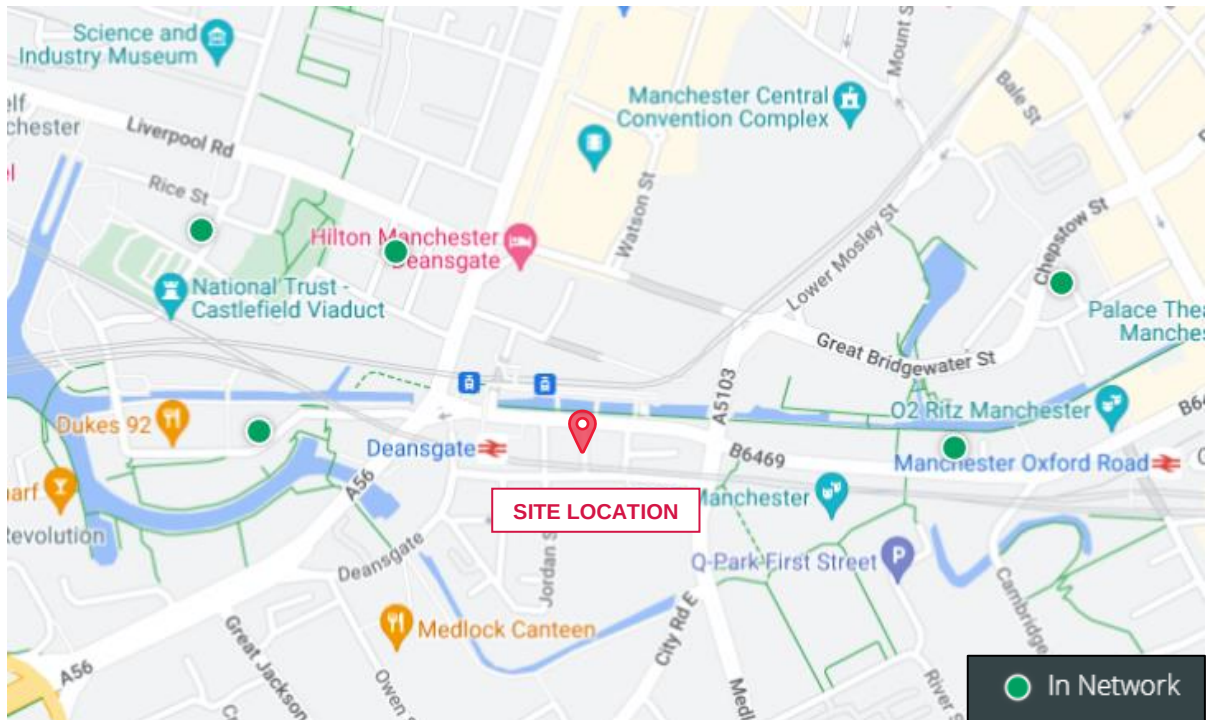


Figure 3.3 – Enterprise Car Club Locations in Vicinity of Site
(Source: Enterprise Car Club)

- 3.3.4 It is considered that the Car Club could therefore be a highly attractive facility for residents who require occasional private car use, therefore minimising the highway impact.
- 3.3.5 It has been discussed with MCC Highways that an additional Car Club space would be beneficial. Curtins has engaged with Enterprise and has proposed two options for an additional Car Club space for consideration (either opposite the site or further east along Whitworth Street West). It is understood that Enterprise is discussing these options with MCC directly.

Proposed Cycle Parking Provision

- 3.3.6 Secure parking for c.180 cycles would be provided in the form of two-tier racks in the ground floor internal store. This equates to c.50% provision relative to the 364 proposed flats. This level of provision has been agreed in principle with MCC Highways.
- 3.3.7 In 2023, 40% of people aged five or over in England owned or had access to a pedal cycle¹, broadly in line with the proposed level of provision.
- 3.3.8 Furthermore, the proposed cycle storage strategy has also been benchmarked against recent in-use cycle storage data from similar city centre residential developments around Manchester where usage ranges from 25% - 35%.

¹ See National Travel Survey dataset NTS0608. Available at: <https://www.gov.uk/government/statistical-data-sets/nts06-age-gender-and-modal-breakdown>

- 3.3.9 The development proposals also include cycle parking for visitors, with five Sheffield stands provided within the landscaped areas around the base of the building. These will be complemented by existing bee network cycle hire stands (also known as Starling Bank Bikes) in close proximity to the proposed development (by Deansgate Rail Station and along 11-15 Whitworth Street West).
- 3.3.10 These are some of the many initiatives to encourage more people to travel by sustainable modes (in addition to other measures outlined in the accompanying Interim Travel Plan (Document Reference: **085996-CUR-00-XX-RP-TP-00002**). The provision of sufficient cycle parking of suitable quality has a key synergy with the successful implementation of Travel Plans.

3.4 Proposed Servicing Arrangements

- 3.4.1 It is acknowledged that the roads bordering the site are constrained in space terms, therefore the proposed servicing and delivery strategy makes best use of the available space, whilst also being cognisant of consented and potential future developments.
- 3.4.2 Daily deliveries (vehicles up to 7.5t – for example online shopping and post) would use a proposed loading bay and turning head off Cameron Street. **Drawings 085996-CUR-00-XX-DR-TP-05001 and 085996-CUR-00-XX-DR-TP-05003** at the rear of this report demonstrate a 7.5t box van and fire tender, respectively, using the turning head.
- 3.4.3 The loading bay on the eastern side of Cameron Street would be delivered as part of the development proposals at 2-4 Whitworth Street West. The loading bay is in the same location as that proposed to serve the approved and now lapsed residential consent at 10-12 Whitworth Street West (Ref. 111003/FO/2016/C1). If similar proposals for high density residential development on 10-12 Whitworth Street West were to come forward in the future, the loading bay would serve both properties.
- 3.4.4 Refuse would be collected from Hewitt Street, with no formal loading bay provided. Hewitt Street would also serve to deliver or collect large items that require a vehicle larger than 7.5t, which is anticipated to be extremely infrequent. Updated road markings are proposed along Hewitt Street, as shown in **Drawing 085996-CUR-00-XX-DR-TP-75003**.
- 3.4.5 Details of the waste collection schedule and number of bins proposed are provided in the Waste Management Strategy prepared by Curtins (Document Reference: **085996-CUR-XX-XX-T-TP-00003**).

4.0 Accessibility by Sustainable Modes of Travel

4.1 Introduction

- 4.1.1 A key element of national and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.
- 4.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:
- Pedestrian Accessibility;
 - Cycle Accessibility; and
 - Public Transport Accessibility.

4.2 Pedestrian Accessibility

- 4.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities.
- 4.2.2 The National Design Guide (NDG, published by DLUHC (now MHCLG), 2021) says that well designed places / neighbourhoods are walkable, which is defined *“Local facilities are within walking distance, generally considered to be no more than a 10 minute walk (800m radius).”*
- 4.2.3 Despite the NDG characterising 800m as a maximum acceptable walking distance, the Department for Transport’s (DfT) National Travel Survey datasets provide empirical evidence to demonstrate people are willing to walk further. This is reflected in Manual for Streets guidance (MfS, published by the DfT, 2007) which states an 800m catchment should not be *“...an upper limit”* and that walking *“...offers the greatest potential to replace short car trips, particularly those under 2 km.”* The Chartered Institution for Highways and Transportation (CIHT) produced a document in 2000 titled *‘Guidelines for Providing for Journeys on Foot’* which provides catchments more in line with those reported in the NTS. The suggested CIHT walking distances are reproduced in **Table 4.1** below:

CIHT Category	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Table 4.1 – CIHT Recommended Walking Distances

- 4.2.4 The average pedestrian can walk approximately 400m every five minutes, based on the CIHT document *‘Planning for Walking’* (2015).

- 4.2.5 To assist in summarising the accessibility of the site by foot, an indicative pedestrian catchment plan has been produced. **Figure 4.1** presents a walking catchment with 500m intervals up to 2,000m – with the darkest red being the 500m catchment through to the lightest orange being the 2,000m catchment.

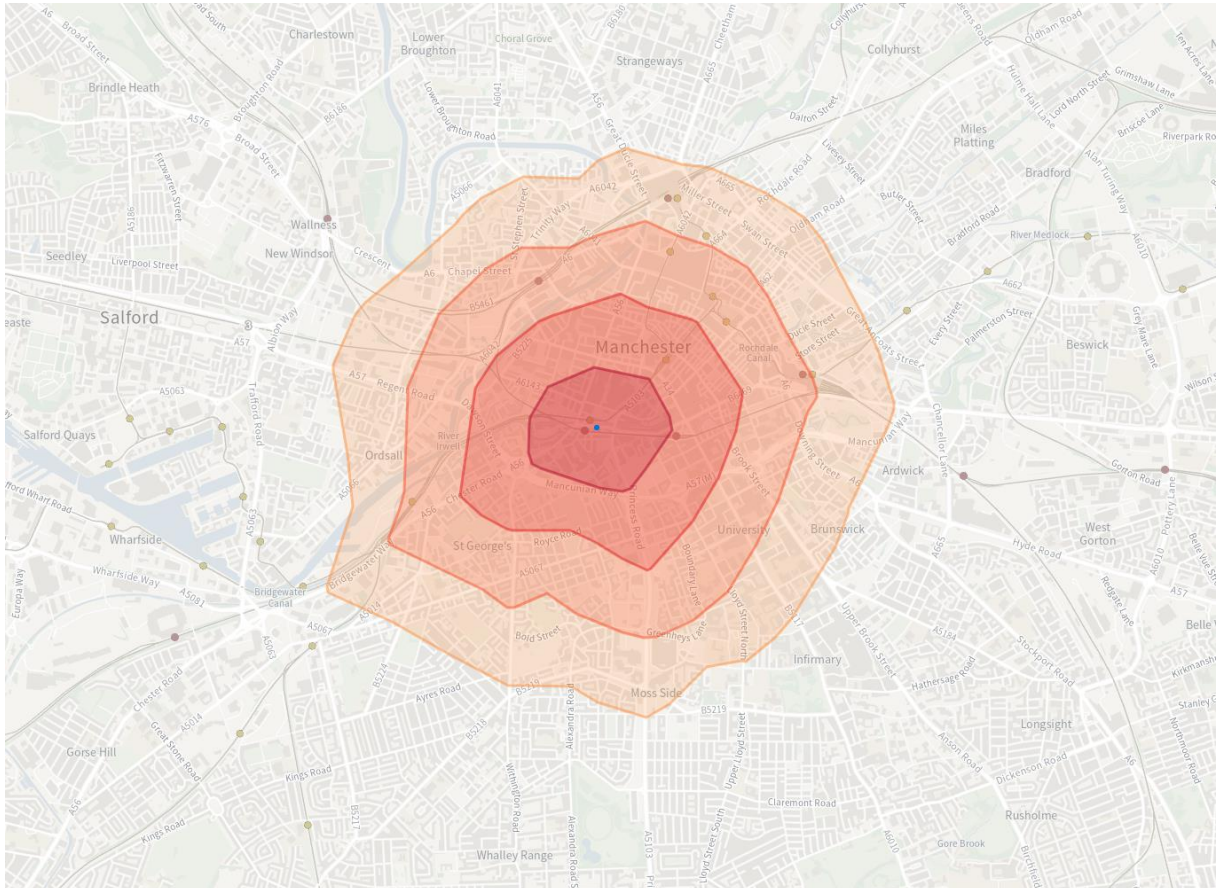


Figure 4.1 – Walking Catchment
(Source: MappingGM, 2024)

- 4.2.6 Within a 1,000m walking distance, convenience stores, gyms, eating and drinking establishments, public open spaces (Hulme Park, St Johns Garden, St Peters and Albert Squares, and Castlefield Urban Heritage Park), cultural and events venues (Manchester Central, Bridgewater Hall, Science and Industry Museum, Central Library, and Manchester Art Gallery). This area also encompasses Deansgate Locks, Castlefield, the New Jackson cluster of towers, Great Northern, Spinningfields, and Chinatown.
- 4.2.7 In terms of public transport, Deansgate train station and Deansgate-Castlefield tram stops are located within extremely close proximity to the site, with Manchester Oxford Road train station also being within the 1,000m walking catchment.
- 4.2.8 The rest of Manchester and Salford city centres, including Manchester Piccadilly, Manchester Victoria, and Salford Central train station, as well as part of Ordsall, the Oxford Road corridor, Hulme, Moss Sidel, and St George's can be accessed within a 2,000m walk.

- 4.2.9 The pedestrian infrastructure which connects the site to the above facilities is generally excellent and there are well lit, wide footways with a number of controlled crossing points across key roads.
- 4.2.10 It is considered that the site is situated within a highly accessible area, with a number of complimentary uses within walking distance.
- 4.2.11 As demonstrated by the Landscape Plan in **Appendix A** the proposed development will provide additional attractive, high-quality publicly accessible spaces around the building.

4.3 Cycle Accessibility

- 4.3.1 Cycling is a cheap, efficient, and healthy way to travel. Cycling also provides a predictable arrival time which depending on location, can be quicker than driving or using public transport, and is subject to fewer delays.
- 4.3.2 In order to assist in assessing the accessibility of the site by cycle, **Figure 4.2** below presents a 25-minute cycle catchment from the site. This equates to a cycle catchment of 5.5km, based on the sources below.
- 4.3.3 The average cycling trip length was 5,300m in 2019 and 5,730m in 2022 (based on National Travel Survey dataset NTS9910a). The average length has been between 5.0km and 6.0km every year from 2012/13 to 2022, except 2014/15 and 2020.
- 4.3.4 National Travel Survey statistics demonstrate that 82% and 80% of cycling trips were under 5 miles / 8km in 2019 and 2022, respectively. This distance is also referenced by both the National Model Design Code – Part 2 (DLUHC (now MHCLG), 2021) and LTN1/20.

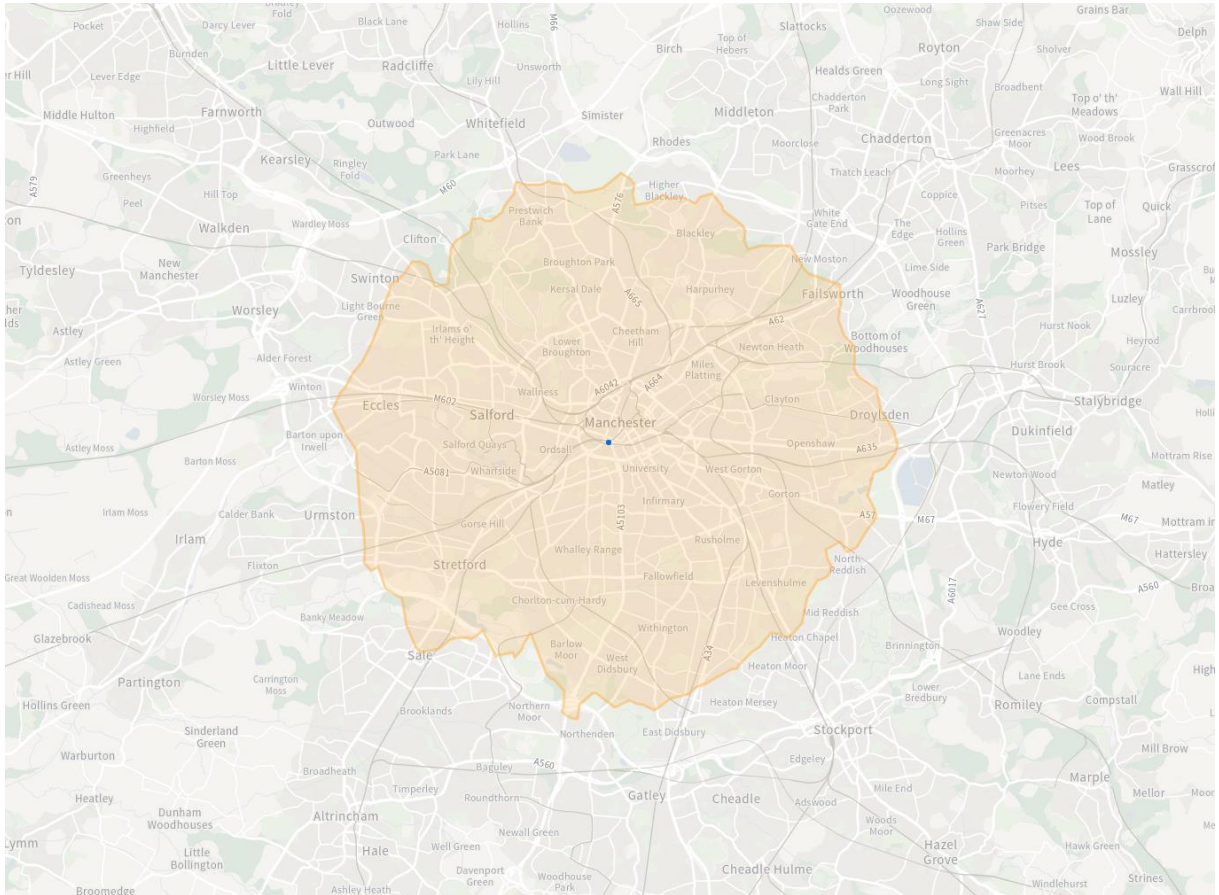


Figure 4.2 – Cycling Catchment
(Source: MappingGM, 2024)

- 4.3.5 Most of the city centre can be reached in a 5-minute cycle journey. The 25-minute cycle catchment extends as far as Heaton Park to the north, Droylsden to the east, Didsbury to the south, and Eccles to the west.
- 4.3.6 The local cycle network in the vicinity of the site is shown in **Figure 4.3** below:

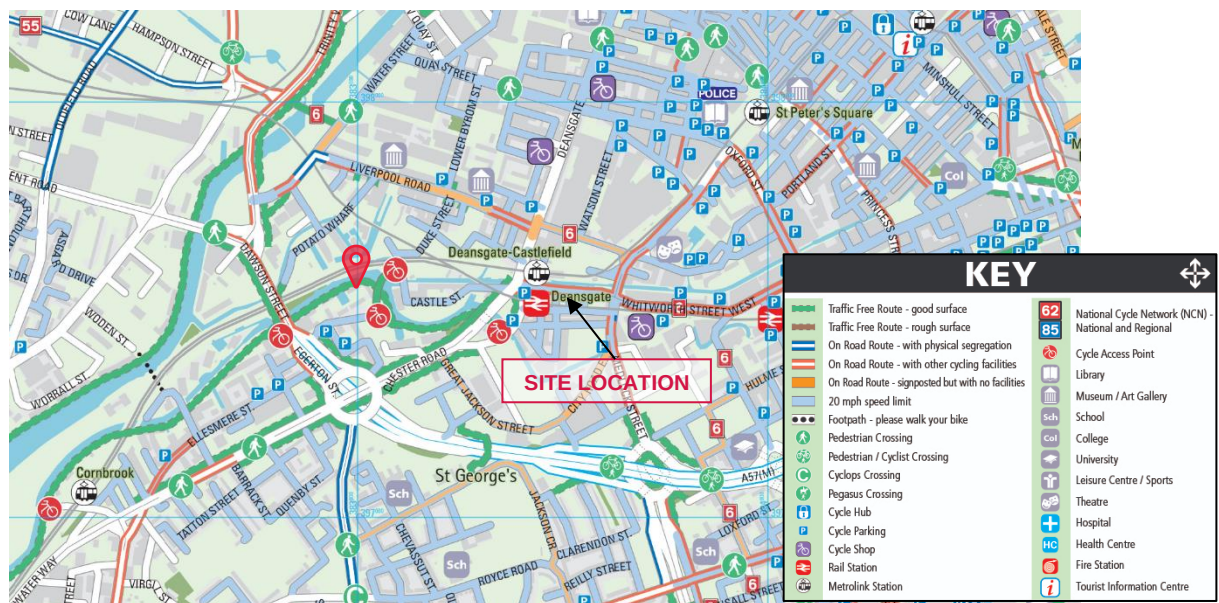


Figure 4.3 – Local Cycle Network
(Source: TfGM)

- 4.3.7 As detailed in **Section 2.3**, new and improved pedestrian and cyclist facilities are currently under construction along Deansgate and Whitworth Street West, including immediately adjacent to the site, as part of the Active Travel Scheme.
- 4.3.8 Transport for Greater Manchester has launched Starling Bank Bikes, Greater Manchester's first publicly operated, self-service, 24/7 cycle hire scheme. It makes cycling a real option for commuters, cross city travellers and students with pedal bikes and e-bikes available across parts of Manchester, Salford, and Trafford.
- 4.3.9 The closest cycle hire stands are currently at the Haçienda, a c. 200m walk from the site, with many more stands also being located within walking distance.
- 4.3.10 Furthermore, the development will provide secure and covered cycle parking spaces for residents, as well as Sheffield stands for visitors, to encourage cycling.
- 4.3.11 The site is therefore ideally placed to take advantage of the cycle connections around Greater Manchester, and it is considered that cycling is a highly realistic mode of travel to and from the site.

4.4 Public Transport Accessibility

- 4.4.1 Developed by Transport for Greater Manchester (TfGM), Greater Manchester Accessibility Levels (GMAL) are a measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester's Local Link (flexible transport service), considering walk access time, service availability, and average waiting time. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region.

- 4.4.2 The accessibility index score is categorised into eight levels (1 to 8), with levels 1 and 8 are characterised by TfGM as ‘very low’ and ‘very high’ levels of accessibility, respectively. The site is located in an area with a GMAL rating of 8 and is considered appropriately situated to take maximum advantage of existing public transport infrastructure within Greater Manchester.
- 4.4.3 The National Model Design Code – Part 2 (DLUHC (now MHCLG), 2021) states: “*Generally, people are prepared to walk further to a railway station or tram stop (10 minutes) [800m walking distance] than to a bus stop (5 minutes) [400m walking distance].*” These times and distances are also cited in the CIHT document ‘*Planning for Walking*’ (2015).
- 4.4.4 Accessibility by bus, rail and Metrolink are considered further below, with a local public transport network map included in **Figure 4.3** below:

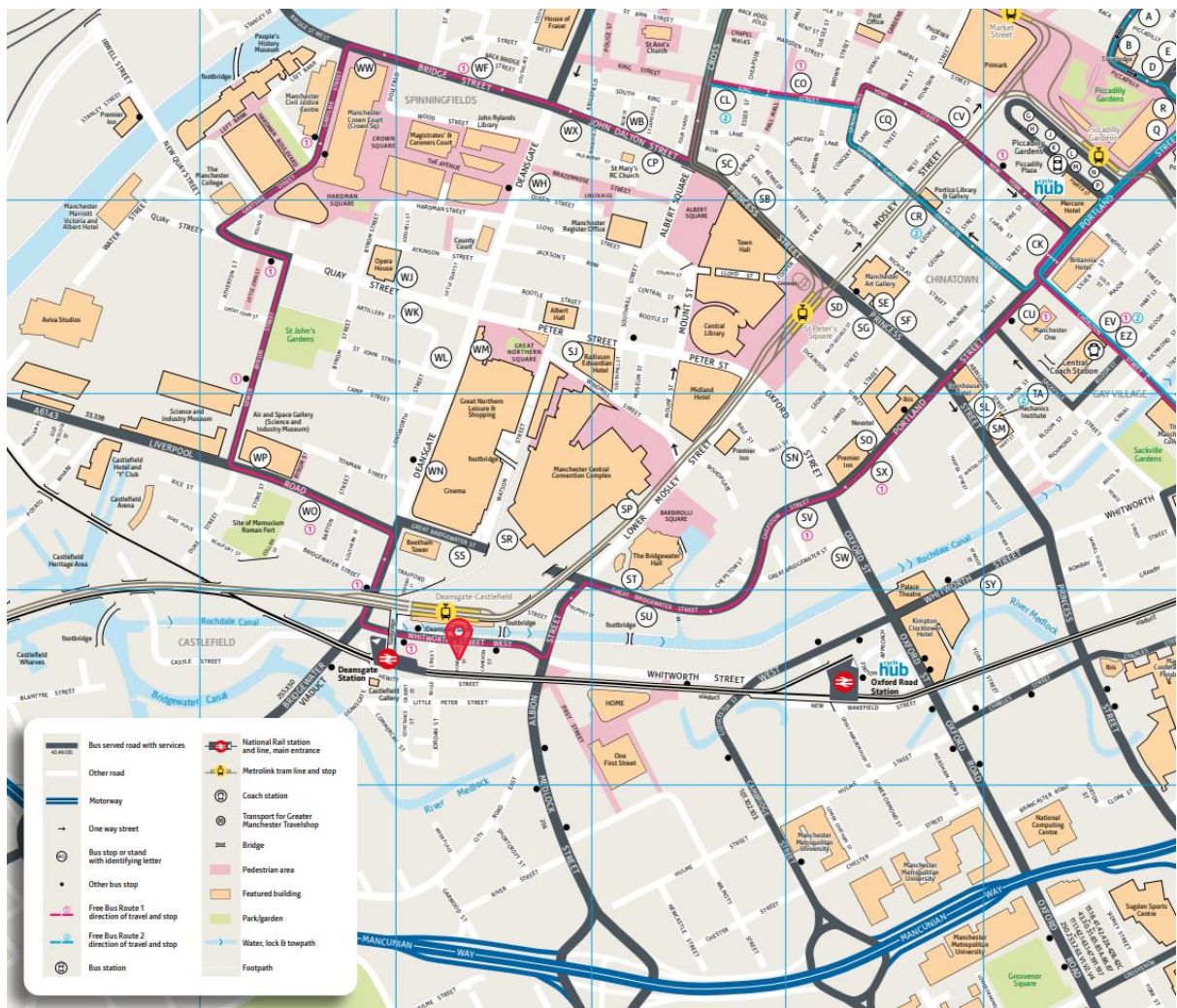


Figure 4.4 – Nearby Public Transport Network

(Source: TfGM, 2024)

Bus Accessibility

4.4.5 Deansgate Station Stops D (westbound) and C (eastbound) on Whitworth Street West are located at c. 80m and 200m walks from the proposed building entrance, therefore well within 400m of the site. Both are served by routes 255 and X50, while Stop D only is served by the one-way 1 free bus. **Figure 4.3** below details the routes and frequency of the free bus.

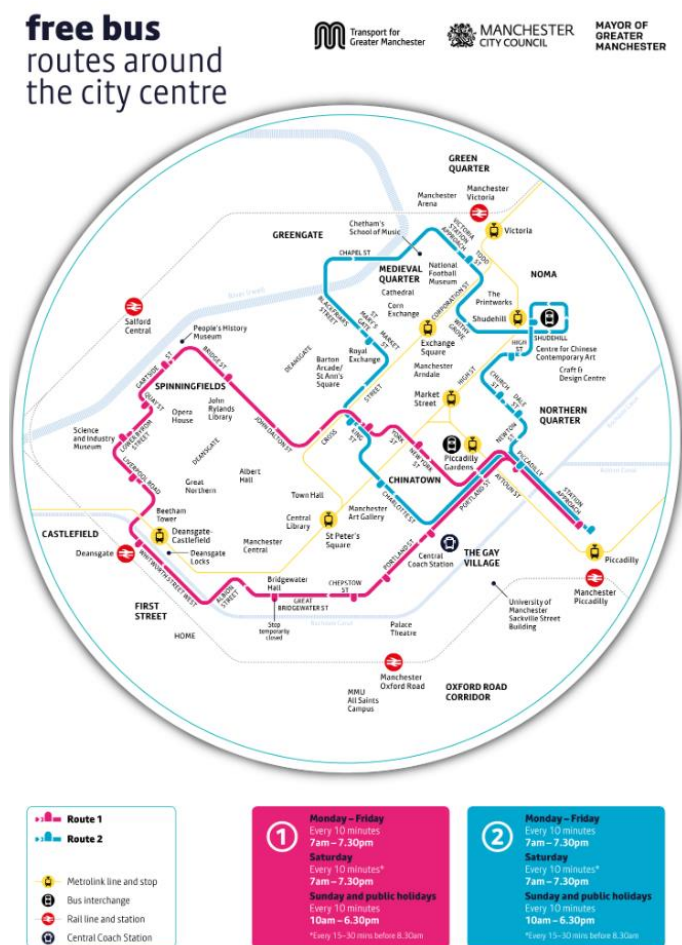


Figure 4.5 – Free Bus Route and Timetable
(Source: TfGM, 2021)

4.4.6 Following completion of the Active Travel Scheme, the westbound bus stop will be located c. 20m from the entrance, and there will be a second eastbound bus stop on Whitworth Street West, as shown by the detailed scheme drawings in **Appendix B**. The westbound bus lane will result in improved journey times and punctuality for residents and other bus users.

4.4.7 The HOME (northbound) and City Road East (southbound) bus stops on Medlock Street are c. 200m and 350m walks from the entrance. Both are served by route 256 only.

4.4.8 Within a c. 250m – 350m walk from the entrance, the Watson Street and Bridgewater Hall bus stops on Great Bridgewater Street can be reached, both of which are served by routes 33 and 33B (eastbound only).

4.4.9 **Table 4.3** details the services that call at these stops, and their associated frequencies:

Bus Service	Route	Peak Hourly Frequency		
		Mon – Fri	Sat	Sun/Hols
255	Partington — Flixton — Urmston — Stretford — Old Trafford — Manchester	2	2	2
X50	RHS Garden Bridgewater — The Trafford Centre — Trafford Park — Manchester	2	2	2
256	Flixton — Davyhulme — Stretford — Hulme — Manchester	3	3	2
33	Worsley — Eccles — Manchester	2	2	1
33B	Brookhouse — Eccles — Manchester	1 in early AM to Manchester	–	–

Table 4.2 – Summary of Bus Service Frequencies in the vicinity of the Site

4.4.10 Slightly beyond the suggested 400m walking distance, the Oxford Road Station Stops E on Whitworth Street West are c. 500 – 550m from the site, being served by routes 101, 102, and 103. Further bus services can be accessed on the adjacent Oxford Street.

4.4.11 These stops provide frequent access to key shopping, entertainment and employment locations throughout Greater Manchester at frequent intervals throughout the week.

4.4.12 It is noted that the provision of bus services will change over time in response to current circumstances. The bus times are accurate at the time of writing, whereas up-to-date bus times can be found on TfGM’s website: <https://tfgm.com/travel-updates/live-departures>.

4.4.13 Overall, it is concluded that the site is highly accessible by bus.

Rail Accessibility

4.4.14 The closest train station to the site is Deansgate, located c. 100m from the proposed entrance, therefore well within 800m of the site. The station is staffed during regular opening hours and has a concourse / ticket machines from which all tickets can be purchased. The station is sheltered and there are facilities such as toilets. Train running information is offered via Customer Information Services (CIS) screens, and parking is available for some cycles outside the station.

4.4.15 The trains that service Deansgate regularly run every day of the week from across the North West, particularly to Manchester Airport, Liverpool, Blackpool and Southport; this provides frequent access for residents.

- 4.4.1 Residents could also reach Manchester Oxford Road at a short c. 650m walk along Whitworth Street West, also within 800m of the site. As illustrated in **Section 4.2**, Manchester Piccadilly and Salford Central are within the 1,000 – 1,500m walking catchments, and Manchester Victoria is located within the 1,500 – 2,000m catchment. These stations provide high frequency services to destinations throughout the UK.
- 4.4.2 A detailed map of the train network within Greater Manchester is shown in **Figure 4.6** overleaf.

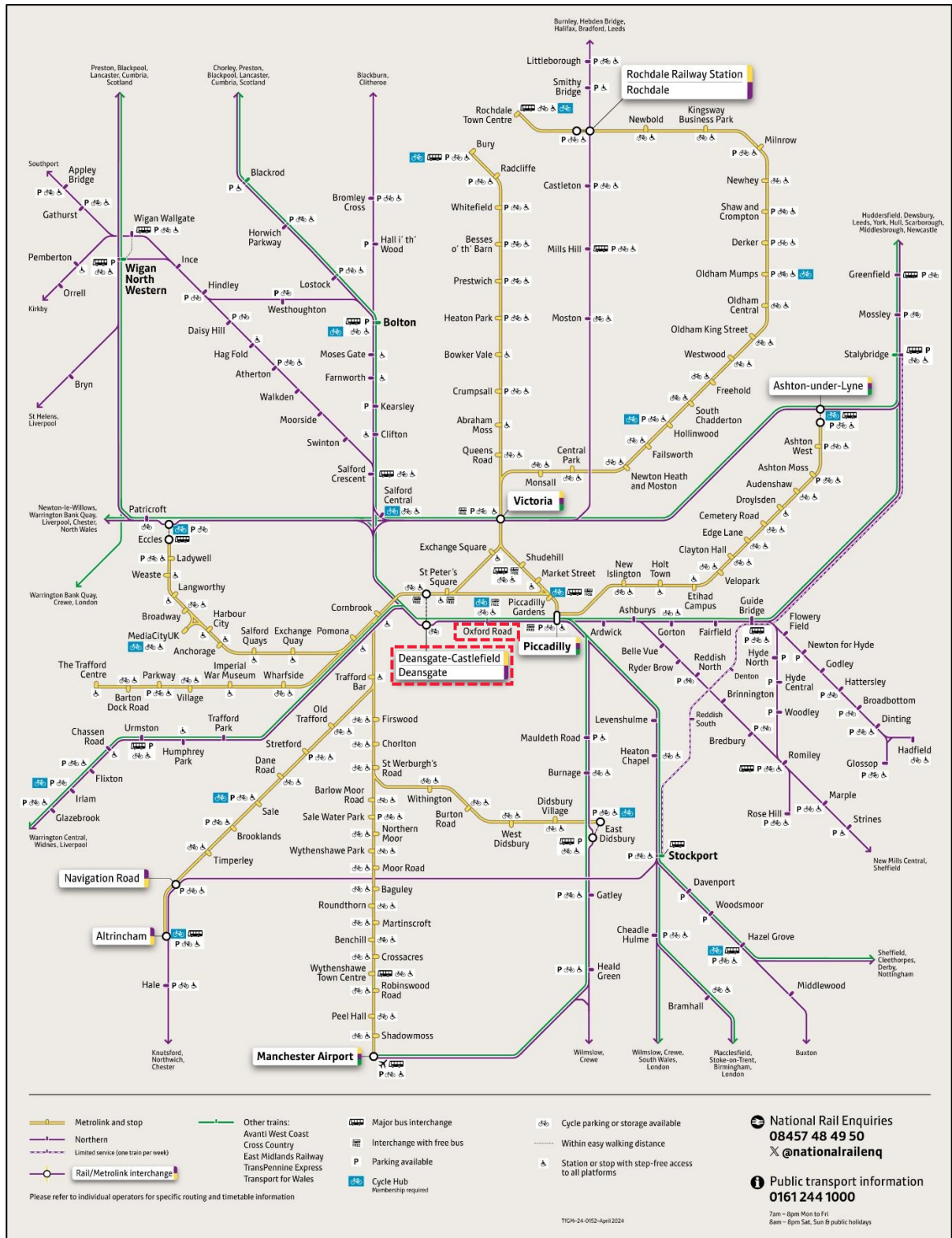


Figure 4.6 – Greater Manchester's Rail and Metrolink Network
(Source: TfGM, 2024)

4.4.3 In summary, it is concluded the site has an extremely high level of accessibility by train.

Metrolink (Light Rail) Accessibility

- 4.4.4 The nearest Metrolink station is Deansgate-Castlefield, located at a c. 200m step-free walk from the proposed entrance, and well within 800m of the site. As shown by the below route map, Deansgate-Castlefield can be used to access the entire Metrolink network.

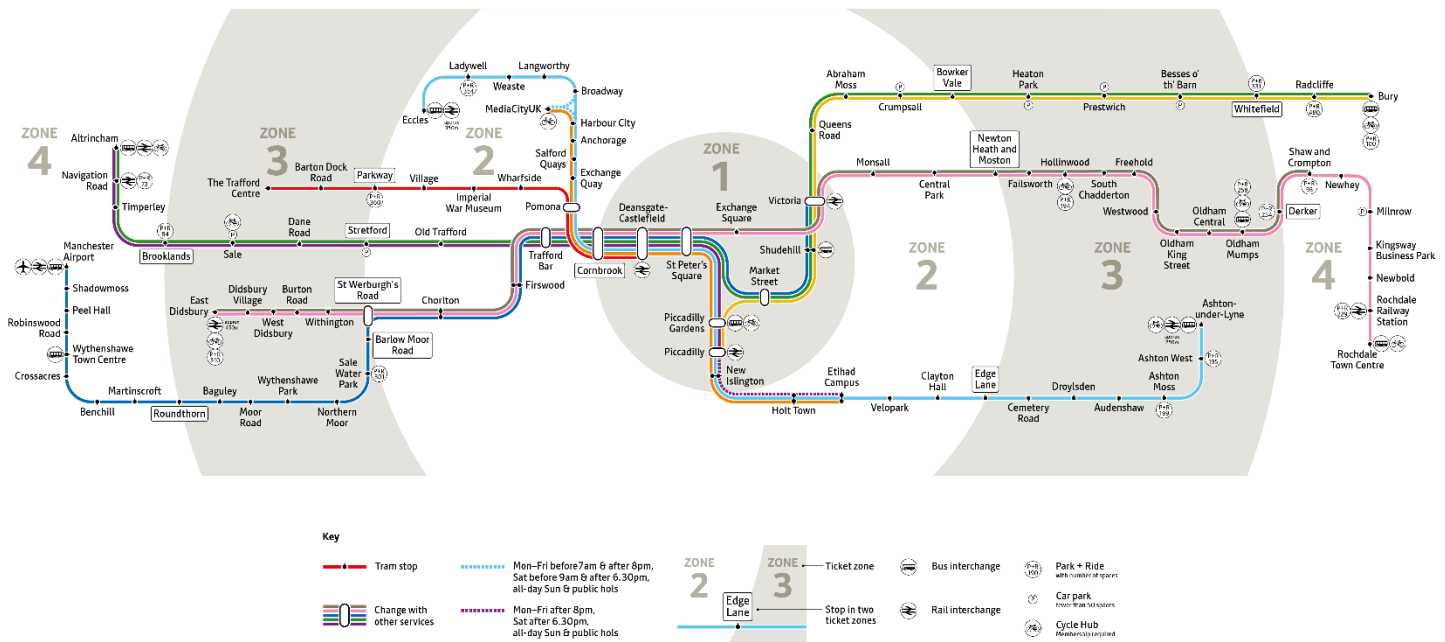


Figure 4.7 – TfGM Metrolink Network Map

(Source: TfGM, 2024)

- 4.4.5 All lines run at a frequency of every 12 minutes between 06:00 – 00:00 on Mondays to Saturdays, every 24 minutes between 00:00 – 01:00 on Fridays and Saturdays, and every 15 minutes between 07:00 – 00:00 on Sundays. Some services operate for part of the day at busier times.
- 4.4.6 In summary, it is concluded the site has an extremely high level of accessibility by Metrolink (light rail).

4.5 Summary

- 4.5.1 It is considered the site is highly accessible by sustainable modes of transport, which are also usable by those with limited mobility and are wheelchair accessible. The surrounding area exhibits excellent levels of pedestrian and cycling infrastructure, and there are many public transport opportunities within acceptable walking distance of the site.

5.0 Traffic Forecasting and Highway Impact

5.1 Introduction

- 5.1.1 The following section contains trip generation analysis based on the proposed development during the weekday AM and PM peak hours.

5.2 Existing Trip Generation

- 5.2.1 The site is currently occupied by two buildings bisected by Rowendale Street. No parking is currently provided on-site. Until recently, the two buildings housed commercial uses which generated traffic as a result. Notwithstanding, the buildings are currently vacant and for robustness the baseline has been considered zero traffic, although the buildings could also be brought back into use and the baseline would then be the extant use.

5.3 Forecast Trip Generation

- 5.3.1 In relation to future trip generation, the proposed development is car-free, as there is no car park proposed. On this basis, the vast majority of vehicular trips associated with the site would be taxis, deliveries and servicing.
- 5.3.2 In order to undertake the assessment, the TRICS database has been used. TRICS is the industry recognised tool for calculating the anticipated future trip demand of a proposed development. The database contains multi-modal surveys of varying land uses in multiple destinations across the UK, including private to rent land uses.

Methodology

- 5.3.3 Multi-modal trips for similar sites in England with low parking (30% parking or less) have been derived from TRICS. This provides robust trip rates based on comparable existing sites. The full search criteria and TRICS output is available in **Appendix C**.
- 5.3.4 The number of private car trips generated by the development has been calculated below based on current car ownership data in the area, as per the Census 2021. This percentage has been used to determine the number of future car owners within the proposed development (as a worst-case scenario, given that the development is car-free).
- 5.3.5 The remainder of vehicular trips (i.e. servicing, taxis, deliveries, etc.) is based on subtracting the total number of car trips from the total number of vehicular trips generated by the whole development, based on TRICS data.

5.3.6 The total trip generation of the site is therefore the result of adding private car trips and the remainder of vehicular trips. Further details are provided below.

Private Car Trips

5.3.7 Census 2021 data shows that only 36.3% of households in the area (Manchester 060E) own a car. Obviously, this number would be lower in this particular instance since people will be renting in a car-free development.

5.3.8 The proposed development proposes 364 apartments. The above percentage indicates that only 132 apartments would own a car (again, this figure is very robust), with 232 apartments not owning a car and therefore not generating any car trips other than taxis and deliveries.

5.3.9 On this basis, the level of private car trips generated by 132 apartments has been calculated, as summarised in the following **Table 5.1**:

132 Apartments	Trip Rates			Trip Generation		
	AM (08:00-09:00)	PM (17:00-18:00)	Daily	AM (08:00-09:00)	PM (17:00-18:00)	Daily
Private Cars	0.020	0.043	0.309	3	6	41

Table 5.1 – Proposed Private Vehicle Trip Generation (132 Apartments).

5.3.10 The number of private car trips generated by the proposed development could equate to 3 and 6 two-way movements in the typical AM and PM peak hours respectively (08:00 – 09:00 and 17:00 – 18:00), or 41 on a daily basis.

Other Vehicular Trips

5.3.11 To account for the remainder of vehicular trips related to the proposed development (i.e. servicing, taxis, deliveries, etc.), the number of trips for both all vehicles and cars alone based on 364 apartments is calculated, as summarised in the following **Tables 5.2** and **5.3**:

364 Apartments	Trip Rates			Trip Generation		
	AM (08:00-09:00)	PM (17:00-18:00)	Daily	AM (08:00-09:00)	PM (17:00-18:00)	Daily
All Vehicles	0.041	0.047	0.695	15	17	253

Table 5.2 – Proposed All Vehicle Trip Generation (364 Apartments)

364 Apartments	Trip Rates			Trip Generation		
	AM (08:00-09:00)	PM (17:00-18:00)	Daily	AM (08:00-09:00)	PM (17:00-18:00)	Daily
Private Cars	0.020	0.043	0.309	8	16	113

Table 5.3 – Proposed Private Vehicle Trip Generation (364 Apartments)

- 5.3.12 The number of servicing, taxis and deliveries trips (i.e. all other vehicular trips) related to the proposed development, is the result of subtracting the number of private cars from the total number of vehicles, both based on 364 apartments. The results are summarised in the following **Table 5.4**:

364 Apartments	Trip Generation		
	AM (08:00-09:00)	PM (17:00-18:00)	Daily
All Other Trips	7	1	140

Table 5.4 – Proposed All Other Vehicle Trip Generation (364 Apartments)

- 5.3.13 The above indicates that the number of vehicle trips related with servicing, taxis and deliveries generated by the proposed development could equate to 7 and 1 two-way movements in the typical AM and PM peak hours respectively (08:00 – 09:00 and 17:00 – 18:00), or 140 movements on a daily basis.

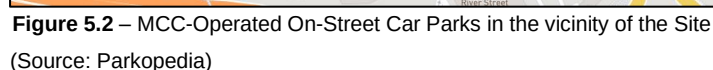
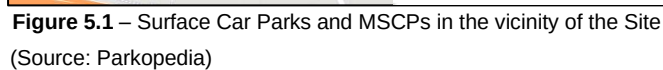
Total Trips

- 5.3.14 The total number of vehicular trips related to the proposed development include both private car trips and all other trips associated with servicing, deliveries, and taxis is summarised in the following **Table 5.5**:

364 Apartments	Trip Generation		
	AM (08:00-09:00)	PM (17:00-18:00)	Daily
All Other Trips	10	7	181

Table 5.5 – Proposed Total Vehicle Trip Generation (364 Apartments)

- 5.3.15 It is concluded that the number of total vehicle trips generated by the proposed development could equate to 10 and 7 two-way movements in the typical AM and PM peak hours respectively (08:00 – 09:00 and 17:00 – 18:00).
- 5.3.16 The number of vehicular trips across the whole day could equate to 181 movements. The number of trips in the immediate highway network has been estimated as 140 per day, since 41 of these trips would start/finish elsewhere since there is no parking on-site.
- 5.3.17 The vehicular impact of these 41 trips would be diluted and dissipated across a wider network depending on the location of car parks utilised (detailed in **Section 3.3** above). To further support this, **Figures 5.1** and **5.2** comprise excerpts from Parkopedia, an online database which allows drivers to find the closest car park to their destination. These show that the on-street and Multi-Storey Car Parks (MSCPs) listed in **Section 3.3** are spread out across Manchester City Centre, and therefore impacts at any particular junction are likely to be negligible:



5.4.1 In summary, an additional 140 vehicular trips would only represent a c.1.5% increase when compared to the existing trips on Whitworth Street West, which is negligible considering typical daily variations in traffic flows on the local highway network.

- 5.4.2 Beyond Whitworth Street West, there are TfGM counts on other roads in the local area, which show traffic flows in the region of 20,000 per day, resulting in a reduced impact of less than 1%.
- 5.4.3 Furthermore, the traffic generation falls well below TfGM's 30 trip threshold,
- 5.4.4 On the above basis, Curtins conclude that capacity assessments would not be required, and that the highway network would not experience any adverse traffic impact resulting from the proposed development.

6.0 Summary and Conclusions

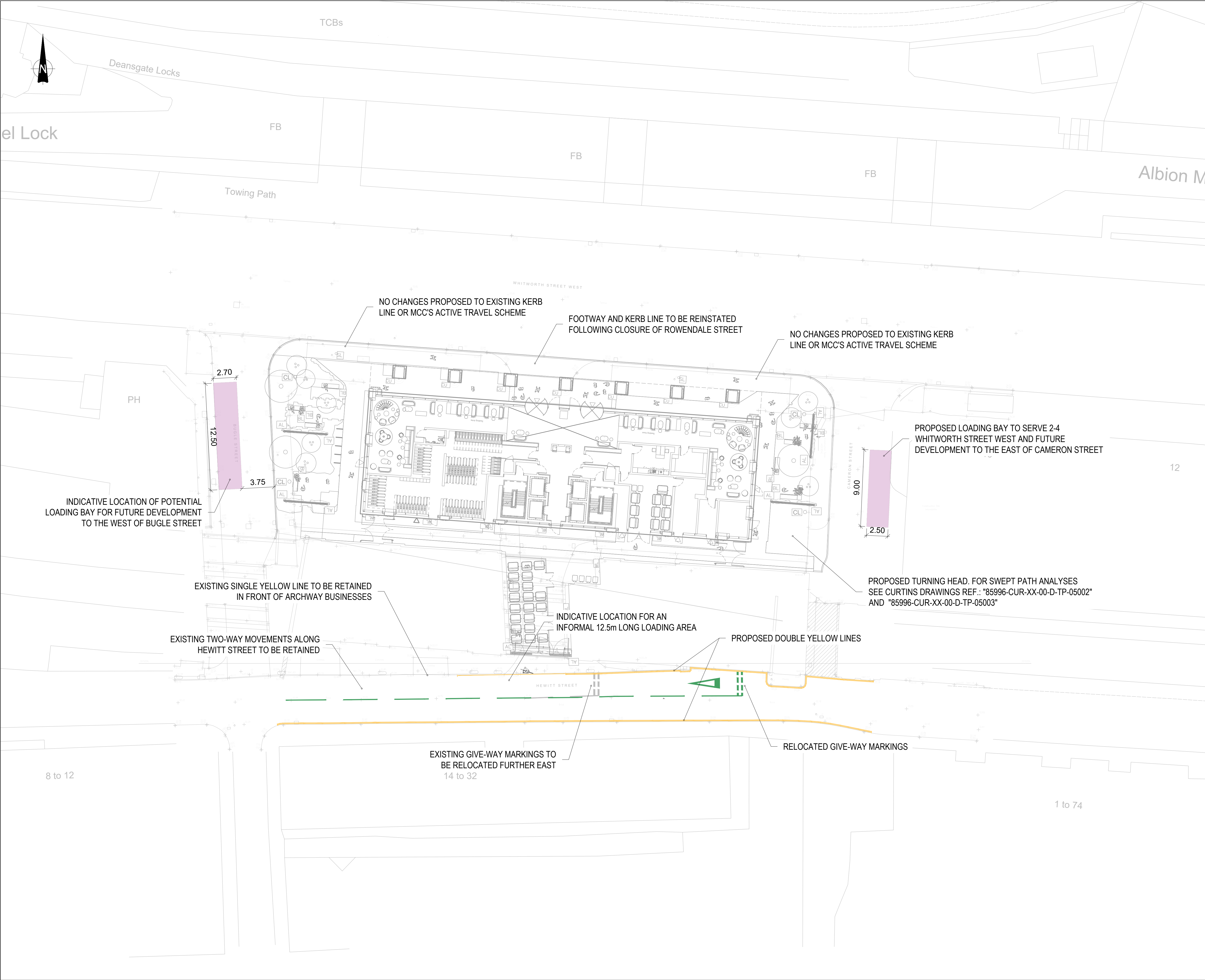
6.1 Summary

- 6.1.1 Curtins has been appointed by Glenbrook WWS Limited, Maizelands Limited and Arringford Limited to provide transport and highways advice in relation to a planning application for a build-to-rent residential development at 2-4 Whitworth Street West in Manchester city centre.
- 6.1.2 A review of baseline conditions and highway safety in the vicinity of the site has been undertaken. It is not considered that there is an existing highway safety issue that is likely to be exacerbated by the proposed development.
- 6.1.3 Relevant details of the proposed site layout, access, and servicing arrangements have been provided.
- 6.1.1 It is considered the site is highly accessible by sustainable modes of transport, which are also usable by those with limited mobility and are wheelchair accessible. The surrounding area exhibits excellent levels of pedestrian and cycling infrastructure, and there are many public transport opportunities within acceptable walking distance of the site.
- 6.1.2 Trip generation forecasts using TRICS and Census data have demonstrated that the number of total vehicle trips generated by the proposed development across the whole day could equate to 181 movements. The number of trips in the immediate highway network has been estimated as 140 per day, since 41 of these trips would start/finish elsewhere since there is no parking on-site. The impact on the immediate network is considered negligible.
- 6.1.3 Additionally, measures are proposed in the accompanying Interim Travel Plan to increase the level of walking, cycling and public transport use to and from the site, and to reduce reliance on the private car.
- 6.1.4 A review of relevant national transport planning guidance has been undertaken. It is considered that the proposed development conforms with such policy.

6.2 Conclusions

- 6.2.1 It is Curtins' view that from a highways and transport perspective there are no reasons why the development proposals should not be granted planning approval.

Drawings



GENERAL NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING.
- THE CONTENT OF THIS DRAWING IS FOR INDICATIVE INFORMATION ONLY AND NOT SUITABLE FOR CONSTRUCTION PURPOSES
- BASED ON LAND SURVEY WHERE AVAILABLE
- BASED ON SHEPPARD ROBSON'S LAYOUT DRAWING REF.: "7196-SRA-ZZ-00-DR-A-20100"
- BASED ON LAYER STUDIO'S LAYOUT DRAWING REF.: "7196-SRA-XX-00-DR-A-02100"

KEY: --- PROPOSED ROAD MARKINGS

P02	Leader text updated	17/12/24	JM	CP
Rev:	Description:	Date:	By:	Chkd:

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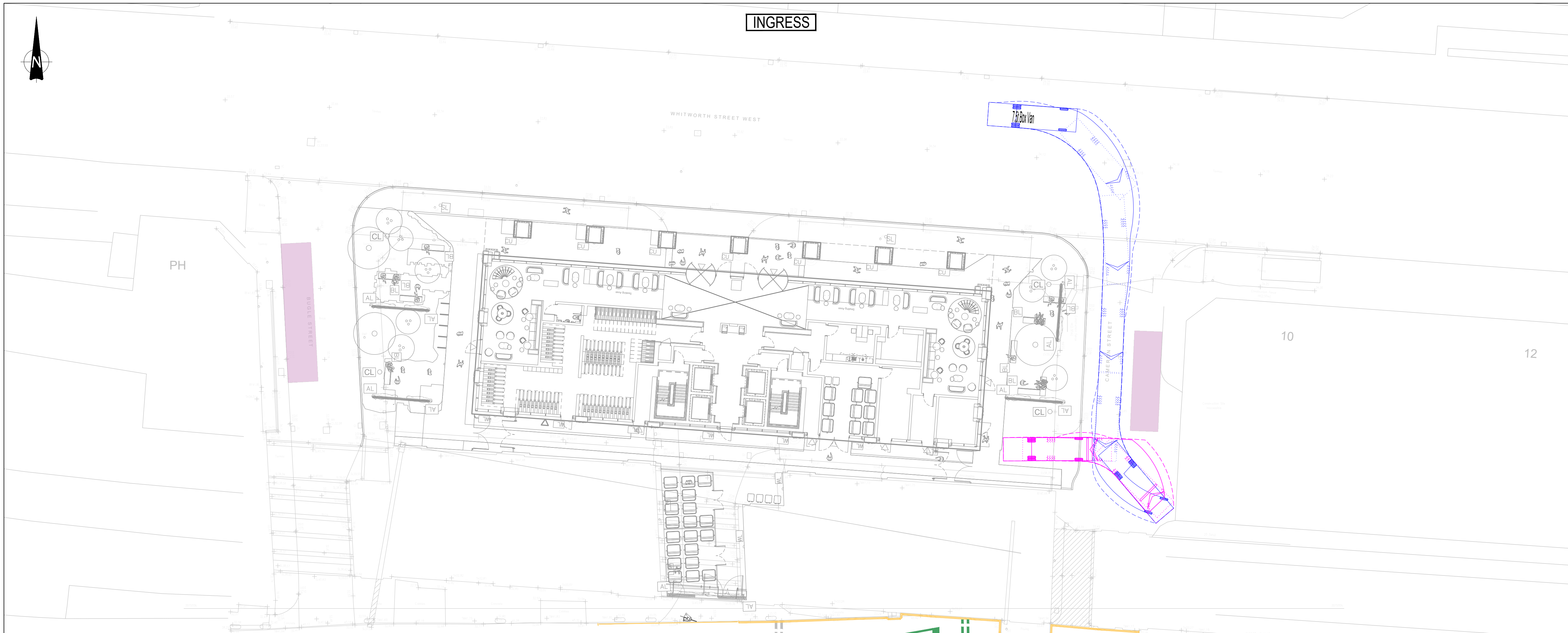
Status: PRELIMINARY

Project: 2-4 WHITWORTH STREET WEST

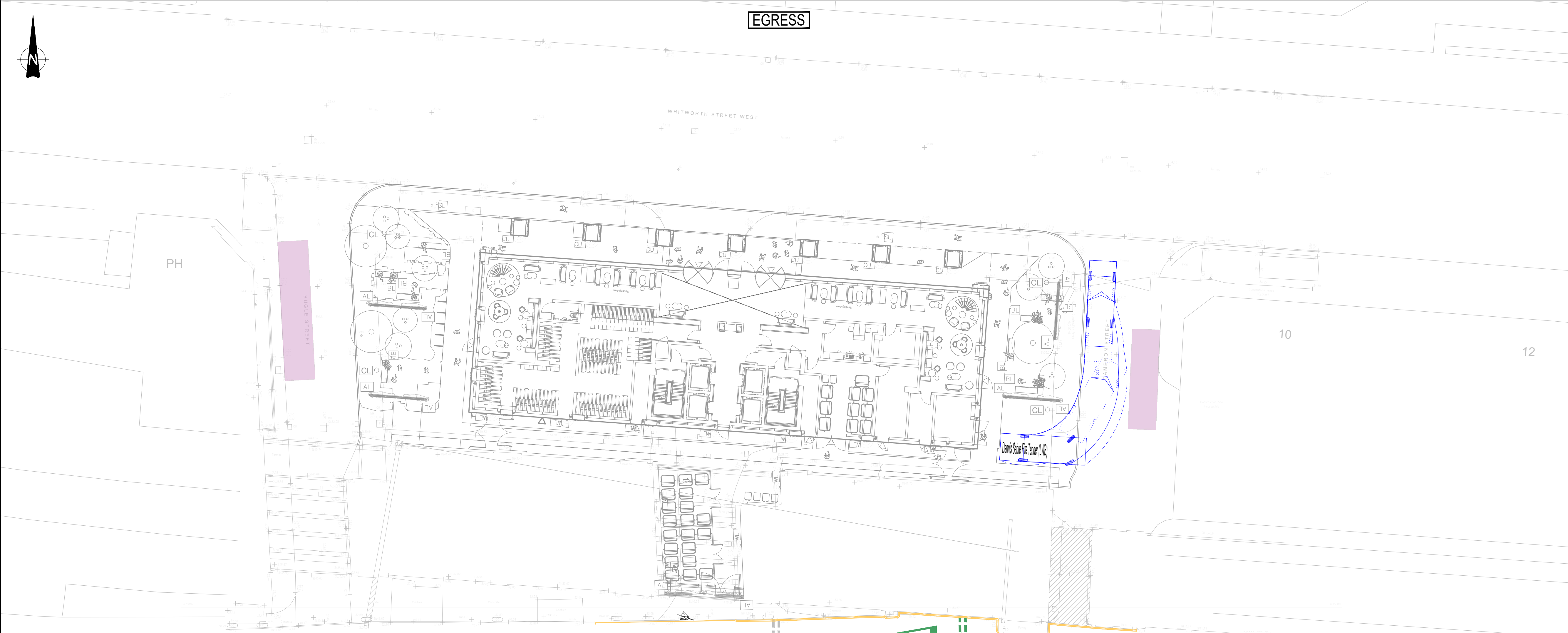
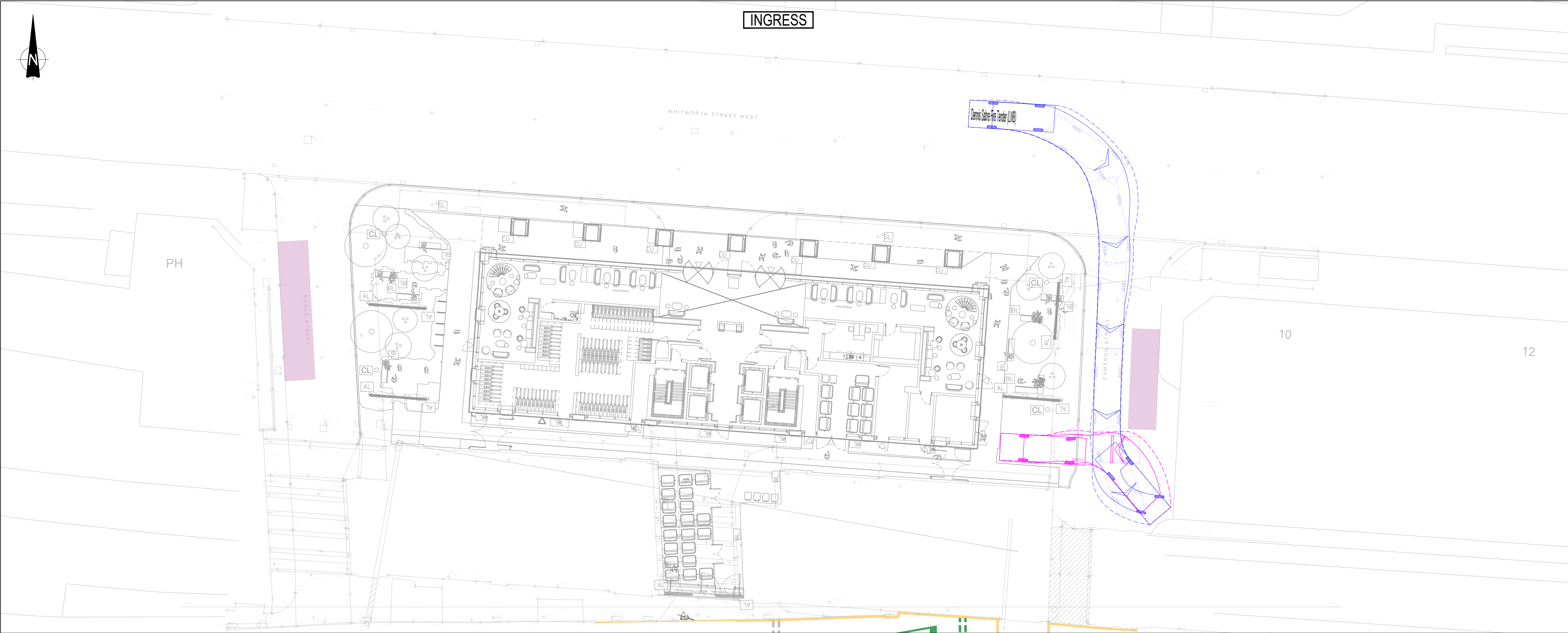
Orig Title: PROPOSED SERVICING ARRANGEMENT

Drawn By	DD	Designed By	DD	Checked By	CP
		Date	20/11/24	Scales @ A1	1:200
Project No - Originator - Function - Spatial - Form - Discipline - Number					Revision
85996 - CUR - XX - 00 - D -TP- 75003					P02

Time & IP Projects 085001 - 06000085996 - 24 Whitworth Street West BTRQ4-Production\4-Master Drawings\TPCAD75



Architectural floor plan of a building, likely a school or institutional facility, showing egress routes. The plan includes a north arrow pointing towards the top left. The title "EGRESS" is centered at the top. The building is situated on "WHITWORTH STREET WEST". To the left, a purple rectangular area is labeled "BULE STREET". To the right, a purple rectangular area is labeled "GERON STREET". The building's interior is detailed with various rooms, including classrooms (CL), administrative offices (AL), a library (BU), a television room (TV), and a "Box Van" area. A dashed blue line indicates a primary egress route starting from a central interior area, passing through a door, and then following the exterior path along the street frontage. A solid blue line shows an alternative egress path. The plan also includes a "PH" (Physical Education) area on the left and a "Box Van" area on the right. The building is surrounded by a street grid, with "WHITWORTH STREET WEST" running horizontally across the top and "BULE STREET" and "GERON STREET" running vertically on the left and right respectively. The building's footprint is outlined in black, and the egress routes are highlighted in blue. The plan includes various architectural details such as doors, windows, and furniture. The overall layout is rectangular, with a central corridor and rooms branching off. The egress routes are clearly marked and follow a logical path from the interior to the exterior. The plan is a technical drawing, likely for a safety or emergency preparedness study. The use of color (blue for egress routes) helps to distinguish the primary paths from the rest of the building's layout. The inclusion of a north arrow and street names provides context for the building's location. The title "EGRESS" is prominent and clearly identifies the purpose of the plan. The various room labels (CL, AL, BU, TV, PH, Box Van) provide specific information about the building's internal structure. The dashed and solid blue lines represent different egress scenarios, allowing for a comparison of potential exit routes. The overall design is clean and professional, typical of architectural drawings. The plan is well-organized and easy to read, with clear lines and labels. The use of a grid system for streets and rooms adds to the technical nature of the drawing. The egress routes are clearly defined and follow a logical path, making it easy to understand the intended exit strategy. The plan is a valuable tool for understanding the building's layout and potential egress options. The inclusion of a north arrow and street names provides a clear sense of direction and location. The title "EGRESS" is a key feature that immediately informs the viewer of the plan's purpose. The various room labels provide additional context and detail. The dashed and solid blue lines are a critical part of the plan, as they show the specific egress routes being studied. The overall design is a high-quality architectural drawing that effectively communicates the building's layout and egress options.



GENERAL NOTES:

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8. BASED ON LAYER STUDIO'S LAYOUT DRAWING REF.: "7196-SRA-XX-00-DR-A-02100"

VEHICLE PROFILE:

12

42

2.700m

2.450m

3.450m

6.500m

2.900m

5.00m

7.400m

Dennis Sabre Fire Tender (LWB)

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Track Width

Lock to View View

Kerb to Kerb Turning Radius

P05	Leader text removed	17/12/24	JM	CP
P04	Layout updated	20/11/24	DD	CP
P03	Layout updated	03/09/24	MQ	CP
P02	Minor update	29/08/24	MQ	DD
Rev:	Description:	Date:	By:	Chkd:

Curtins

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Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

Status:

PRELIMINARY

Project:

2-4 WHITWORTH STREET WEST

Orig Title:

SWEPT PATH ANALYSIS
FIRE TENDER

Drawn By	MQ	Designed By	MQ	Checked By	DD
		Date	22/08/24	Scales @ A1	1:200

Project No - Originator - Function - Spatial - Form - Discipline - Number	Revision
85996 - CUR - XX - 00 - D - TP- 05003	P05

Time & Projects 085001 - 08600085996 - 24 Whitworth Street West BTRQ4-Production4-Master Drawings (TPCAD05)

Appendix A – Proposed Site Layout

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DO NOT SCALE FROM THIS DRAWING
The contractor shall check and verify all dimensions on site and report any discrepancies in writing to Sheppard Robson before proceeding work

FOR ELECTRONIC DATA ISSUE
Electronic Data / drawings are issued as "read only" and should not be interrogated for measurement. All dimensions and levels should read, only from those values stated in text on the drawing.

NOTES

The layout is intended to represent the general intent for a typical floor arrangement. Furniture layout is indicative only.

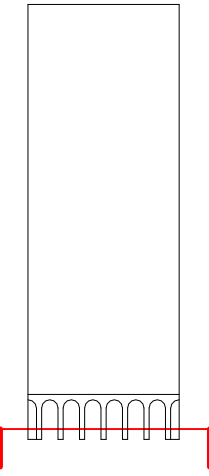
The structural and drainage strategies depicted are indicative only. TBC by Structural and Mechanical/ Electrical Engineers.

The landscape drawn is indicative, refer to Landscape Architect's drawings for landscape strategy.

- KEY:**
- Amenity
 - Reception
 - Back of House
 - Plant
 - Circulation

REVISIONS		
REV.	DATE	AMENDMENT
P01	18/11/24	Issued for Planning

KEYPLAN



CLIENT
Glenbrook WWS Limited

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PROJECT
2-4 Whitworth Street West

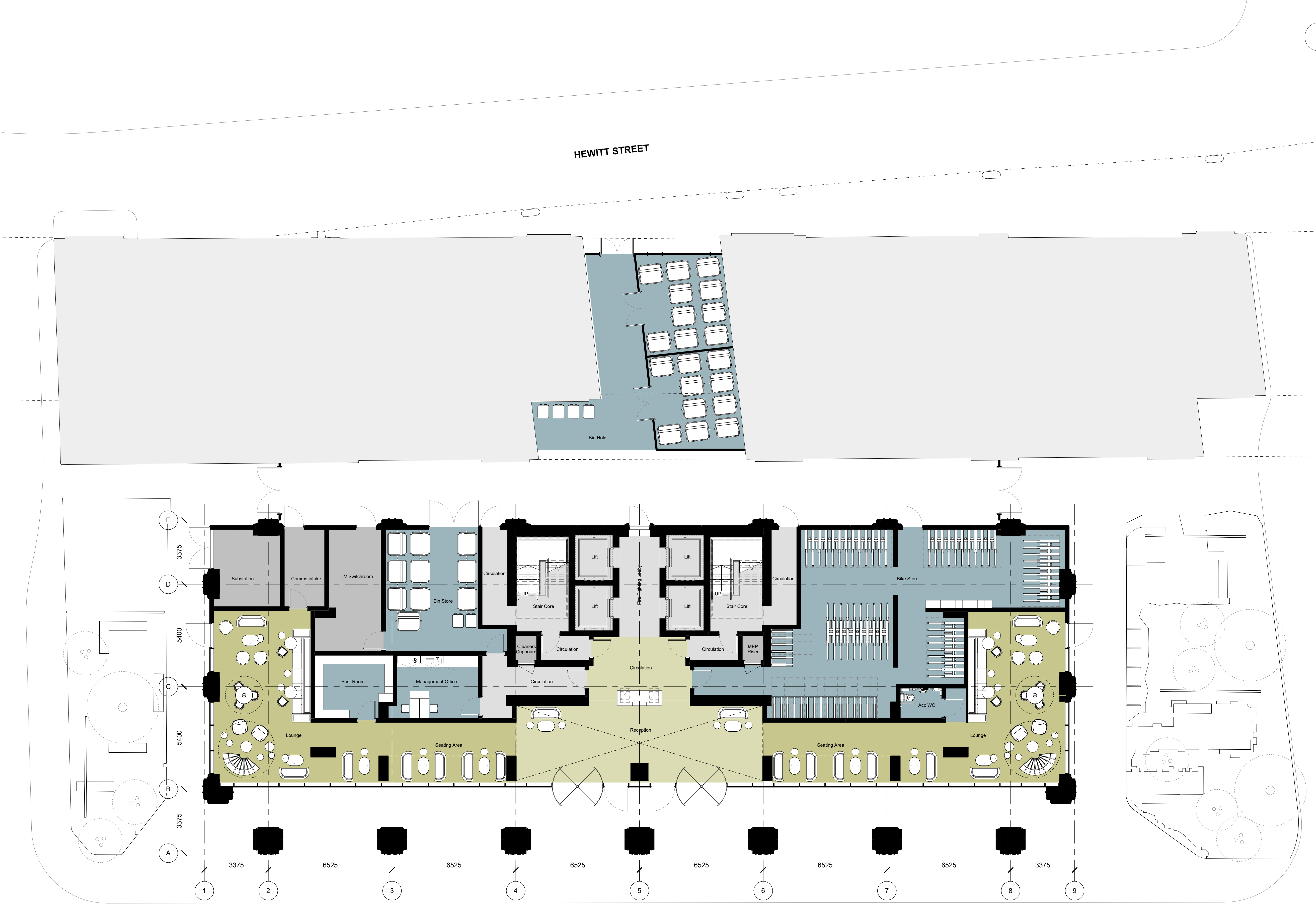
SCALE@A1	DATE	ORIGINATOR	CHECKED	AUTHORISED
1 : 100	18/11/24	MT	PC	TOB

DESCRIPTION
General Arrangement
Ground Floor Plan

STAGE
Stage 2

STATUS	PURPOSE FOR ISSUE	SR NO.
S2	Planning	7196

DRAWING NO.	REV.
7196-SRA-XX-00-DR-A-02100	P01



HEWITT STREET

WHITWORTH STREET WEST

Appendix B – Active Travel Scheme Drawings

Active Travel (ATF) City Centre Scheme section 2: Liverpool Road – Whitworth Street West.

This plan shows the permanent changes taking place on Deansgate and Whitworth Street West, between Liverpool Road – Bridgewater Viaduct:

- Motorised traffic is one-way southbound only between Tonman Street and Great Bridgewater Street.
- Two-way traffic resumes from south of Liverpool Road.
- A two-way cycleway separated from traffic by wand orcas (small sections of kerb with a vertical pole) on the eastside of Deansgate from Tonman Street and continues south down Deansgate through the junctions of Great Bridgewater Street and Liverpool Road, and Deansgate and Whitworth Street west.
- Green cycleway surface to highlight the cycleway to motor vehicles at the junctions of Great Bridgewater Way and Liverpool Road, Trafford Street and Deansgate, and Whitworth Street West and Deansgate.
- Green cycleway surface to highlight the cycleway to motor vehicles at the junctions of all sideroads leading on to Whitworth Street west.
- Controlled pedestrian crossings at the junctions of Great Bridgewater Way and Liverpool Road, and Whitworth Street West and Deansgate.
- Zebra crossings across cycleways the junctions of Great Bridgewater Way and Liverpool Road, and Whitworth Street West and Deansgate.
- Zebra crossings across the cycleway to three bus stops on the western section of Whitworth Street west.
- Zebra crossing across the cycleway to a bus stop on Deansgate south of Castle Street.

- Rain Garden drainage at the junction of Deansgate and Whitworth Street west.
- Taxi ranks on the northside of Whitworth Street west, opposite Bugle Street.
- Loading bay on the eastside of Deansgate, between Tonman Street and Great Bridgewater Street.
- Six pay and display parking bays and three blue badge parking bays on the northside of Whitworth Street west, between Rowendale Street and Cameron Street.
- Turning refuge points for cyclists to leave Deansgate onto Tonman Street.
- The scheme boundaries for this section run both sides of Deansgate, from just north of Tonman Street down to south of Castle Street, and extends into the sideroads of Great Bridgewater Street, Liverpool Road, Trafford Street, Bridgewater Street, Whitworth Street west, Albion Street, and Castle Street.

KEY

Footway/paved area

Coloured surfacing

Controlled crossing

Zebra crossing

Black and white wands

Kerb

Scheme boundary

Appendix C – TRICS Output

Calculation Reference: AUDIT-148301-240612-0631

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON	
	HM HAMMERSMITH AND FULHAM	1 days
	IS ISLINGTON	1 days
	WF WALTHAM FOREST	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: 97 to 194 (units:)
Range Selected by User: 6 to 493 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: Selected: 0.00 to 0.30 Actual: 0.07 to 4.38

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: 01/01/16 to 13/09/23

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

Selected survey days:

Tuesday 2 days
Thursday 1 days

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

Selected survey types:

Manual count 3 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:

Town Centre 1
Edge of Town Centre 2

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

Selected Location Sub Categories:

Development Zone 1
Residential Zone 1
Built-Up Zone 1

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

Inclusion of Servicing Vehicles Counts:

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

Secondary Filtering selection:

Use Class:

C3 3 days

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

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

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

Population within 5 miles:

500,001 or More	3 days
-----------------	--------

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	1 days

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

Travel Plan:

Yes	2 days
No	1 days

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

PTAL Rating:

5 Very Good	1 days
6a Excellent	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1	HM-03-C-02	BLOCKS OF FLATS		HAMMERSMITH AND FULHAM
	GLENTHORNE ROAD			
	HAMMERSMITH			
	Town Centre			
	Built-Up Zone			
	Total No of Dwellings:	194		
	Survey date: TUESDAY	30/04/19		Survey Type: MANUAL
2	IS-03-C-04	BLOCK OF FLATS		ISLINGTON
	CITY ROAD			
	ISLINGTON			
	Edge of Town Centre			
	Development Zone			
	Total No of Dwellings:	157		
	Survey date: THURSDAY	14/07/16		Survey Type: MANUAL
3	WF-03-C-01	BLOCKS OF FLATS		WALTHAM FOREST
	ERSKINE ROAD			
	WALTHAMSTOW			
	Edge of Town Centre			
	Residential Zone			
	Total No of Dwellings:	97		
	Survey date: TUESDAY	05/11/19		Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 6.53

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	3	149	0.018	3	149	0.027	3	149	0.045
08:00 - 09:00	3	149	0.016	3	149	0.025	3	149	0.041
09:00 - 10:00	3	149	0.025	3	149	0.022	3	149	0.047
10:00 - 11:00	3	149	0.027	3	149	0.020	3	149	0.047
11:00 - 12:00	3	149	0.029	3	149	0.036	3	149	0.065
12:00 - 13:00	3	149	0.013	3	149	0.018	3	149	0.031
13:00 - 14:00	3	149	0.025	3	149	0.029	3	149	0.054
14:00 - 15:00	3	149	0.011	3	149	0.016	3	149	0.027
15:00 - 16:00	3	149	0.022	3	149	0.020	3	149	0.042
16:00 - 17:00	3	149	0.047	3	149	0.036	3	149	0.083
17:00 - 18:00	3	149	0.029	3	149	0.018	3	149	0.047
18:00 - 19:00	3	149	0.036	3	149	0.029	3	149	0.065
19:00 - 20:00	3	149	0.038	3	149	0.031	3	149	0.069
20:00 - 21:00	3	149	0.016	3	149	0.016	3	149	0.032
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.352			0.343			0.695

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: 97 - 194 (units:)
Survey date range: 01/01/16 - 13/09/23
Number of weekdays (Monday-Friday): 3
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS 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	3	149	0.007	3	149	0.007	3	149	0.014
08:00 - 09:00	3	149	0.002	3	149	0.002	3	149	0.004
09:00 - 10:00	3	149	0.004	3	149	0.004	3	149	0.008
10:00 - 11:00	3	149	0.007	3	149	0.007	3	149	0.014
11:00 - 12:00	3	149	0.004	3	149	0.004	3	149	0.008
12:00 - 13:00	3	149	0.002	3	149	0.002	3	149	0.004
13:00 - 14:00	3	149	0.007	3	149	0.007	3	149	0.014
14:00 - 15:00	3	149	0.000	3	149	0.000	3	149	0.000
15:00 - 16:00	3	149	0.002	3	149	0.002	3	149	0.004
16:00 - 17:00	3	149	0.004	3	149	0.004	3	149	0.008
17:00 - 18:00	3	149	0.000	3	149	0.000	3	149	0.000
18:00 - 19:00	3	149	0.004	3	149	0.004	3	149	0.008
19:00 - 20:00	3	149	0.007	3	149	0.007	3	149	0.014
20:00 - 21:00	3	149	0.007	3	149	0.007	3	149	0.014
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.057			0.057			0.114

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL 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	3	149	0.002	3	149	0.007	3	149	0.009
08:00 - 09:00	3	149	0.000	3	149	0.007	3	149	0.007
09:00 - 10:00	3	149	0.000	3	149	0.000	3	149	0.000
10:00 - 11:00	3	149	0.002	3	149	0.007	3	149	0.009
11:00 - 12:00	3	149	0.000	3	149	0.000	3	149	0.000
12:00 - 13:00	3	149	0.002	3	149	0.004	3	149	0.006
13:00 - 14:00	3	149	0.000	3	149	0.000	3	149	0.000
14:00 - 15:00	3	149	0.004	3	149	0.002	3	149	0.006
15:00 - 16:00	3	149	0.000	3	149	0.000	3	149	0.000
16:00 - 17:00	3	149	0.004	3	149	0.000	3	149	0.004
17:00 - 18:00	3	149	0.007	3	149	0.002	3	149	0.009
18:00 - 19:00	3	149	0.002	3	149	0.000	3	149	0.002
19:00 - 20:00	3	149	0.004	3	149	0.004	3	149	0.008
20:00 - 21:00	3	149	0.007	3	149	0.002	3	149	0.009
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.035			0.069

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL 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	3	149	0.027	3	149	0.145	3	149	0.172
08:00 - 09:00	3	149	0.029	3	149	0.266	3	149	0.295
09:00 - 10:00	3	149	0.038	3	149	0.083	3	149	0.121
10:00 - 11:00	3	149	0.069	3	149	0.078	3	149	0.147
11:00 - 12:00	3	149	0.038	3	149	0.076	3	149	0.114
12:00 - 13:00	3	149	0.036	3	149	0.042	3	149	0.078
13:00 - 14:00	3	149	0.040	3	149	0.047	3	149	0.087
14:00 - 15:00	3	149	0.045	3	149	0.036	3	149	0.081
15:00 - 16:00	3	149	0.085	3	149	0.045	3	149	0.130
16:00 - 17:00	3	149	0.071	3	149	0.058	3	149	0.129
17:00 - 18:00	3	149	0.112	3	149	0.060	3	149	0.172
18:00 - 19:00	3	149	0.219	3	149	0.071	3	149	0.290
19:00 - 20:00	3	149	0.118	3	149	0.029	3	149	0.147
20:00 - 21:00	3	149	0.060	3	149	0.020	3	149	0.080
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.987			1.056			2.043

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 6.53

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	3	149	0.058	3	149	0.239	3	149	0.297
08:00 - 09:00	3	149	0.058	3	149	0.424	3	149	0.482
09:00 - 10:00	3	149	0.078	3	149	0.192	3	149	0.270
10:00 - 11:00	3	149	0.136	3	149	0.143	3	149	0.279
11:00 - 12:00	3	149	0.114	3	149	0.167	3	149	0.281
12:00 - 13:00	3	149	0.087	3	149	0.100	3	149	0.187
13:00 - 14:00	3	149	0.105	3	149	0.129	3	149	0.234
14:00 - 15:00	3	149	0.100	3	149	0.105	3	149	0.205
15:00 - 16:00	3	149	0.196	3	149	0.107	3	149	0.303
16:00 - 17:00	3	149	0.232	3	149	0.167	3	149	0.399
17:00 - 18:00	3	149	0.241	3	149	0.138	3	149	0.379
18:00 - 19:00	3	149	0.388	3	149	0.201	3	149	0.589
19:00 - 20:00	3	149	0.241	3	149	0.121	3	149	0.362
20:00 - 21:00	3	149	0.145	3	149	0.103	3	149	0.248
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.179			2.336			4.515

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

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

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

MULTI-MODAL CARS

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	3	149	0.007	3	149	0.016	3	149	0.023
08:00 - 09:00	3	149	0.002	3	149	0.018	3	149	0.020
09:00 - 10:00	3	149	0.007	3	149	0.004	3	149	0.011
10:00 - 11:00	3	149	0.004	3	149	0.009	3	149	0.013
11:00 - 12:00	3	149	0.009	3	149	0.011	3	149	0.020
12:00 - 13:00	3	149	0.011	3	149	0.007	3	149	0.018
13:00 - 14:00	3	149	0.009	3	149	0.013	3	149	0.022
14:00 - 15:00	3	149	0.002	3	149	0.004	3	149	0.006
15:00 - 16:00	3	149	0.009	3	149	0.004	3	149	0.013
16:00 - 17:00	3	149	0.022	3	149	0.009	3	149	0.031
17:00 - 18:00	3	149	0.027	3	149	0.016	3	149	0.043
18:00 - 19:00	3	149	0.022	3	149	0.016	3	149	0.038
19:00 - 20:00	3	149	0.020	3	149	0.013	3	149	0.033
20:00 - 21:00	3	149	0.009	3	149	0.009	3	149	0.018
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.160			0.149			0.309

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

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

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

MULTI-MODAL Servicing Vehicles

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	3	149	0.007	3	149	0.007	3	149	0.014
08:00 - 09:00	3	149	0.011	3	149	0.007	3	149	0.018
09:00 - 10:00	3	149	0.013	3	149	0.011	3	149	0.024
10:00 - 11:00	3	149	0.009	3	149	0.004	3	149	0.013
11:00 - 12:00	3	149	0.016	3	149	0.018	3	149	0.034
12:00 - 13:00	3	149	0.002	3	149	0.007	3	149	0.009
13:00 - 14:00	3	149	0.011	3	149	0.011	3	149	0.022
14:00 - 15:00	3	149	0.004	3	149	0.002	3	149	0.006
15:00 - 16:00	3	149	0.009	3	149	0.011	3	149	0.020
16:00 - 17:00	3	149	0.018	3	149	0.020	3	149	0.038
17:00 - 18:00	3	149	0.002	3	149	0.002	3	149	0.004
18:00 - 19:00	3	149	0.004	3	149	0.004	3	149	0.008
19:00 - 20:00	3	149	0.007	3	149	0.007	3	149	0.014
20:00 - 21:00	3	149	0.000	3	149	0.000	3	149	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.113			0.111			0.224

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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