

PROPOSED DEVELOPMENT AT CHURCHGATE HOUSE, MANCHESTER

APRIL 2020

1 BACKGROUND

- 1.1 This Technical Note has been prepared by Vectos on behalf of Helical to consider the part-change of use at basement level of Churchgate House located in Manchester City Centre.
- 1.2 Churchgate House currently provides office space spread over 8 floors with associated off-street car parking facilities at basement level. The site is bounded by Oxford Street to the east, Rochdale Canal Tow Path to the South and Great Bridgewater Street to the north – refer to **Figure 1.1**.

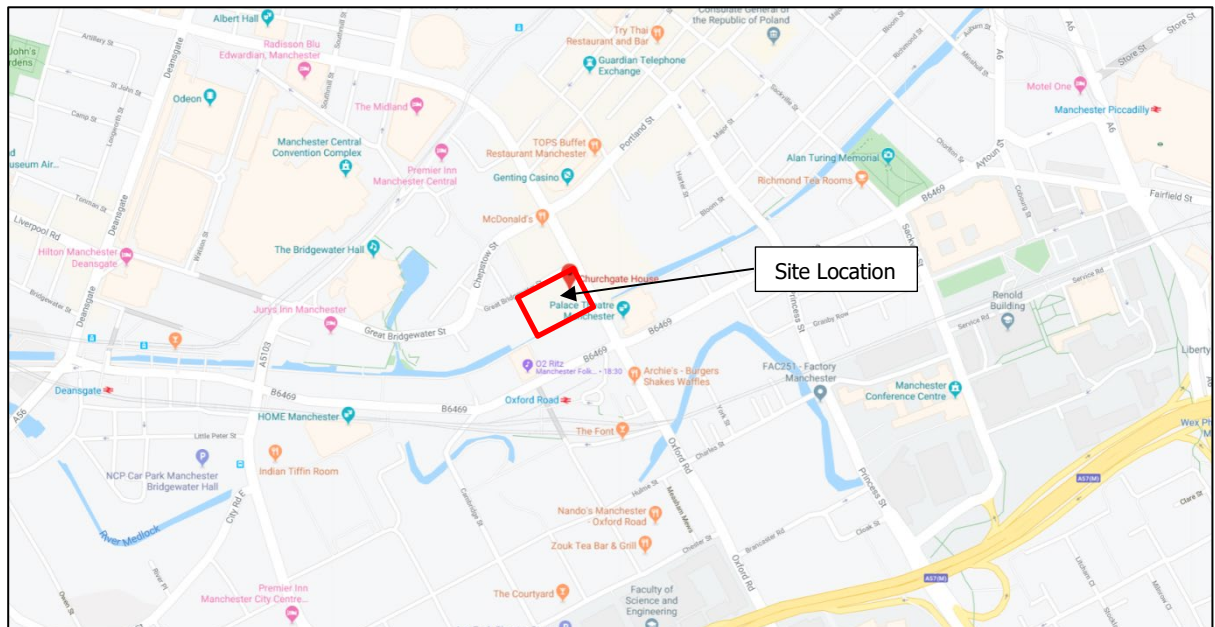
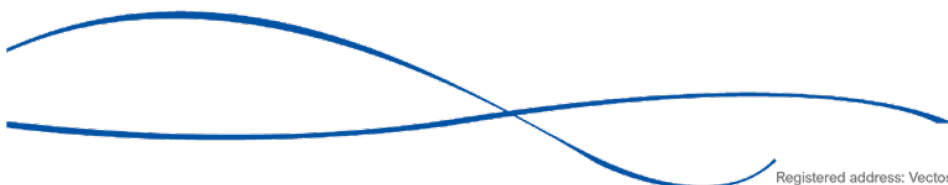
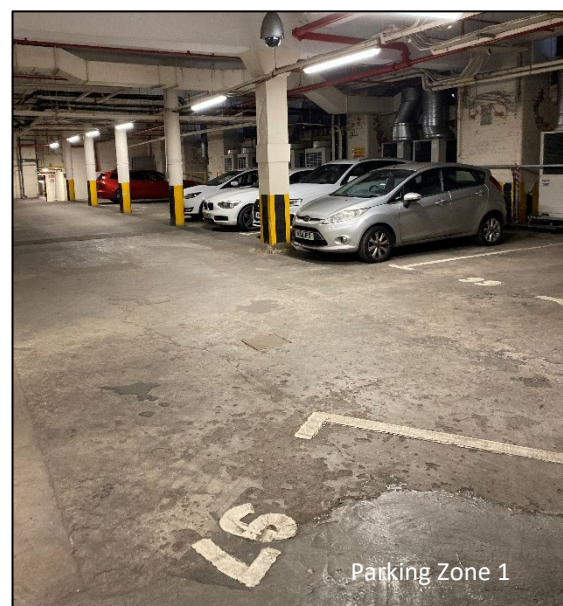
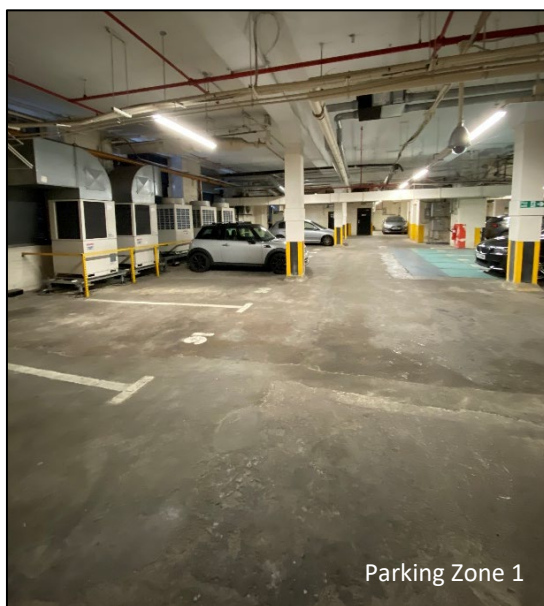


Figure 1.1 – Site Location

- 1.3 The proposal comprises of the part-change of use at basement floor to accommodate an office scheme (land use B1) which will form an extension to Churchgate Houses' existing use as an office facility. Pedestrian access will be taken via stairs/lift access from street level. The indicative site plan is presented in **Appendix A**.
- 1.4 Vectos has been commissioned to prepare this Technical Note which provides clarification on the trip generation associated with the proposed office development, its impact on existing parking arrangements, cycle parking and the strategy towards refuse and servicing.

2 EXISTING CONDITIONS

- 2.1 Access is currently provided to the existing basement car park facilities via a ramp from Great Bridgewater Street. Access from Great Bridgewater Street is controlled using roller shutters set back from the edge of the highway. These are monitored by management at the site to prevent unauthorised or unscheduled activity.
- 2.2 Car parking spaces are provided within the basement and these are managed and monitored by Churchgate House. Such parking spaces are identified into three distinct zones, which for ease of reference are referred to as Zones 1, 2 and 3.
- 2.3 Parking Zone 1 is located on the side that runs adjacent to Oxford Street and contains 45 car parking spaces. Some of these spaces are narrower than standard car parking spaces by today's standards as this basement car park was designed at a time when the typical car was of narrow dimensions. Parking Zone 2 is located in the centre of this basement level and contains 17 car parking spaces, with Parking Zone 3 located on the end furthest from Oxford Street and provides 35 car parking spaces. The three key zones are shown in **Figure 2.1**.



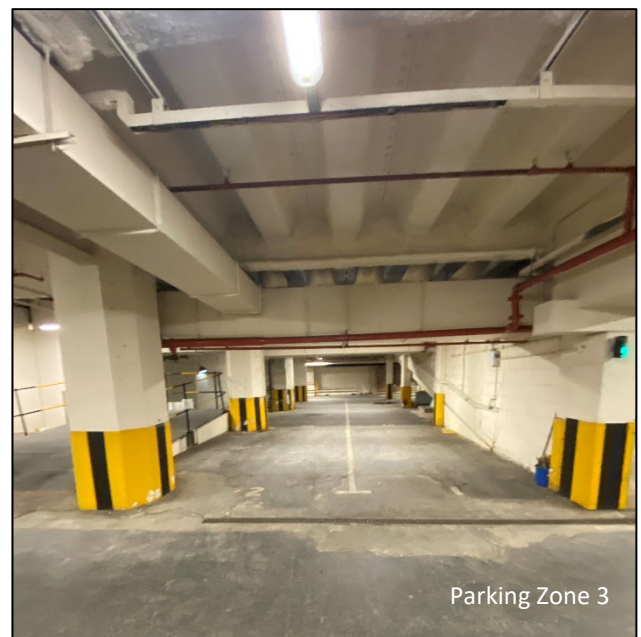
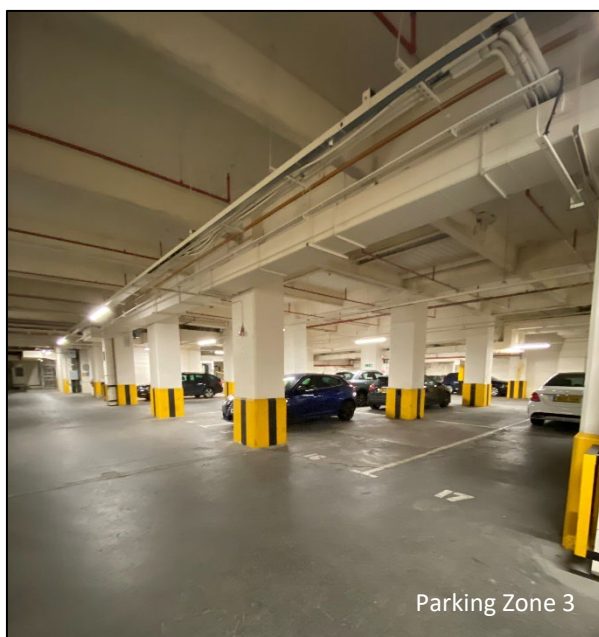
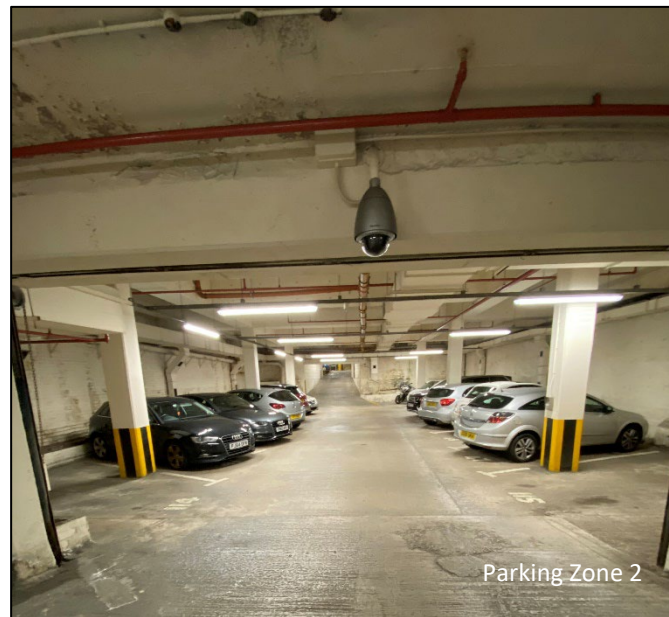
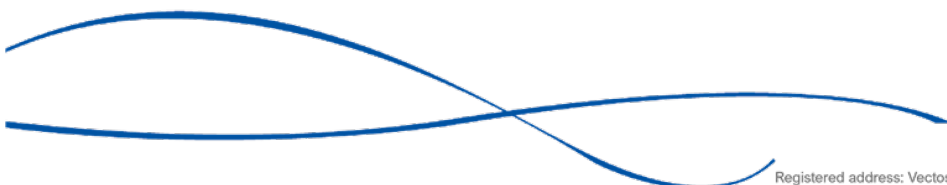


Figure 2.1: Existing Basement Parking Zones

- 2.4 As can be seen from **Figure 2.1** the car park is currently not operating anywhere near full capacity.
- 2.5 Cycle parking provision at Churchgate House is currently provided in a section of Zone 2. The site's existing cycle parking provision is in the form of semi-vertical cycle racks where there are approximately 40 cycle spaces (approx. 92m²). This cycle parking is located within a secure cycle cage, a lit area and is under surveillance. The cycle parking is shown in **Figure 2.2** below.



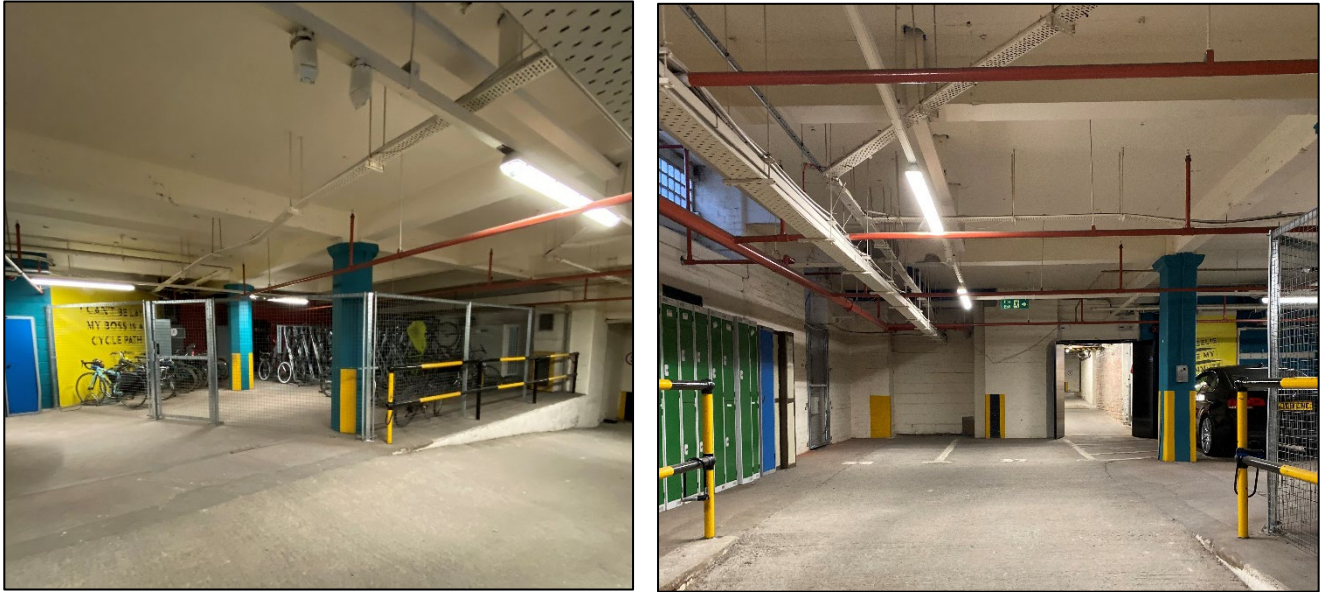
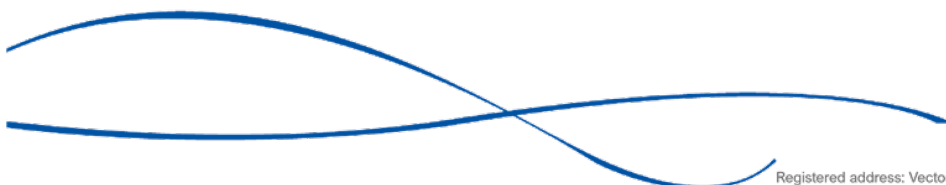


Figure 2.2: Secure Cycle Parking in Basement

- 2.6 The site's existing waste and servicing arrangements are taken from Great Bridgewater Street. To the rear of Churchgate House is a small gated servicing yard which provides flexible space for a variety of uses and refuse storage and is managed by a team employed by Churchgate House that are on site every day. The servicing and refuse arrangements at present are coordinated as part of the existing operation of occupiers of the Churchgate House.

3 PROPOSED DEVELOPMENT

- 3.1 The proposal comprises of B1 office space covering a proportion of the basement, with access proposed for pedestrians via stairs/lift from ground level.
- 3.2 A total of approximately 47 existing parking spaces (entire Car Parking Zone 1 and part of Zone 2) will be lost as part of the development proposal. The remaining on-site basement car parking provision will be 50 car parking spaces. This is discussed further in subsequent sections.
- 3.3 It is expected that the office use will form typical peak morning and evening periods that are associated with almost all employment land uses. These will coincide with employment trips that already exist for Churchgate House. In order to assess the potential impact of the proposed development, we provide potential trip generation associated with the additional office space overleaf.

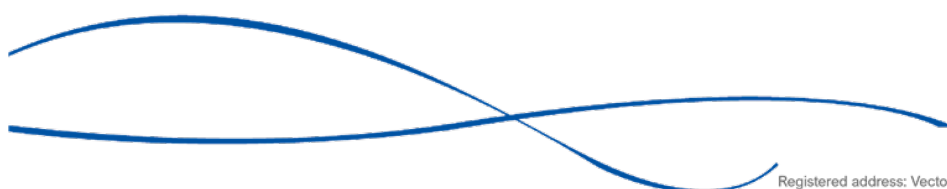


- 3.4 Given the site is located within Manchester City Centre and is situated within a short walk to various local public transport hubs, the majority of trips to the proposed office space will likely be via non-car modes. To quantify this, an interrogation of the TRICS database has been undertaken using the 'Land Use 02 /A – Office' category to identify sites located in a similar location (only high density town/city centre locations) and surveyed Monday – Friday, as this is expected to represent the sites peak periods.
- 3.5 As discussed, the site will accommodate additional office (B1 use) at basement level. The proposed development is anticipated to have a Gross Floor Area (GFA) of approximately 1360m². A summary of trips generated by this use is shown in **Table 3.1**, with the full TRICS output presented in **Appendix B**.

Time Range	Office Trip Generation (Approx. GFA 1360m ²)							
	Taxis		Cyclists		Pedestrians		Public Transport	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
0700-0800	0	0	0	0	0	0	4	0
0800-0900	0	0	0	0	5	1	17	0
0900-1000	0	0	0	0	3	4	9	0
1000-1100	0	0	1	1	9	7	2	1
1100-1200	0	0	0	0	5	8	0	0
1200-1300	0	0	0	0	11	19	1	0
1300-1400	0	0	0	0	22	14	1	1
1400-1500	0	0	0	0	7	5	1	1
1500-1600	0	0	0	0	4	3	0	1
1600-1700	0	0	0	0	2	1	0	8
1700-1800	0	0	0	1	1	4	0	16
1800-1900	0	0	0	0	0	3	0	6
Daily Total	0	0	2	2	69	69	35	34

Table 3.1: Trip Generation (Note: May be some arithmetic errors due to rounding)

- 3.6 As shown in **Table 3.1**, the proposed office use will generate trips from a range of non-car modes throughout the course of the day.
- 3.7 Over the course of the day the TRICS data suggests that the proposed development could generate 138 two-way pedestrian trips and 69 two-way public transport trips, with these becoming more occurrent during typical employment morning and afternoon peak periods and during the middle of the day (typical lunchtime periods). These trips can easily be accommodated by the site's surrounding public transport infrastructure, including the Oxford Road bus corridor, bus stops located on Oxford Street (a bus stop is located directly outside the site with this bus stop providing the following bus services; 15, 44, 191, 197, 751, 797), Portland Street, Chepstow Street and Whitworth Street. Oxford Road rail station is located approximately 150 metres south of the site and St Peter's Square Metrolink is located 300 metres north of the site.



3.8 The TRICS data suggests that the proposed development is unlikely to generate significant levels of cycle movements throughout the course of the day. However, through the promotion of sustainable transport initiatives it is likely that cycle trips will be higher than what is proposed in **Table 3.1**. Churchgate House already integrates transport initiatives such as the 'getting here' webpage that shows occupiers/visitors how to travel sustainably to the site. This includes the promotion of cycling, and information on nearby tram and train links - <http://churchgateandleehouse.co.uk/gettinghere/>. The occupiers of the development will be made aware of these and will be able to utilise the existing and proposed secure cycle parking located at basement level in Churchgate House.

3.9 The proposed development could also generate 25 vehicle arrivals and 25 vehicle departures during the course of the day – refer to **Appendix B**. The proposed development will not be provided within any designated on-site parking and employees will be made aware of this prior to occupation. This is very typical for city centre office developments and is used as a successful means to encourage staff to travel sustainably. Therefore, these trips will be accommodated within the NCP multi-storey car park located next to the Churchgate building on Oxford Road (amongst others) and pay and display on-street parking bays located in the vicinity of the site. The closest multi-story car parks (all located within 400m of the site) and their capacity are as follows:

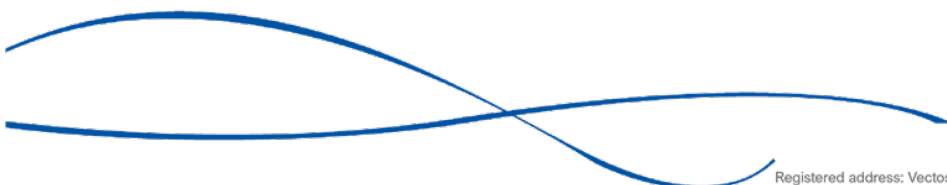
- NCP Car Park Manchester Oxford Street: 431 spaces
- NCP Car Park Manchester Chepstow Street: 411 spaces
- Q-Park First Street Car Park, Manchester: 700 spaces
- NCP Car Park Manchester Palace: 16 spaces

3.10 There are therefore a number of options available to accommodate vehicle parking close to the site.

4 PARKING

4.1 As detailed in Section 1, the proposed office space will encroach into an area of existing car parking with approximately 47 basement car parking spaces expected to be displaced under the proposal. The remaining on-site basement car parking provision will be 50 car parking spaces – refer to **Appendix A**. A parking occupancy study has been undertaken in order to inform the Technical Note of the existing demand for car parking at the site in order to assess the potential impact.

4.2 An average car parking occupancy study was undertaken in October 2019 at each of the aforementioned parking zones. On each occasion parking occupancy was observed between 10am and 11am as this is the time when parking uptake in any workplace development is expected to be highest. The results of the study are presented in **Table 4.1**.



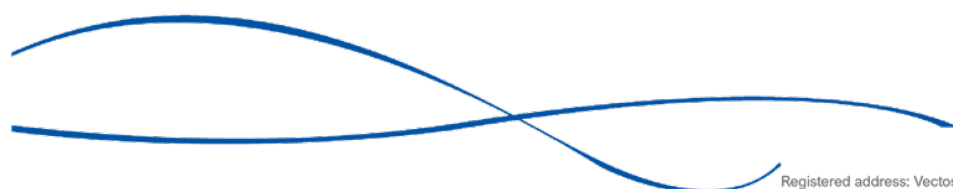
	Total Parking Capacity	Typical Car Parking Occupancy	
Car Parking Area 1 (to be displaced)	45	22	49%
Car Parking Area 2 (to be partly displaced)	17	11	65%
Car Parking Area 3	35	17	49%

Table 4.1: Car Parking Occupancy Study Results

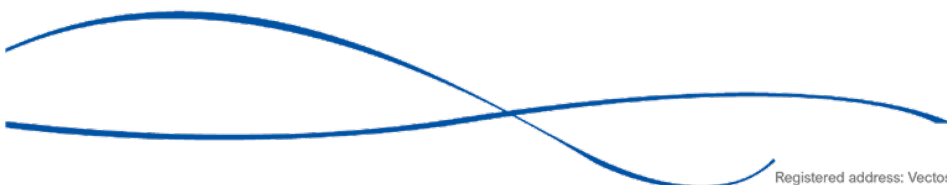
- 4.3 As shown in **Table 4.1** the average number of cars currently parking in the basement level car park during a 'typical working day' was 50 cars. As discussed, a total of circa 47 car parking spaces will be displaced under the proposal, meaning 50 spaces will remain. The survey therefore shows that there is space available at the site post-development based on current demand.
- 4.4 Access to the remaining parking areas will remain to be taken from Great Bridgewater Street. Vehicle movements are naturally managed within the car park given the low speeds and available space providing a natural control.
- 4.5 In addition, reducing parking stock within Churchgate House should help increase sustainable travel to the site among those currently choosing to travel by the private car, in turn helping reduce congestion within Manchester centre during peak hours.
- 4.6 It should be noted that all of the car parking within the site are managed and monitored at regular intervals by management staff at Churchgate House. This includes a regular review of parking supply and demand to ensure that the site continues to operate efficiently, and that best use is made of available space. This will continue to be the case following construction of the proposal.
- 4.7 Given that the development proposals are expanding Churchgate Houses' existing land use consideration has also been given to local cycle parking standards. The existing cycle parking facilities that currently serve Churchgate House have an average space capacity of approximately 30%. The proposed development will be able to use these existing cycle parking facilities, in addition to a second cycle store that will be provided in the basement as part of the proposal. Additional cycle parking is also provided on the numerous on-street cycle loops that are located outside the site and within Manchester City Centre.
- 4.8 As per the car parking arrangements, the use of cycle parking is regularly monitored as part of the buildings site management plan, with ongoing monitoring of overall demand, ensuring that the needs of cyclists can be accommodated at the site.

5 SERVICING AND REFUSE STRATEGY

- 5.1 The site's existing operation coordinates servicing and delivery movements to the rear of the site from Great Bridgewater Street. There have been no recorded accidents at this location on Great Bridgewater Street in the most recent 5-year period, based on the available data (Source: Crash Maps).

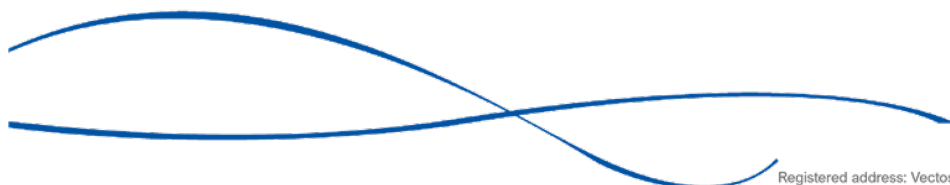


- 5.2 Due to Churchgate House already having an established use as a commercial/office building, servicing and deliveries for the proposed basement office use will be almost identical to those currently generated by Churchgate House and will tie in with existing arrangements. It is expected that deliveries associated with the additional office space will be minimal.
- 5.3 It is anticipated that waste from the offices will be transferred a short distance by a member of staff at the end of the day to a communal bin store, which will be shared with the other existing units in Churchgate House – refer to **Appendix A**. The bins will be designated according to the individual waste streams.
- 5.4 The bins will be wheeled from the basement to street level on Great Bridgewater Street by site management on collection day, where bin collection will tie in with other existing bin collection arrangements. This involves a refuse vehicle servicing the development kerbside from Great Bridgewater Street. The expected dwell time will be around 2 minutes.
- 5.5 Waste collection will take place by B&M which is the current waste supplier for the wider building. It will be ensured that waste is wheeled to street level shortly before it is collected, and empty bins will be returned to the proposed unit's refuse store immediately after collection has taken place.
- 5.6 The frequency of collections will not increase or change from that which currently exists for the wider building.
- 5.7 Waste generation of B1 land use is calculated based on the British Standard 'Waste Management in Buildings — Code of Practice' (BS5906:2005). This assumes 50 litres per each employee. The number of employees at this point cannot be confirmed but by using the Governments standard Employment Densities Guide (2010) it is said that an area of 12m² is required per full time equivalent (FTE) member of staff. It is therefore anticipated that there could be up to 113 members of staff, however it is likely to be significantly less. By applying the worst-case scenario, the following calculation is arrived:
- *113 x 50 litres = 5,650 litres per week.*
- 5.8 Waste from office building frequently contain up to 80% paper, and hence a high proportion of this can be reclaimed and recycled, therefore from this calculation the site should be provided with a bin capacity of up to 1,130litres for general waste and 4,520litres for recyclable waste. This will be in addition to requirements currently needed for the wider building.
- 5.9 Suitable waste management and collection will be implemented which will be in line with existing arrangements that currently take place for the wider building.



6 SUMMARY

- 6.1 This Technical Note has been prepared to provide clarification relating to the trip generation and existing parking and servicing arrangements associated with a new office space within the basement of the Churchgate House building in Manchester.
- 6.2 The trip generation associated with the proposed new office space has been shown to be largely pedestrian and public transport-based, which is to be expected in such a city centre location. Any vehicles making dedicated trips to the site have options to park within the nearby multi-storey car parks or on-street pay and display bays.
- 6.3 Within the site, the car and cycle parking occupancy surveys have shown that there is space available at the site based on current demand to accommodate the lost parking. The overall parking management system (i.e. car and cycle) will continue to operate at the site with regular monitoring to ensure that best use is made of the available space within the site.
- 6.4 It has been acknowledged that due to the site already successfully operating as an office use, aside from a new communal bin store located in the basement area, servicing will tie in with existing arrangements currently in place for the wider building.
- 6.5 Overall it is concluded that the proposed development is acceptable from a transport and highways perspective and will increase sustainable trips to the site, aligning with key themes outlined within national and local planning policy.



APPENDIX A – PROPOSED SITE LAYOUT

APPENDIX B – FULL TRICS OUTPUT FILE

Calculation Reference: AUDIT-715001-200305-0341

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE
 MULTI-MODAL VEHICLES

Selected regions and areas:

08	NORTH WEST	
	GM GREATER MANCHESTER	2 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 2090 to 4200 (units: sqm)
 Range Selected by User: 178 to 7000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 14/03/19

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:

Monday	2 days
Wednesday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Town Centre	3
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Built-Up Zone	3
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B1	3 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000

3 days

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

Population within 5 miles:

500,001 or More

3 days

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

Car ownership within 5 miles:

0.6 to 1.0

3 days

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

Travel Plan:

No

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	GM-02-A-07 MOSELEY STREET MANCHESTER	LAW OFFICES		GREATER MANCHESTER
	Town Centre Built-Up Zone			
	Total Gross floor area:	4200 sqm		
	Survey date: WEDNESDAY	19/10/11		Survey Type: MANUAL
2	GM-02-A-08 FOUNTAIN STREET MANCHESTER	REGUS		GREATER MANCHESTER
	Town Centre Built-Up Zone			
	Total Gross floor area:	3960 sqm		
	Survey date: MONDAY	26/09/16		Survey Type: MANUAL
3	TW-02-A-07 MULGRAVE TERRACE GATESHEAD	OFFICES		TYNE & WEAR
	Town Centre Built-Up Zone			
	Total Gross floor area:	2090 sqm		
	Survey date: MONDAY	13/06/16		Survey Type: MANUAL

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

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

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	3417	0.068	3	3417	0.010	3	3417	0.078
07:30 - 08:00	3	3417	0.127	3	3417	0.010	3	3417	0.137
08:00 - 08:30	3	3417	0.205	3	3417	0.020	3	3417	0.225
08:30 - 09:00	3	3417	0.312	3	3417	0.049	3	3417	0.361
09:00 - 09:30	3	3417	0.244	3	3417	0.059	3	3417	0.303
09:30 - 10:00	3	3417	0.156	3	3417	0.068	3	3417	0.224
10:00 - 10:30	3	3417	0.078	3	3417	0.020	3	3417	0.098
10:30 - 11:00	3	3417	0.078	3	3417	0.059	3	3417	0.137
11:00 - 11:30	3	3417	0.020	3	3417	0.049	3	3417	0.069
11:30 - 12:00	3	3417	0.029	3	3417	0.020	3	3417	0.049
12:00 - 12:30	3	3417	0.039	3	3417	0.039	3	3417	0.078
12:30 - 13:00	3	3417	0.068	3	3417	0.078	3	3417	0.146
13:00 - 13:30	3	3417	0.059	3	3417	0.049	3	3417	0.108
13:30 - 14:00	3	3417	0.059	3	3417	0.039	3	3417	0.098
14:00 - 14:30	3	3417	0.078	3	3417	0.059	3	3417	0.137
14:30 - 15:00	3	3417	0.039	3	3417	0.049	3	3417	0.088
15:00 - 15:30	3	3417	0.049	3	3417	0.068	3	3417	0.117
15:30 - 16:00	3	3417	0.010	3	3417	0.010	3	3417	0.020
16:00 - 16:30	3	3417	0.029	3	3417	0.185	3	3417	0.214
16:30 - 17:00	3	3417	0.029	3	3417	0.137	3	3417	0.166
17:00 - 17:30	3	3417	0.049	3	3417	0.263	3	3417	0.312
17:30 - 18:00	3	3417	0.020	3	3417	0.156	3	3417	0.176
18:00 - 18:30	3	3417	0.010	3	3417	0.263	3	3417	0.273
18:30 - 19:00	3	3417	0.010	3	3417	0.088	3	3417	0.098
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.865			1.847			3.712

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:	2090 - 4200 (units: sqm)
Survey date date range:	01/01/11 - 14/03/19
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 MULTI-MODAL TAXIS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
07:30 - 08:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
08:00 - 08:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
08:30 - 09:00	3	3417	0.010	3	3417	0.010	3	3417	0.020
09:00 - 09:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
09:30 - 10:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
10:00 - 10:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
10:30 - 11:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
11:00 - 11:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
11:30 - 12:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
12:00 - 12:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
12:30 - 13:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
13:00 - 13:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
13:30 - 14:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
14:00 - 14:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
14:30 - 15:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
15:00 - 15:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
15:30 - 16:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
16:00 - 16:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
16:30 - 17:00	3	3417	0.010	3	3417	0.010	3	3417	0.020
17:00 - 17:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
17:30 - 18:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
18:00 - 18:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
18:30 - 19:00	3	3417	0.010	3	3417	0.010	3	3417	0.020
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.030			0.030			0.060

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 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	3417	0.010	3	3417	0.000	3	3417	0.010
07:30 - 08:00	3	3417	0.010	3	3417	0.000	3	3417	0.010
08:00 - 08:30	3	3417	0.010	3	3417	0.000	3	3417	0.010
08:30 - 09:00	3	3417	0.010	3	3417	0.000	3	3417	0.010
09:00 - 09:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
09:30 - 10:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
10:00 - 10:30	3	3417	0.010	3	3417	0.010	3	3417	0.020
10:30 - 11:00	3	3417	0.029	3	3417	0.029	3	3417	0.058
11:00 - 11:30	3	3417	0.020	3	3417	0.020	3	3417	0.040
11:30 - 12:00	3	3417	0.010	3	3417	0.010	3	3417	0.020
12:00 - 12:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
12:30 - 13:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
13:00 - 13:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
13:30 - 14:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
14:00 - 14:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
14:30 - 15:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
15:00 - 15:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
15:30 - 16:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
16:00 - 16:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
16:30 - 17:00	3	3417	0.010	3	3417	0.010	3	3417	0.020
17:00 - 17:30	3	3417	0.000	3	3417	0.039	3	3417	0.039
17:30 - 18:00	3	3417	0.000	3	3417	0.000	3	3417	0.000
18:00 - 18:30	3	3417	0.000	3	3417	0.020	3	3417	0.020
18:30 - 19:00	3	3417	0.000	3	3417	0.010	3	3417	0.010
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.119			0.148			0.267

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 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PEDESTRIANS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	3417	0.000	3	3417	0.000	3	3417	0.000
07:30 - 08:00	3	3417	0.029	3	3417	0.000	3	3417	0.029
08:00 - 08:30	3	3417	0.176	3	3417	0.029	3	3417	0.205
08:30 - 09:00	3	3417	0.224	3	3417	0.059	3	3417	0.283
09:00 - 09:30	3	3417	0.117	3	3417	0.176	3	3417	0.293
09:30 - 10:00	3	3417	0.127	3	3417	0.098	3	3417	0.225
10:00 - 10:30	3	3417	0.361	3	3417	0.312	3	3417	0.673
10:30 - 11:00	3	3417	0.322	3	3417	0.224	3	3417	0.546
11:00 - 11:30	3	3417	0.234	3	3417	0.361	3	3417	0.595
11:30 - 12:00	3	3417	0.166	3	3417	0.224	3	3417	0.390
12:00 - 12:30	3	3417	0.517	3	3417	0.790	3	3417	1.307
12:30 - 13:00	3	3417	0.263	3	3417	0.624	3	3417	0.887
13:00 - 13:30	3	3417	0.624	3	3417	0.663	3	3417	1.287
13:30 - 14:00	3	3417	0.985	3	3417	0.341	3	3417	1.326
14:00 - 14:30	3	3417	0.351	3	3417	0.166	3	3417	0.517
14:30 - 15:00	3	3417	0.176	3	3417	0.185	3	3417	0.361
15:00 - 15:30	3	3417	0.098	3	3417	0.166	3	3417	0.264
15:30 - 16:00	3	3417	0.176	3	3417	0.088	3	3417	0.264
16:00 - 16:30	3	3417	0.098	3	3417	0.068	3	3417	0.166
16:30 - 17:00	3	3417	0.020	3	3417	0.029	3	3417	0.049
17:00 - 17:30	3	3417	0.029	3	3417	0.205	3	3417	0.234
17:30 - 18:00	3	3417	0.010	3	3417	0.088	3	3417	0.098
18:00 - 18:30	3	3417	0.000	3	3417	0.166	3	3417	0.166
18:30 - 19:00	3	3417	0.000	3	3417	0.029	3	3417	0.029
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			5.103			5.091			10.194

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 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	3417	0.049	3	3417	0.000	3	3417	0.049
07:30 - 08:00	3	3417	0.215	3	3417	0.000	3	3417	0.215
08:00 - 08:30	3	3417	0.449	3	3417	0.000	3	3417	0.449
08:30 - 09:00	3	3417	0.790	3	3417	0.000	3	3417	0.790
09:00 - 09:30	3	3417	0.527	3	3417	0.000	3	3417	0.527
09:30 - 10:00	3	3417	0.137	3	3417	0.000	3	3417	0.137
10:00 - 10:30	3	3417	0.117	3	3417	0.010	3	3417	0.127
10:30 - 11:00	3	3417	0.010	3	3417	0.059	3	3417	0.069
11:00 - 11:30	3	3417	0.010	3	3417	0.010	3	3417	0.020
11:30 - 12:00	3	3417	0.020	3	3417	0.000	3	3417	0.020
12:00 - 12:30	3	3417	0.029	3	3417	0.010	3	3417	0.039
12:30 - 13:00	3	3417	0.068	3	3417	0.000	3	3417	0.068
13:00 - 13:30	3	3417	0.029	3	3417	0.039	3	3417	0.068
13:30 - 14:00	3	3417	0.010	3	3417	0.000	3	3417	0.010
14:00 - 14:30	3	3417	0.049	3	3417	0.000	3	3417	0.049
14:30 - 15:00	3	3417	0.000	3	3417	0.039	3	3417	0.039
15:00 - 15:30	3	3417	0.000	3	3417	0.029	3	3417	0.029
15:30 - 16:00	3	3417	0.000	3	3417	0.068	3	3417	0.068
16:00 - 16:30	3	3417	0.020	3	3417	0.215	3	3417	0.235
16:30 - 17:00	3	3417	0.010	3	3417	0.351	3	3417	0.361
17:00 - 17:30	3	3417	0.000	3	3417	0.780	3	3417	0.780
17:30 - 18:00	3	3417	0.000	3	3417	0.410	3	3417	0.410
18:00 - 18:30	3	3417	0.000	3	3417	0.351	3	3417	0.351
18:30 - 19:00	3	3417	0.000	3	3417	0.107	3	3417	0.107
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.539			2.478			5.017

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

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