

DEANSGATE SOUTH
MANCHESTER

TRANSPORT STATEMENT

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Transport Planning
Flood Risk & Hydrology
Infrastructure Engineering



calibro
transport, flood risk & infrastructure consultants



Control Sheet

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1. INTRODUCTION

1.1 Background

- 1.1.1 Calibro Consultants has been appointed by Fusion Students (herein referred to as “the Applicant”) to provide an appraisal of the traffic and transport implications associated with the proposed redevelopment of the site at Deansgate South, Manchester for a student accommodation scheme comprising 534 bedrooms, across 261 units.
- 1.1.2 Given the highly sustainable town centre location in combination with the nature of the proposed development, the proposals incorporate a zero-car approach to maximise the sustainability of the site. However, a student drop-off strategy will be in place to safely and efficiently process the arrival and departure of students at the start and end of academic periods.
- 1.1.3 This report has therefore been prepared with the purpose of providing the Local Planning and Highway Authorities with an evidence base that establishes the magnitude and severity of the transport-related development effects. The assessment process has been undertaken with due regard to best practice and current policy, particularly in respect of the Revised National Planning Policy Framework (NPPF).
- 1.1.4 In this way, the assessment focuses on the following two principal areas of policy.

1. Sustainability

The stated purpose of the NPPF and the wider planning system is “to help to achieve sustainable development” and is therefore underpinned by a presumption in favour of sustainable development. In this regard, the economic, social and environmental credentials of the development proposals will be considered throughout this report, so far as relevant to transport and highways matters.



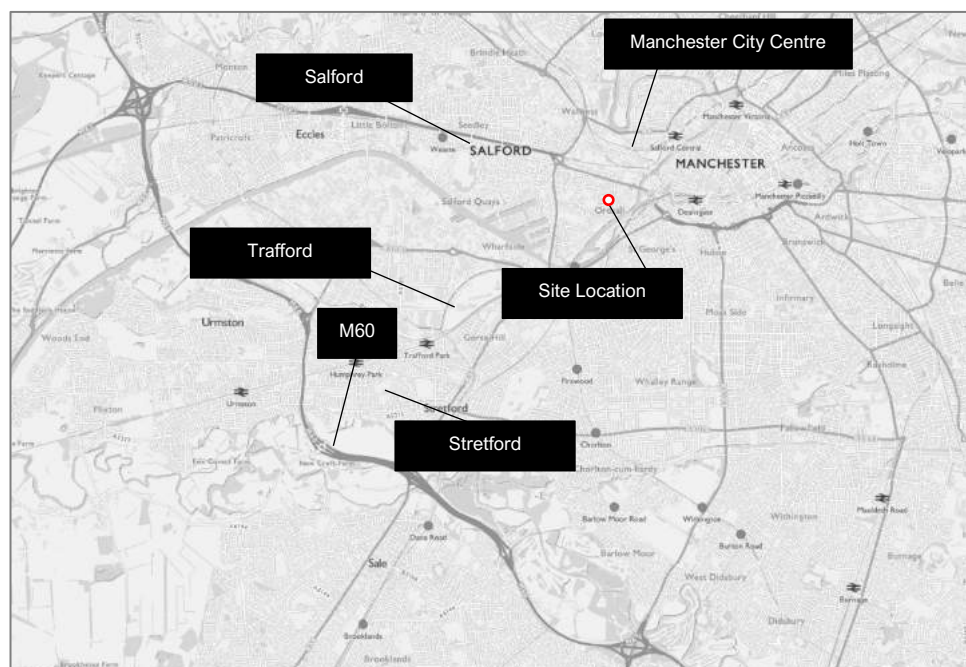
2. Cumulative Impact

Paragraph 109 of NPPF states that “development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe” and the report therefore seeks to quantify the magnitude of any transport effects (including highway capacity and safety) in order to inform measures of likely severity.

1.2 Site Location

- 1.2.1 The application site comprises a parcel of previously developed land, located in the western extent of Manchester City Centre. In a regional context, the site is located some 290-metres of the A57(M). The site is within Manchester City Council, which borders Trafford Council to the south and Salford City Council to the west. The closest junction to the M60 is located 6-kilometres south in Stretford.
- 1.2.2 The application site is shown in its strategic context below.

Figure 1–1 Strategic Site Context



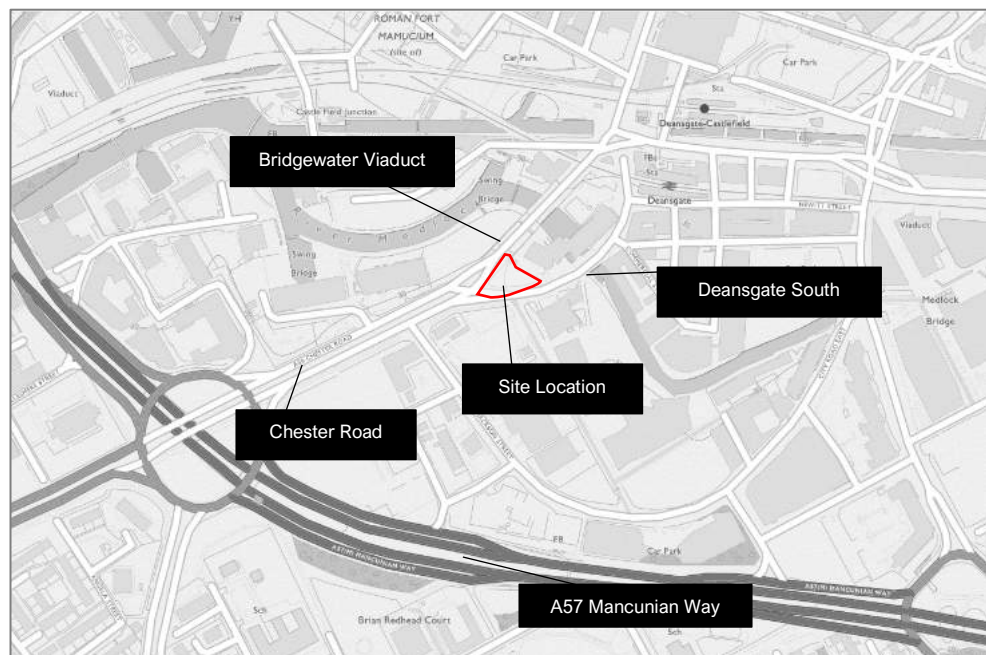


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- 1.2.3 The site is a brownfield site, currently vacant and overgrown. The site is defined by Chester road to the north-west, Bridgewater Viaduct to the north-east and Deansgate to the south, whilst a neighbouring residential apartment building delineates the eastern boundary.
- 1.2.4 The site is shown in its local context below.

Figure 1–2 Local Site Context



1.3 Structure of the Report

- 1.3.1 This report has been prepared as a Transport Statement to provide the planning and highway authorities with the evidence they require to consider the implications of a planning application for the proposed development of a purpose-built student accommodation scheme at Deansgate.
- 1.3.2 The report sets out the various considerations under the following structure:

Section 2. Development Proposals

This section of the report outlines those elements of the proposed development that are pertinent to transport, movement and accessibility.



Section 3. Travel Credentials: Non-Car Access

The non-car accessibility credentials of the application site are considered within this section of the report. An accessibility model has been created to inform the analysis and to show the site's relationship to key trip attractors. This is supplemented by a review of the interconnecting infrastructure.

Section 4. Travel Credentials: Car-Borne Access

This section of the report considers the geometry of the vehicular highway network in the locality of the application site and considers whether it is suitable to accommodate the physical requirements of the type and volume of vehicular movements generated by the day-to-day operation of the proposed development.

Section 5. Traffic Impact

This section of the report considers the magnitude of any traffic effects resultant from the proposed development, together with its potential significance in the context of the safe and efficient operation of the public highway network.

Section 6. Framework Travel Plan

This section of the report sets out the proposed Framework Travel Plan that will operate on site to further encourage sustainable travel.

Section 7. Student Parking Controls and Management

This section of the report identifies the various local parking constraints and sets out the proposed unloading/loading strategy for the start and end of the academic year.

Section 8. Summary and Conclusion

A summary of the salient findings of the report are provided within this section and these are used to evidence an overarching conclusion regarding the suitability of the proposed development.

2. DEVELOPMENT PROPOSALS

2.1 Application Details

2.1.1 A detailed description of the proposed development is provided in the Planning Statement prepared by Cushman & Wakefield, which accompanies the planning application. However, a plan illustrating the proposed site layout is shown below and to scale at [Appendix A](#).

Figure 2-1 Site Layout



2.1.2 In respect of traffic and transport, the salient elements of the proposed scheme may be summarised as follows:

- a) The proposals comprise of the development of a purpose-built student accommodation facility comprising 534 number of bedrooms across a maximum of 27 floors, together with an active frontage on ground-floor and mezzanine.
- b) An internal cycle store will be provided within the development with space for 92 bicycles: representing a cycle provision of 17%. The cycle parking will be provided for residents, staff, and visitors. Further information relating to cycle parking is provided at 2.3.3.



- c) Reflecting the highly sustainable town centre location, the development is proposed to be car-free; and
- d) A drop-off and collection strategy is proposed in order to safely and efficiently manage the arrival and departures of residents at the start and end of academic years.

2.2 Means of Access

Vehicular Access

- 2.2.1 To reflect the highly sustainable town centre location, the proposed development will operate as a car-free development.
- 2.2.2 Temporary arrangements are proposed to manage the arrival and departure of students safely and efficiently at the start and end of academic years. The proposed arrangements are discussed at [Section 6](#) of this report.

Pedestrian Access

- 2.2.3 Pedestrian access will be provided directly onto the street (Deansgate South) to the south of the development. The street affords circa 3.5-metre-wide pavements and provides direct access to an array of day-to-day facilities such as local food stores, leisure and retail uses.
- 2.2.4 The non-car design of the scheme will actively discourage the use of personal vehicles and will encourage means of sustainable travel. However, to further encourage sustainable travel, a Travel Plan will operate on-site to maximise walking and cycling as first tier modes of travel to key amenities and connect to further modes of travel such as tram, bus and rail. Further information is provided with the Framework Travel Plan document in section 6.



2.3 Cycle Parking

2.3.1 Manchester City Council does not have cycle parking standards for Purpose Built Student Accommodation (PBSA), and sites will be judged on a case-by-case basis. When reviewing other approved PBSA planning applications¹ on Manchester City Council's planning portal, it is shown that provisions between 8-29% cycle parking spaces per bedroom have been accepted.

2.3.2 Further to this, recent examples of Calibro projects are summarised below.

- a. Hatfield (Fusion Students) – 308 bed facility provided with 52 cycle parking spaces (16.9%);
- b. Capital Quarter, Cardiff (Fusion Students)– 675 bed facility provided with 194 cycle parking spaces (28.7%);
- c. Moore Street, Sheffield (Fusion Students) - 850 bed facility with 116 cycle parking spaces (13.6%);
- d. Upper Duke Street, Liverpool (Fusion Students) - 420 bed facility with 150 cycle parking spaces (35.8%);
- e. Curzon Circus (speculative development) – 381 bed facility provided with 100 cycle parking spaces (26.2%); and
- f. Lancaster Street, Birmingham – 549 bed facility provided with 107 cycle parking spaces (19.49%).

2.3.3 On this basis, it is evidenced that a 17% cycle parking provision would be sufficient to serve the site. The proposal incorporates some 92 no. spaces in a secure ground floor cycle storage via a mix of two-tier racks and Sheffield stands.

¹ [118683/FO/2017], [120896/FO/2018], [125654/FO/2019]



2.4 Service Arrangements

- 2.4.1 An internal bin store will be provided in the south-western corner of the lower ground floor to enable refuse collection to take place from Deansgate South. The bin storage will be accessed via a ramp in the south eastern corner of the site. The entrance doors will open inwards, away from the public highway, whilst an integrated footway level loading bay will be provided to allow for the movement of bins between the storage area and refuse lorries.
- 2.4.2 Swept-path analysis of a refuse vehicle is shown in the figure below and to scale at [Appendix B](#). The surrounding road network of the site allows refuse vehicles to approach the loading bay either from east or west. However, arriving from the east would place the rear of the vehicle closest to the bin store exit, which is beneficial to reduce walking distance to and from the bin storage.

Figure 2-2 Refuse Vehicle Swept-Path Analysis



2.4.4 The proposals for the development include slight changes to the layout of the western end of Deansgate South. These include adjusting the kerb line and centre island to facilitate refuse vehicles accessing the site; converting the existing three on street parking bays to shared foot and cycle way; introducing a courtesy cycle crossing to connect with Chorlton way and further connectivity to existing city centre cycle paths; as well as adding an integrated loading bay to the south east end of the site, as referred to in previous section 2.4.1. Consideration has been taken to ensure that the refuse vehicles attending the loading bay will not impact the required visibility splay for the junction adjacent to the site to the east.



3. NON-CAR-TRAVEL CREDENTIALS

3.1 Introduction

- 3.1.1 This section of the report describes the availability and quality of the various travel networks accessible to the application site. In this way, the existing non-car credentials are considered within this section of the report by way of GIS-based modelling, using centralised travel networks and public transport data to identify the geographical catchment of each mode and the amenities location therein. All accessibility analysis outputs are included at [Appendix C](#) of this report.
- 3.1.2 It is noteworthy that the principle of the proposed development is complimentary to Paragraph 103 of the Revised National Planning Policy Framework (NPPF) which states that “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 [which can] help to reduce congestion and emissions as well as improve air quality and public health.

3.2 Accessibility via Foot

- 3.2.1 The application site is accessed via a well-formed and maintained network of footways that provide connectivity to the nearby bus stops, train station, retail, and university areas which future residents may wish to access on a daily basis.
- 3.2.2 Indeed, the site is directly connected onto Deansgate South, which has been landscaped with wide footways and leads to an existing pedestrianised section of Deansgate by the train station. Further north plans to convert sections of Deansgate into a more pedestrian friendly environment is well underway, with a section of Deansgate between King Street West and Blackfriars Street temporary closed to traffic, as a COVID-19 initiative enabled by the emergency active travel fund. The street has now been reopened in one direction, whilst still providing ample opportunities for pedestrians.
- 3.2.3 Deansgate South is defined by a mix of high-rise residential units and commercial office space on its southern boundaries and a mix of residential and lower scale industrial brick buildings along its’ northern boundaries. The carriageway is cobbled and both sides have generous pavements widths of circa 3.5-metres.



- 3.2.4 Allied to the above, all footways within the vicinity of the site and around the centre of Manchester are generally of good width. Indeed, based on guidance set out in Manual for Streets (MfS), the local footways would be sufficient to accommodate a wheelchair user passing a pedestrian or an adult walking safely alongside a child (minimum requirement of 1.2-metres).
- 3.2.5 To the south of the site, shared surface footways are provided on either side of the road which allows connectivity to Deansgate-Castlefield tram stop, Deansgate Rail Station and the heart of Manchester City Centre. Dropped kerbs are provided at informal crossing points in the locality to facilitate pedestrian movements.
- 3.2.6 A more detailed description of the surrounding network geometry can be found at [Section 4](#) of this report.
- 3.2.7 The National Planning Policy Framework (NPPF) does not define a catchment within which travel by foot is considered feasible and the suggested maximum desirable walk distance of 2-kilometres advocated with the document entitled 'Guidelines for Providing for Journeys on Foot' has been adopted.
- 3.2.8 Given its location within close proximity to Manchester City Centre, the application site is situated within a 2-kilometre walking distance of a wide range of facilities and amenities which may be required on a daily basis by future residents, some of which are listed in the below table:



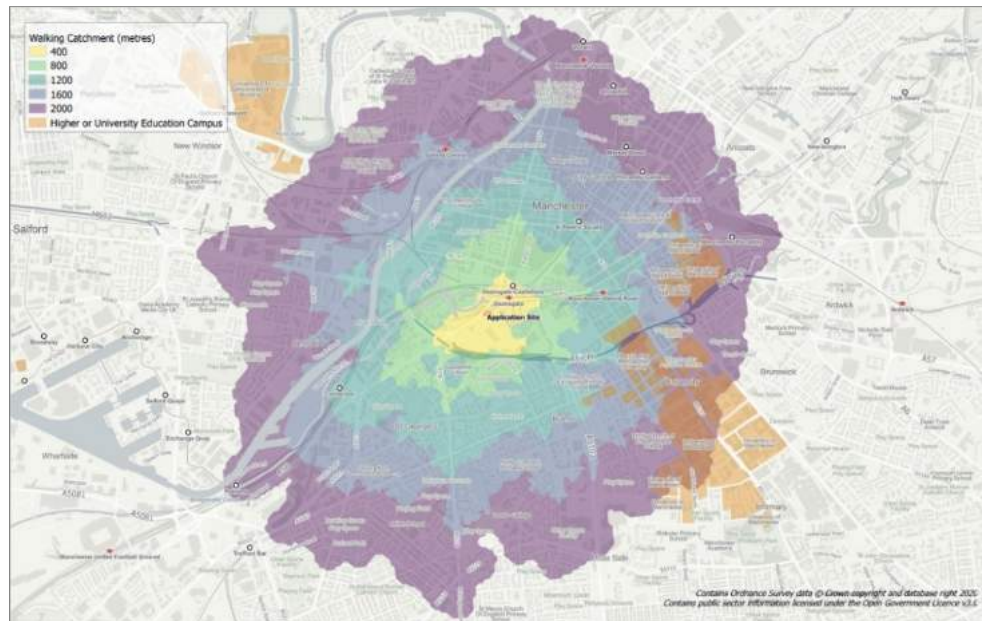
Table 3.1 Walking Distances and Times to Local Facilities

Amenity/Facility	Distance (metres)	Walking Time (minutes - based on a pace of 4.8-kph)
Lakeland Grocers	180	2
Deansgate Rail Station	210	3
Deansgate-Castlefield Tram Stop	260	3
The Gym	500	7
Train CrossFit	650	8
Harry Hall Cycles	650	8
The Doctors Practice	700	9
The Medical Centre	700	9
Cornbrook Medical Practice	900	11
Tesco Express Oxford St	950	12
Manchester Central Library	1,000	13
Hulme Post Office	1,000	13
Deansgate Post Office	1,000	13
St Lawrence Pharmacy	1,100	14
Manchester Metropolitan University	1,200	15
Princess Street Night Life	1,200	16
Central Retail District	1,500	18
Sainsbury's	1,500	20
ASDA Hulme Superstore	1,700	22
University of Manchester - Oxford Rd	1,800	23

- 3.2.9 To aid orientation and pedestrian movement, signed pedestrian routes showing the direction and distance to key local facilities and amenities are provided along the local pedestrian network.
- 3.2.10 In the context of the proposed development, a 2-kilometre travel distance has been considered within a GIS-based accessibility model that has been constructed considering the available infrastructure surrounding the application site.
- 3.2.11 The resultant geographical catchment and the amenities located therein is shown below, whilst a larger scale plan is provided at [Appendix C](#).



Figure 3-1 Walking Catchment



3.2.12 It is evident that from the above figure that walking is a viable option for future residents as the site is within a 25-minute walk of Manchester University. Indeed, it also shows that that the entirety of Manchester City Centre can be accessed within a 20-minute walk (1,600-metres) from the proposed development, where there is a plethora of medical facilities, employment, leisure, and a variety of retail destinations.

3.2.13 In this respect, the location of the application site affords an opportunity for future residents to travel to the site by foot, thus making walking a viable and attractive mode of transport to and from the proposal site for the majority of journey purposes.

3.3 Accessibility via Bicycle

3.3.1 The industry-standard distance over which cycling is considered to be feasible for most of the population is 5-kilometres, although it is noted that there will always be a part of the population that have a natural propensity to cycle and will therefore be willing and able to travel further by bike.

3.3.2 Indeed, National Travel Survey (Table NTS0306) highlights that the average cycle trip is currently 3.5-miles (5.6-kilometres) and that the average distance travelled has steadily increased since 1995.



- 3.3.3 However, Local Transport 1/04 indicates that “journeys up to three times [the average distance] are not uncommon for regular commuters” and accepted the “fitness and physical ability, journey purpose....and conditions” were relevant factors.
- 3.3.4 Consequently, it is considered that cycle trips up to 16.8-kilometres would be considered, whereas journey distances between 5-kilometres and 12-kilometres would be acceptable, and those less than 5-kilometres would be desirable.
- 3.3.5 With regards to infrastructure, the application site is surrounded by a network of roads that feature cycle lanes or low traffic routes. Notwithstanding, within the vicinity of the site there are several roads that form part of the ‘Beelines Network’, as well as existing National Cycle Route 6, which runs in an east-west direction north of the perimeter of Deansgate.

Figure 3-2 Existing cycle network (Transport for Greater Manchester)



- 3.3.6 It is also noted that the draft ‘City Centre Transport Strategy to 2040 – From A to Bee²’, published in 2020 by Manchester City Council, Salford City Council, Greater Manchester Combined Authority and Transport for Greater Manchester includes committed and planned schemes that are being rolled out in the area, with the view to create a cohesive ‘beelines network’ of high-quality cycle provision.

² www.manchester.gov.uk/download/downloads/id/27777/draft_city_centre_transport_strategy_2020.pdf [accessed 2020-11-25]

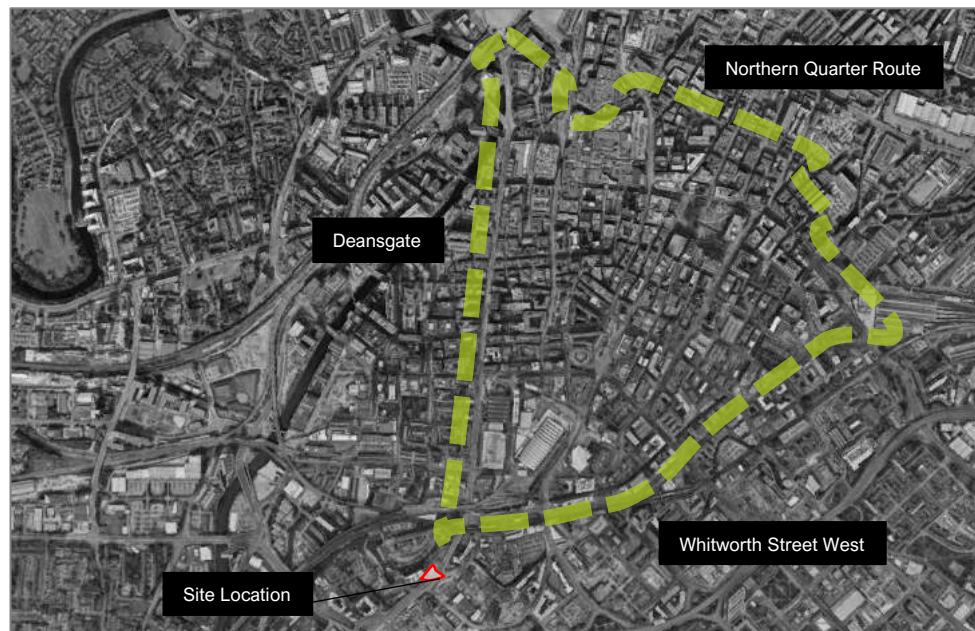


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- 3.3.7 In the Draft Transport Strategy to 2040 it is stated: *“To support more people using bikes we are developing an integrated city centre cycle network, formed around “the triangle” cycle network, comprising three major routes: Deansgate, Whitworth Street West and the committed Northern Quarter cycle route. This will be supported by a series of “spokes” on the “city centre wheel” cycle network, which will deliver quality radial routes for people travelling from across the city-region”.*
- 3.3.8 The development site is at the very edge of the planned ‘city centre wheel’, which means that this site will be excellent in terms of cycle infrastructure provision.

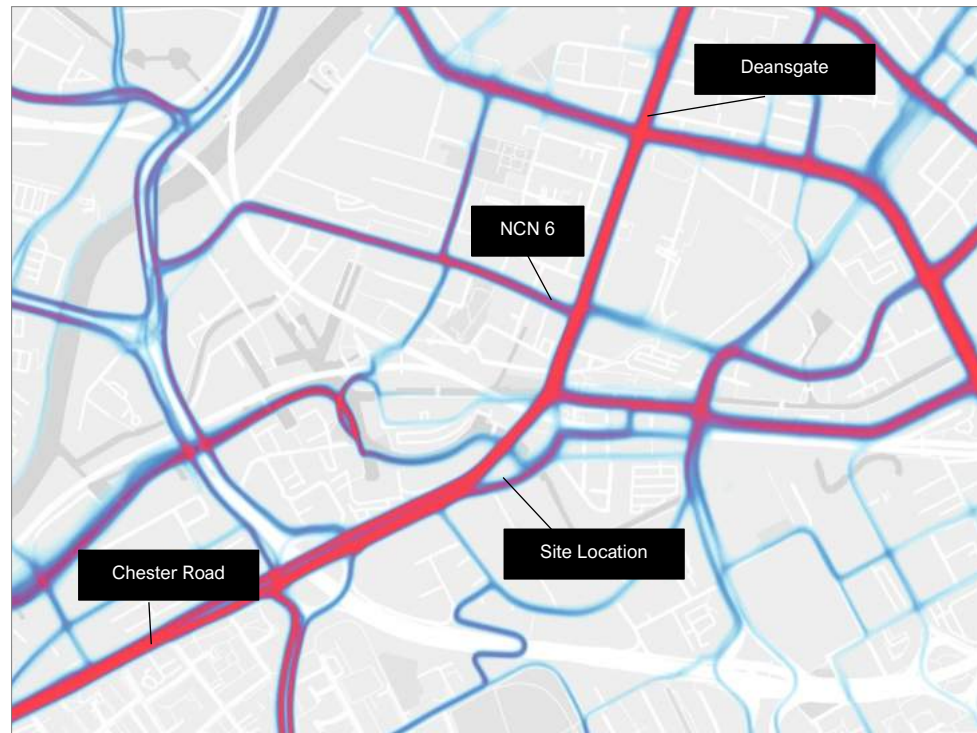
Figure 3-3 The planned “Manchester Cycle Triangle” in relation to Site



- 3.3.9 Allied to the above, the local highway network is of suitable geometry that informal cycling may occur within the carriageway of the roads alongside vehicular traffic, without detriment to highway safety.
- 3.3.10 Indeed, this is evidenced by the figure below, an extract from the Strava Heat Map, which demonstrates that the main roads within the vicinity of the site are frequently used by cyclists.



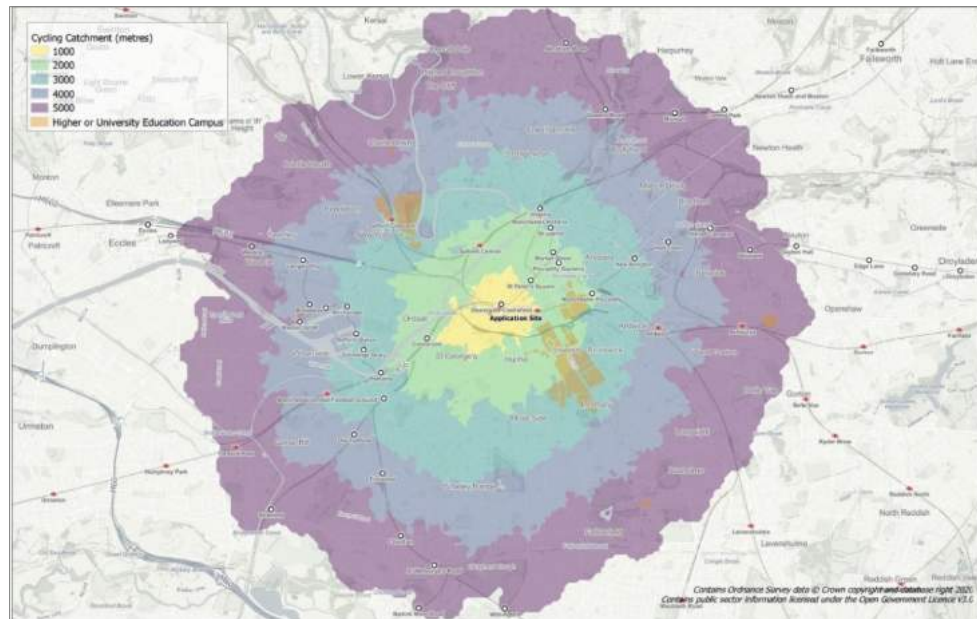
Figure 3-4 Strava Heat Map



- 3.3.11 The above figure is supported by the analysis of accident data on the local highway network included at [Section 4](#) which confirms that there is no unacceptable risk to cyclists on the local roads as a consequence of the above cycle use.
- 3.3.12 On the basis of the above, the resultant 5-kilometre catchment area for cycling is shown in the below figure and to scale at [Appendix C](#).



Figure 3-5 Cycling Catchment

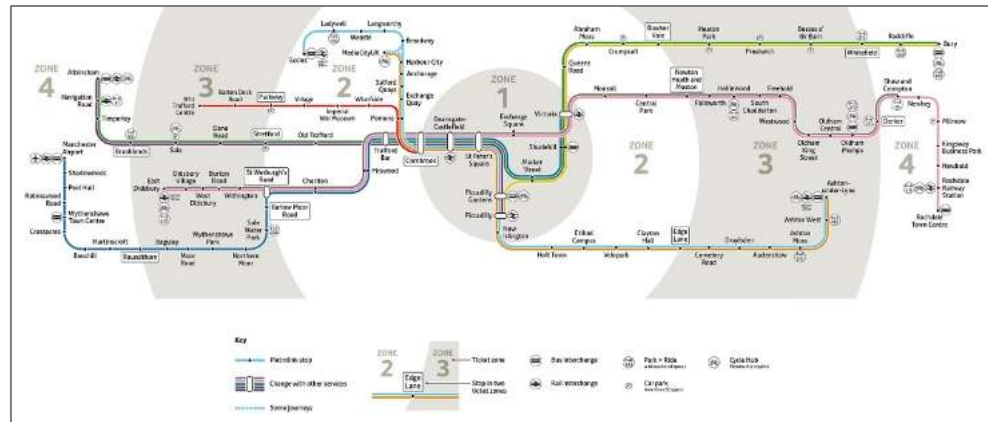


- 3.3.13 The figure above demonstrates that application of the 5-kilometre threshold would indicate the potential for future residents to travel from the site by bicycle to the entirety of central Manchester, along with extending to include nearby Salford and Trafford, for example. Thus, a significant built-up area can be reached via bicycle.
- 3.3.14 Consequently, the application site would afford an opportunity for journeys to and from the site to be undertaken by bike, in line with current local and national sustainable transport policy objectives.

3.4 Accessibility via Tram

- 3.4.1 The nearest tram stop to the site is Deansgate-Castlefield which is located some 260-metres away from the site, and therefore well within the maximum desirable distance of 400-metres identified by the Institute of Highways & Transportation (IHT) document entitled Planning for Public Transport in Developments.
- 3.4.2 The Deansgate-Castlefield tram stop is, as shown in the Metrolink network map below, located at the very hub of the tram network, and all lines save for Trafford Centre-Cornbrook and Bury-Piccadilly utilise this stop. For context, the Metrolink network map is shown within the figure below.

Figure 3-6 Manchester Metrolink Tram Network



- 3.4.3 Metrolink timetable and frequency are the same for all lines with the table below outlining the timetable and destinations for each line serving the Deansgate-Castlefield station.

Table 3.2 Tram Lines, Timetable and Frequency

Day	Start	Freq. (mins)	Finish
Weekday	06:00	10	19:00
	19:00	20	00:00
Saturday	06:00	20	08:00
	08:00	10	20:00
	20:00	20	00:00
Sunday	07:00	15	23:00

- 3.4.4 It is evident from the above that the Metrolink would provide a high frequency public transport mode to wide parts of central and Greater Manchester, which in turn grants future residents a plethora of destinations easily accessible by tram.
- 3.4.5 In addition, analysis of the latest public transport data has been processed in a GIS-based accessibility model. The generated accessibility maps below show the geographical reach and travel times of the tram lines during AM and PM peak, starting from the development site.



Figure 3-7 Tram Catchment AM

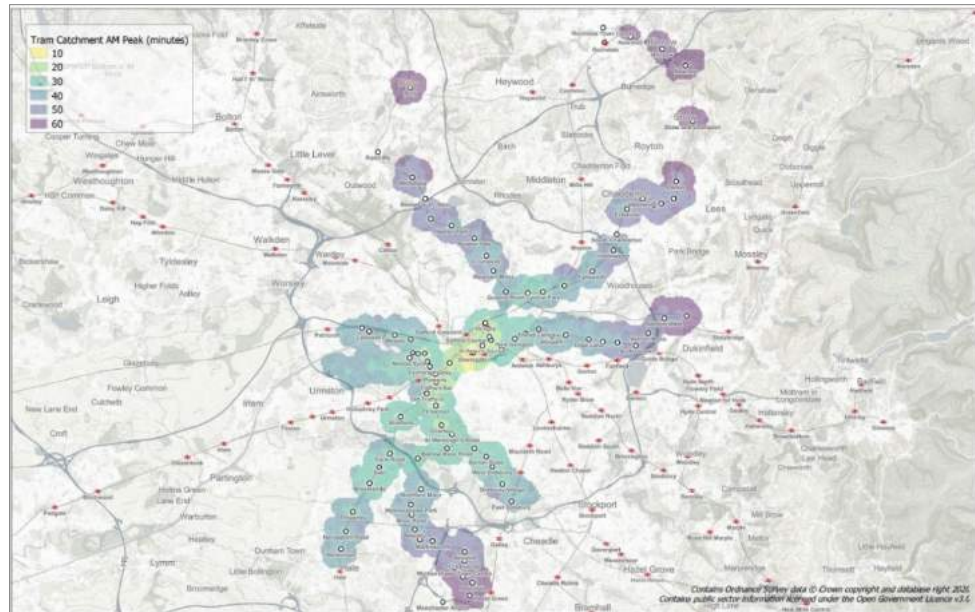
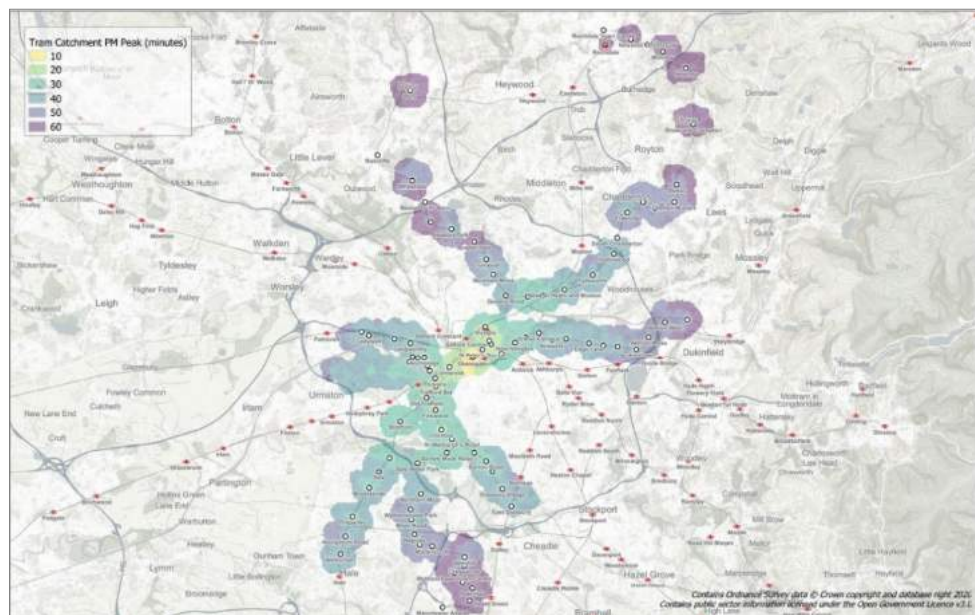


Figure 3-8 Tram Catchment PM



- 3.4.6 In consideration of the above analyses, it is evident that the tram would form a viable and attractive option to access areas across central Manchester alongside destinations further afield and is also a less weather dependent mode of transport in comparison with walking and cycling.



3.5 Accessibility via Bus

- 3.5.1 The nearest bus stops are both located some 150-metres from the site and are served by the number 255 bus service. Bus stop Knott Mill, for southbound journeys to Partington, is located on Bridgewater Viaduct. Bus stop Castlegate, for northbound journeys to Piccadilly Gardens, is located on the north side of Chester road.
- 3.5.2 Additional bus stops, affording service 256, are both located on Medlock Street, where the northbound stop is some 350 metres to the east of the development and southbound stop City Road East some 500 metres walking distance away from the development.
- 3.5.3 On the basis of the above, the distance to the nearest serviced bus stops is therefore within the maximum desirable distance of 400-metres identified by the Institute of Highways & Transportation (IHT) document entitled Planning for Public Transport in Developments.
- 3.5.4 In terms of public transport accessibility, the destination that buses serve also play a major role. The following table demonstrate the bus services operating close to the application site throughout the week. Worth noting is that the 256 route is passing the MMU Birley campus.

Table 3.3 Local Bus Services

Service	Route	Weekday			Saturday	Sunday
		Start	Freq. (mins)	Finish	Freq. (mins)	Freq. (mins)
Bridgewater Viaduct - Chester Road						
255	Partington -Piccadilly Gardens	05:28	30	23:33	30	60
	Piccadilly Gardens - Partington	05:01		23:06		
Medlock Street						
256	Flixton -Piccadilly Gardens	04:58	10	00:15	20	30
	Piccadilly Gardens - Flixton	05:15		00:36		

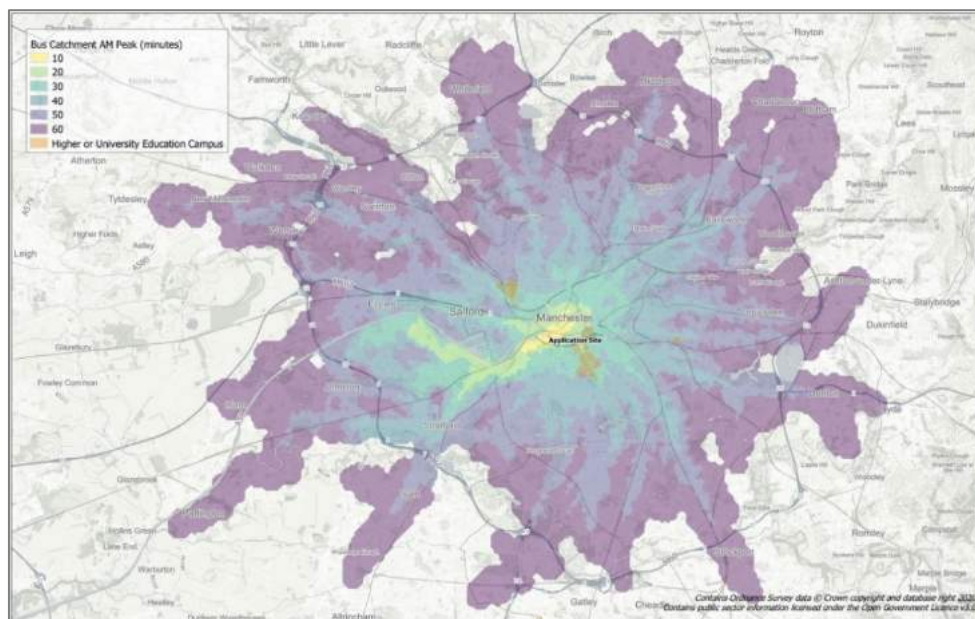


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- 3.5.5 In line with the above, the latest local bus stop and service route data has been incorporated into a GIS-based accessibility model. This has been created to indicate the geographical catchment that is accessible within a 60-minute intermodal travel time, i.e., walk/bus/walk. This reflects the maximum commute time considered reasonable, however the regional average commute time via bus of 35-minutes³ has also been shown.

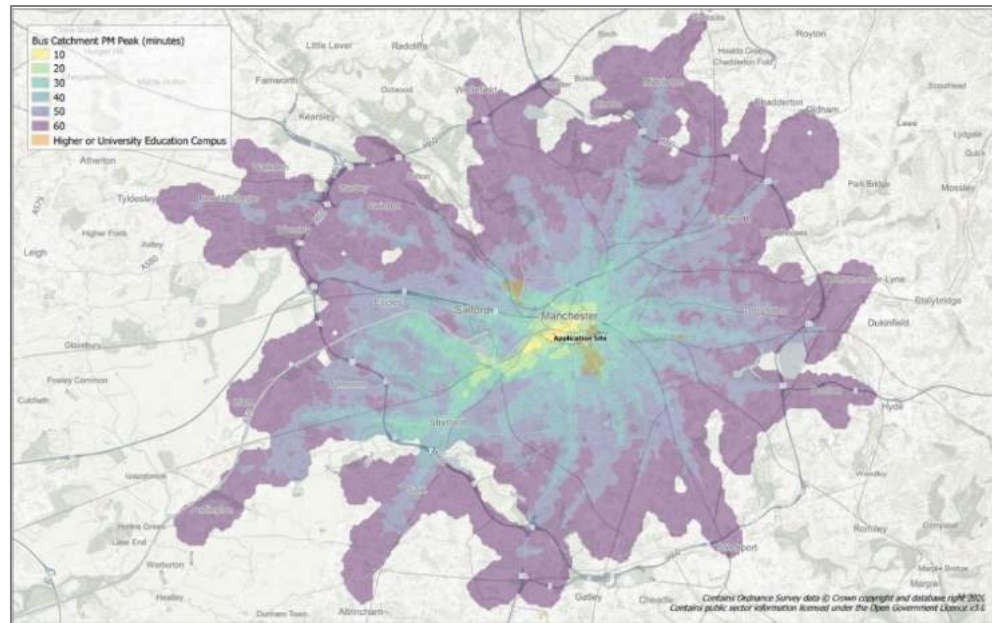
Figure 3-9 Bus AM Peak Catchment



³ DfT Transport Statistics Great Britain (2017) – TSGB0111



Figure 3-10 Bus PM Peak Catchment



- 3.5.6 As illustrated by the figures above, during the weekday AM and PM period, a significant geographical area is accessible within an acceptable bus journey from the application site. Indeed, it would be possible for future residents to travel to the universities as well as many surrounding towns centres and villages via bus.
- 3.5.7 On this basis, journeys by bus represent a viable mode of travel for future student residents of the site.

3.6 Accessibility via Rail

- 3.6.1 The nearest railway station to the site is Deansgate Railway Station which is located some 210-metres away and therefore lies well below the maximum walking distance of 800-metres identified by the Institute of Highways & Transportation (IHT) document entitled Planning for Public Transport in Developments.
- 3.6.2 The station lies on the Northern Railway line and serves frequent rail services to Blackpool, Crewe, Liverpool, Alderley, and Manchester Airport as well as other local destinations. It is also noted, it takes 5 minutes via train to reach Manchester Piccadilly station, whereby a multitude of national destinations such as London, Birmingham, Bristol and Edinburgh can be accessed.



- 3.6.3 On the basis of the above, rail represents a viable mode of travel, especially for future residents visiting their hometowns at weekends and holidays.

3.7 Section Summary

- 3.7.1 Future residents will have the opportunity to walk, cycle or use public transport facilities to travel to and from the site for education, employment, leisure and health facilities located within Manchester City Centre and beyond.
- 3.7.2 The evidence set out within this section of the report confirms that future residents are afforded the opportunity to use non-car modes of travel as genuine alternatives. In this way, the proposals accord with the principles of sustainable development as they relate to transport.



4. CAR-BORNE TRAVEL CREDENTIALS

4.1 Introduction

4.1.1 This section of the report considers the road network and provides a critique of the existing highway network surrounds the application site. The study area therefore comprises the following key links:

1. A56-Chester Road / Deansgate
2. Deansgate South / Little Peter Street; and
3. A5103-Medlock Street/ Little Peter Street.

4.1.2 For context, the Figure below indicates the study area highway network.

Figure 4-1 Highway Study Area



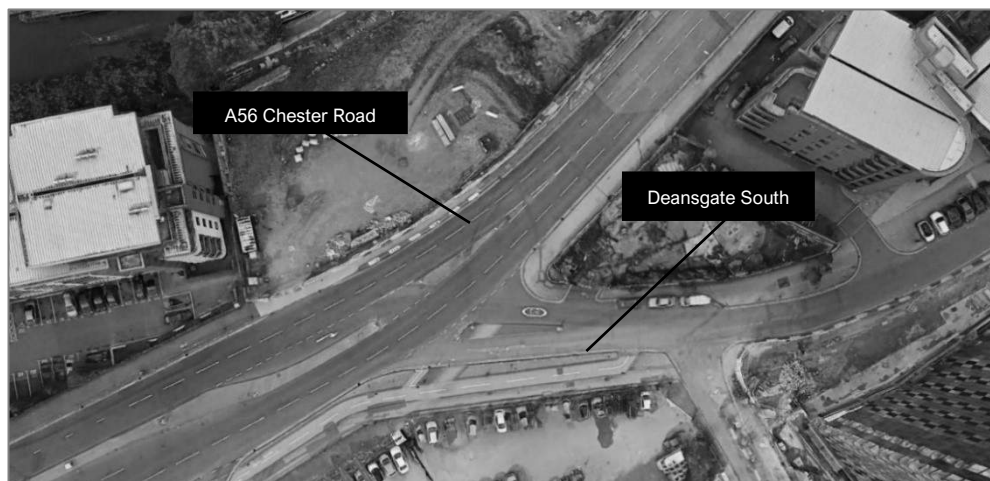


4.3 Highway Geometry

A56 Chester Road / Deansgate South

- 4.3.1 Chester Road forms the northern boundary of the application site, running on a southwest to northeast alignment. It comprises a four-lane carriageway, measuring some 11-metres along much of its extent. Directly located to the site, there is additional lane for right turning movement for traffic approaching from the south. This lane measures approximately 30 metres with a corresponding storage capacity of ca 5 PCUs.
- 4.3.2 Chester Road is subject to 30 mph speed limit, all other roads in the vicinity of the site are subject to 20-mph speed limits. All roads are lit to modern standards.
- 4.3.3 In the south western corner of the application site, the A56-Chester Road forms the major arm of the A56-Chester Road / Deansgate South T-junction. Due to the relative straightness of Chester Road, visibility splays at the junction are achievable over at least 100 metres in both directions, and such are compliant with the 43-metre standard set out in MfS for roads of 30-mph.
- 4.3.4 Deansgate South is a two-way road that runs on a broadly southwest to northeast alignment from Chester Road in the west to Hewitt Street in the north at the railway underpass. It measures approximately 6.8 metres in width. It is noted that this is still sufficient to allow two-way traffic to move safely along in this location. For context, an aerial photograph of the junction has been included below.

Figure 4-2 Chester Road / Deansgate South junction





20-376-20 DEANS_GATE SOUTH, MANCHESTER

Transport Statement

Deansgate South / Little Peter Street

- 4.3.5 Some 150 metres to the east of the A56-Chester Road / Deansgate South junction, Deansgate South forms a junction with Little Peter Street. Little Peter Street is a partly one-way street that runs on an east to west alignment from Medlock Street in the east to Deansgate South in the west. The street is two-way between Medlock Street and Jordan Street, and there it measures approximately 7-metres wide. It turns one way after the intersection with Jordan and Bugle Street, and from that point it measures approximately 3.8-metres in width.
- 4.3.6 The street intersects with Deansgate South and Commercial Street in a three-armed y junction, as depicted in the figure below. Visibility splays at this junction are meeting the 25-metre standard set out in MfS for roads of 20-mph.
- 4.3.7 For context, an aerial photograph of the junction has been included below.

Figure 4-3 Little Peter Street/Deansgate South/Commercial Street junction



- 4.3.8 Commercial Street runs on a southeast to northwest alignment and is open for two-way traffic. The street is primarily an access route a private car park and to office and residential buildings and reaches Jordan Street in the south east end of its stretch. It is lined with pavements on both sides that are roughly 2-metres wide.
- 4.3.9 Commercial Street measures some 4.8-metres width, however, there are four on street parking bays on the south side of the street that reduce its effective width to 3.6-metres at the passing places.



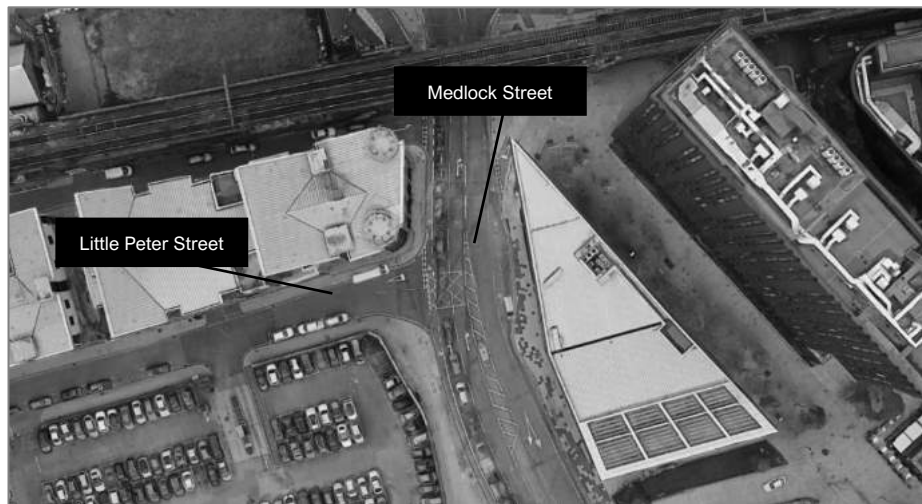
20-376-20 DEANSGATE SOUTH, MANCHESTER

Transport Statement

A5103-Medlock Street / Little Peter Street

- 4.3.10 Approximately 300 metres northeast of the application site, Medlock Street forms the major arm of the Medlock Street/Little Peter Street T-junction. Medlock Street runs on a north to south alignment and is approximately 16-metres wide including an on-street cycle lane on its west side, as well as a wide centre line reservation. At the junction where it connects with Little Peter Street, visibility splays are compliant with the 25-metre standard set out in MfS for roads of 20-mph.
- 4.3.11 For context, an aerial photograph of the junction has been included below.

Figure 4-4 Medlock Street / Little Peter Street T-junction





4.4 Highway Safety

- 4.4.1 In order to assess the safety performance of the existing highway network within the vicinity of the site, road safety, or Personal Injury Accident (PIA) data, has been obtained from the publicly available data source crashmap.co.uk for the most recent five-year period available.

Figure 4-5 Personal Injury Accident Records (2014>2019) Pedestrian Casualties

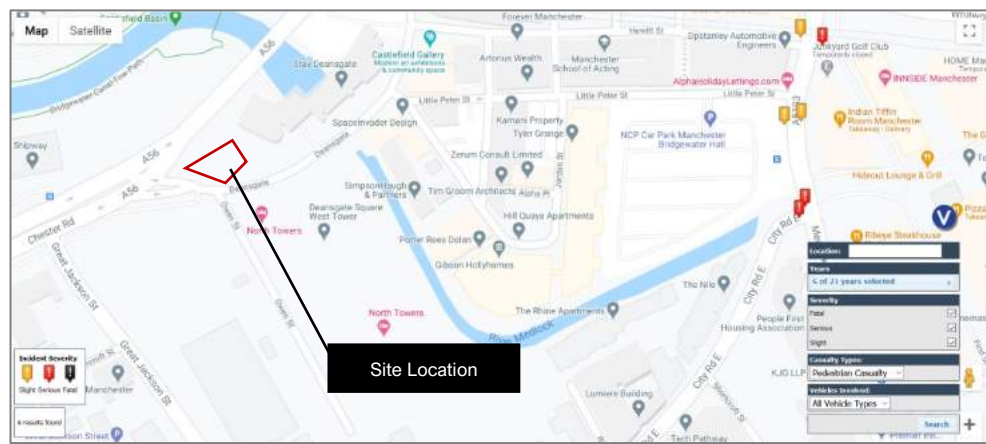
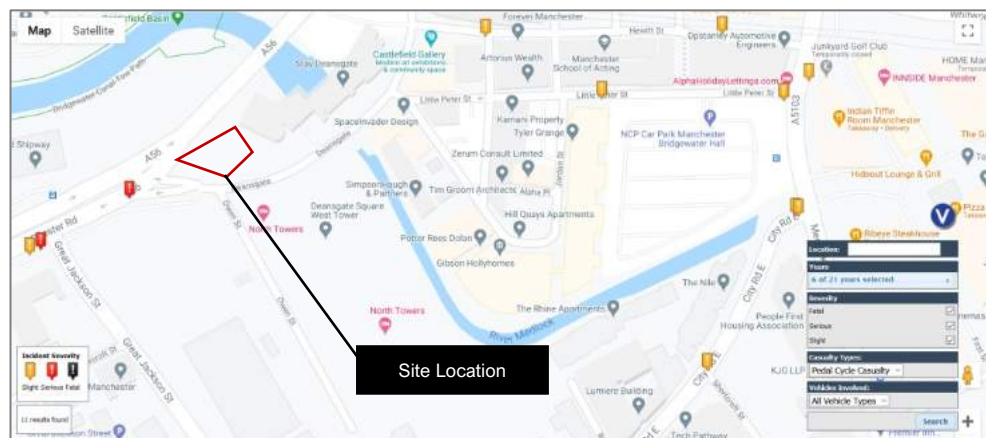


Figure 4-6 Personal Injury Accident Records (2014>2019) Pedal Cycle Casualties



- 4.4.2 As shown in figures above, within the vicinity of the site, 18 serious and slight non-car mode personal injury accidents (PIAs) are recorded during the latest five-year period. No fatal accidents were recorded within the study area.



- 4.4.3 The table below shows a breakdown of the non-car mode personal injury accidents recorded within the most recent five-year period.

Table 4.1 Casualty Types

	Fatal	Serious	Slight	Total
Pedestrian	0	4	3	7
Cyclists	0	2	9	11

- 4.4.1 Given the above, it is evident that there are no accident clusters or hotspots within the study area that might suggest a deficient in the geometry of the road network. Indeed, the number of accidents recorded along the A5103 are not considered out of character with reference to the high volume of traffic it, and the surrounding city centre roads accommodate each day. It is also considered that planned improvements to cycle infrastructure in the area is likely to increase the safety for cyclists further.
- 4.4.2 On this basis, the existing performance of the study area highway network is considered to be acceptable in the context of highway safety, which is not anticipated to materially or discernibly alter the pattern or frequency of accidents on the surrounding highway network.

4.5 Section Conclusion

- 4.5.1 The proposed development benefits from easy access to the local and strategic highway network which provides good links to local and regional centres.
- 4.5.2 The analysis above confirms that the adjoining public highway network is suitable to accommodate the types of vehicles likely to be generated by the proposed development and that there are no inherent highway safety risks in the existing operation of the network. Therefore, the proposals would be acceptable in the context of highway safety and geometry.



5. PERSON TRIP EFFECTS

5.1 Introduction

- 5.1.1 The development proposal comprises erection of a 28-storey student accommodation including active frontage on the ground floor and a mezzanine floor. The current site is vacant, and in this context, the site has no extant trip generation potential which will serve to offset the relative effect of the proposed development. The proposed development is car-free and would therefore be limited to a change in demand by non-car travel modes and minor increase in vehicular trips due to service and maintenance.
- 5.1.2 On this basis, there could be no cumulative severe impact in highway capacity terms such that clauses within the NPPF (109) are not met and refusal on capacity grounds could not be justified.
- 5.1.3 Notwithstanding, this section of the report considers the trip generation potential of the proposed developments to identify the magnitude of any change in demand by each non-car mode. The resultant change is then used to inform the likely significance of any effect and the potential to impact on highway safety - being the only other reason on which an application may be refused on highway grounds.

5.2 Future Trip Generation Potential

- 5.2.1 The proposed development comprises of one trip generating function - the 534-bedroom student accommodation with associated amenity space. Due to this, the non-vehicular trip generating potential of the proposed development has been considered.
- 5.2.2 The industry standard TRICS (7.7.3) database has been used to calculate average trip rate from a number of sites similar to the development site, which have been selected based on a range of characteristics, such as geography, size and composition.

Proposed Student Accommodation Trip Generation

- 5.2.3 With regards to student accommodation, the RESIDENTIAL > STUDENT ACCOMMODATION category has been considered, selecting sites within TOWN CENTRE and EDGE OF TOWN CENTRE locations, and removing any sites in Ireland, Scotland and Greater London. Due to the non-car nature of the development, trip rates for ALL PERSON trips have been assigned to an adjusted mode-share.
- 5.2.4 The detailed TRICS outputs are contained at [Appendix D](#) whereas a summary of the derived trip rates and resultant trip generations is provided in the Table below.

Table 5.1 TRICS Proposed Trip Rates (Student Accommodation)

Time Segment	Arrivals				Departures				Two-Way			
	Total	Walk	Cycle	PT	Total	Walk	Cycle	PT	Total	Walk	Cycle	PT
06:00-07:00	0	0	0	0	0	0	0	0	0	0	0	0
07:00-08:00	1	0	0	1	5	4	0	2	6	4	0	3
08:00-09:00	10	5	0	4	105	71	1	34	115	77	1	38
09:00-10:00	7	4	0	3	29	21	0	9	37	25	0	12
10:00-11:00	20	17	0	3	49	40	0	9	69	57	0	12
11:00-12:00	30	20	2	9	36	26	2	9	66	45	3	17
12:00-13:00	41	25	0	17	44	25	0	20	85	49	0	36
13:00-14:00	53	39	0	15	49	29	1	19	103	68	1	34
14:00-15:00	67	46	1	20	49	38	0	10	116	84	1	31
15:00-16:00	86	59	1	26	54	41	0	13	140	100	1	40
16:00-17:00	84	66	0	18	33	25	0	8	117	91	0	26
17:00-18:00	93	70	0	23	56	44	1	11	148	114	1	34
18:00-19:00	89	76	0	13	61	45	1	15	150	121	1	28
19:00-20:00	48	27	0	21	37	28	0	9	85	55	0	30
20:00-21:00	60	48	0	12	49	38	0	11	109	86	0	24
21:00-22:00	26	26	0	0	20	20	0	0	45	45	0	0
Daily Trips	715	527	3	185	677	493	4	180	1392	1021	7	364

- 5.2.5 As shown above, the vast majority of trips associated with the proposed development are expected to be walking trips, reflecting the city centre location and the application site's proximity to surrounding amenities and services. Indeed, some 715 arrivals to the site occur throughout the day, 527 of which are pedestrians. Some 677 departures are generated by the site, 493 of which are pedestrians. A total of 105 departures with 71 pedestrians are forecast during the AM peak period. A total of 93 arrivals are forecast during the PM peak hour, between 1700-1800, of which 70 are pedestrians.



5.3 Section Conclusion

- 5.3.1 Based on the above, the multimodal trips associated with the proposed development are not considered material nor discernible in the case of highway safety or the capacity on the surrounding pedestrian and cycle network. The proposals are car-free and therefore do not impact upon the operation of the surrounding highway network.
- 5.3.2 Consequently, the development effects cannot be concluded to give rise to cumulative impacts that are considered to be severe and the proposals would thus be acceptable under the terms prescribed by the NPPF.



6. FRAMEWORK TRAVEL PLAN

6.1 Introduction

- 6.1.1 It is proposed to implement and operate a Travel Plan as part of the proposed development to maximise the use of non-motorised means of travel and to discourage the use of private car trips.
- 6.1.2 A Full Travel Plan will be submitted to the Local Authority prior to occupation of the proposed development. The basic framework of this document will comprise the following:
 - 1. Appointment of a Travel Plan Co-ordinator (TPC) to be responsible for the implementation and management of the plan. The TPC would be the main point of contact for all travel related queries from the Local Authority and residents.
 - 2. Preparation of a suite of Travel Plan documents:
 - a. A Travel Plan report for submission to the Local Authority for approval and thereafter as part of any travel plan update.
 - b. A Travel Plan brochure, to be included within the resident's Welcome Packs, detailing the various benefits and opportunities of non-car travel. This would include maps illustrating pedestrian and cycle facilities alongside public transport information.
 - c. A Travel Plan leaflet to be provided within welcome packs and in communal areas on notice boards, in agreement with the Council. The leaflets will provide a summary of key travel opportunities available from the site.
 - d. An Action Plan that details measures taken to fulfil the targets of the Travel Plan. These can for example include offering green travel vouchers, staff and resident's training, organising events such as bike repair days and other local and national green travel events, in liaison with the Council.



3. Annual monitoring of travel habits of residents for the first five-years following initial occupation of the facility will be undertaken. This will include organising residents travel surveys, with content agreed in advance by the Council. After each completed survey, a monitoring report will be issued to the Council for sign off. The information gathered from the travel survey will enable initiatives and incentives to be altered and tailored to address specific challenges and opportunities of this site.
 4. Identifying and managing arrangements for the start and end of year drop-offs and collections. Localised traffic management will be required by the TPC. This is considered later within this report.
- 6.1.3 The approach outlined above will ensure that the residents and staff on this site are well informed about sustainable travel alternatives available and are actively encouraged to choose active green modes as their preferred choice of travel.

6.2 Traffic Management Framework

- 6.2.1 With regards to the need to bring personal and essential household items to the development, Section 7 below outlines the student parking controls and management framework.



7. STUDENT PARKING CONTROLS AND MANAGEMENT

7.1 Introduction

- 7.1.1 This section of the report outlines the various local parking constraints which prevent future residents of the site from owning or keeping a car nearby during their tenancy. It also sets out the proposed unloading/loading strategy for the start and end of the academic year.

7.2 Student Parking Restrictions

- 7.2.1 Given the site's highly sustainable location within the town centre, close to a plethora of local amenities, education opportunities, and public transport services, there is an opportunity to provide a car-free development to reduce reliance on private-car travel and its' associated effects on congestion and air quality, whilst also being entirely supportive of various active travel policies.
- 7.2.2 Crucially, the opportunities to access local amenities and travel by non-car travel modes is supported by parking constraint in the locality which removes the opportunity for residents parking on surrounding roads. This is demonstrated in the below Figure which illustrates the various parking restrictions that are in place within approximately 300-metres from the site.

Figure 7-1 Existing Parking Restrictions and Local Road Markings





- 7.2.3 It is evident from the above that all the roads within the vicinity of the site have existing parking controls typically comprising of double yellow lines. The exception is Owen Street and its adjacent vacant land, which is currently reserved for construction traffic use. Thus, there are no opportunities to park on the surrounding roads, save for dedicated pay and display parking bays.
- 7.2.4 The Pay and Display parking bays located on Deansgate South and the nearby Commercial Street have a total capacity of 25 cars⁴. However, these spaces are noted to be provided on a short term pay and display basis (being up to two hours) and are therefore unsuitable for residential use.
- 7.2.5 Allied to the above, there are a number of nearby Pay and Display car parks in the vicinity of the site; MCC⁵ Bridgewater Hall Car Park is a 24-hour facility located to the east of the site and accommodates space for some 288 vehicles. Similarly, the MCC Deansgate Car Park, to the northwest of Deansgate has space for up to 331 vehicles, and RCP Park Avenue has a capacity of 112 vehicles. The car parks have no maximum length of stay, but it is noted that parking for 24 hours cost up to £25 hours in some of these locations. A map of these car parks is shown in section 7.3.5.
- 7.2.6 Consequently, whilst there are car parking opportunities local to the site, they are all subject to limits and costly charges which would preclude future residents from parking their vehicles on a long-stay basis.
- 7.2.7 In view of the above, there are sufficient parking controls that remove most opportunity for residents to own a vehicle in the locality.
- 7.2.8 Notwithstanding, the applicant is willing to accept an appropriately worded planning condition to require that all resident leases require that residents do not own or operate a vehicle within 3-kilometres of the site. Similar conditions have been employed at other facilities in town/city centre locations and would be enforced by the management company.

⁵ Car Parks operated by MCC 2021. <https://secure.manchester.gov.uk/news/article/8580/manchester-city-centre-set-for-car-park-revolution> [accessed 14-12-2020]



7.3 Student Drop-off and Collection Strategy

- 7.3.1 It is common for students arriving and departing at the start/end of the academic year to be assisted by parents/relatives given the quantity of personal belongings and household items. Thus, for the purposes of the student drop off and collection strategy it has been assumed that each resident will generate a car trip during their arrival and departure at the start/end of the academic year. In this way, the student drop-off and collection strategy plan is for the management of 534 car trips over a weekend.
- 7.3.2 Indeed, the moving in process will need to be more carefully managed than the moving out process as students will move in over a more concentrated period of time. The moving out process is less intensive as this generally occurs over a number of weeks due to students on different courses finishing and moving out at different times. By restricting moving in trips to a shorter timeframe, the impact upon neighbouring uses will be mitigated.
- 7.3.3 On this basis, students will be strongly encouraged to move in at a set date at the beginning of the tenancy, ensuring that the bulk of arrivals occurring on a set weekend. For the purposes of providing a robust assessment, it is assumed that all students will arrive over the course of one weekend and the following management strategy, to minimise impact on surrounding area, is envisaged to comprise the following elements.

Prior Notification

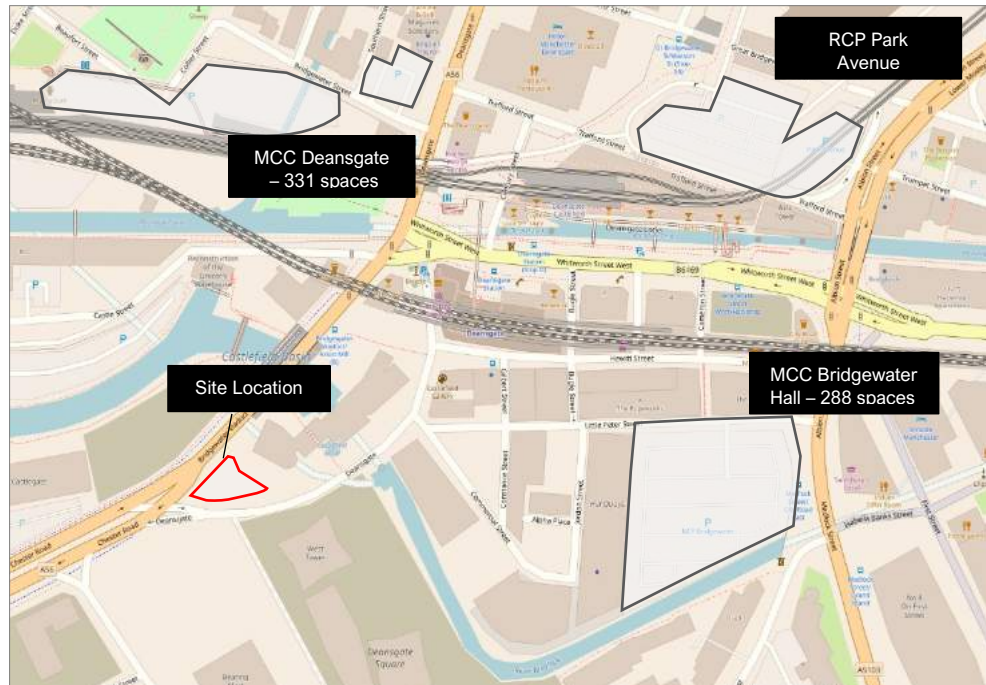
- 7.3.4 Prior to arrival, correspondence will be sent to all students including a map advising them on access to the accommodation, arrival slot time, unloading strategy, and parking arrangements. This will consider distance travelled to ensure students with longer journeys do not have early arrival slots.

Step 1: Student Arrivals

- 7.3.5 On first arrival, students will be required to park in a nearby car park (likely locations will be the MCC or RCP car parks) and walk to the property to check in and collect a key. The locations of these car parks are illustrated on the figure below and are within ten-minutes' walking distance of the development.



Figure 7-2 Locations of Local Car Parks



- 7.3.6 Once checked in, the students will be encouraged to arrive at Bridgewater Hall Car Park within 15 minutes of at their allotted time slot, where nine holding bays have been reserved for the arriving students.
- 7.3.7 There will be parking marshals in place on both locations that will inform when their car may be brought to the on-street car parking on Deansgate (accessed via Little Peter Street), where unloading may take place. See Figure 7-3 for reference. This strategy provides a robustness and prevents any conflict to occur at a street level if a student is delayed.
- 7.3.8 Temporary directional signage will be provided at key locations, including at the north of Deansgate, westward from Bridgewater Hall Car Park on Little Peter Street and on Medlock Street.



Step 2: Student Drop-off / Collection

- 7.3.9 Time slots of 15-minutes will be allocated to students over the course of one weekend (two days) between 0900 AM and 1730 PM. This equates to a total of 8.5 hours of operation which would generate the opportunity for 34 vehicle drop-offs/collections per day per space. With 8 allocated bays, this equates to 272 slots per day, or 544 slots over the two drop-off/collection days. See [Table 7.1](#).
- 7.3.10 The above parking slots will be accommodated within the existing Pay and Display parking bays on Deansgate, where eight bays will be temporarily suspended over the course of the weekend to allow for unloading to take place in this location.
- 7.3.11 In addition, the nine holding bays at the nearby Bridgewater Hall Car Park will be provided for students that are next in line in order to reduce any conflict or waiting in the street. This will allow for flexibility and prevent the risk that someone arrives slightly earlier than their designated time, or another takes longer than the allotted 15 minutes. There will be parking marshals stationed in both locations which will communicate when unloading bays are free for the next person.
- 7.3.12 Allied to the above, advanced warning signs will be put up a month prior to the first moving in weekend to ensure those who usually park in any of the spaces along Deansgate South will be aware.
- 7.3.13 The calculations for the unloading time times set out above are shown in the table below.

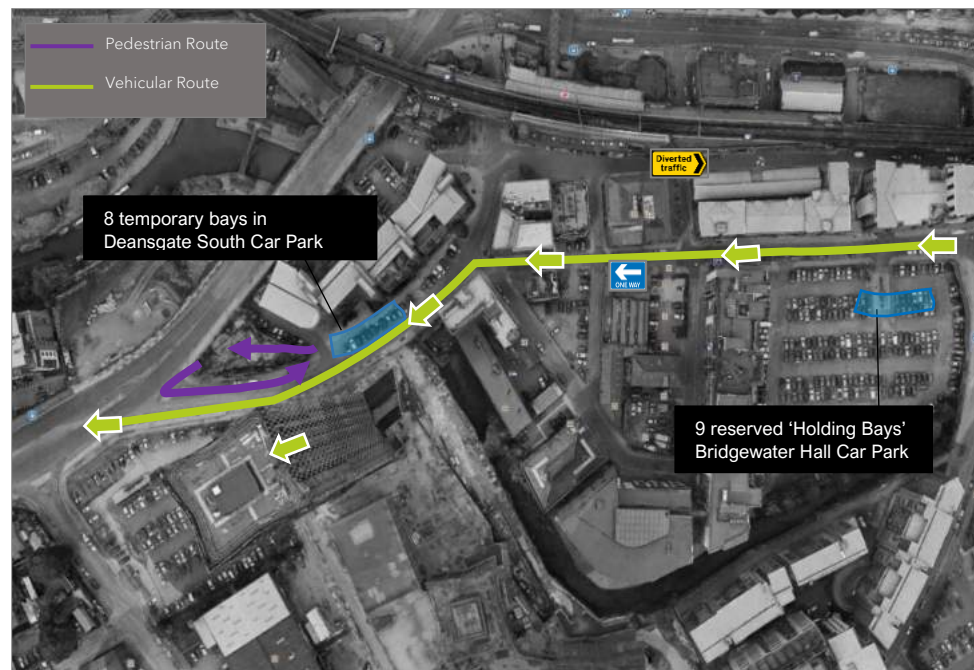
Table 7.1 Unloading Times Calculations

Proposed Max Time Slot (minutes)	15
Maximum Vehicles Unloading at Once	8
Number of Vehicles per Hour	32
Drop off slots per day (8.5 hours of operation)	272
Max Number of Vehicles Over Weekend	544
Spare Capacity	10



- 7.3.14 The developer is well versed in managing the arrival and pick-up strategy at the beginning and end of each academic year. In other successful developments, time slots of 10 minutes are allotted to students (Moore Street Sheffield), and therefore a 15-minute time slot should provide the council with comfort that this is a working strategy.
- 7.3.15 Students will be able to unload their belongings from their cars in the designated 15-minute slot. Porters with trolleys will be ready to transport students' belongings to their flat/rooms and minimise the amount of time that cars are parked on Deansgate South.
- 7.3.16 Students will be encouraged to enter through the lower ground floor entrance, which is located closest to the car park, and exit from the upper ground floor level to ensure a smooth flow of people.
- 7.3.17 The proposed arrival and unloading strategies are shown in the figure below.

Figure 7-3 Arrival and Unloading Strategy

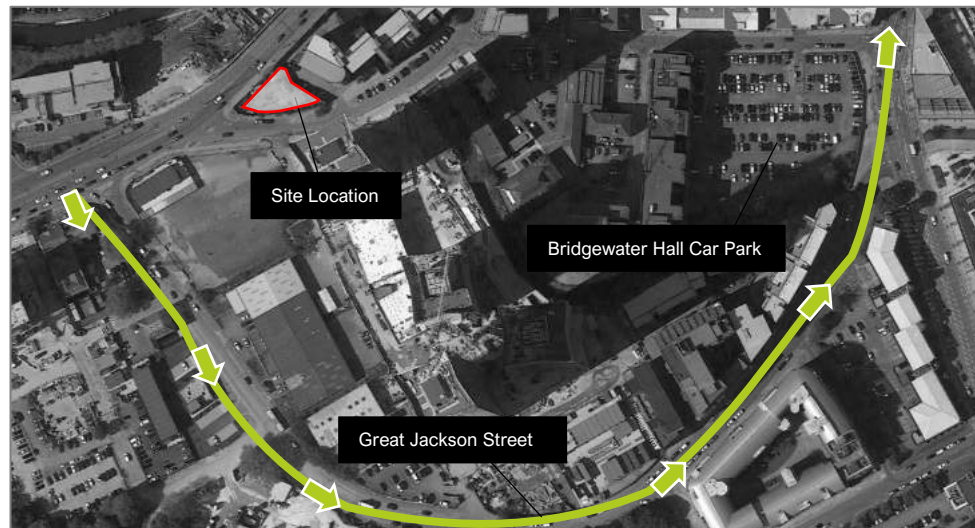




Step 3: Post Drop-off

7.3.18 Once students have unloaded their belongings from their vehicle during their allotted time slot, cars will be directed to return to the car parks before returning to the development to settle in, if desired. With this, Great Jackson Street allows students to loop back around to Bridgewater Hall car park, but depending on occupancy levels, they will be encouraged by marshals to use other car parks to prevent any obstruction to the drop off.

Figure 7-4 Post drop off route to public car parks





8. SUMMARY & CONCLUSIONS

8.1 Report Summary

8.1.1 This report has been prepared by Calibro Consultants Limited on behalf of Fusion Students (the Applicant) and has considered the traffic and transport implications associated with a proposed development on Deansgate South, Manchester, to provide student accommodation of 534 bedrooms.

8.1.2 The findings of the report may be summarised as follows: -

- The proposed development comprises to provide student accommodation with up to 534 bedrooms and associated amenity space. Due to the car-free nature of the development no parking spaces will be provided.
- The non-car travel credentials of the application site have been reviewed with the creation of a GIS-based accessibility model for the area, which has determined the accessible catchments for walking, cycling, and public transport, along with the various amenities contained therein. The report concludes that the Application Site is in a location that affords opportunity to travel to a range of destinations by a choice of non-car modes, in accordance with sustainable transport policies.
- The Application Site is within 15 minutes' walk of MMU Birley Campus and 23 minutes' walk to UoM Oxford road campus, coupled with plenty of options for residents to travel via bike or public transport.
- The surrounding highway network has also been appraised, with the review concluding that it adheres to existing guidance and would be of a suitable standard to accommodate the number of vehicular trips associated with the scheme inclusive of the small number of vehicular trips generated by service and maintenance vehicles.



- The proposals are car-free therefore the non-vehicular trip generation proposed land-use has been considered using industry standard software. Results show that multimodal trips associated with the proposed development are not considered material nor discernible in the case of highway safety or the capacity of the network.
- The report has also identified a range of traffic management measures that would be put in place at times when residents would be moving in and out of their accommodation at the beginning and end of the year and end of the year. This management system would minimise the impact on surrounding roads.

8.2 Report Conclusion

- 8.2.1 On the evidence presented within this report, it is concluded that the proposed development would not result in an unacceptable impact to highway safety, nor would it result in a residual cumulative impact that may be classified as being "severe".
- 8.2.2 Consequently, the proposal is in full accordance with paragraph 109 of the NPPF and the planning permission should not therefore be withheld on transport grounds.
- 8.2.3 Notwithstanding, future residents will therefore have opportunities to travel to key destinations, university campuses and amenities by a range of non-car travel, including the primary modes of walking and cycling. It is therefore concluded that there are no valid highways or transport reasons, which should prevent the proposed development of this site.



APPENDICES

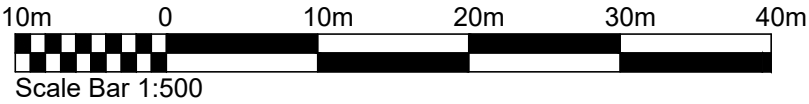


APPENDIX A

Site Layout



01 Proposed Site Location Plan
1:500



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NOTES:



01	Interim Design Issue	20/10/20	CMc	ML
00	First Issue	28/09/20	CMc	ML
Rev	Description	Date	Dr By	App By

Project Stage

PLANNING

REV	DATE	NOTES	CHK
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Client

FUSION STUDENTS

Project

DEANSGATE SOUTH
MANCHESTER

Drawing Title

PROPOSED
SITE LOCATION PLAN

Drawn	Checked	Paper Size	Scale	Date
CMc	ML	A2	1:500	OCT 2020
Project No.		Drawing No.		Revision
20269		0300		01

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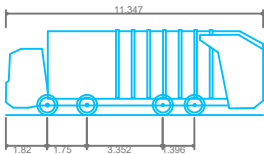
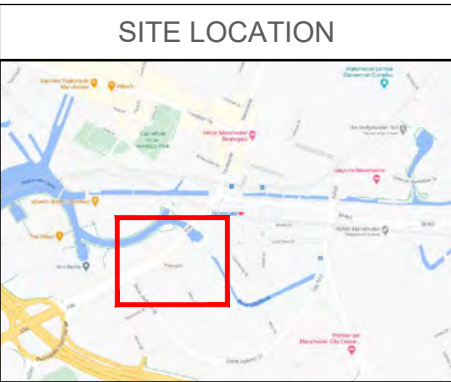
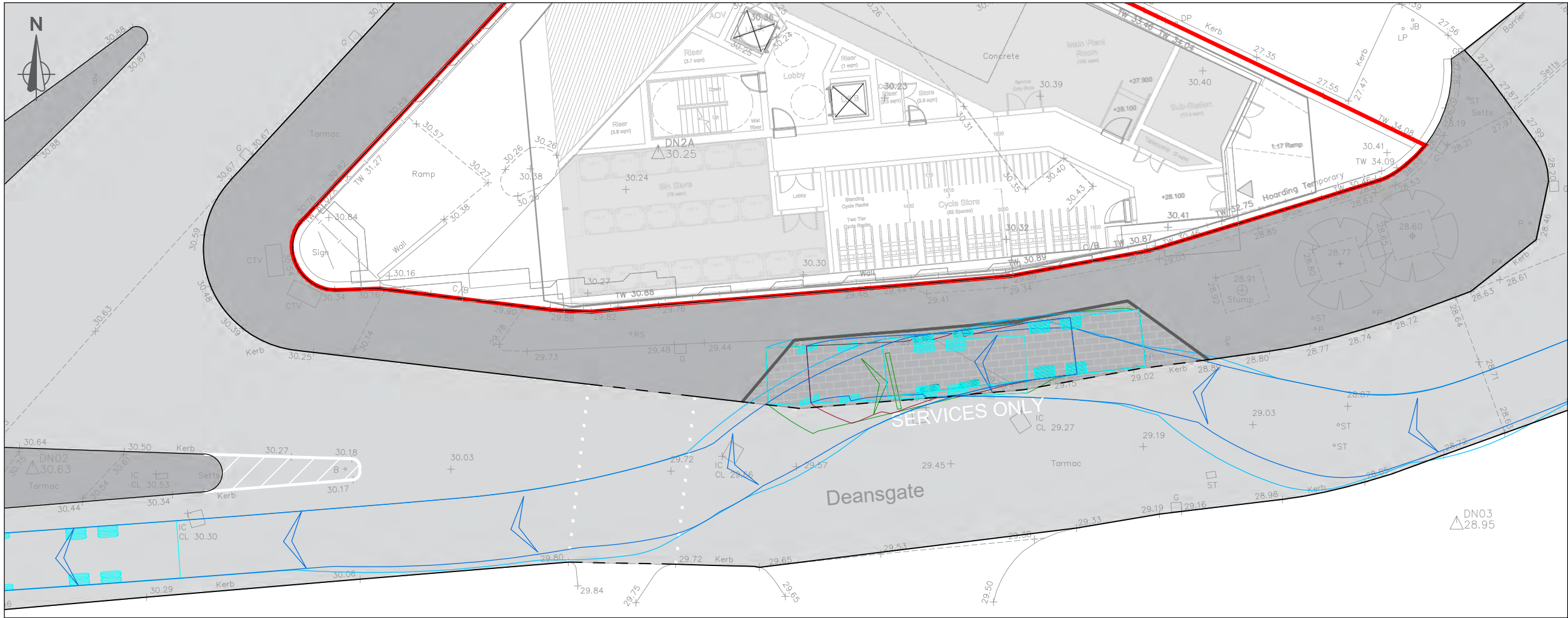
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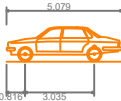


APPENDIX B

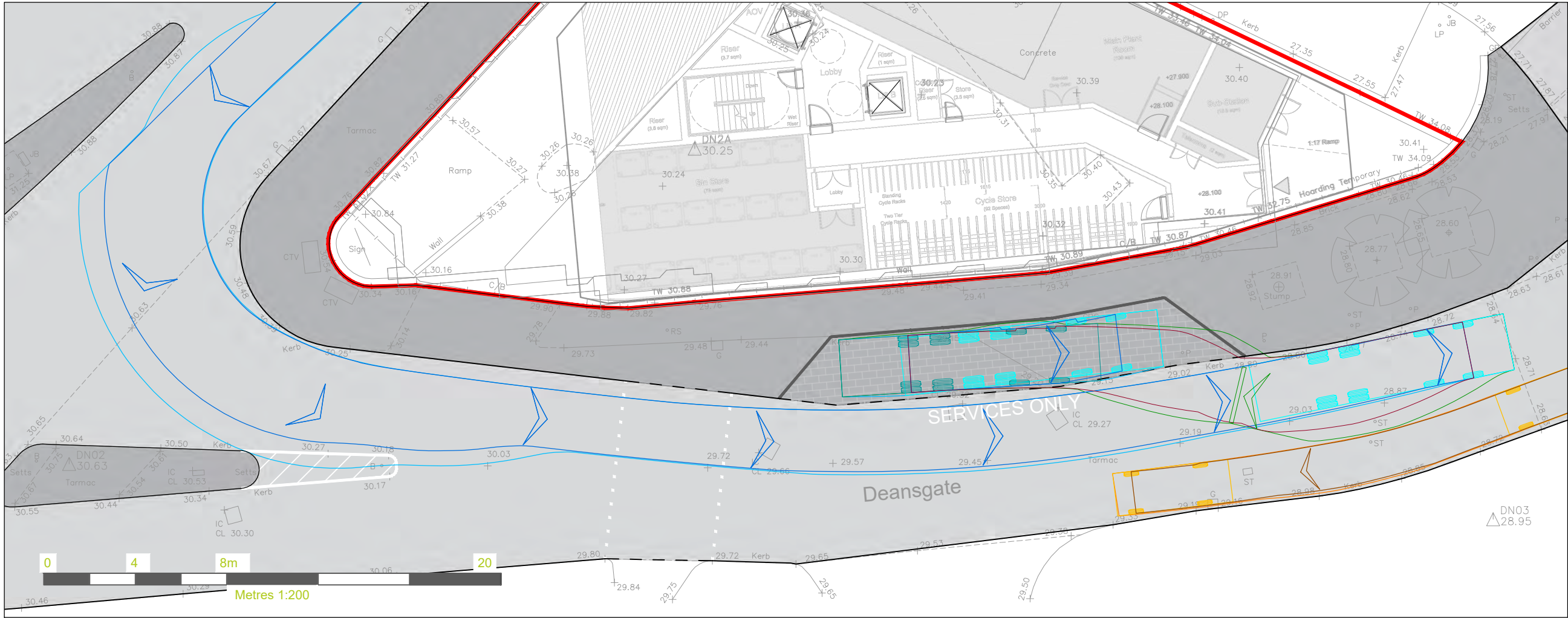
Refuse Strategy, Visibility & Swept-Path Analyses



Large Refuse Vehicle (4 axle)
Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 6.00s
Wall to Wall Turning Radius 11.330m



Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m



-	FIRST ISSUE	AF	02/12/20
REV:	DESCRIPTION:	BY:	DATE:

STATUS: FOR INFORMATION

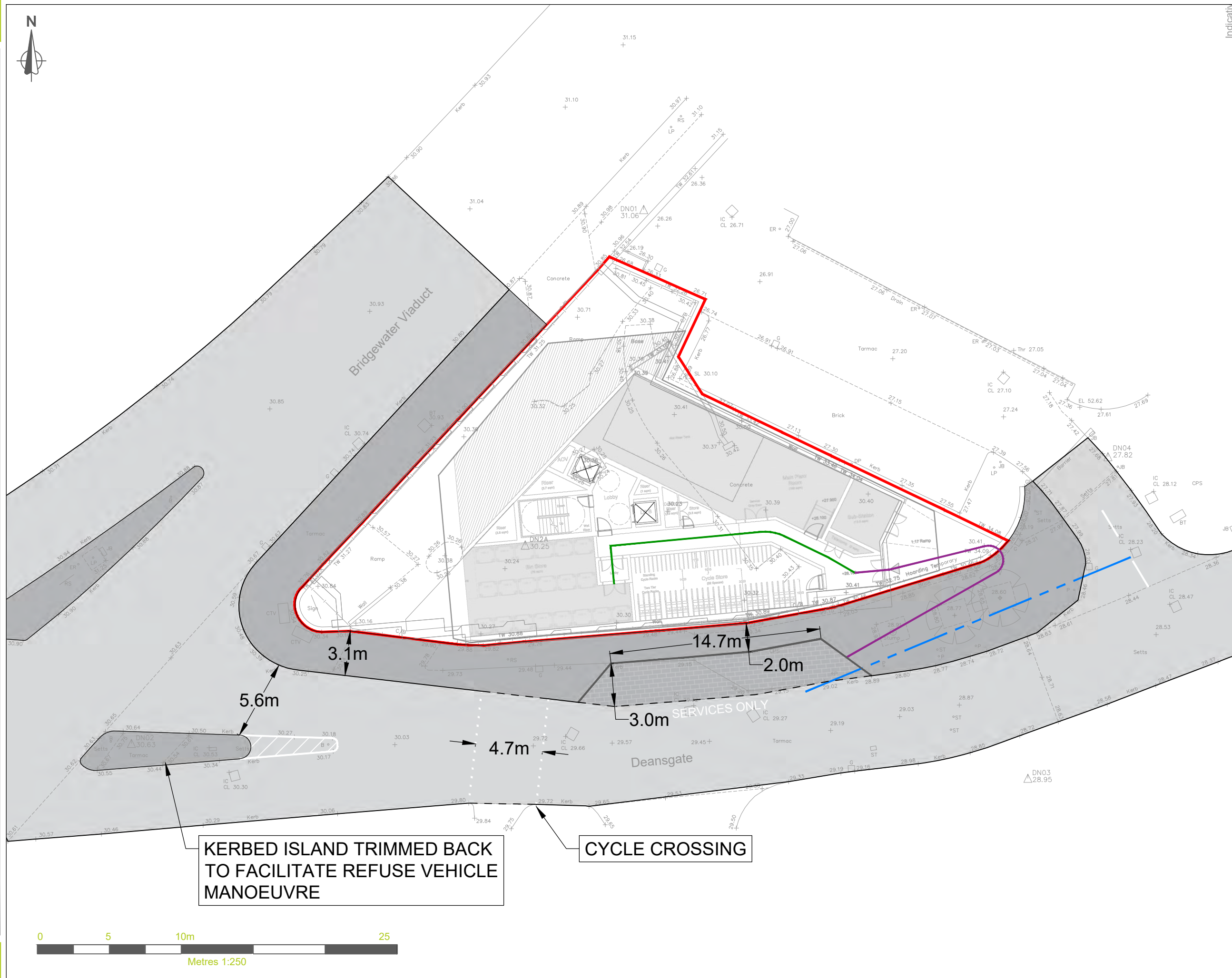
CLIENT: FUSION MANCHESTER
DEVCO LTD

SITE: DEANS_GATE,
MANCHESTER

TITLE: SWEEP-PATH ANALYSIS
REFUSE VEHICLE

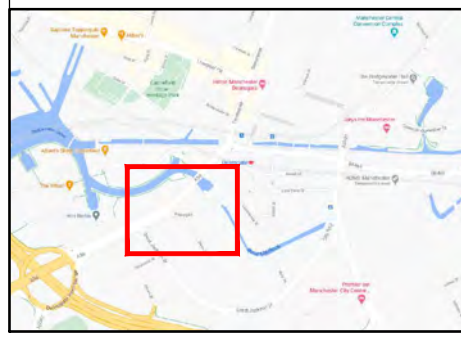


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PROJECT NO:	DRAWING NO:	REVISION:	
20-376-20	SP01	-	



Indicative

SITE LOCATION



- CARRIAGEWAY
- FOOTWAY
- SERVICE BAY FOOTWAY LEVEL
- DROPPED KERBS
- REFUSE INTERNAL CARRYING DISTANCE 18m
- REFUSE COLLECTION DISTANCE 24m
- 2.4x25m JUNCTION VISIBILITY SPLAY 20mph SSD, MFS

-	FIRST ISSUE	AF	02/12/20
REV:	DESCRIPTION:	BY:	DATE:

STATUS: **FOR INFORMATION**

CLIENT: **FUSION MANCHESTER
DEVCO LTD**

SITE: **DEANS_GATE,
MANCHESTER**

TITLE: **REFUSE STRATEGY**

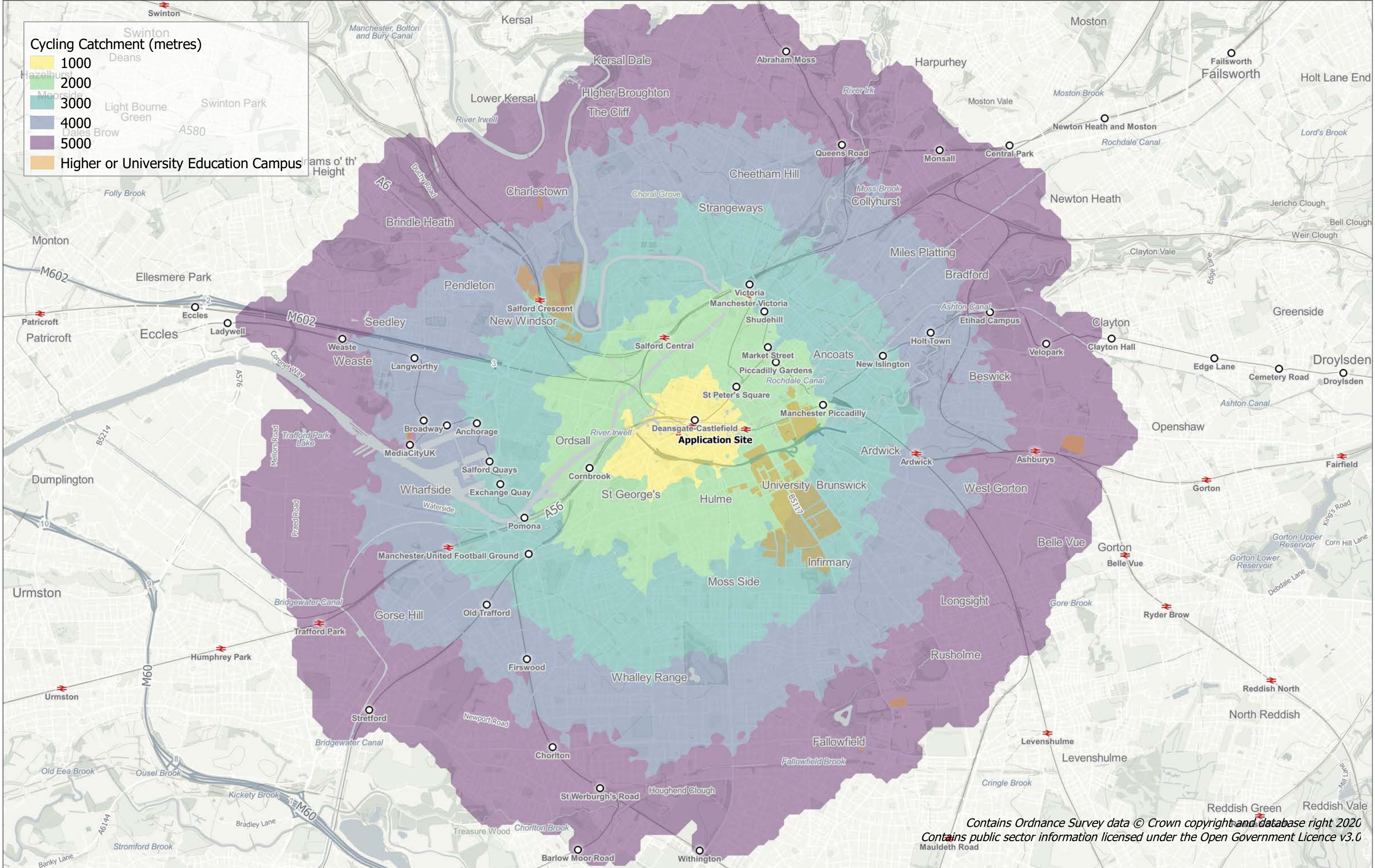


SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:250	02/12/20	AF	FB
PROJECT NO:	DRAWING NO:	REVISION:	
20-376-20	SK03	-	

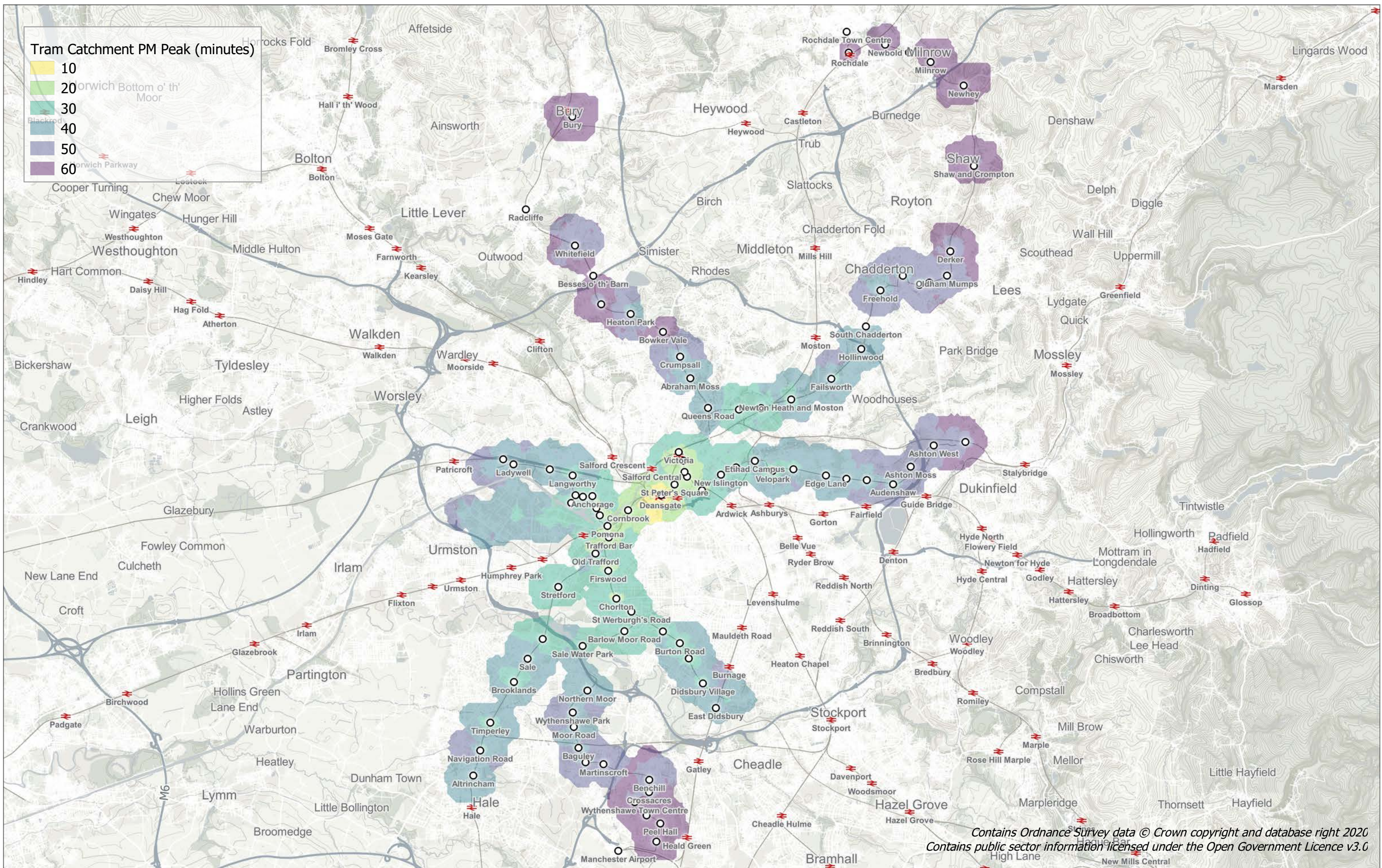


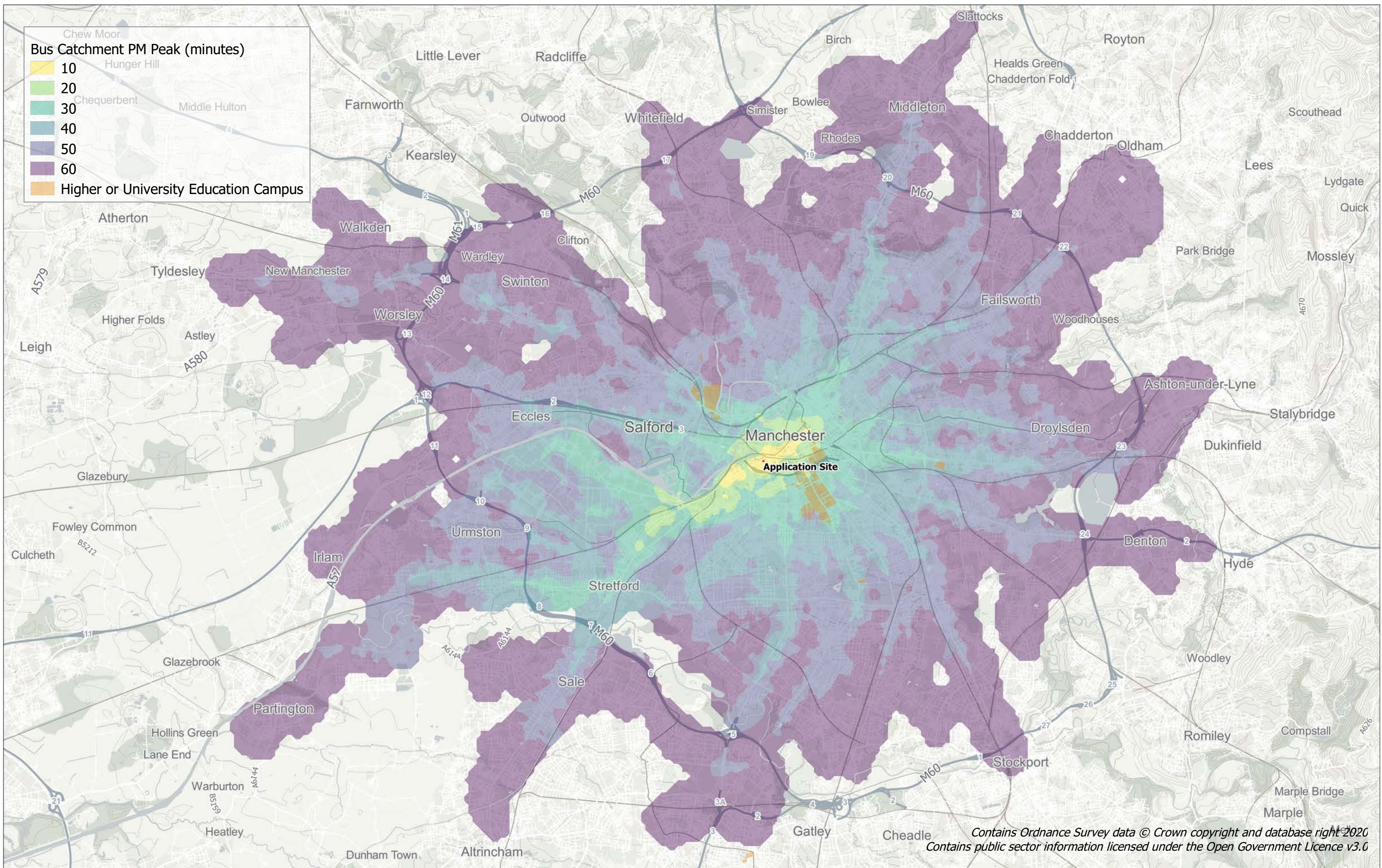
APPENDIX C

Accessibility Catchments



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APPENDIX D

Detailed TRICS Outputs & Calculations

Calculation Reference: AUDIT-861401-201202-1208

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : G - STUDENT ACCOMMODATION
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DV DEVON	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	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:	Number of residents
Actual Range:	197 to 350 (units:)
Range Selected by User:	15 to 700 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 25/09/19

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:

Wednesday	1 days
Thursday	2 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:

Residential Zone	1
Built-Up Zone	2

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

Secondary Filtering selection:

Use Class:

C3	3 days
----	--------

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

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

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

Population within 5 miles:

25,001 to 50,000	1 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	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:

No	3 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	3 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	DS-03-G-02	STUDENT ACCOMMODATION	DERBYSHIRE
	CATHEDRAL ROAD		
	DERBY		
	Town Centre		
	Built-Up Zone		
	Total Number of residents:	350	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL
2	DV-03-G-04	STUDENT ACCOMMODATION	DEVON
	BONHAY ROAD		
	EXETER		
	Edge of Town Centre		
	Residential Zone		
	Total Number of residents:	241	
	Survey date: THURSDAY	28/11/13	Survey Type: MANUAL
3	WK-03-G-02	STUDENT FLATS	WARWICKSHIRE
	RAGLAN STREET		
	COVENTRY		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of residents:	197	
	Survey date: THURSDAY	17/10/13	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/G - STUDENT ACCOMMODATION
 MULTI-MODAL TOTAL VEHICLES
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.001	3	263	0.000	3	263	0.001
08:00 - 09:00	3	263	0.004	3	263	0.000	3	263	0.004
09:00 - 10:00	3	263	0.003	3	263	0.001	3	263	0.004
10:00 - 11:00	3	263	0.005	3	263	0.006	3	263	0.011
11:00 - 12:00	3	263	0.003	3	263	0.000	3	263	0.003
12:00 - 13:00	3	263	0.001	3	263	0.005	3	263	0.006
13:00 - 14:00	3	263	0.005	3	263	0.004	3	263	0.009
14:00 - 15:00	3	263	0.003	3	263	0.003	3	263	0.006
15:00 - 16:00	3	263	0.004	3	263	0.004	3	263	0.008
16:00 - 17:00	3	263	0.003	3	263	0.004	3	263	0.007
17:00 - 18:00	3	263	0.000	3	263	0.006	3	263	0.006
18:00 - 19:00	3	263	0.000	3	263	0.000	3	263	0.000
19:00 - 20:00	3	263	0.004	3	263	0.004	3	263	0.008
20:00 - 21:00	3	263	0.005	3	263	0.005	3	263	0.010
21:00 - 22:00	2	219	0.007	2	219	0.011	2	219	0.018
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.053			0.101

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:	197 - 350 (units:)
Survey date range:	01/01/12 - 25/09/19
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/G - STUDENT ACCOMMODATION
 MULTI-MODAL TAXIS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.000	3	263	0.000	3	263	0.000
08:00 - 09:00	3	263	0.001	3	263	0.001	3	263	0.002
09:00 - 10:00	3	263	0.000	3	263	0.000	3	263	0.000
10:00 - 11:00	3	263	0.000	3	263	0.000	3	263	0.000
11:00 - 12:00	3	263	0.000	3	263	0.000	3	263	0.000
12:00 - 13:00	3	263	0.000	3	263	0.000	3	263	0.000
13:00 - 14:00	3	263	0.003	3	263	0.003	3	263	0.006
14:00 - 15:00	3	263	0.000	3	263	0.000	3	263	0.000
15:00 - 16:00	3	263	0.001	3	263	0.000	3	263	0.001
16:00 - 17:00	3	263	0.000	3	263	0.000	3	263	0.000
17:00 - 18:00	3	263	0.000	3	263	0.000	3	263	0.000
18:00 - 19:00	3	263	0.000	3	263	0.000	3	263	0.000
19:00 - 20:00	3	263	0.001	3	263	0.000	3	263	0.001
20:00 - 21:00	3	263	0.001	3	263	0.001	3	263	0.002
21:00 - 22:00	2	219	0.007	2	219	0.002	2	219	0.009
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.007			0.021

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL CYCLISTS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.000	3	263	0.000	3	263	0.000
08:00 - 09:00	3	263	0.000	3	263	0.001	3	263	0.001
09:00 - 10:00	3	263	0.000	3	263	0.000	3	263	0.000
10:00 - 11:00	3	263	0.000	3	263	0.000	3	263	0.000
11:00 - 12:00	3	263	0.003	3	263	0.003	3	263	0.006
12:00 - 13:00	3	263	0.000	3	263	0.000	3	263	0.000
13:00 - 14:00	3	263	0.000	3	263	0.001	3	263	0.001
14:00 - 15:00	3	263	0.001	3	263	0.000	3	263	0.001
15:00 - 16:00	3	263	0.001	3	263	0.000	3	263	0.001
16:00 - 17:00	3	263	0.000	3	263	0.000	3	263	0.000
17:00 - 18:00	3	263	0.000	3	263	0.001	3	263	0.001
18:00 - 19:00	3	263	0.000	3	263	0.001	3	263	0.001
19:00 - 20:00	3	263	0.000	3	263	0.000	3	263	0.000
20:00 - 21:00	3	263	0.000	3	263	0.000	3	263	0.000
21:00 - 22:00	2	219	0.000	2	219	0.000	2	219	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.005			0.007			0.012

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
 MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.001	3	263	0.000	3	263	0.001
08:00 - 09:00	3	263	0.004	3	263	0.001	3	263	0.005
09:00 - 10:00	3	263	0.003	3	263	0.000	3	263	0.003
10:00 - 11:00	3	263	0.008	3	263	0.010	3	263	0.018
11:00 - 12:00	3	263	0.004	3	263	0.000	3	263	0.004
12:00 - 13:00	3	263	0.001	3	263	0.005	3	263	0.006
13:00 - 14:00	3	263	0.009	3	263	0.004	3	263	0.013
14:00 - 15:00	3	263	0.003	3	263	0.006	3	263	0.009
15:00 - 16:00	3	263	0.006	3	263	0.004	3	263	0.010
16:00 - 17:00	3	263	0.003	3	263	0.004	3	263	0.007
17:00 - 18:00	3	263	0.000	3	263	0.006	3	263	0.006
18:00 - 19:00	3	263	0.000	3	263	0.000	3	263	0.000
19:00 - 20:00	3	263	0.006	3	263	0.004	3	263	0.010
20:00 - 21:00	3	263	0.009	3	263	0.006	3	263	0.015
21:00 - 22:00	2	219	0.009	2	219	0.007	2	219	0.016
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.066			0.057			0.123

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL PEDESTRIANS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.000	3	263	0.006	3	263	0.006
08:00 - 09:00	3	263	0.006	3	263	0.126	3	263	0.132
09:00 - 10:00	3	263	0.006	3	263	0.038	3	263	0.044
10:00 - 11:00	3	263	0.022	3	263	0.065	3	263	0.087
11:00 - 12:00	3	263	0.034	3	263	0.048	3	263	0.082
12:00 - 13:00	3	263	0.043	3	263	0.043	3	263	0.086
13:00 - 14:00	3	263	0.063	3	263	0.051	3	263	0.114
14:00 - 15:00	3	263	0.082	3	263	0.066	3	263	0.148
15:00 - 16:00	3	263	0.104	3	263	0.070	3	263	0.174
16:00 - 17:00	3	263	0.121	3	263	0.041	3	263	0.162
17:00 - 18:00	3	263	0.127	3	263	0.077	3	263	0.204
18:00 - 19:00	3	263	0.142	3	263	0.084	3	263	0.226
19:00 - 20:00	3	263	0.047	3	263	0.047	3	263	0.094
20:00 - 21:00	3	263	0.080	3	263	0.066	3	263	0.146
21:00 - 22:00	2	219	0.039	2	219	0.030	2	219	0.069
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.916			0.858			1.774

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL BUS/TRAM PASSENGERS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.001	3	263	0.003	3	263	0.004
08:00 - 09:00	3	263	0.005	3	263	0.060	3	263	0.065
09:00 - 10:00	3	263	0.005	3	263	0.016	3	263	0.021
10:00 - 11:00	3	263	0.004	3	263	0.014	3	263	0.018
11:00 - 12:00	3	263	0.015	3	263	0.016	3	263	0.031
12:00 - 13:00	3	263	0.029	3	263	0.034	3	263	0.063
13:00 - 14:00	3	263	0.024	3	263	0.033	3	263	0.057
14:00 - 15:00	3	263	0.036	3	263	0.018	3	263	0.054
15:00 - 16:00	3	263	0.046	3	263	0.023	3	263	0.069
16:00 - 17:00	3	263	0.033	3	263	0.014	3	263	0.047
17:00 - 18:00	3	263	0.041	3	263	0.019	3	263	0.060
18:00 - 19:00	3	263	0.024	3	263	0.029	3	263	0.053
19:00 - 20:00	3	263	0.036	3	263	0.016	3	263	0.052
20:00 - 21:00	3	263	0.020	3	263	0.020	3	263	0.040
21:00 - 22:00	2	219	0.000	2	219	0.000	2	219	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.319			0.315			0.634

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/G - STUDENT ACCOMMODATION
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 RESIDE
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.000	3	263	0.001	3	263	0.001
08:00 - 09:00	3	263	0.003	3	263	0.009	3	263	0.012
09:00 - 10:00	3	263	0.000	3	263	0.001	3	263	0.001
10:00 - 11:00	3	263	0.003	3	263	0.003	3	263	0.006
11:00 - 12:00	3	263	0.000	3	263	0.000	3	263	0.000
12:00 - 13:00	3	263	0.004	3	263	0.001	3	263	0.005
13:00 - 14:00	3	263	0.004	3	263	0.003	3	263	0.007
14:00 - 15:00	3	263	0.004	3	263	0.001	3	263	0.005
15:00 - 16:00	3	263	0.004	3	263	0.004	3	263	0.008
16:00 - 17:00	3	263	0.000	3	263	0.003	3	263	0.003
17:00 - 18:00	3	263	0.006	3	263	0.001	3	263	0.007
18:00 - 19:00	3	263	0.000	3	263	0.000	3	263	0.000
19:00 - 20:00	3	263	0.001	3	263	0.003	3	263	0.004
20:00 - 21:00	3	263	0.004	3	263	0.000	3	263	0.004
21:00 - 22:00	2	219	0.000	2	219	0.000	2	219	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.033			0.030			0.063	

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL PUBLIC TRANSPORT USERS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.001	3	263	0.004	3	263	0.005
08:00 - 09:00	3	263	0.008	3	263	0.069	3	263	0.077
09:00 - 10:00	3	263	0.005	3	263	0.018	3	263	0.023
10:00 - 11:00	3	263	0.006	3	263	0.016	3	263	0.022
11:00 - 12:00	3	263	0.015	3	263	0.016	3	263	0.031
12:00 - 13:00	3	263	0.033	3	263	0.036	3	263	0.069
13:00 - 14:00	3	263	0.028	3	263	0.036	3	263	0.064
14:00 - 15:00	3	263	0.039	3	263	0.019	3	263	0.058
15:00 - 16:00	3	263	0.049	3	263	0.027	3	263	0.076
16:00 - 17:00	3	263	0.033	3	263	0.016	3	263	0.049
17:00 - 18:00	3	263	0.047	3	263	0.020	3	263	0.067
18:00 - 19:00	3	263	0.024	3	263	0.029	3	263	0.053
19:00 - 20:00	3	263	0.037	3	263	0.019	3	263	0.056
20:00 - 21:00	3	263	0.024	3	263	0.020	3	263	0.044
21:00 - 22:00	2	219	0.000	2	219	0.000	2	219	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.349			0.345			0.694

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.003	3	263	0.010	3	263	0.013
08:00 - 09:00	3	263	0.018	3	263	0.197	3	263	0.215
09:00 - 10:00	3	263	0.014	3	263	0.056	3	263	0.070
10:00 - 11:00	3	263	0.036	3	263	0.091	3	263	0.127
11:00 - 12:00	3	263	0.056	3	263	0.067	3	263	0.123
12:00 - 13:00	3	263	0.077	3	263	0.084	3	263	0.161
13:00 - 14:00	3	263	0.100	3	263	0.091	3	263	0.191
14:00 - 15:00	3	263	0.126	3	263	0.091	3	263	0.217
15:00 - 16:00	3	263	0.161	3	263	0.100	3	263	0.261
16:00 - 17:00	3	263	0.156	3	263	0.061	3	263	0.217
17:00 - 18:00	3	263	0.174	3	263	0.105	3	263	0.279
18:00 - 19:00	3	263	0.166	3	263	0.114	3	263	0.280
19:00 - 20:00	3	263	0.090	3	263	0.070	3	263	0.160
20:00 - 21:00	3	263	0.113	3	263	0.093	3	263	0.206
21:00 - 22:00	2	219	0.048	2	219	0.037	2	219	0.085
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.338			1.267			2.605

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL CARS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.000	3	263	0.000	3	263	0.000
08:00 - 09:00	3	263	0.001	3	263	0.000	3	263	0.001
09:00 - 10:00	3	263	0.001	3	263	0.000	3	263	0.001
10:00 - 11:00	3	263	0.000	3	263	0.000	3	263	0.000
11:00 - 12:00	3	263	0.000	3	263	0.000	3	263	0.000
12:00 - 13:00	3	263	0.000	3	263	0.003	3	263	0.003
13:00 - 14:00	3	263	0.000	3	263	0.000	3	263	0.000
14:00 - 15:00	3	263	0.000	3	263	0.000	3	263	0.000
15:00 - 16:00	3	263	0.000	3	263	0.000	3	263	0.000
16:00 - 17:00	3	263	0.001	3	263	0.003	3	263	0.004
17:00 - 18:00	3	263	0.000	3	263	0.000	3	263	0.000
18:00 - 19:00	3	263	0.000	3	263	0.000	3	263	0.000
19:00 - 20:00	3	263	0.000	3	263	0.000	3	263	0.000
20:00 - 21:00	3	263	0.000	3	263	0.000	3	263	0.000
21:00 - 22:00	2	219	0.000	2	219	0.000	2	219	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.006			0.009

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/G - STUDENT ACCOMMODATION
 MULTI-MODAL LGVS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	1	241	0.000	1	241	0.000	1	241	0.000
07:00 - 08:00	3	263	0.000	3	263	0.000	3	263	0.000
08:00 - 09:00	3	263	0.000	3	263	0.000	3	263	0.000
09:00 - 10:00	3	263	0.001	3	263	0.000	3	263	0.001
10:00 - 11:00	3	263	0.000	3	263	0.001	3	263	0.001
11:00 - 12:00	3	263	0.000	3	263	0.000	3	263	0.000
12:00 - 13:00	3	263	0.000	3	263	0.000	3	263	0.000
13:00 - 14:00	3	263	0.001	3	263	0.001	3	263	0.002
14:00 - 15:00	3	263	0.000	3	263	0.000	3	263	0.000
15:00 - 16:00	3	263	0.001	3	263	0.001	3	263	0.002
16:00 - 17:00	3	263	0.000	3	263	0.000	3	263	0.000
17:00 - 18:00	3	263	0.000	3	263	0.001	3	263	0.001
18:00 - 19:00	3	263	0.000	3	263	0.000	3	263	0.000
19:00 - 20:00	3	263	0.000	3	263	0.000	3	263	0.000
20:00 - 21:00	3	263	0.000	3	263	0.000	3	263	0.000
21:00 - 22:00	2	219	0.000	2	219	0.000	2	219	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.004			0.007

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

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



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