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**9th Floor, City Tower
Piccadilly Plaza**

Transport Statement

Final Report for:

City Tower Unit Trust

April 2022

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APPENDICES

APPENDIX A – EDUCATION TRICS OUTPUT

APPENDIX B – OFFICE TRICS OUTPUT

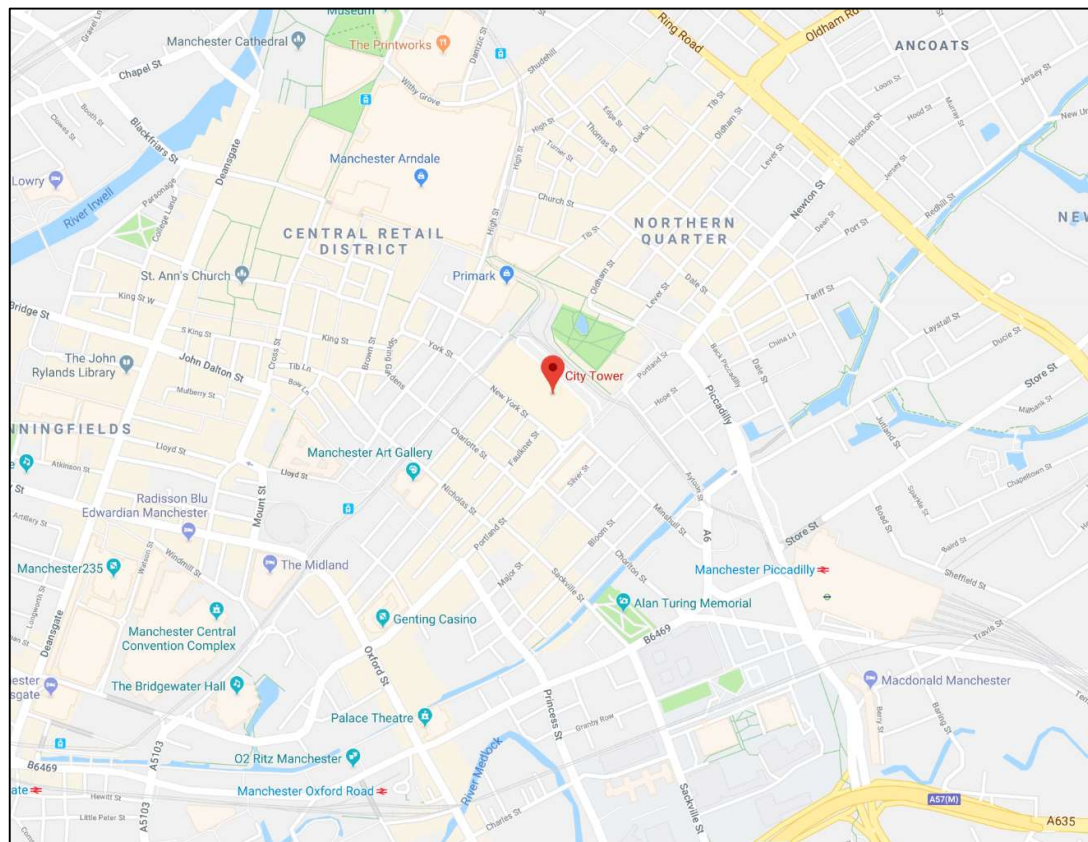
APPENDIX C – TRAVEL PLAN

1.0 INTRODUCTION

1.1 Overview

- 1.1.1 City Tower Unit Trust have instructed Cora IHT to prepare a Transport Statement [TS] in support of a planning application for: 'Change of use from office (Use Class E(g)) to education (Use Class F.1) at Level 9 of City Tower, Piccadilly Plaza'.
- 1.1.2 City Tower is located within the Piccadilly Gardens area of Manchester with the postcode M1 4BT. The site location is illustrated in **Figure 1.1**.

Figure 1.1: Site Location



- 1.1.3 This TS has been prepared in accordance with National Planning Policy Framework and Planning Policy Guidance: Travel Plans, Transport Assessments and Statements in Decision-Taking. It sets out the transport matters relating to the development site and provides details of the development proposals, including an assessment of the predicted traffic flows, the corresponding impact on the surrounding highway network and matters associated with accessibility and connectivity.

1.2.1 Following this brief introduction:

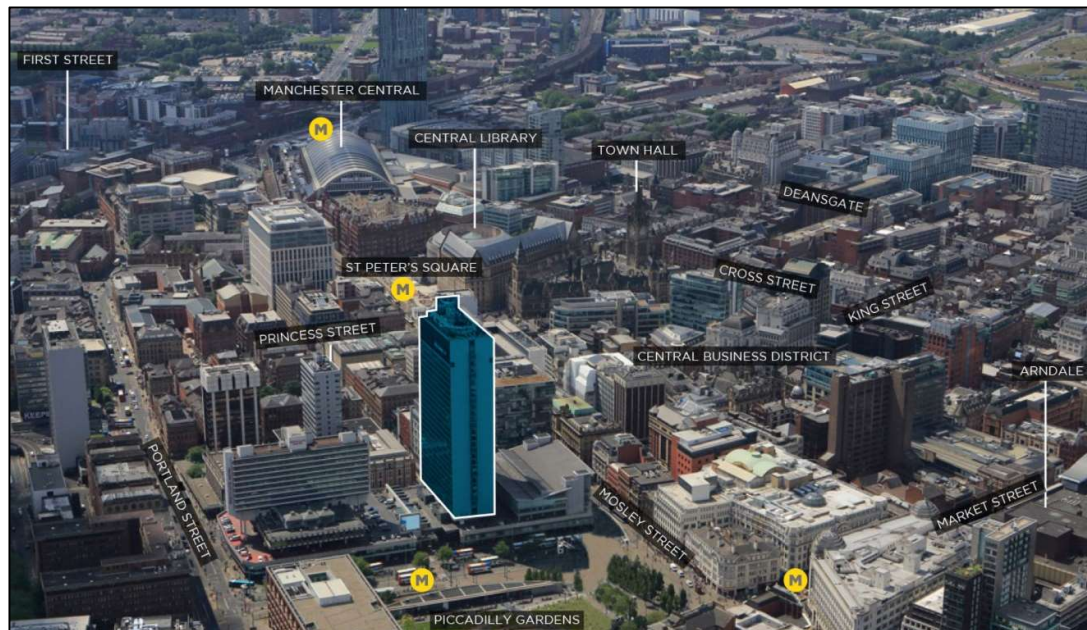
- Section 2 describes the site location.
- Section 3 then describes the development proposals.
- Section 4 provides an assessment of the trip generation associated with the change of use.
- The summary and conclusion are set out in Section 5.

2.0 SITE DESCRIPTION

2.1 Existing Site

- 2.1.1 City Tower is located in the Piccadilly Gardens area of Manchester Central Business District.
- 2.1.2 The site is located adjacent to the Piccadilly bus hub and Metrolink stop on Parker Street. Piccadilly Train Station is approximately 600m from the site.
- 2.1.3 The 9th floor has office use with a Gross Internal Area (GIA) of 841.6m².
- 2.1.4 On the second-floor car-deck there are an existing total of 172 car park spaces with cycle storage and motorcycle parking areas.
- 2.1.5 The City Tower also benefits from a Cycle Hub, located in the basement of the building which includes 200 cycle spaces, showers and cycling facilities.
- 2.1.6 City Tower is in a highly accessible location for non-car travel. Greater Manchester Accessibility Level Modelling scores the site 8 out of 8 as the site is located adjacent to the substantial public transport facilities in the city centre.
- 2.1.7 **Figure 2.1** shows the City Tower and its surrounding area.

Figure 2.1: Site Location and Surrounding Area



- 2.1.8 Manchester Piccadilly Gardens NCP Car Park is located within City Tower. This car park has 712 car parking spaces, 8 disabled bays, and car-electric charging points. It is opened between 05:30 and 23:30 hours Monday to Sunday and benefits from a 24hr contact centre.

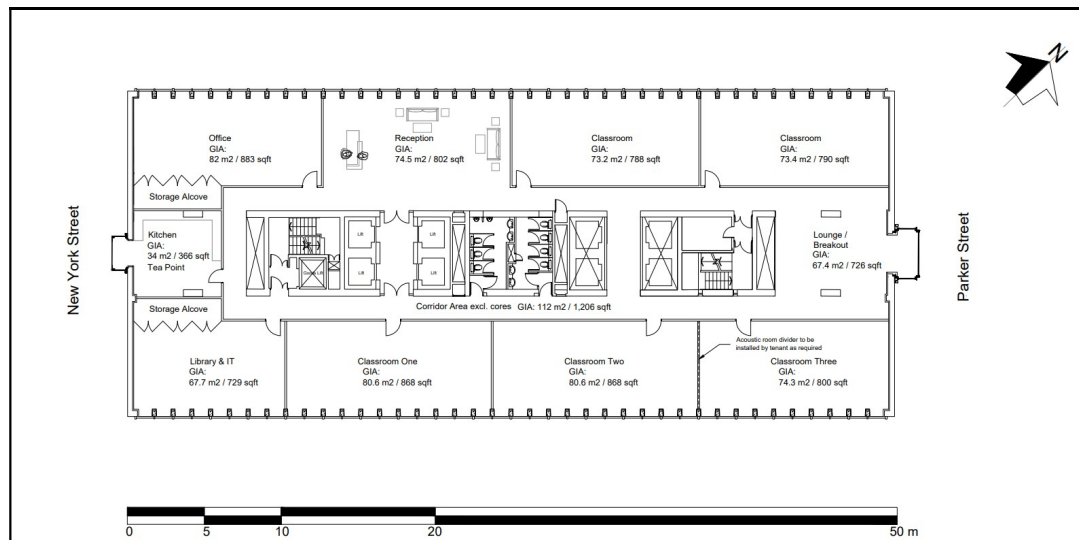
3.0 PROPOSED DEVELOPMENT

3.1 Proposed Development

3.1.1 It is proposed to change the lawful use of the ninth floor of City Tower from 'from office (Use Class E(g) to education (Use Class F.1) at Level 9 of City Tower, Piccadilly Plaza'. The total floorspace would be as existing, 847.5m².

3.1.2 The proposed layout is provided in **Figure 3.1**.

Figure 3.1: Floor Layout



3.1.3 The hours of operation would be between 8:30am – 5:30pm however during exam periods, students may wish to study until 7:30pm.

3.1.4 The proposed education facility will have access to the Cycle Hub, showers and cycling facilities.

4.0 TRIP ASSESSMENT

4.1 Introduction

- 4.1.1 This section of the report considers the trip generations associated with the change of use from office to education.

4.2 Development Trips

- 4.2.1 The site is located within the city centre where there is a high accessibility level for non-car travel, therefore, trips to the development would likely be made by non-car modes due to the substantial sustainable modes available and the change from commuter to student travel.
- 4.2.2 For comparative purposes a general trip generation assessment based on typical office / educational use has been carried out to assess whether there would be any increases in vehicle trips to the site.
- 4.2.3 To identify the trip generation associated with the proposed D1 development, the TRICS database “college/university” category has been utilised. **Table 4.1** summarises the trip rates and generations associated with the proposed use at the site. The TRICS outputs are provided in **Appendix A**.

Table 4.1: Proposed Trip Rates and Generation Using TRICS

Education	Morning Peak (08:00-09:00)			Evening Peak (17:00-18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Trip Rates	1.354	0.27	1.624	0.552	1.009	1.561
Trips	11	2	14	5	8	13

- 4.2.4 **Table 4.2** summarises the trip rates and generations associated with the existing extant office use, if it was at full occupancy. The TRICS outputs are provided in **Appendix B**.

Table 4.2: Existing Office Trip Rates and Generation Using TRICS

Office	Morning Peak (08:00-09:00)			Evening Peak (17:00-18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Trip Rates	2.333	0.303	2.636	0.408	1.899	2.307
Existing Trips	20	3	22	3	16	19

- 4.2.5 **Table 4.3** summarises the trip assessment.

Table 4.3: Trip Comparison

	Morning Peak (08:00-09:00)			Evening Peak (17:00-18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Existing Office Trips	20	3	22	3	16	19
Proposed Education Trips	11	2	14	5	8	13
Difference	-8	0	-9	1	-7	-6

- 4.2.6 **Table 4.3** shows that there would be a reduction in vehicle trips to the site.

4.3 Car Parking

- 4.3.1 The key tool provided to the highway authority and Council in reducing overall car travel is to restrict car parking so that alternative sustainable travel can be encouraged.
- 4.3.2 Car parking for education staff will be restricted, therefore, any demand for car parking as a result of the change of use would be served by the existing public car parks within the city centre.
- 4.3.3 It can be deduced that the change of use would not have detrimental impact on the car parking operation.

4.4 Travel Plan

- 4.4.1 City Tower Unit Trust recognise the importance of reducing the potential negative transport related impacts of their proposed development and the need to provide for, and encourage, a range of sustainable travel options as an alternative to car use.
- 4.4.2 A Travel Plan has been prepared for City Tower which is contained in **Appendix C**. City Tower Unit Trust are committed to implementing the measures contained within the travel plan to provide staff, students, tenants and visitors with the facilities and information they require in order for them to make sustainable travel choices.

5.0 SUMMARY AND CONCLUSION

5.1 Summary

- 5.1.1 It is proposed to change the lawful use of the ninth floor of City Tower from 'from office (Use Class E(g) to education (Use Class F.1) at Level 9 of City Tower, Piccadilly Plaza'. The total floorspace would be as existing, 847.5m².
- 5.1.2 City Tower is located in the Piccadilly Gardens area of Manchester Central Business District.
- 5.1.3 The site is located adjacent to Piccadilly bus station and the Parker Street Metrolink stop. Piccadilly Train Station is approximately 600m from the site.
- 5.1.4 On the second-floor car-deck there are a total of 172 car park spaces with cycle storage and motorcycle parking areas.
- 5.1.5 City Tower benefits from a Cycle Hub, located in the basement of the building which includes 200 cycle spaces, showers and cycling facilities.
- 5.1.6 The site is located within the city centre where there is a high accessibility level for non-car travel, therefore, trips to the development would likely be made by non-car modes due to the substantial sustainable modes available and the change from commuter to student travel.
- 5.1.7 For comparative purposes a general trip generation assessment based on typical office / educational use has been carried out to assess whether there would be any increases in vehicle trips to the site. The assessment showed that there would likely be a reduction in vehicle trips.
- 5.1.8 Car parking for education staff will be restricted, therefore, any demand for car parking as a result of the change of use would be served by the existing public car parks within the city centre.
- 5.1.9 The Travel Plan for the site will be used to encourage sustainable travel.

5.2 Conclusion

- 5.2.1 It is concluded that the development proposals are acceptable in highways and transportation terms. There are no highways or transportation-related reasons upon which a refusal of the planning application for the proposals would be justified.

APPENDICES

APPENDIX A – EDUCATION TRICS OUTPUT

Calculation Reference: AUDIT-662801-190719-0735

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
 Category : C - COLLEGE/UNIVERSITY
 MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	BT BRENT	1 days
	HD HILLINGDON	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
10	WALES	
	SW SWANSEA	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: 750 to 4500 (units: sqm)
 Range Selected by User: 750 to 5000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 16/10/01 to 06/03/18

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

Selected survey days:

Monday	2 days
Tuesday	2 days
Wednesday	1 days

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

Selected survey types:

Manual count	5 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	1
Suburban Area (PPS6 Out of Centre)	2
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	1
Village	1
No Sub Category	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:

D1

5 days

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

Population within 1 mile:

10,001 to 15,000

1 days

15,001 to 20,000

1 days

25,001 to 50,000

3 days

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

Population within 5 miles:

100,001 to 125,000

1 days

125,001 to 250,000

1 days

250,001 to 500,000

1 days

500,001 or More

2 days

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

Car ownership within 5 miles:

0.5 or Less

1 days

0.6 to 1.0

1 days

1.1 to 1.5

3 days

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

Travel Plan:

Not Known

1 days

Yes

1 days

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

4 days

4 Good

1 days

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

LIST OF SITES relevant to selection parameters

1	BT-04-C-01	COLLEGE OF N.W. LONDON	BRENT
	PRIORY PARK ROAD		
	KILBURN		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	750 sqm	
	Survey date: TUESDAY	16/10/01	Survey Type: MANUAL
2	CH-04-C-01	LAW COLLEGE	CHESHIRE
	PEPPER STREET		
	CHESTER		
	CHRISTLETON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Gross floor area:	4500 sqm	
	Survey date: WEDNESDAY	15/10/08	Survey Type: MANUAL
3	HD-04-C-03	UNIVERSITY (HEALTH)	HILLINGDON
	OXFORD ROAD		
	UXBRIDGE		
	Town Centre		
	Built-Up Zone		
	Total Gross floor area:	4369 sqm	
	Survey date: TUESDAY	06/03/18	Survey Type: MANUAL
4	SW-04-C-02	COLLEGE	SWANSEA
	WALTER ROAD		
	SWANSEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	3900 sqm	
	Survey date: MONDAY	21/10/13	Survey Type: MANUAL
5	WM-04-C-01	ARTS/TECH COLLEGE	WEST MIDLANDS
	SCARBOROUGH RD		
	WALSALL		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Gross floor area:	2435 sqm	
	Survey date: MONDAY	20/02/06	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 04 - EDUCATION/C - COLLEGE/UNIVERSITY

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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.163	5	3191	0.063	5	3191	0.226
08:00 - 09:00	5	3191	1.354	5	3191	0.270	5	3191	1.624
09:00 - 10:00	5	3191	2.056	5	3191	0.458	5	3191	2.514
10:00 - 11:00	5	3191	0.564	5	3191	0.201	5	3191	0.765
11:00 - 12:00	5	3191	0.501	5	3191	0.251	5	3191	0.752
12:00 - 13:00	5	3191	0.439	5	3191	0.470	5	3191	0.909
13:00 - 14:00	5	3191	0.483	5	3191	0.451	5	3191	0.934
14:00 - 15:00	5	3191	0.288	5	3191	0.501	5	3191	0.789
15:00 - 16:00	5	3191	0.313	5	3191	0.946	5	3191	1.259
16:00 - 17:00	5	3191	0.401	5	3191	1.291	5	3191	1.692
17:00 - 18:00	5	3191	0.552	5	3191	1.009	5	3191	1.561
18:00 - 19:00	5	3191	0.451	5	3191	0.476	5	3191	0.927
19:00 - 20:00	3	4256	0.047	3	4256	0.251	3	4256	0.298
20:00 - 21:00	2	4135	0.036	2	4135	0.435	2	4135	0.471
21:00 - 22:00	2	4135	0.000	2	4135	0.012	2	4135	0.012
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		7.648			7.085			14.733	

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:	750 - 4500 (units: sqm)
Survey date range:	16/10/01 - 06/03/18
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
08:00 - 09:00	5	3191	0.019	5	3191	0.019	5	3191	0.038
09:00 - 10:00	5	3191	0.013	5	3191	0.006	5	3191	0.019
10:00 - 11:00	5	3191	0.006	5	3191	0.013	5	3191	0.019
11:00 - 12:00	5	3191	0.013	5	3191	0.013	5	3191	0.026
12:00 - 13:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
13:00 - 14:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
14:00 - 15:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
15:00 - 16:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
16:00 - 17:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
17:00 - 18:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
18:00 - 19:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
19:00 - 20:00	3	4256	0.000	3	4256	0.000	3	4256	0.000
20:00 - 21:00	2	4135	0.000	2	4135	0.000	2	4135	0.000
21:00 - 22:00	2	4135	0.000	2	4135	0.000	2	4135	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.051			0.051			0.102

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 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.000	5	3191	0.000	5	3191	0.000
08:00 - 09:00	5	3191	0.006	5	3191	0.000	5	3191	0.006
09:00 - 10:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
10:00 - 11:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
11:00 - 12:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
12:00 - 13:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
13:00 - 14:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
14:00 - 15:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
15:00 - 16:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
16:00 - 17:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
17:00 - 18:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
18:00 - 19:00	5	3191	0.006	5	3191	0.006	5	3191	0.012
19:00 - 20:00	3	4256	0.008	3	4256	0.008	3	4256	0.016
20:00 - 21:00	2	4135	0.000	2	4135	0.000	2	4135	0.000
21:00 - 22:00	2	4135	0.000	2	4135	0.000	2	4135	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.074			0.068			0.142

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

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TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.050	5	3191	0.000	5	3191	0.050
08:00 - 09:00	5	3191	0.157	5	3191	0.000	5	3191	0.157
09:00 - 10:00	5	3191	0.094	5	3191	0.013	5	3191	0.107
10:00 - 11:00	5	3191	0.038	5	3191	0.013	5	3191	0.051
11:00 - 12:00	5	3191	0.019	5	3191	0.013	5	3191	0.032
12:00 - 13:00	5	3191	0.013	5	3191	0.031	5	3191	0.044
13:00 - 14:00	5	3191	0.000	5	3191	0.013	5	3191	0.013
14:00 - 15:00	5	3191	0.013	5	3191	0.044	5	3191	0.057
15:00 - 16:00	5	3191	0.006	5	3191	0.050	5	3191	0.056
16:00 - 17:00	5	3191	0.013	5	3191	0.113	5	3191	0.126
17:00 - 18:00	5	3191	0.025	5	3191	0.031	5	3191	0.056
18:00 - 19:00	5	3191	0.038	5	3191	0.031	5	3191	0.069
19:00 - 20:00	3	4256	0.008	3	4256	0.039	3	4256	0.047
20:00 - 21:00	2	4135	0.000	2	4135	0.036	2	4135	0.036
21:00 - 22:00	2	4135	0.000	2	4135	0.000	2	4135	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.474			0.427			0.901

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 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.188	5	3191	0.063	5	3191	0.251
08:00 - 09:00	5	3191	1.655	5	3191	0.163	5	3191	1.818
09:00 - 10:00	5	3191	2.470	5	3191	0.364	5	3191	2.834
10:00 - 11:00	5	3191	0.708	5	3191	0.176	5	3191	0.884
11:00 - 12:00	5	3191	0.558	5	3191	0.238	5	3191	0.796
12:00 - 13:00	5	3191	0.483	5	3191	0.527	5	3191	1.010
13:00 - 14:00	5	3191	0.652	5	3191	0.558	5	3191	1.210
14:00 - 15:00	5	3191	0.313	5	3191	0.658	5	3191	0.971
15:00 - 16:00	5	3191	0.357	5	3191	1.279	5	3191	1.636
16:00 - 17:00	5	3191	0.520	5	3191	1.674	5	3191	2.194
17:00 - 18:00	5	3191	0.758	5	3191	1.285	5	3191	2.043
18:00 - 19:00	5	3191	0.539	5	3191	0.696	5	3191	1.235
19:00 - 20:00	3	4256	0.031	3	4256	0.368	3	4256	0.399
20:00 - 21:00	2	4135	0.036	2	4135	0.520	2	4135	0.556
21:00 - 22:00	2	4135	0.000	2	4135	0.012	2	4135	0.012
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		9.268			8.581			17.849	

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 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.069	5	3191	0.056	5	3191	0.125
08:00 - 09:00	5	3191	0.501	5	3191	0.075	5	3191	0.576
09:00 - 10:00	5	3191	1.015	5	3191	0.069	5	3191	1.084
10:00 - 11:00	5	3191	0.382	5	3191	0.282	5	3191	0.664
11:00 - 12:00	5	3191	0.696	5	3191	0.658	5	3191	1.354
12:00 - 13:00	5	3191	0.608	5	3191	0.652	5	3191	1.260
13:00 - 14:00	5	3191	0.470	5	3191	0.420	5	3191	0.890
14:00 - 15:00	5	3191	0.370	5	3191	0.432	5	3191	0.802
15:00 - 16:00	5	3191	0.207	5	3191	0.451	5	3191	0.658
16:00 - 17:00	5	3191	0.100	5	3191	0.426	5	3191	0.526
17:00 - 18:00	5	3191	0.169	5	3191	0.226	5	3191	0.395
18:00 - 19:00	5	3191	0.376	5	3191	0.207	5	3191	0.583
19:00 - 20:00	3	4256	0.023	3	4256	0.039	3	4256	0.062
20:00 - 21:00	2	4135	0.048	2	4135	0.073	2	4135	0.121
21:00 - 22:00	2	4135	0.000	2	4135	0.000	2	4135	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		5.034			4.066				9.100

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 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.081	5	3191	0.000	5	3191	0.081
08:00 - 09:00	5	3191	1.304	5	3191	0.000	5	3191	1.304
09:00 - 10:00	5	3191	1.492	5	3191	0.081	5	3191	1.573
10:00 - 11:00	5	3191	0.959	5	3191	0.144	5	3191	1.103
11:00 - 12:00	5	3191	0.407	5	3191	0.244	5	3191	0.651
12:00 - 13:00	5	3191	0.307	5	3191	0.370	5	3191	0.677
13:00 - 14:00	5	3191	0.244	5	3191	0.414	5	3191	0.658
14:00 - 15:00	5	3191	0.150	5	3191	0.796	5	3191	0.946
15:00 - 16:00	5	3191	0.094	5	3191	1.385	5	3191	1.479
16:00 - 17:00	5	3191	0.132	5	3191	1.454	5	3191	1.586
17:00 - 18:00	5	3191	0.364	5	3191	0.332	5	3191	0.696
18:00 - 19:00	5	3191	0.401	5	3191	0.157	5	3191	0.558
19:00 - 20:00	3	4256	0.000	3	4256	0.078	3	4256	0.078
20:00 - 21:00	2	4135	0.012	2	4135	0.048	2	4135	0.060
21:00 - 22:00	2	4135	0.000	2	4135	0.024	2	4135	0.024
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.947			5.527			11.474

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 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3191	0.389	5	3191	0.119	5	3191	0.508
08:00 - 09:00	5	3191	3.617	5	3191	0.238	5	3191	3.855
09:00 - 10:00	5	3191	5.071	5	3191	0.527	5	3191	5.598
10:00 - 11:00	5	3191	2.087	5	3191	0.614	5	3191	2.701
11:00 - 12:00	5	3191	1.680	5	3191	1.153	5	3191	2.833
12:00 - 13:00	5	3191	1.410	5	3191	1.580	5	3191	2.990
13:00 - 14:00	5	3191	1.366	5	3191	1.404	5	3191	2.770
14:00 - 15:00	5	3191	0.846	5	3191	1.931	5	3191	2.777
15:00 - 16:00	5	3191	0.664	5	3191	3.165	5	3191	3.829
16:00 - 17:00	5	3191	0.765	5	3191	3.667	5	3191	4.432
17:00 - 18:00	5	3191	1.316	5	3191	1.874	5	3191	3.190
18:00 - 19:00	5	3191	1.354	5	3191	1.091	5	3191	2.445
19:00 - 20:00	3	4256	0.063	3	4256	0.525	3	4256	0.588
20:00 - 21:00	2	4135	0.097	2	4135	0.677	2	4135	0.774
21:00 - 22:00	2	4135	0.000	2	4135	0.036	2	4135	0.036
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		20.725			18.601				39.326

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

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

APPENDIX B – OFFICE TRICS OUTPUT

Calculation Reference: AUDIT-662801-190717-0725

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	ES EAST SUSSEX	1 days
	HF HERTFORDSHIRE	1 days
	KC KENT	1 days
	SO SLOUGH	1 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	2 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 178 to 2000 (units: sqm)
Range Selected by User: 178 to 2000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 04/10/18

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

Selected survey days:

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

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

Selected survey types:

Manual count	13 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
Edge of Town Centre	10

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	1
Residential Zone	1
Retail Zone	1
Built-Up Zone	6
High Street	1

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

Secondary Filtering selection:

Use Class:

B1 13 days

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

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	3 days
25,001 to 50,000	6 days

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

Population within 5 miles:

25,001 to 50,000	2 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	3 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	8 days
1.1 to 1.5	5 days

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

Travel Plan:

Yes	2 days
No	11 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	13 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	BD-02-A-03 BROMHAM ROAD BEDFORD	OFFICES		BEDFORDSHIRE
	Edge of Town Centre No Sub Category Total Gross floor area:		1469 sqm	
	Survey date: MONDAY		14/10/13	Survey Type: MANUAL
2	CB-02-A-02 PORT ROAD CARLISLE	OFFICE		CUMBRIA
	Edge of Town Centre Industrial Zone Total Gross floor area:		925 sqm	
	Survey date: FRIDAY		24/06/16	Survey Type: MANUAL
3	DC-02-A-08 STATION APPROACH DORCHESTER	OFFICE		DORSET
	Edge of Town Centre No Sub Category Total Gross floor area:		1550 sqm	
	Survey date: THURSDAY		03/07/08	Survey Type: MANUAL
4	ES-02-A-13 ROMAN ROAD HOVE	OFFICES		EAST SUSSEX
	Edge of Town Centre Residential Zone Total Gross floor area:		280 sqm	
	Survey date: WEDNESDAY		04/07/18	Survey Type: MANUAL
5	HF-02-A-03 60 VICTORIA STREET ST ALBANS	OFFICE		HERTFORDSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area:		610 sqm	
	Survey date: WEDNESDAY		16/10/13	Survey Type: MANUAL
6	KC-02-A-09 SANDLING ROAD MAIDSTONE	COUNCIL OFFICES		KENT
	Edge of Town Centre Built-Up Zone Total Gross floor area:		1500 sqm	
	Survey date: WEDNESDAY		19/10/11	Survey Type: MANUAL
7	LC-02-A-08 UNION STREET CHORLEY	COUNCIL OFFICES		LANCASHIRE
	Edge of Town Centre Retail Zone Total Gross floor area:		2000 sqm	
	Survey date: TUESDAY		13/06/06	Survey Type: MANUAL
8	NF-02-A-02 NORTH QUAY GREAT YARMOUTH	FINANCIAL PLANNERS		NORFOLK
	Edge of Town Centre Commercial Zone Total Gross floor area:		894 sqm	
	Survey date: MONDAY		11/09/17	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	NY-02-A-01 NORTH PARK ROAD HARROGATE	SOLICITORS		NORTH YORKSHIRE
	Edge of Town Centre Built-Up Zone			
	Total Gross floor area:	178 sqm		
	Survey date: THURSDAY	04/10/18		Survey Type: MANUAL
10	SO-02-A-01 HIGH STREET SLOUGH	COUNCIL OFFICES		SLOUGH
	Town Centre High Street			
	Total Gross floor area:	1800 sqm		
	Survey date: THURSDAY	27/02/14		Survey Type: MANUAL
11	TW-02-A-01 CHURCH STREET GATESHEAD	RADIO STUDIOS		TYNE & WEAR
	Edge of Town Centre Built-Up Zone			
	Total Gross floor area:	645 sqm		
	Survey date: WEDNESDAY	04/05/05		Survey Type: MANUAL
12	TW-02-A-02 JOHN DOBSON STREET NEWCASTLE-UPON-TYNE	UNION OFFICES		TYNE & WEAR
	Town Centre Built-Up Zone			
	Total Gross floor area:	1675 sqm		
	Survey date: TUESDAY	03/05/05		Survey Type: MANUAL
13	WK-02-A-01 WARWICK ROAD COVENTRY	OFFICES		WARWICKSHIRE
	Town Centre Built-Up Zone			
	Total Gross floor area:	960 sqm		
	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 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	12	1192	0.105	12	1192	0.021	12	1192	0.126
07:30 - 08:00	12	1192	0.489	12	1192	0.035	12	1192	0.524
08:00 - 08:30	13	1114	0.973	13	1114	0.110	13	1114	1.083
08:30 - 09:00	13	1114	1.360	13	1114	0.193	13	1114	1.553
09:00 - 09:30	13	1114	1.029	13	1114	0.276	13	1114	1.305
09:30 - 10:00	13	1114	0.635	13	1114	0.366	13	1114	1.001
10:00 - 10:30	13	1114	0.621	13	1114	0.504	13	1114	1.125
10:30 - 11:00	13	1114	0.511	13	1114	0.421	13	1114	0.932
11:00 - 11:30	13	1114	0.380	13	1114	0.345	13	1114	0.725
11:30 - 12:00	13	1114	0.449	13	1114	0.511	13	1114	0.960
12:00 - 12:30	13	1114	0.311	13	1114	0.476	13	1114	0.787
12:30 - 13:00	13	1114	0.318	13	1114	0.380	13	1114	0.698
13:00 - 13:30	13	1114	0.297	13	1114	0.338	13	1114	0.635
13:30 - 14:00	13	1114	0.525	13	1114	0.352	13	1114	0.877
14:00 - 14:30	13	1114	0.324	13	1114	0.352	13	1114	0.676
14:30 - 15:00	13	1114	0.276	13	1114	0.324	13	1114	0.600
15:00 - 15:30	13	1114	0.304	13	1114	0.497	13	1114	0.801
15:30 - 16:00	13	1114	0.228	13	1114	0.324	13	1114	0.552
16:00 - 16:30	13	1114	0.269	13	1114	0.787	13	1114	1.056
16:30 - 17:00	13	1114	0.276	13	1114	1.070	13	1114	1.346
17:00 - 17:30	13	1114	0.311	13	1114	1.298	13	1114	1.609
17:30 - 18:00	13	1114	0.097	13	1114	0.601	13	1114	0.698
18:00 - 18:30	12	1192	0.049	12	1192	0.252	12	1192	0.301
18:30 - 19:00	12	1192	0.028	12	1192	0.140	12	1192	0.168
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:			10.165			9.973			20.138

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:	178 - 2000 (units: sqm)
Survey date range:	01/01/00 - 04/10/18
Number of weekdays (Monday-Friday):	13
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	12	1192	0.000	12	1192	0.000	12	1192	0.000
07:30 - 08:00	12	1192	0.014	12	1192	0.007	12	1192	0.021
08:00 - 08:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
08:30 - 09:00	13	1114	0.014	13	1114	0.021	13	1114	0.035
09:00 - 09:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
09:30 - 10:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
10:00 - 10:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
10:30 - 11:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
11:00 - 11:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
11:30 - 12:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
12:00 - 12:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
12:30 - 13:00	13	1114	0.014	13	1114	0.014	13	1114	0.028
13:00 - 13:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
13:30 - 14:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
14:00 - 14:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
14:30 - 15:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
15:00 - 15:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
15:30 - 16:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
16:00 - 16:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
16:30 - 17:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
17:00 - 17:30	13	1114	0.014	13	1114	0.014	13	1114	0.028
17:30 - 18:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
18:00 - 18:30	12	1192	0.000	12	1192	0.000	12	1192	0.000
18:30 - 19:00	12	1192	0.000	12	1192	0.000	12	1192	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.077			0.077			0.154

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	12	1192	0.007	12	1192	0.000	12	1192	0.007
07:30 - 08:00	12	1192	0.028	12	1192	0.000	12	1192	0.028
08:00 - 08:30	13	1114	0.062	13	1114	0.000	13	1114	0.062
08:30 - 09:00	13	1114	0.041	13	1114	0.000	13	1114	0.041
09:00 - 09:30	13	1114	0.007	13	1114	0.000	13	1114	0.007
09:30 - 10:00	13	1114	0.014	13	1114	0.014	13	1114	0.028
10:00 - 10:30	13	1114	0.021	13	1114	0.014	13	1114	0.035
10:30 - 11:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
11:00 - 11:30	13	1114	0.007	13	1114	0.007	13	1114	0.014
11:30 - 12:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
12:00 - 12:30	13	1114	0.007	13	1114	0.007	13	1114	0.014
12:30 - 13:00	13	1114	0.007	13	1114	0.021	13	1114	0.028
13:00 - 13:30	13	1114	0.021	13	1114	0.014	13	1114	0.035
13:30 - 14:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
14:00 - 14:30	13	1114	0.007	13	1114	0.007	13	1114	0.014
14:30 - 15:00	13	1114	0.021	13	1114	0.014	13	1114	0.035
15:00 - 15:30	13	1114	0.007	13	1114	0.007	13	1114	0.014
15:30 - 16:00	13	1114	0.000	13	1114	0.021	13	1114	0.021
16:00 - 16:30	13	1114	0.021	13	1114	0.048	13	1114	0.069
16:30 - 17:00	13	1114	0.021	13	1114	0.021	13	1114	0.042
17:00 - 17:30	13	1114	0.007	13	1114	0.048	13	1114	0.055
17:30 - 18:00	13	1114	0.000	13	1114	0.028	13	1114	0.028
18:00 - 18:30	12	1192	0.000	12	1192	0.021	12	1192	0.021
18:30 - 19:00	12	1192	0.000	12	1192	0.000	12	1192	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.320			0.306			0.626

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 VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	12	1192	0.105	12	1192	0.021	12	1192	0.126
07:30 - 08:00	12	1192	0.531	12	1192	0.056	12	1192	0.587
08:00 - 08:30	13	1114	1.105	13	1114	0.048	13	1114	1.153
08:30 - 09:00	13	1114	1.477	13	1114	0.131	13	1114	1.608
09:00 - 09:30	13	1114	1.132	13	1114	0.262	13	1114	1.394
09:30 - 10:00	13	1114	0.663	13	1114	0.366	13	1114	1.029
10:00 - 10:30	13	1114	0.732	13	1114	0.490	13	1114	1.222
10:30 - 11:00	13	1114	0.552	13	1114	0.407	13	1114	0.959
11:00 - 11:30	13	1114	0.483	13	1114	0.407	13	1114	0.890
11:30 - 12:00	13	1114	0.552	13	1114	0.580	13	1114	1.132
12:00 - 12:30	13	1114	0.380	13	1114	0.601	13	1114	0.981
12:30 - 13:00	13	1114	0.421	13	1114	0.442	13	1114	0.863
13:00 - 13:30	13	1114	0.387	13	1114	0.407	13	1114	0.794
13:30 - 14:00	13	1114	0.642	13	1114	0.366	13	1114	1.008
14:00 - 14:30	13	1114	0.387	13	1114	0.435	13	1114	0.822
14:30 - 15:00	13	1114	0.283	13	1114	0.373	13	1114	0.656
15:00 - 15:30	13	1114	0.331	13	1114	0.552	13	1114	0.883
15:30 - 16:00	13	1114	0.276	13	1114	0.380	13	1114	0.656
16:00 - 16:30	13	1114	0.249	13	1114	0.849	13	1114	1.098
16:30 - 17:00	13	1114	0.214	13	1114	1.146	13	1114	1.360
17:00 - 17:30	13	1114	0.242	13	1114	1.450	13	1114	1.692
17:30 - 18:00	13	1114	0.069	13	1114	0.718	13	1114	0.787
18:00 - 18:30	12	1192	0.049	12	1192	0.287	12	1192	0.336
18:30 - 19:00	12	1192	0.014	12	1192	0.147	12	1192	0.161
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:			11.276			10.921			22.197

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	12	1192	0.028	12	1192	0.014	12	1192	0.042
07:30 - 08:00	12	1192	0.070	12	1192	0.021	12	1192	0.091
08:00 - 08:30	13	1114	0.166	13	1114	0.014	13	1114	0.180
08:30 - 09:00	13	1114	0.428	13	1114	0.069	13	1114	0.497
09:00 - 09:30	13	1114	0.345	13	1114	0.207	13	1114	0.552
09:30 - 10:00	13	1114	0.469	13	1114	0.249	13	1114	0.718
10:00 - 10:30	13	1114	0.497	13	1114	0.345	13	1114	0.842
10:30 - 11:00	13	1114	0.587	13	1114	0.614	13	1114	1.201
11:00 - 11:30	13	1114	0.442	13	1114	0.635	13	1114	1.077
11:30 - 12:00	13	1114	0.559	13	1114	0.690	13	1114	1.249
12:00 - 12:30	13	1114	0.649	13	1114	1.574	13	1114	2.223
12:30 - 13:00	13	1114	1.339	13	1114	1.408	13	1114	2.747
13:00 - 13:30	13	1114	1.319	13	1114	1.346	13	1114	2.665
13:30 - 14:00	13	1114	1.477	13	1114	0.815	13	1114	2.292
14:00 - 14:30	13	1114	0.642	13	1114	0.497	13	1114	1.139
14:30 - 15:00	13	1114	0.387	13	1114	0.400	13	1114	0.787
15:00 - 15:30	13	1114	0.345	13	1114	0.352	13	1114	0.697
15:30 - 16:00	13	1114	0.449	13	1114	0.393	13	1114	0.842
16:00 - 16:30	13	1114	0.214	13	1114	0.421	13	1114	0.635
16:30 - 17:00	13	1114	0.152	13	1114	0.407	13	1114	0.559
17:00 - 17:30	13	1114	0.138	13	1114	0.283	13	1114	0.421
17:30 - 18:00	13	1114	0.041	13	1114	0.242	13	1114	0.283
18:00 - 18:30	12	1192	0.014	12	1192	0.070	12	1192	0.084
18:30 - 19:00	12	1192	0.000	12	1192	0.049	12	1192	0.049
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:			10.757			11.115			21.872

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	12	1192	0.014	12	1192	0.000	12	1192	0.014
07:30 - 08:00	12	1192	0.077	12	1192	0.000	12	1192	0.077
08:00 - 08:30	13	1114	0.097	13	1114	0.000	13	1114	0.097
08:30 - 09:00	13	1114	0.318	13	1114	0.007	13	1114	0.325
09:00 - 09:30	13	1114	0.235	13	1114	0.014	13	1114	0.249
09:30 - 10:00	13	1114	0.200	13	1114	0.055	13	1114	0.255
10:00 - 10:30	13	1114	0.173	13	1114	0.104	13	1114	0.277
10:30 - 11:00	13	1114	0.104	13	1114	0.090	13	1114	0.194
11:00 - 11:30	13	1114	0.249	13	1114	0.242	13	1114	0.491
11:30 - 12:00	13	1114	0.138	13	1114	0.179	13	1114	0.317
12:00 - 12:30	13	1114	0.124	13	1114	0.117	13	1114	0.241
12:30 - 13:00	13	1114	0.076	13	1114	0.152	13	1114	0.228
13:00 - 13:30	13	1114	0.124	13	1114	0.145	13	1114	0.269
13:30 - 14:00	13	1114	0.062	13	1114	0.117	13	1114	0.179
14:00 - 14:30	13	1114	0.138	13	1114	0.117	13	1114	0.255
14:30 - 15:00	13	1114	0.131	13	1114	0.097	13	1114	0.228
15:00 - 15:30	13	1114	0.048	13	1114	0.124	13	1114	0.172
15:30 - 16:00	13	1114	0.104	13	1114	0.110	13	1114	0.214
16:00 - 16:30	13	1114	0.021	13	1114	0.152	13	1114	0.173
16:30 - 17:00	13	1114	0.048	13	1114	0.262	13	1114	0.310
17:00 - 17:30	13	1114	0.000	13	1114	0.249	13	1114	0.249
17:30 - 18:00	13	1114	0.000	13	1114	0.069	13	1114	0.069
18:00 - 18:30	12	1192	0.007	12	1192	0.014	12	1192	0.021
18:30 - 19:00	12	1192	0.000	12	1192	0.000	12	1192	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.488			2.416			4.904

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

MULTI-MODAL TOTAL PEOPLE

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	12	1192	0.154	12	1192	0.035	12	1192	0.189
07:30 - 08:00	12	1192	0.706	12	1192	0.077	12	1192	0.783
08:00 - 08:30	13	1114	1.429	13	1114	0.062	13	1114	1.491
08:30 - 09:00	13	1114	2.264	13	1114	0.207	13	1114	2.471
09:00 - 09:30	13	1114	1.719	13	1114	0.483	13	1114	2.202
09:30 - 10:00	13	1114	1.346	13	1114	0.683	13	1114	2.029
10:00 - 10:30	13	1114	1.422	13	1114	0.953	13	1114	2.375
10:30 - 11:00	13	1114	1.249	13	1114	1.118	13	1114	2.367
11:00 - 11:30	13	1114	1.180	13	1114	1.291	13	1114	2.471
11:30 - 12:00	13	1114	1.249	13	1114	1.450	13	1114	2.699
12:00 - 12:30	13	1114	1.160	13	1114	2.299	13	1114	3.459
12:30 - 13:00	13	1114	1.843	13	1114	2.023	13	1114	3.866
13:00 - 13:30	13	1114	1.850	13	1114	1.912	13	1114	3.762
13:30 - 14:00	13	1114	2.188	13	1114	1.305	13	1114	3.493
14:00 - 14:30	13	1114	1.174	13	1114	1.056	13	1114	2.230
14:30 - 15:00	13	1114	0.821	13	1114	0.884	13	1114	1.705
15:00 - 15:30	13	1114	0.732	13	1114	1.035	13	1114	1.767
15:30 - 16:00	13	1114	0.828	13	1114	0.904	13	1114	1.732
16:00 - 16:30	13	1114	0.504	13	1114	1.470	13	1114	1.974
16:30 - 17:00	13	1114	0.435	13	1114	1.836	13	1114	2.271
17:00 - 17:30	13	1114	0.387	13	1114	2.030	13	1114	2.417
17:30 - 18:00	13	1114	0.110	13	1114	1.056	13	1114	1.166
18:00 - 18:30	12	1192	0.070	12	1192	0.391	12	1192	0.461
18:30 - 19:00	12	1192	0.014	12	1192	0.196	12	1192	0.210
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:			24.834			24.756			49.590

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

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CORA IHT WILMSLOW ROAD MANCHESTER

Licence No: 662801

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

MULTI-MODAL Servicing 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	12	1192	0.000	12	1192	0.000	12	1192	0.000
07:30 - 08:00	12	1192	0.007	12	1192	0.000	12	1192	0.007
08:00 - 08:30	13	1114	0.014	13	1114	0.007	13	1114	0.021
08:30 - 09:00	13	1114	0.014	13	1114	0.000	13	1114	0.014
09:00 - 09:30	13	1114	0.007	13	1114	0.035	13	1114	0.042
09:30 - 10:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
10:00 - 10:30	13	1114	0.021	13	1114	0.021	13	1114	0.042
10:30 - 11:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
11:00 - 11:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
11:30 - 12:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
12:00 - 12:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
12:30 - 13:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
13:00 - 13:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
13:30 - 14:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
14:00 - 14:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
14:30 - 15:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
15:00 - 15:30	13	1114	0.007	13	1114	0.007	13	1114	0.014
15:30 - 16:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
16:00 - 16:30	13	1114	0.007	13	1114	0.007	13	1114	0.014
16:30 - 17:00	13	1114	0.007	13	1114	0.007	13	1114	0.014
17:00 - 17:30	13	1114	0.000	13	1114	0.000	13	1114	0.000
17:30 - 18:00	13	1114	0.000	13	1114	0.000	13	1114	0.000
18:00 - 18:30	12	1192	0.000	12	1192	0.000	12	1192	0.000
18:30 - 19:00	12	1192	0.000	12	1192	0.000	12	1192	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.091			0.091			0.182

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APPENDIX C – TRAVEL PLAN



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better buildings, better lives

Schroders Ltd.

Floors 6, 7 and 8

City Tower, Manchester

Travel Plan

May 2018

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NOTICE

This document and its contents are intended solely for the information of MHBC LLP as the project manager and Schroders as the client, in relation to the BREEAM assessment for City Tower, Piccadilly Plaza, Manchester, M1 4BT. Verte Ltd. assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

Document History

Job Number: v149		Doc Ref: City Tower Phase 3, Manchester - Travel Plan		
Revision	Purpose description	Originated	Authorised	Date
A	Final	LJ	RM	01 May 2018
B				
C				
D				
E				

1. Executive Summary

Verte have been appointed by MHBC LLP to provide a Travel Plan for City Tower, Piccadilly Plaza, Manchester, M1 4BT.

The refurbishment works at this site comprise of fitting out the 6th, 7th and 8th floors of City Tower, Manchester to grade A office specification with new electrical, mechanical and domestic services.

As the development constitutes part of a larger site, plans and details for the entire property have been used for all aspects including cycle spaces and facilities.

The development uses the GMAL rating system developed by Transport for Greater Manchester – where City Tower is in the highest rating level – 8 out of 8; this is due to the proximity of Piccadilly Gardens Metrolink Station, Manchester Piccadilly mainline train station with its regular high-speed and suburban commuter services. In addition, the site is close to many bus stops and stations that operate in the area. The location is well serviced for public amenity with many retail options in the basement and surrounding area, as well as clearly marked pedestrian infrastructure. Indeed, a 'Cycle Hub' is located in the basement of the property, which has provision for in excess of 200 cycle spaces, as well as showers and lockers. It is therefore envisaged that a high percentage of occupants will walk, cycle or use public transport to access the property.

As the 6th, 7th and 8th floors are not currently occupied, a specific travel survey has not been carried out, which is discussed in the relevant section of the report.

The main recommendations within this Travel Plan are to ensure that the Travel Plan and recommendations are provided to the building management/ future occupants for implementation, particularly with regard to the appointment of a Travel Plan Coordinator (TPC). The developer should provide written confirmation to the BREEAM assessor that this will be the case.

1.1. BREEAM Credit Assessment

This Travel Plan should aid this as the property will achieve the following BREEAM 2014 credits:

Issue ID	Issue Name	No. Credits Awarded
Tra01	Public transport solutions	3
Tra02	Proximity to amenities	1
Tra03	Cyclist facilities	0
Tra04	Maximum car parking capacity	N/a
Tra05	Travel Plan	1
Total Number of Credits Awarded		6

2. Introduction

Verte have been appointed by MHBC LLP to provide a Travel Plan for the refurbishment of the 6th, 7th and 8th floors of City Tower, Piccadilly Plaza, Manchester, M1 4BT in support of the requirements for BREEAM 2014 Offices.

City Tower is a 30-storey property situated in the Piccadilly Gardens area of Manchester, England. It has the highest office space currently available in Manchester, standing 107 metres tall. City Tower was completed in 1965. The building comprises of a ground floor mall area with entrances to the building, basement car parking, ground floor entrance, car deck level 2 parking and 28 floors of office space. The Tower also houses Manchester's main radio transmitting station – this is on the roof.

2.1. Development Proposal

The refurbishment works comprise of stripping and fitting out the 6th, 7th and 8th floors of City Tower, Manchester to grade A office specification.

2.2. Scope of the Travel Plan

This Travel Plan proposes a range of measures, initiatives and strategies which can be implemented or considered for implementation by the Travel Plan Coordinator (TPC) to encourage the use of sustainable modes of travel for employees at the site or people visiting the property.

The document has also been developed to satisfy the BREEAM 2014 - Tra5 requirements and presents how the Travel Plan will be managed, delivered and monitored. It has been prepared in line with the Department for Transport (DfT) 'Guidance on Travel Planning' (March 2008) and BREEAM 2014 – Tra5 Requirements.

This Travel Plan is intended to be a 'live' document and will be updated and amended as more detail on the operation of the development is agreed.

The remainder of this Plan is structured as follows:

- Section 3 - Illustrates the BREEAM Transport credits available
- Section 4 - Outlines the location and accessibility of the site,
- Section 5 - Provides the objectives and targets of the Travel Plan,
- Section 6 - Sets out the suggested measures that will be implemented by the Travel Plan,
- Section 7 - Outlines a Travel Plan Monitoring Review Programme,
- Section 8 - Provides the timescales for implementing Travel Plan Actions.
- Section 9 - Illustrates the BREEAM Transport credits achieved
- Section 10 - Provides supporting documentation

2.3. Motivation and Objectives

The prime motivation of setting up the plan is to promote a range of measures that will help to reduce journeys made as the single occupant of a private vehicle and encourage an increased use of public transport, walking, cycling and car sharing.

Additionally, the development is targeting a BREEAM rating and this Travel Plan will form the basis of the transport section assessment. This will be discussed in a later section.

The aims/objectives of developing a Travel Plan for this development are as follows:

- To effectively manage the travel behaviour for staff, residents and where possible visitors, capitalising on the opportunities of the development's location in terms of high public transport accessibility;
- To develop a strategy for the ongoing management, coordination and marketing of the Travel Plan ensuring it remains a 'live' document; and
- To satisfy the BREEAM Tra5 requirements relating to the development of a Travel Plan.

2.4. Policy

Government policy is increasingly focused on aiming to reduce the reliance on private vehicles as a method of tackling congestion, improving air quality whilst promoting walking and cycling as way of improving the quality of life and health of those in the surrounding area.

2.4.1. National Policy

National Planning Policy Framework (NPPF)

The NPPF¹ sets out the Government's planning policies for England and how these are expected to be applied. Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives.

Chapter 4 – 'Promoting Sustainable Transport' sets out central Government national transport policy:

"Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel."

Developments should be inherently located and designed where practical to:

- Accommodate the efficient delivery of goods and supplies;

¹ The 'National Planning Policy Framework (NPPF)' – Department for Communities and Local Government – March 2012

- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- Create safe and secure layouts, which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and, where appropriate, establishing home zones;
- Incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- Consider the needs of people with disabilities via all modes of transport.

Paragraph 36 of the NPPF states that:

“A key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan.”

2.4.2. Regional Policy

Greater Manchester's Third Local Transport Plan 2011/12 - 2015/16

This regional planning document² develops the national policy approach in putting emphasis on achieving a sustainable city.

An effective transport network is an essential catalyst to realise the potential of Greater Manchester as it connects people to places in a sustainable manner – places where they can work, study, shop, relax, and access public services. In summary, the Local Transport Plan emphasises the below:

- Drive growth through private sector-led investment strategies.
- Aim to develop sustainable transport approaches which link people and skills to jobs and opportunities,
- bring public and private resources together to deliver much-needed infrastructure.
 - This includes Accelerated Development Zones (ADZ), where a concentrated 'offer' is developed to support a key economic growth point that already benefits from distinctive features such as business clustering.

In Section 2.2 of this document it is stated that there will not be making any proposals for congestion charging or workplace parking charging, instead the *“...focus will be on a high quality, targeted investment in public transport and other sustainable modes, alongside measures to maximise the efficiency across road and public transport systems.”*

² Greater Manchester's Third Local Transport Plan 2011/12 – 2015/16 – February 2011

Transport for Sustainable Communities: A Guide for Developers³

This publication, by Transport for Greater Manchester (TfGM) offers a source of guidance on sustainable transport and is intended to supplement the statutory policies set out in the NPPF 2012. Two of the TfGM's five main objectives are to:

- Ensure that carbon emissions from transport are reduced in line with UK Government targets in order to minimise the impacts of climate change
- Ensure that the transport system facilitates active, healthy lifestyles and a reduction in the number of casualties; and that other health impacts are minimised

In this document, in Chapter 3, Transport Principles for Sustainable Development, it states:

"To maximise the sustainability of a new development, the following five transport principles should be followed:

- *Maximise accessibility*
- *Reduce the need to travel by car*
- *Make the best use of existing furniture*
- *Design for active travel".*

2.4.3. Local Policy

Local Area Implementation Plans have been prepared for each of the ten District areas in Greater Manchester. These have been prepared locally, taking into account the priorities in each District as set out in their Sustainable Community Strategies.

The Local Transport Plan for Manchester⁴

The City Tower is located in Central Manchester district, whose Local Transport Plan document states:

"The long term congestion strategy remains to reduce the need to travel through integrating land use planning with transport investment to increase accessibility by sustainable travel options and encourage a change in travel behaviour by supporting interventions to encourage people to choose sustainable travel modes, whenever practical."

The key aims of Manchester City Council's strategy in this document are provided below:

- Car parking and pricing strategies discouraging commuter parking, particularly when investments have been made in public transport;
- Reduce the need to travel through integrating transport with land use planning, locating development in accessible locations;

³ Transport for Sustainable Communities: A Guide for Developers – Transport for Greater Manchester – Mar 2013

⁴ The Local Transport Plan for Manchester – Manchester City Council – Apr 2012

- Policies and investment in public transport systems, ticketing and information;
- Policies and investment to support more walking and cycling for shorter journeys, particular journey to work and education; and
- Investments in activities and intervention around smarter travel choices.

3. BREEAM Transport Requirements

This development is being assessed under BREEAM 2014 and the relevant transport credits are listed below in *Table 1*.

Table 1: BREEAM Transport Credits Available

Issue ID	Issue name	Credit summary
Tra01	Public transport solutions	Split into 2 parts: - Accessibility Index (AI) – up to three credits (offices) - Using the BREEAM AI tool, the number of transport nodes in the immediate vicinity of the site is assessed: - Alternative transport index – up to an additional two credits Up to a maximum of 5 credits are available from a combination of the above criteria
Tra02	Proximity to amenities	One credit is available: Where the building is located within close proximity and accessible to the following amenities: grocery shop or food outlet, post box and cash machine.
Tra03	Cyclist Facilities	One credit - Cycle storage (excluding sheltered housing, care homes, supported living facilities and prison building types) 1. Compliant cycle storage spaces that meet the minimum levels are installed. One credit - Cyclist facilities (excluding sheltered housing, care homes and supported living facilities, student residents, key accommodation, transport hub and MOD residential and prison building types) 2. Criterion 1 has been achieved. 3. At least two of the following types of compliant cyclist facilities have been provided for all building users: a. Showers b. Changing facilities c. Lockers d. Drying spaces. One credit - Cycle storage and cyclist facilities (sheltered housing, care homes and supported living facilities and prison building types only) 4. Where criteria 1 to 3 have been met for cycle space and cycle facilities requirements.
Tra04	Maximum car parking capacity	If there is a change of use, two credits are available based on the following criteria for Business – Office and Industrial: Max parking capacity 1 space per x building users where x is 4,5,6 depending on the buildings Accessibility Index (AI)

Tra05	Travel Plan	One credit is available based on the following: 1. A travel plan has been developed as part of the feasibility and design stages. 2. A site specific travel assessment/statement has been undertaken to ensure the travel plan is structured to meet the needs of the particular site and covers the following (as a minimum): a. Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. b. Travel patterns and transport impact of future building users. c. Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children). d. Disabled access (accounting for varying levels of disability and visual impairment). e. Public transport links serving the site. f. Current facilities for cyclists. 3. The travel plan includes a package of measures to encourage the use of sustainable modes of transport and movement of people and goods during the building's operation and use. 4. If the occupier is known, they must be involved in the development of the travel plan and they must confirm that the travel plan will be implemented post refurbishment or fit-out and be supported by the building's management in operation.
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4. Site Location and Accessibility

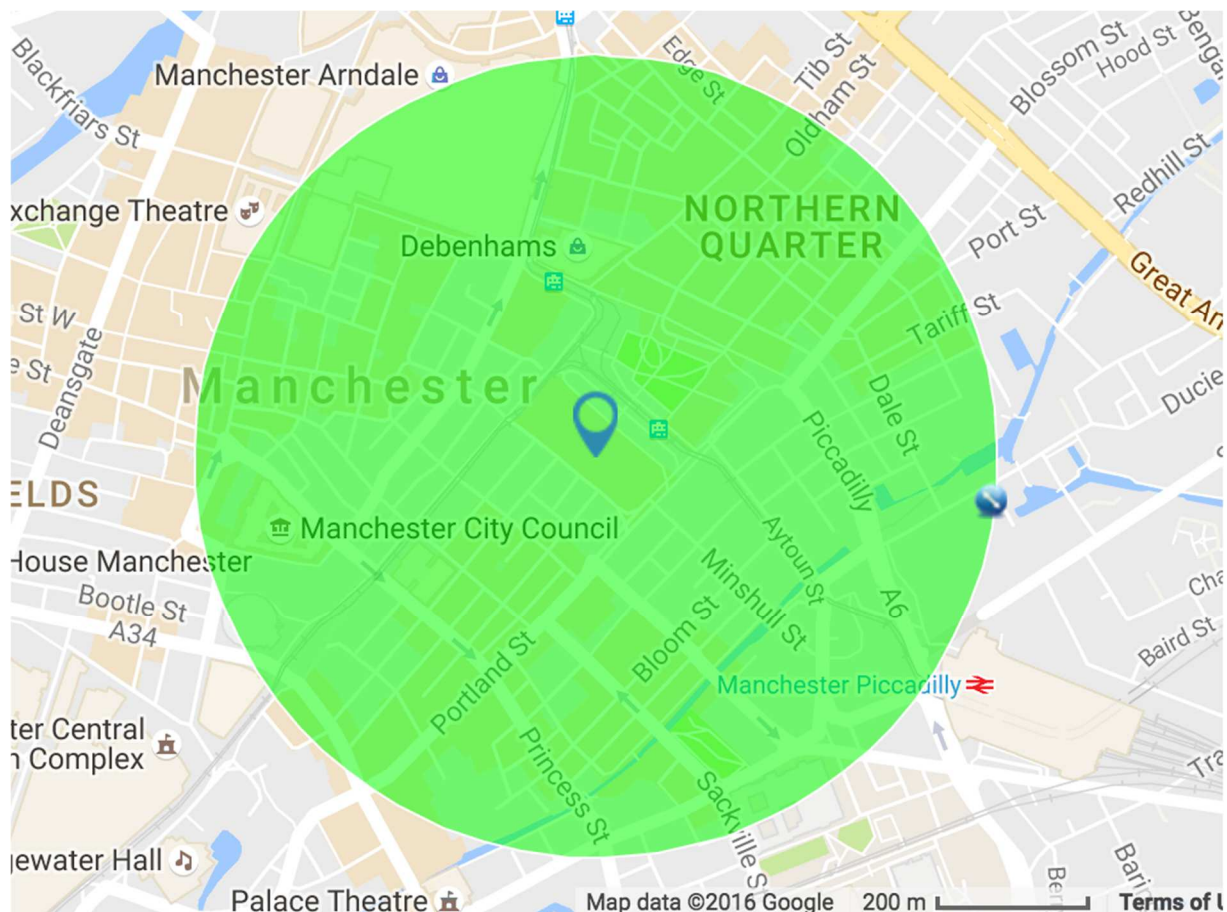
4.1. Site location

City Tower is a 107M high property situated in the Piccadilly Gardens area of the Manchester Central Business District (CBD). The postcode is M1 4BT.

The closest Metrolink (tram) station is Piccadilly Gardens, 87 metres from the property on Parker St. There are also 6 bus stations in and around this location, 4 of these being on Parker St itself.

The closest mainline train station is Manchester Piccadilly (which provides long distance train services to London and beyond) is 550M from the property and also provides the closest Metroshuttle (free of charge bus) service (see *Figure 1* below illustrating the transport options within 600 metres from the property).

Figure 1: Location of City Tower, Manchester M1 4BT



4.2. Car Parking Restrictions

The centre the city is covered by a Controlled Parking Zone (CPZ) which has 4 zones. The City Tower is located in Zone 2 and therefore has a maximum stay of 2 hours. The CPZ is operational Monday to Sunday between 08:00 – 20:00 excluding Bank Holidays; during these times motorists must pay to park in pay and display bays and are forbidden to park on single or double yellow lines.

4.3. Access to the Site by Non-Car Modes

4.3.1. Pedestrian Infrastructure

Getting Manchester Moving⁵

Manchester City Council have been encouraging the use of transport that does not include driving private motor vehicles in the last few years. As part of this, the council in conjunction with Manchester City Hospital, have developed the guidance document entitled 'Getting Manchester Moving' which primarily aims to encourage

⁵ Getting Manchester Moving - Manchester City Council & Manchester City Hospital – May 2008

walking in and around the city centre. In addition, a walk called The Green Corridor has been promoted and infrastructure around the city improved to encourage its use.

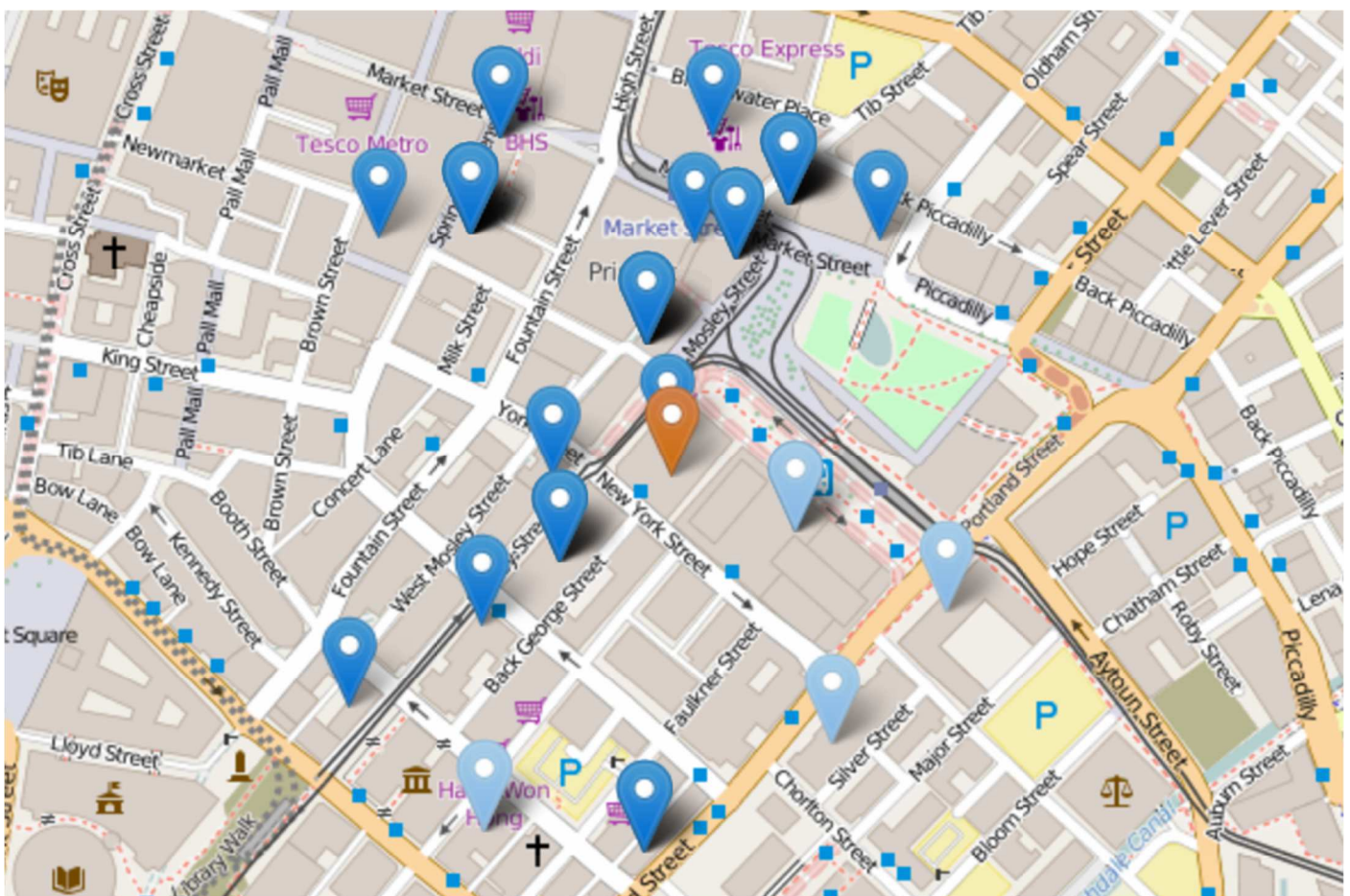
There is a great deal of pedestrian infrastructure close by the site, with the Piccadilly Gardens being just opposite. Footways are well maintained near the site.

Pedestrian routes provide access to all local tram, bus and mainline rail stations. Access to Manchester Piccadilly gives scope for interchange between services to London and beyond.

4.3.2. Proximity to Local Amenities

As can be seen by Figures 2a and 2b below, the site benefits from a wide range of amenities within easy walking distance including shops, banks, bars and food service outlets

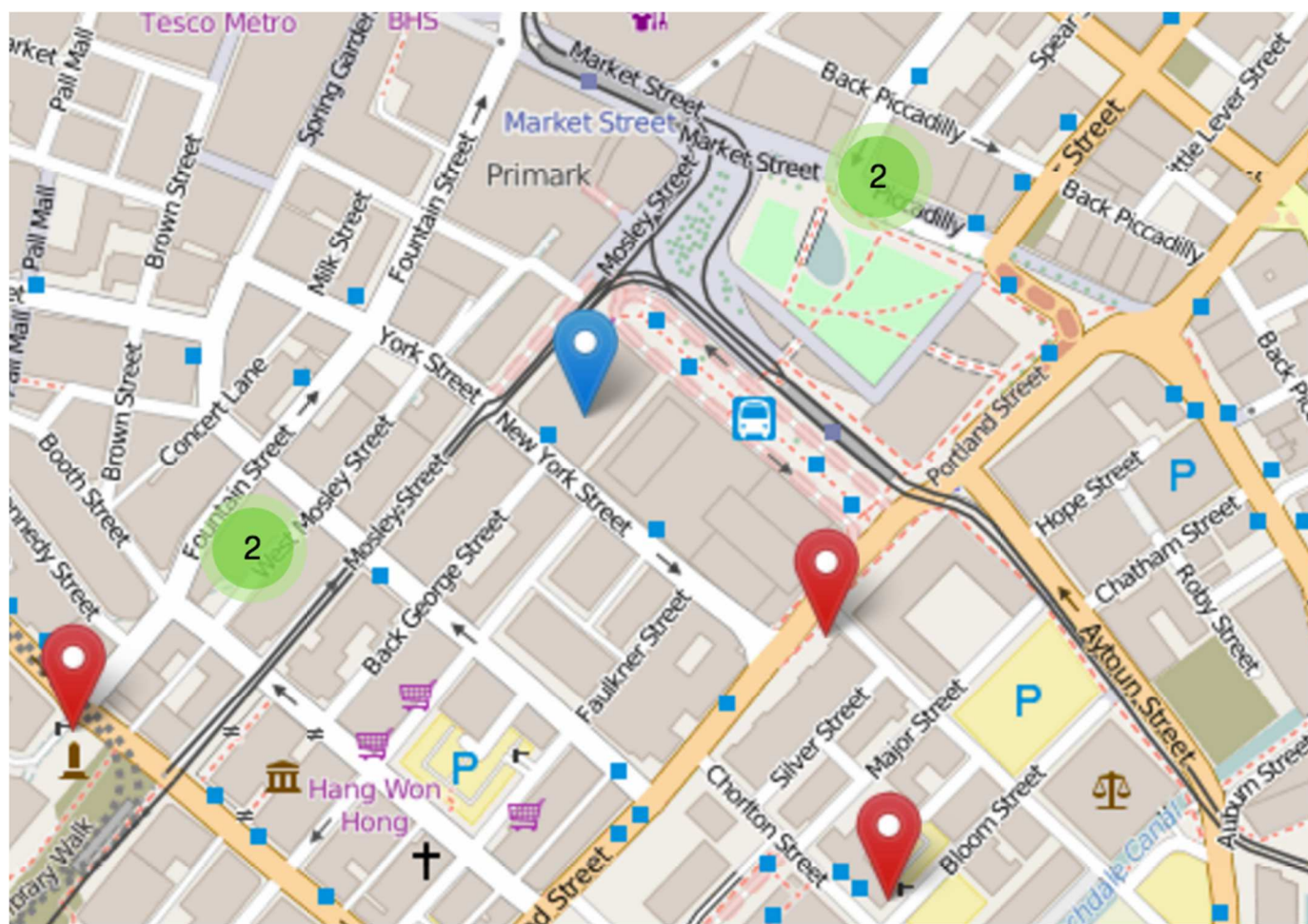
Figure 2a: Proximity to local amenities: ATM⁶



The closest ATM is located in the basement of City Tower itself, in the Tesco (operated by the Royal Bank of Scotland).

⁶ Source: Dracos Maps
<http://dracos.co.uk/made/nearest-cash-machine/>

Figure 2b: Proximity to local amenities: Post boxes⁷



The closest post boxes are either 160 metres to the South East, on the intersection of Portland St and Minshull St, or the same distance to Piccadilly.

4.4. Cycle infrastructure

There has been a big push to encourage cycling in the region by Transport for Greater Manchester (TfGM) in recent years. The improvements so far have included⁸:

- 60km of largely segregated cycle lanes built since 2013.
- Around 9,000 people enjoying free adult bike training sessions.
- The construction of Cycle Hubs at bus, train and Metrolink stops, with more on the way in 2016.
- Working with 11 schools and colleges to promote cycling to pupils and staff

The next steps for TfGM are⁹:

⁷ Source: Dracos Maps

<http://dracos.co.uk/made/nearest-postbox/>

⁸ <http://cycling.tfgm.com/Pages/Cycle-City.aspx>

⁹ Ibid

- A further 45km of new or improved cycle lanes to be completed by 2018.
- Four Cycle Friendly District Centres to focus investment on cycle routes and parking.
- Build more cycle and ride facilities and transport interchanges.
- Work to improve facilities in and around more schools and colleges, meaning we'll eventually have helped pupils and staff at more than 20 educational sites since 2013.

4.4.1. Cycle Hubs

Cycle Hubs, located near public transport centres, are the ideal place for people to park their bike. The Hubs provide secure and sheltered bicycle parking, protected by CCTV and swipe card entry. City Tower benefits from a Cycle Hub being located in the basement of the building, which includes 200 cycle spaces, showers and drying facilities.

The image below illustrates the route to and from the City Tower Hub, and Appendix II provides a detailed plan of the City Tower Cycle Hub.

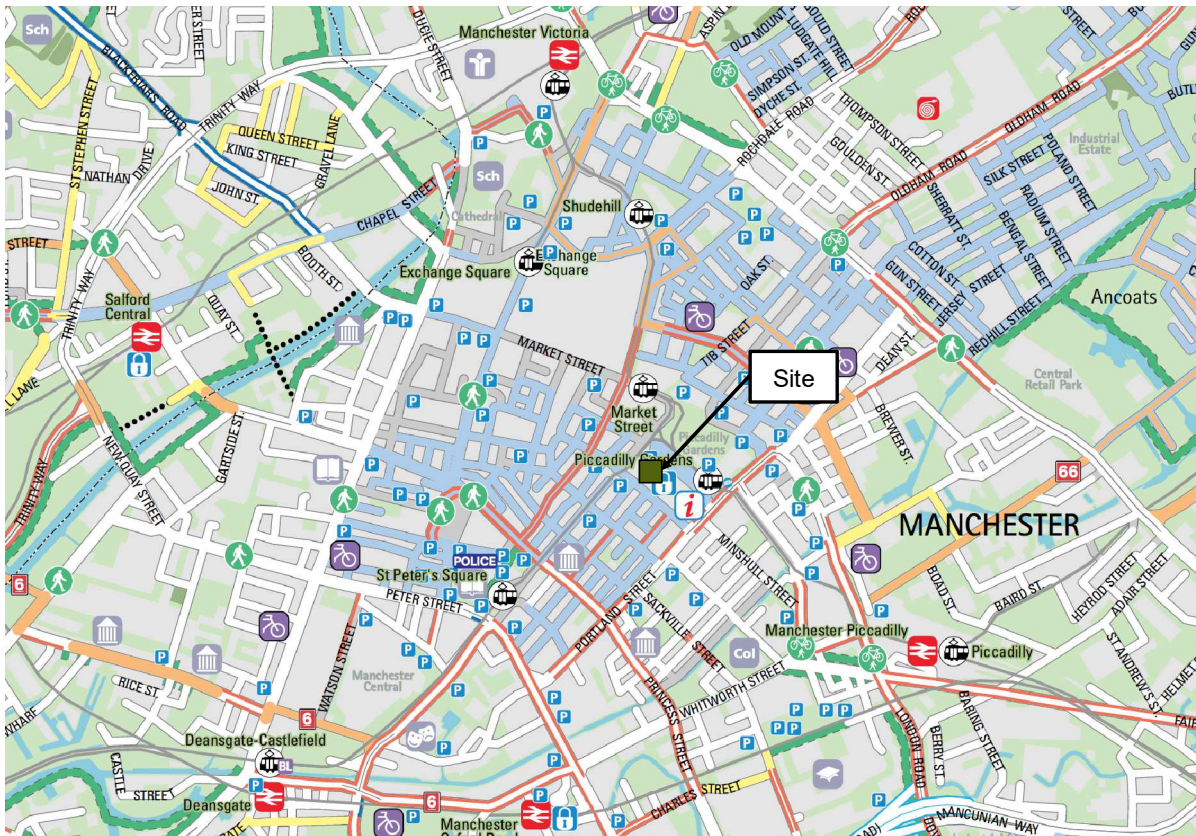
Figure 3a: Cycle Hub Map¹⁰



¹⁰ Source: Transport for Greater Manchester: <http://cycling.tfgm.com/Pages/pdfs/City-Tower-Cycle-Hub-location.pdf>

Figure 3b: Greater Manchester Cycle Map¹¹

The map below shows all the cycle routes in the central Manchester area and local points of interest.

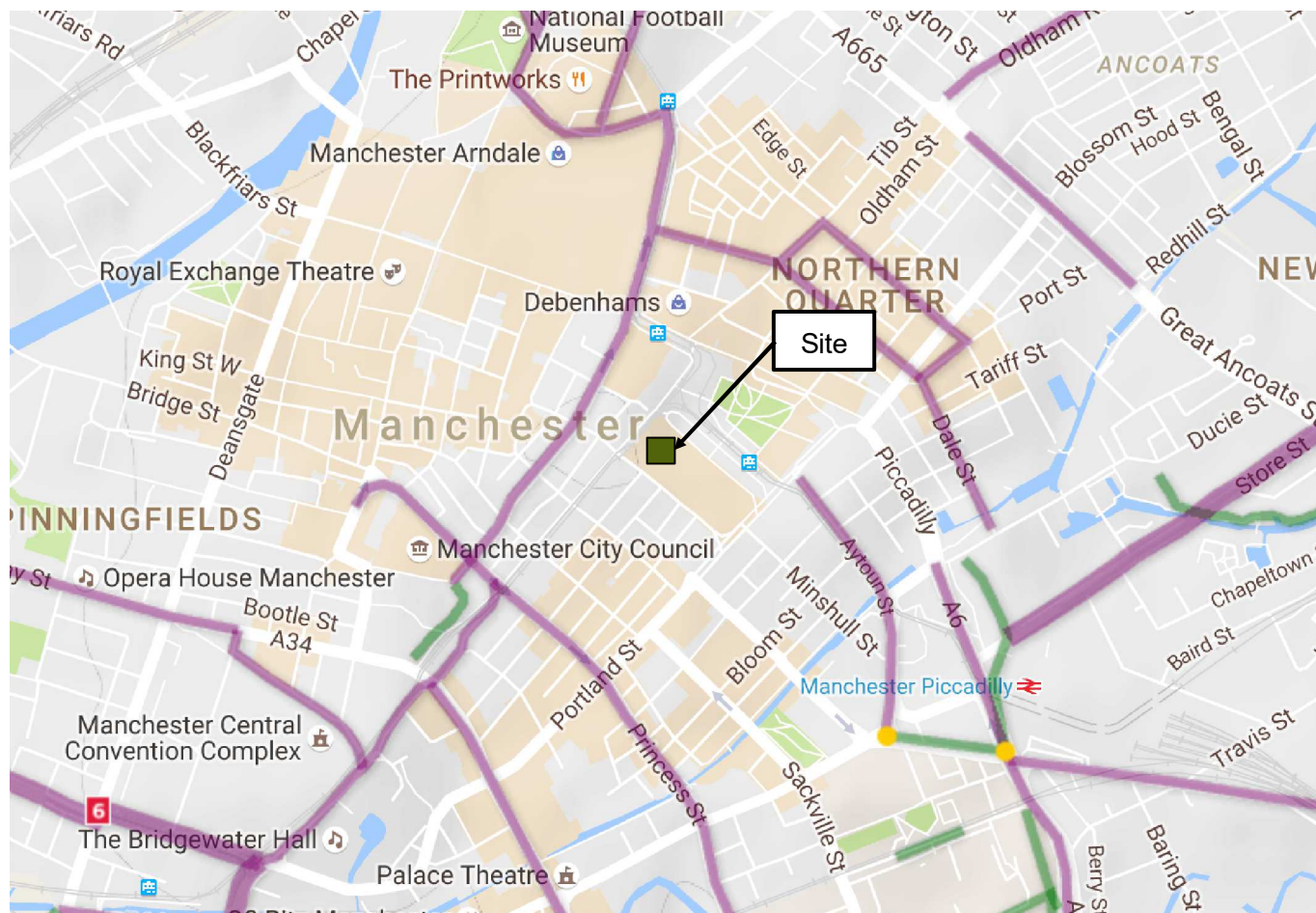


In the above image roads designated as traffic free routes are green, light blue denotes roads with a 20mph speed limit, the purple cycle boxes are cycle shops and the blue and white padlock signs illustrate cycle hubs. There is a cycle hub underneath City Tower.

Figure 3b overleaf illustrates that there are two on-road cycle routes (purple lines) within 150M of the site – on Aytoun St and Fountain St. This enables access to the Cycle Hub in the basement of City Tower. The closest traffic free route is Dulcie St, 400M south, towards Manchester Piccadilly Station.

¹¹ Source: Transport for Greater Manchester – Better by Cycle: <http://tfgm.pindarcreative.co.uk/>

Figure 3c: Manchester Cycle Map – National Cycle Network¹²



¹² Source: Sustrans

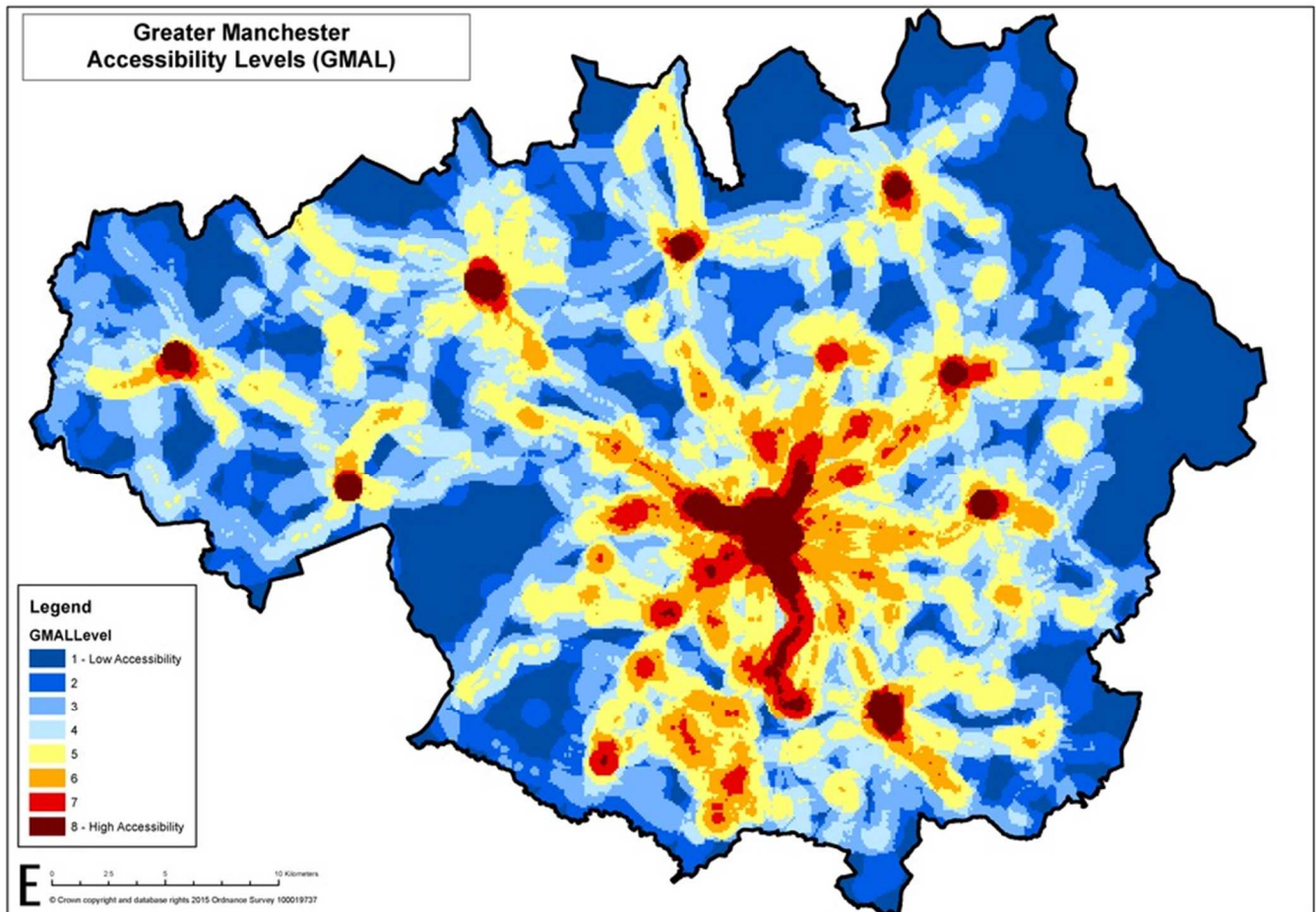
<http://www.sustrans.org.uk/ncn/map>

4.5. Public Transport

The site is ideally located in respect of accessibility by public transport. According to Greater Manchester's Accessibility Levels (GMAL), which represents the accessibility from locations to the public transport network, taking into account walk access time and service availability (similar to the Public Transport Accessibility Level (PTAL) used by Transport for London).

The site scores the highest possible accessibility level – 8 out of a maximum of 8, classed as "High". The GMAL map of Greater Manchester is illustrated in *Figure 4* below:

Figure 4: GMAL map illustrating GMAL accessibility level¹³



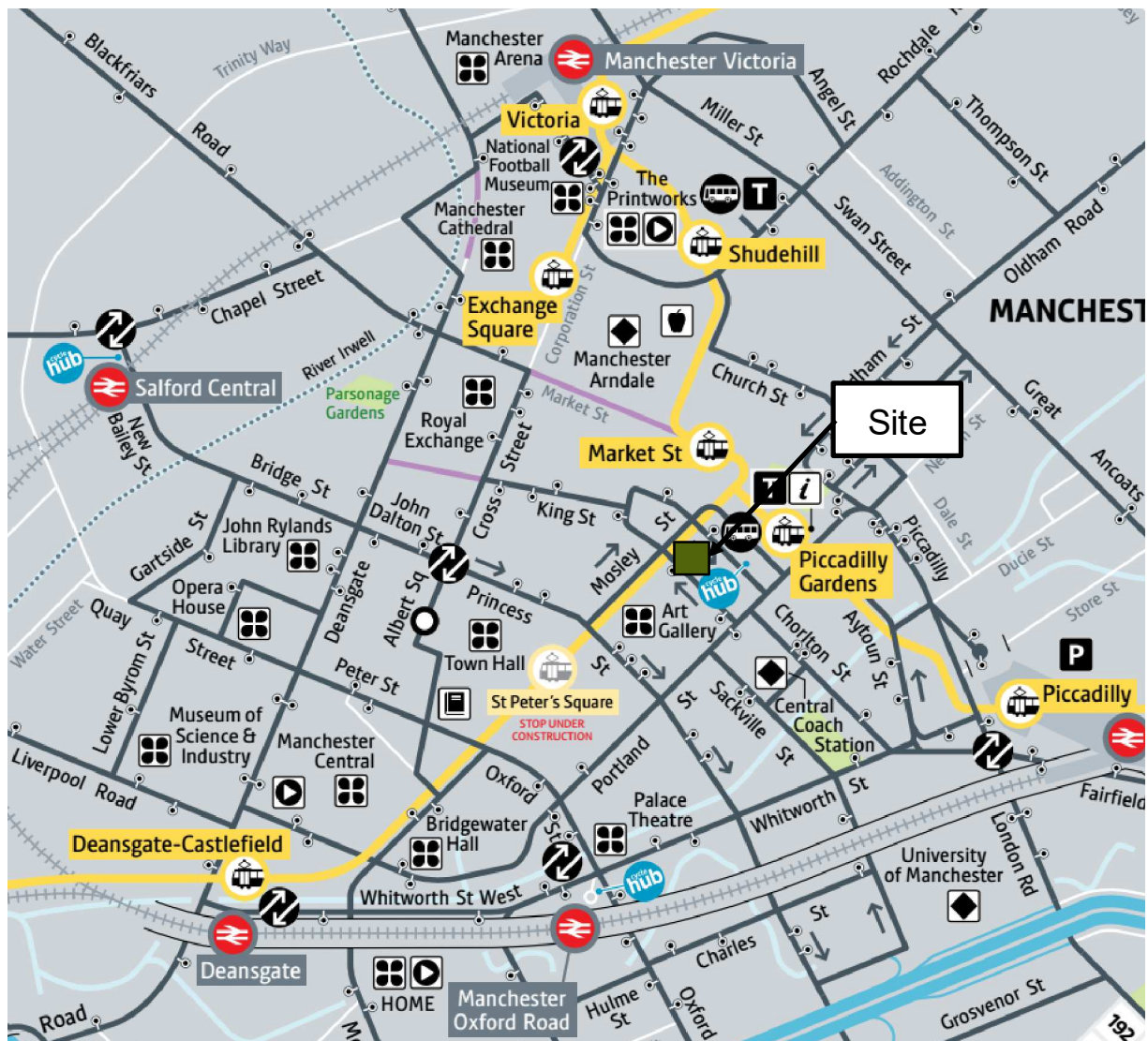
4.6. Metrolink & Mainline Train

As stated previously, the property is located within 100M of the closest Metrolink service, Piccadilly Gardens and within 300M of the next closest, Market St. In addition to this, the closest mainline train station is Manchester Piccadilly (see *Figure 5* overleaf):

¹³ Source: Greater Manchester Spatial Framework

https://gmsf-consult.objective.co.uk/portal/options_consultation/strategic_options?pointId=d308981e1807

Figure 5: Map Illustrating closest Metrolink stations and lines¹⁴



¹⁴ Source: Transport for Greater Manchester

http://www.tfgm.com/journey_planning/Documents/PDFMaps/Network-maps/Manchester-North.pdf

4.6.1. Greater Manchester Accessibility Levels (GMALs)

When assessing the distance, service, direction and frequency of Metrolink, walking and mainline train services, the data that informs the GMAL model has been downloaded and interpreted.

The GMAL model takes the following into account:

- Walking time from the point-of interest to the public transport access points;
- The number of services (bus, Metrolink and Rail) available within the catchment;
- The level of service at the public transport access points - i.e. average waiting time; and
- The operating areas of Local Link (flexible transport) services

The GMAL level of the site is 8, meaning the site has a 'high' level of accessibility to public transport – this is the maximum rating that can be achieved.

The details of the location distances, scores and travel times to certain regional destinations are listed in the tables overleaf – reproduced from the GMAL calculator datasets¹⁵.

Table 2: Breakdown of GMAL rating

GMAL Criteria	City Tower	Maximum Achievable	City Tower - % Maximum Achievable
Bus Score	121	125	97%
Rail Score	20	36	56%
Metro Score	12	13	88%
GMAL Score	153	159	96%
Overall GMAL Level	8	8	100%

Table 3: Travel time to specific locations in and around Manchester

Location	Time to Location (Mins)
Manchester Market Street	5

¹⁵ Greater Manchester Spatial Framework

https://gmsf-consult.objective.co.uk/portal/options_consultation/strategic_options?pointId=d308981e1807

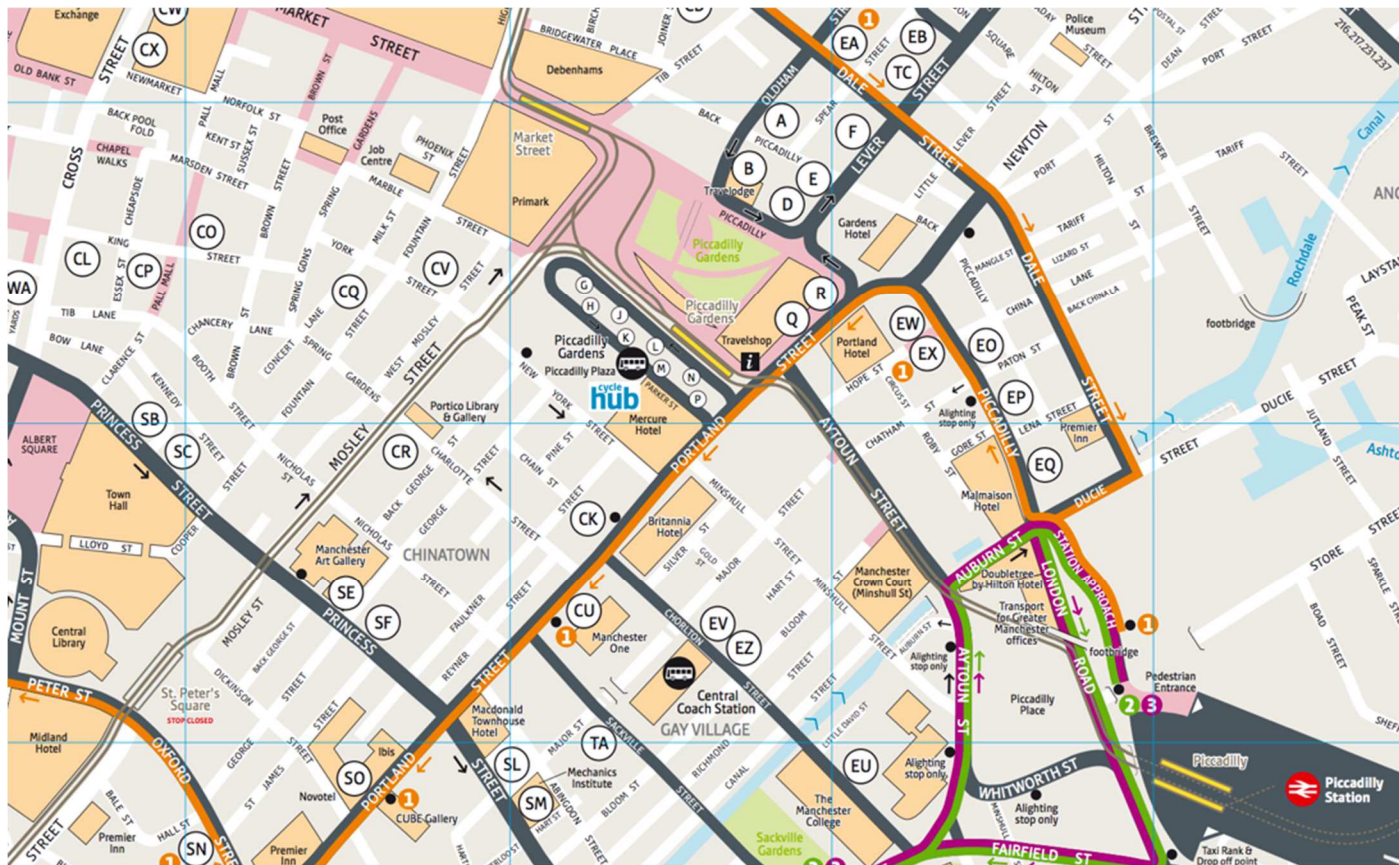
Manchester Oxford Road	10
Manchester Spinningfields	10
Altrincham	30
Ashton	30
Trafford Centre	30
Bolton	35
Bury	35
Manchester Airport	35
Oldham	40
Rochdale	40
Wigan	50

4.7. Bus

There are a total of 8 bus stops within 100M of the property.

Figure 6 below illustrates the proximity of the site to local bus stops and the closest Metrolink bus shuttle – No 1.

Figure 6: Proximity to bus stops¹⁶



4.8. Car Clubs

Via undertaking a desktop review, it was found that the closest car club parking bays are operated by Enterprise Car Club. This company operates 3 vehicles within 200M of the site – the closest of these being Fountain St, then Tib St and Bloom St.

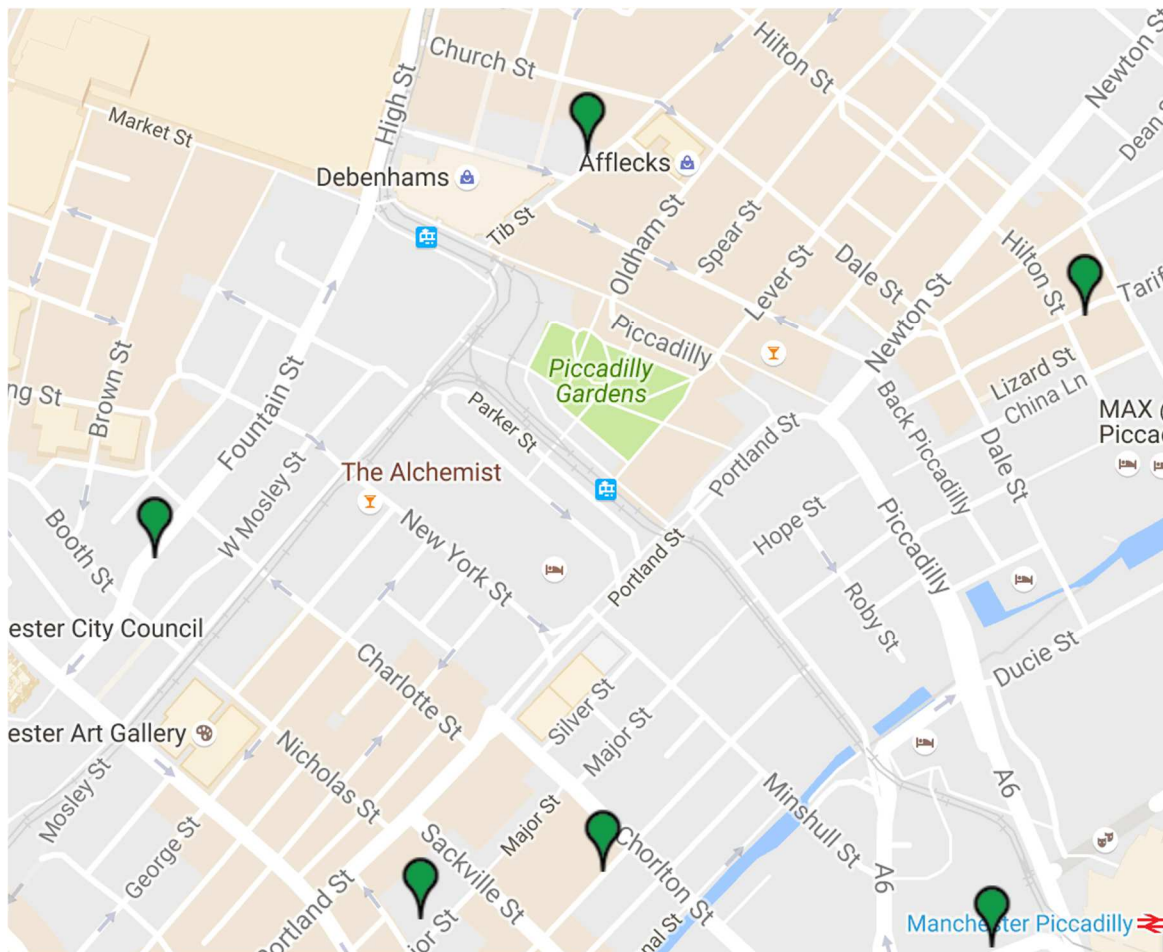
Car Clubs provide an easily accessible vehicle to their members for short term hire, as and when needed. They offer a lower fixed cost alternative to car ownership, as membership fees are typically lower than the annual cost of road tax, and once this fee is paid, car usage is on a low cost pay as you drive basis. This will provide access to a range of efficient, reliable cars without the hassle of private car ownership.

Figure 7 below illustrates the closest car parking spaces to the site

¹⁶ Source: Transport for Greater Manchester:

http://www.tfgm.com/journey_planning/Documents/PDFMaps/City-Centre-Map.pdf

Figure 7: Car parking spaces within 300M of the site¹⁷



4.9. Mode Share Data

As the assessed offices are not currently occupied, a travel survey for existing users has not been carried out for the development. It is anticipated that a leasehold arrangement will be put in place and that surveys will be undertaken once the building has been occupied.

¹⁷ Source: Enterprise Cars: <https://www.enterpriseclub.co.uk/vehicles/postcode/M1%204BT/>

5. Travel Plan - Objectives & Targets

5.1. The Focus of the Travel Plan

This Travel Plan is primarily focused on staff as there is a far greater success rate with this target group. The majority of measures proposed are therefore intended to encourage staff to vary or minimise their reliance on private car travel. It is recognised that there is the potential to influence visitor travel behaviour to a degree.

The measures aimed at visitors are directed towards increasing awareness of alternatives to private car use through the display and promotion of information on notice boards and leaflets. It is worth noting however, that given the nature of the commercial element of the site, it is not envisaged that many customers will travel to the site via non-car modes of travel.

5.2. Objectives

There are a number of objectives that the implementation of the Travel Plan is intended to help fulfil. These include:

- to influence travel behaviour of employees;
- to generate fewer staff single-occupancy car trips than would otherwise be the case, by influencing a modal shift in travel to the facility;
- to encourage safe and viable alternatives for accessing the facility;
- to reduce the need for unnecessary journeys by employees;
- a reduction in overall vehicle mileage; and
- to help improve the health of staff and visitors.

5.3. Targets

Travel Plans are evolving documents that need to remain adaptable to changing working practices and local conditions, therefore the plan targets will be set annually for five years after full occupation of the site. These targets however, will be reviewed to track progress and to enable amendments if necessary.

As this site is currently unoccupied and no travel surveys were therefore undertaken for present occupants, an accurate picture of the likely travel plans for staff for the proposed site uses is not currently available.

The targets will therefore be set by the Travel Plan Co-ordinator following the initial staff travel survey. This will be undertaken following full occupation of the site and is envisaged to be no longer than 3 months after occupation. As per the BREEAM requirements of 'Tra 05' (as outlined in Table 1), the initiatives and measures outlined within this Travel Plan will be tailored to meet the requirements of staff further to the results of the travel surveys that will be undertaken.

6. Travel Plan - Measures & Initiatives

Initial measures could be implemented prior to full occupation to encourage employees and visitors to take up environmentally sustainable travel choices from the outset.

BREEAM requires consideration of all types of travel relevant to the building users, including staff (commuter journeys and business travel), visitors and personnel who make deliveries and/or collections to and from the development. These groups may have different travel patterns and it is important to provide Travel Plan measures, which are targeted to their needs.

The following measures could be considered at the outset. Following the baseline survey, the measures would be reviewed and finalised in the full Travel Plan.

6.1. Travel Plan Coordinator (TPC)

Successful implementation of the travel plan is in part related to the level of commitment of the applicant to the process. Implementation of the travel plan will necessitate some financial costs which may be borne by the occupying organisation and/ or developer, depending on the strategy set out within the travel plan.

It is important that discussions about the costs associated with the implementation of the travel plan (i.e. the funding of the management, measures and ongoing monitoring) occur in the initial stages of the planning process.

The Travel Plan Coordinator (TPC) will be responsible for the travel plan, including implementation, monitoring and progress reporting, and is the main point of contact for the travel plan. The TPC should ideally have knowledge and experience of sustainable travel initiatives and be supported by senior management. In some cases, a consultancy can be commissioned to undertake this role. However, it is recommended that the responsibility is given to someone involved in the day to day running of site as soon as reasonably possible. Previous experience has shown that it is vital that the TPC is briefed by the author of the travel plan as to its implementation, and the handover procedure for this will be articulated within the action plan.

The TPC should ensure readily available information, be aware of changes to transport by liaising with the relevant services and all stakeholders. The TPC would be responsible for the following:

- Ensuring that all building users are aware of the Travel Plan objectives;
- Raising awareness and promoting the availability of public transport, cycling and walking travel information. This will be produced electronically and made available to all staff via the occupier's intranet as well as to visitors via their website. This is particularly important for new staff as part of induction in order to establish sustainable travel patterns from the outset;
- Implement the various marketing and promotional measures and campaigns;

- Update information on walking, cycling and public transport as they arise;
- Monitor usage of cycle parking provision to ensure adequate spaces are always available to occupants;
- Undertake the monitoring of travel patterns and travel demand, reviewing the Travel Plan measures accordingly.

6.2. Information Packs

All new employees could be issued with an information pack from which they can make informed decisions about the travel mode they select. These could be produced as hard copies and include details on all travel options available, as well as services and amenities provided locally. The provision of such information is essential in fostering sustainable travel habits early, before employees settle into unsustainable habits when a sustainable alternative may be more suitable.

The information packs could include:

- The aims and objectives of the Travel Plan, for example the benefits to the environment of reduced car use and the health benefits of walking and cycling;
- Information on travel planning website services such as journey planners, to raise awareness of transport options, and alternatives in case of delays or cancellations;
- Maps showing the pedestrian and cycle routes to the site, as well as destinations of local facilities with routes and journey times by walking, cycling and public transport;
- Train and bus service maps and timetables to highlight the services available;

6.3. Marketing and Promotion

Several marketing measures could be implemented to ensure that all building users are aware of their role in achieving the aims of the Travel Plan and help to encourage new employees to use sustainable travel alternatives.

- Website: Information on the location of the office and transport links, including local buses and Rail stations and cycling routes, could be provided on the company website. Information on the purpose of the Travel Plan would be provided along with the strategies and measures implemented. This would encourage visitors, new members of staff (and potentially interviewees seeking employment) to use sustainable modes of transport.
- Intranet: In addition to the company website, travel information could also be provided on the intranet which would be accessible by staff. This would provide more targeted information, such as cycle facilities and promotional events.
- Notice boards: These could be in the entrance foyers and clearly displayed to staff and visitors. This would provide travel information and updates on improvements and any proposed measures. The notice boards would keep employees and visitors up-to-date with changes in the travel options available which

would keep them travelling by sustainable modes and to encourage others to use such modes either for the first time or on a more regular basis.

- Forum meetings: Six monthly Travel Plan forum meetings or staff meetings could be held within the development in which transport matters can be discussed and any suggested improvements implemented by the TPC. These meetings should be more regular during the early stages of occupation to help identify the perceived barriers to travelling by certain modes and ways to overcome such barriers at the outset.

6.4.Promotion of Public Transport Use

The following initiatives could be considered to assist building users to use the public transport network:

- Route maps: Public transport information, including bus route maps and timetables, could be made available to all staff in key areas to highlight the services available. This would assist in informing staff of the most efficient way to travel to meetings and other business-related journeys.
- Travel Planning Service: The TPC could provide information to staff about online journey planners to raise awareness of transport options, and alternatives in case of delays or cancellations.
- Interest-free season ticket loans: The TPC could investigate the feasibility of offering interest-free season ticket loans to staff. This would reduce the financial burden of travelling by public transport.

6.5.Car Facilities

The main source of carbon emissions from travel to the site is related to commuter transport. To minimise this need to travel to the development site by private car and particularly single occupancy use, opportunities for travel by alternative and more sustainable travel modes should be taken.

The proposals for the development of City Tower do not include any car parking spaces and so the scope excludes personal car use.

6.6.Promotion of Cycling

Cycling is the quickest form of transport for many journeys in Central Manchester, especially on congested routes. One of the key advantages of cycling is a greater certainty of journey time, which cannot be achieved by other vehicular modes on a congested network. A few measures could be introduced to promote and encourage cycling:

- Cycle parking: 202 cycle parking spaces are installed on-site.
 - Visitors who plan to cycle to the office could contact the TPC to make arrangements to use the cycle store.

- Cycle parking: lighting will be provided in line with the appropriate Code for Lighting recommendations for circulation space. If any external cycle parking is included in the future this will be provided in accordance with BS5489 Part 1, as per BREEAM criteria.
- Cycle storage: it is anticipated that vertical type cycle racks will be installed, which provide secure, fixed structures for locking each bike. Access to the bike store will be restricted to the office staff.
- Details of the location and number of cycle racks are included in the Appendix – ‘Floor Plan – Basement’, also highlighting all cycle stores and facilities.
- Cyclist facilities: two large shower rooms that house 12 showers adjacent to the cycle store, which will encourage employees to cycle to work. A bicycle shop and training area has also been provided.
 - 80 lockers will be included in total, with 4 distinct privacy areas and storage rooms
- Bikes4Work scheme: Staff could be offered interest free loans to purchase a bicycle free of tax.
- Bicycle Users Group: A bicycle users group for employees could be set up to provide a useful forum to bring together cyclists within the development so that they can share best practice, information and organise promotional events. This forum could also encourage experienced cyclists to become a ‘buddy’ for new or less confident cyclists.
- Promotional events: The TPC could promote and organise events to encourage staff to cycle to work. These could include service and repair sessions, free breakfasts for cyclists and promoting National Bike Week.

6.7. Promotion of Sustainable Deliveries

A baseline survey will collect information on the delivery patterns and the following measures could be implemented if required:

- Consolidating deliveries: The TPC could discuss with the delivery operators on the feasibility of consolidating deliveries which would involve combining and reducing the number of vehicle trips.
- Green vehicles: Hybrid, electric and other low carbon emission vehicles are less harmful to the environment. Delivery and collection companies, which use green vehicles, could be used.

7. Travel Plan - Monitoring and Review

A Travel Plan usually commences with a review of the baseline travel patterns at the time of its initiation, focusing both on travel arrangements of building users and on the existing infrastructure and systems. This information helps define a starting point against which the Travel Plan's success is measured as part of the ongoing review process.

The Travel Plan will be adopted within the first 6 months of occupation. A Travel Plan Coordinator will be appointed prior to occupation to ensure there are measures in place before the new buildings are occupied to allow sustainable travel patterns to be adopted from the outset.

7.1. Targets

Since this Travel Plan is being produced for a refurbishment project, it is not possible to set final targets at this stage. Once the initial baseline travel survey has been undertaken, the full modal split will be known and the targets for modal shift can be set and appropriate measures implemented if deemed necessary.

7.2. Monitoring

For the duration of the Travel Plan Coordinators appointment a monitoring survey will be undertaken on a regular basis. The responses to the survey will be collated and analysed by the TPC, who will then report the results to Travel Plan officer for the area. If the survey indicates the plan is failing to meet objectives it will be amended as necessary and alternative strategies implemented.

The baseline survey should be conducted at six months after occupation or at 75% capacity whichever comes first. Further surveys and reviews should be conducted one, three and five years after initial occupation. In each review the Travel Plan should be updated including but not limited to:

- Targets
- Modal split survey comparison
- Action plan and initiatives
- Uptake of cycle provisions

The following monitoring should be undertaken on years one, three and five following the baseline survey:

- Undertake an employee questionnaire to understand travel patterns and behaviour;
- Monitor the level of usage of cycle parking to establish demand, and if exceeded, explore provision of additional parking;
- Monitoring demand for motorcycle parking;
- Recording comments received from employees related to the operation and implications of the Travel Plan;

- Reviewing the results of the questionnaires (to be sent to all employees periodically from the implementation of this Travel Plan).

8. Travel Plan – Timescales for Action Implementation

The Travel Plan should be considered a continuous process by adapting and evolving as sustainable transport practices develop and the needs of tenants change, as well as taking into consideration existing and future travel patterns. The above suggested recommendations have been inherently formulated so that appropriate considerations can be made throughout the occupancy of the building. The Travel Plan demonstrates long-term commitment to sustainable transport efforts and commitment to maintaining BREEAM standards.

Table 5: **Suggested** Timescales for Implementation of Travel Plan Actions & Dates

Action	Responsibility	Target Date
Appoint a Transport Plan Coordinator (TPC)	Occupier	On occupation
Undertake Baseline Surveys	TPC	Within 3 months
Finalise Measures and Produce Full Travel Plan	TPC	Within 6 months
Issue Information packs	TPC	Induction Packs
Provide Cycle Parking	Occupier	Construction
Provide Showers and Lockers	Occupier	Construction
Set up Bicycle Users Group	TPC	Within 12 months
Consider offering interest-free loans for season tickets and bicycles	Occupier	Within 12 months
Promote sustainable practices for deliveries, if required	TPC	Within 12 months
Survey	TPC	At year 1, 3 and 5
Review Travel Plan Measures	TPC	Within 6 months

9. BREEAM Assessment

Following the collation of the information above it is possible to assess the development characteristics against the BREEAM criteria. These are summarised in *Table 6* below.

Table 6: BREEAM Credit Assessment

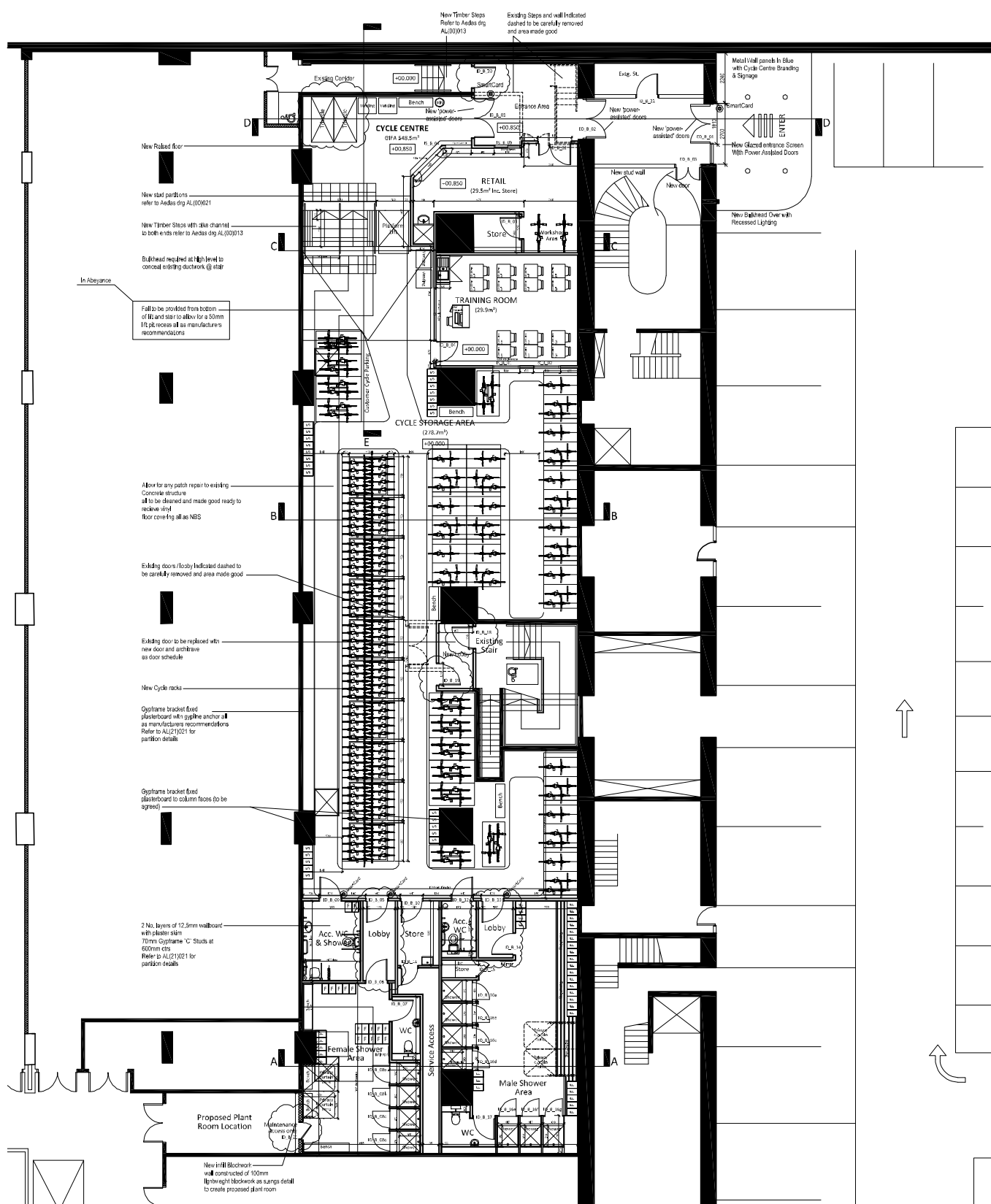
Issue ID	Issue name	Credits Awarded	Credit summary
Tra01	Public transport solutions	3 credits awarded	Following the analysis of the site and based on the information collated and illustrated in <i>Figures 2-7</i> and <i>5 Tables 2 and 3</i> it is possible to confirm that for: Accessibility Index: 3 credits can be awarded The PTAL rating for the site indicates an Accessibility Index of >8 which allows the award of the maximum 3 credits.
Tra02	Proximity to amenities	1 credit awarded	Based on the information illustrated in <i>Figures 2a and 2b</i> , it is possible to confirm that 1 credit can be awarded for the location of the relevant amenities within 500m. (Bank, Post Box, Food Outlet)
Tra03	Cyclist Facilities	0 Credits	Although there are cyclist facilities provided in the building, there is a sign up and fee is required by any future tenant. As it cannot be confirmed that a future tenant will sign up to these facilities these two credits cannot be awarded.
Tra04	Maximum car parking capacity	N/a	Only applicable if change of use.
Tra05	Travel Plan	1 credit awarded	If the recommendations in this Travel Plan are implemented with regards to the inclusion of cycle provision and a signed letter from the developer that the Plan will be distributed to all occupants for implementation, then the credit can be awarded

10. Appendices

10.1. APPENDIX I – Occupancy Table – All Floors

Floor No	Total Occupancy	75% Total Occupancy
1	0	0
2	120	90
3	120	90
4	110	83
5	140	105
6	150	113
7	150	113
8	150	113
9	150	113
10	150	113
11	140	105
12	100	75
13	100	75
14	100	75
15	140	105
16	120	90
17	120	90
18	120	90
19	120	90
20	140	105
21	150	113
22	120	90
23	144	108
24	100	75
25	120	90
26	120	90
27	120	90
28	150	113
29	30	23

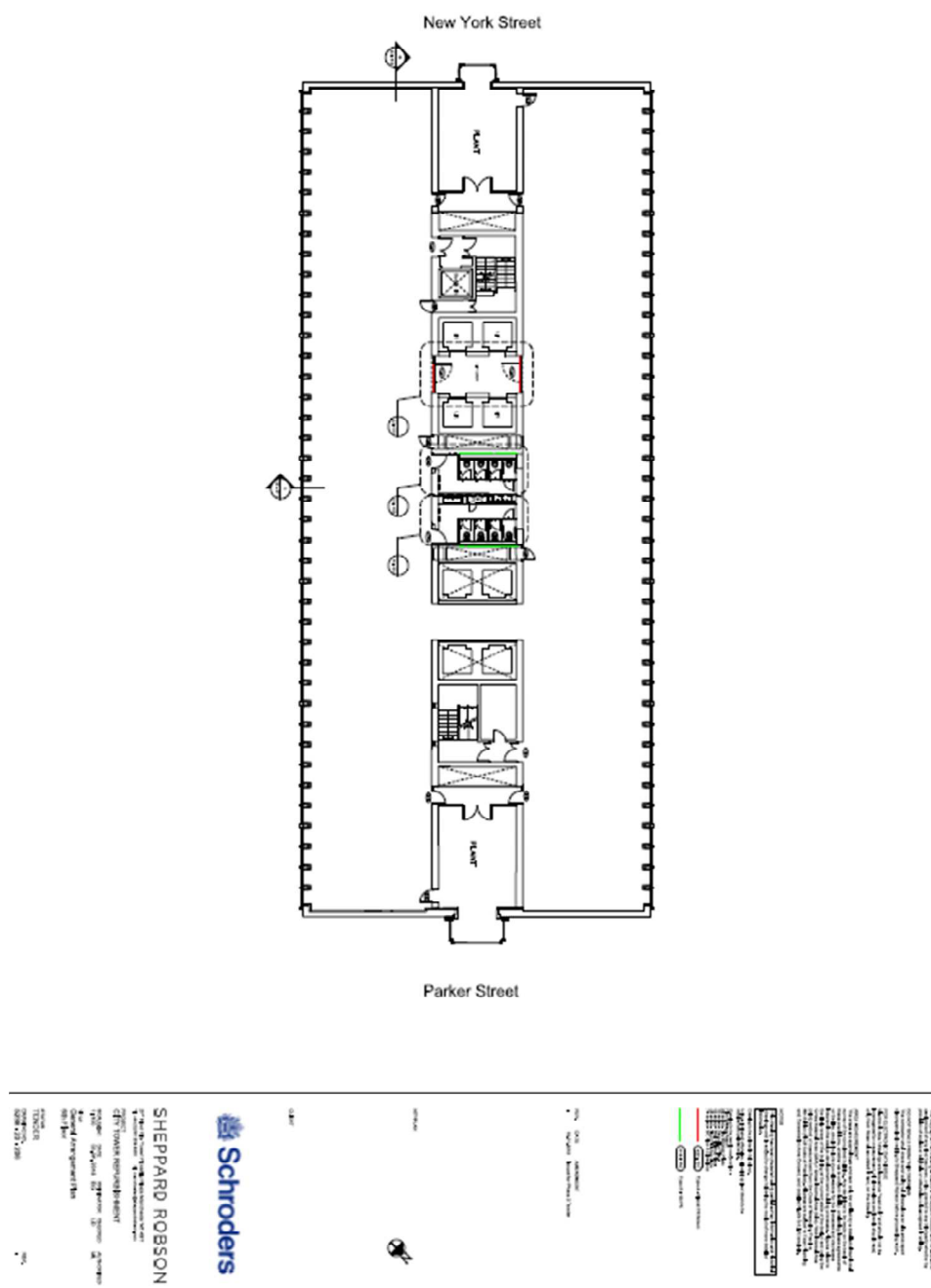
10.2. APPENDIX II – Floorplan – Cycle Hub



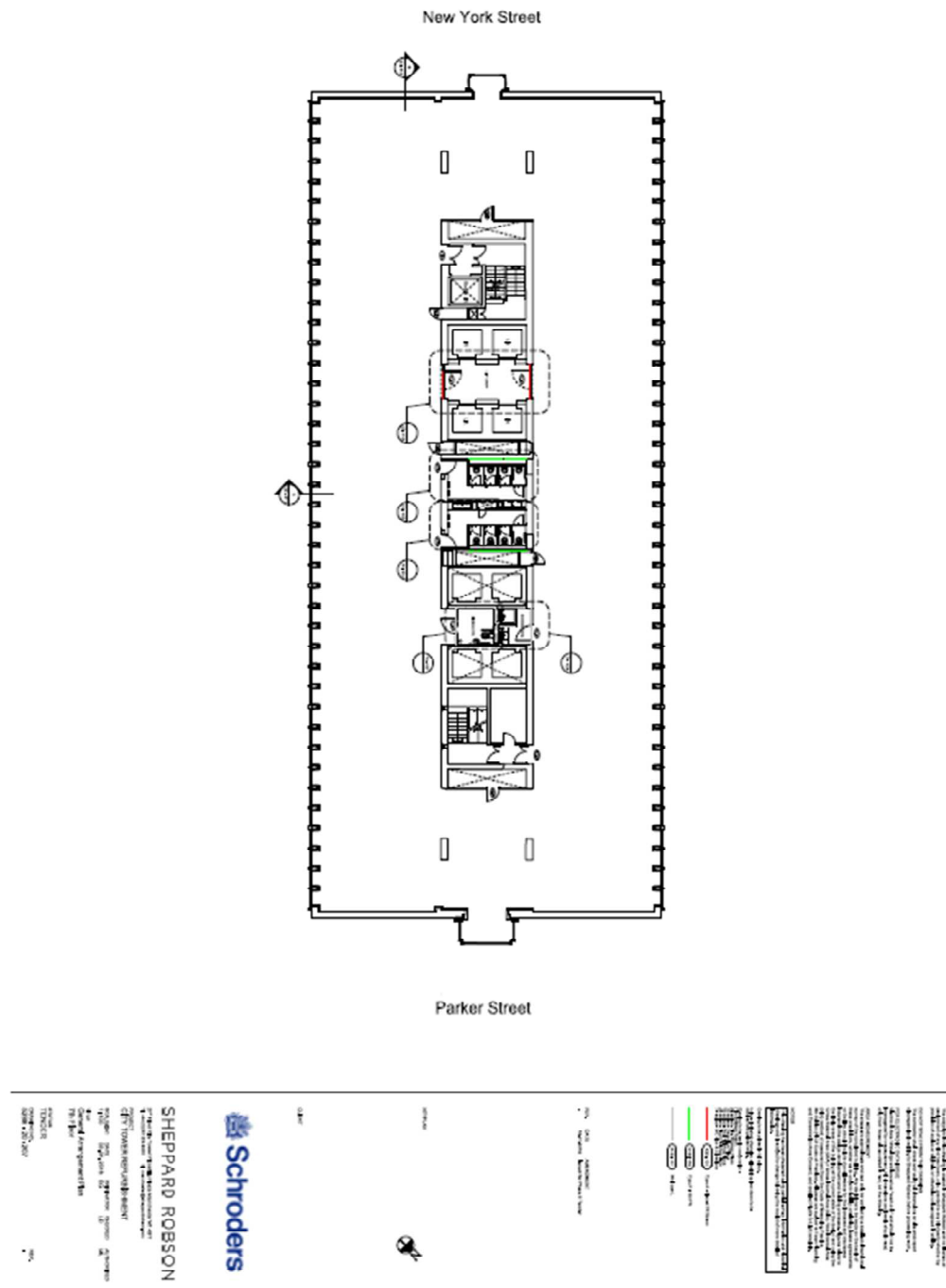
Proposed Plan Layout

Scale 1:100

10.3. APPENDIX III – Floorplan – Floor 6



10.4. APPENDIX IV – Floorplan – Floor 7



10.5. APPENDIX V – Floorplan – Floor 8

