

TRANSPORT NOTE

CHANGE OF USE FROM OFFICE TO FLEXIBLE USE FOR OFFICE AND EDUCATION

5TH FLOOR BARLOW HOUSE

MINSHULL STREET

MANCHESTER

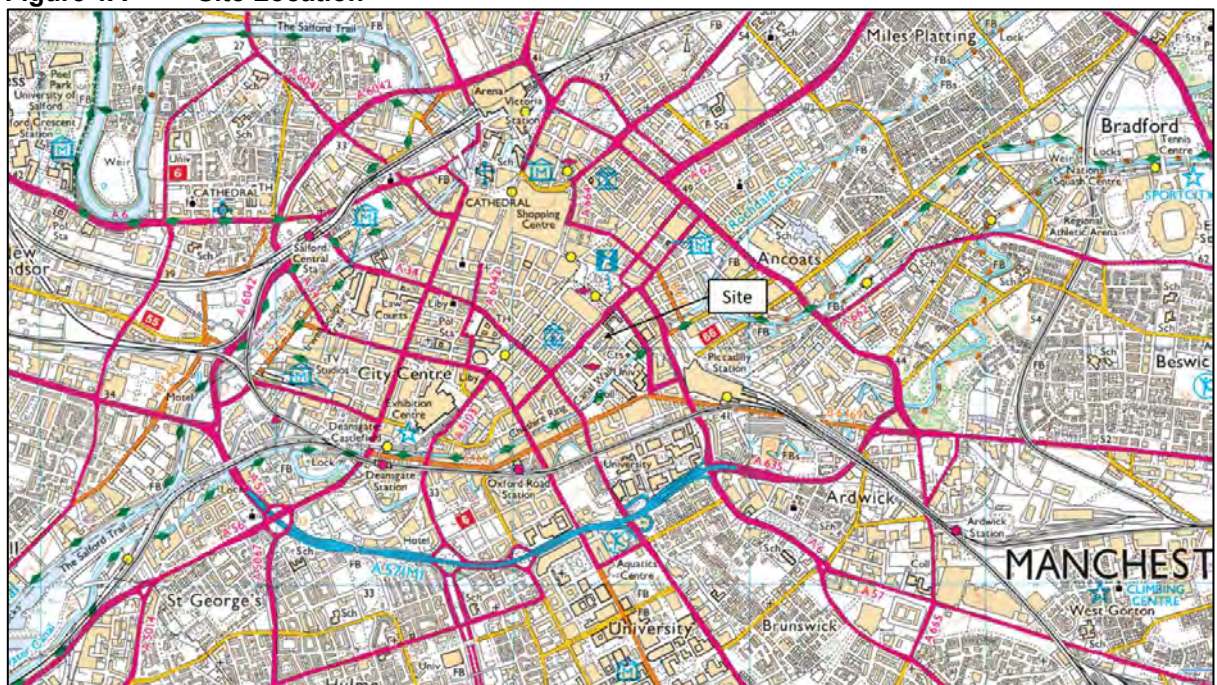
M1 3DZ

ADL REF: 5373, 18th January 2022

1.0 Introduction

- 1.1 ADL Traffic & Highways Engineering Ltd (ADL) have been appointed by Arden University to prepare this Transport Note (TN) to support an application for full planning permission for the change of use at 5th floor level from office to flexible office (Use Class E) and education (Use Class F.1) at Barlow House, Minshull Street, Manchester, M1 3DZ.
- 1.2 The location of the site is shown in Figure 1A.

Figure 1A Site Location



- 1.3 The proposed development is car-free and therefore all trips to the site would be via walking, cycling and public transport. This Transport Note has been prepared to compare the existing with the proposed uses in their transport context and demonstrate there would be no severe impact.
- 1.4 This Transport Note is supplemented by a Framework Travel Plan which outlines the measures to encourage sustainable modes of transport.

2.0 Site Context

- 2.1 The application relates to the 5th Floor of Barlow House, with a floorspace area of 523 sqm. Two floors of the building are already occupied by Arden University and the 5th Floor currently was most recently in office use. The previous occupant has now vacated the property.
- 2.2 Barlow House is located between four roads: Minshull Street to the northeast, Silver Street to the northwest, Gold Street to the southwest and Major Street of the southeast.
- 2.3 The area has a mix of uses from education to offices, to hospitality, to residential. The Britannia Hotel and two bars are located to the west Barlow House. A number of offices are based around the site providing a range of services. Educational use is also established in the area, both within the existing building and to the south, where the Scholars School System is based.
- 2.4 The site and surrounding area are shown in Figure 2B.

Figure 2B Site and Surrounding Area



3.0 Trip Generation: Office Use

- 3.1 As mentioned previously, the existing office use with 523sqm is car-free. Using TRICS database, the total person trips and mode split for office use in Town Centre and Edge of Town Centre has been derived. Sites with zero on-site parking have been manually selected.
- 3.2 The TRICS output for total person trips for office use is provided as Appendix 1.1 and the mode split is provided as Appendix 1.2. This is summarised in Table 3A.

Table 3A Daily Trips: Office Use

Mode	Mode Split (%)	Daily Trips (Two-Way)
Pedestrians	37.9%	77
Cyclists	1.0%	2
Single Vehicle Occupants	27.5%	56
Multi Vehicle Occupants	16.9%	34
Bus/Tram Passengers	11.9%	24
Total Rail Passengers	4.7%	9
Total	100%	202

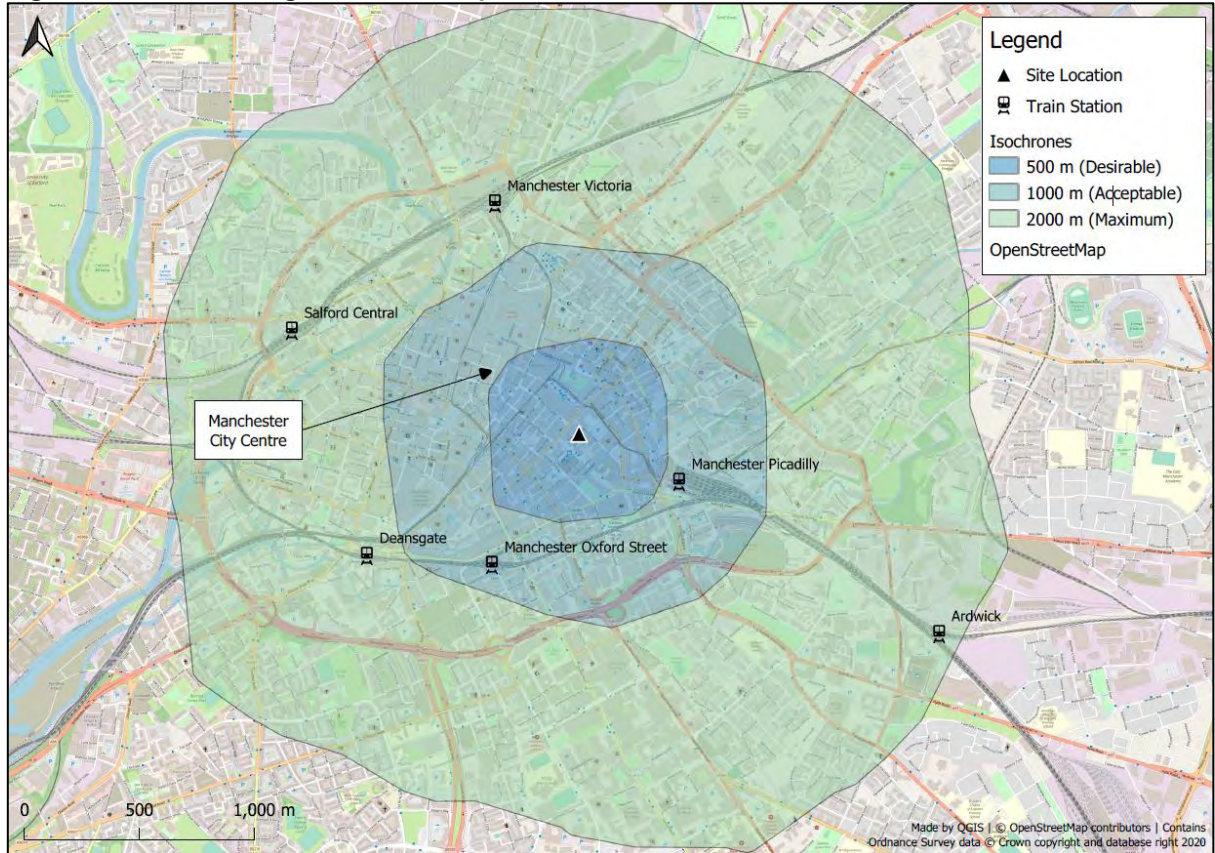
- 3.3 Table 3A shows that the existing use of the site would generate 202 two-way person trips on a daily basis. 77 two-way trips would be made by pedestrians, 2 two-way trips made by cyclist, and 35 trips by public transport users.

4.0 Site Accessibility to Non-Car Modes

Walking

- 4.1 The site is located within a mature city centre environment. As such, the pedestrian infrastructure in the vicinity of the site is considered to be excellent. Provision of footways, crossing points and street lighting throughout is conducive to facilitating pedestrian trips.
- 4.2 There are at least two-metre footways around the perimeter of Barlow House, on Minshull Street, Silver Street, Gold Street, and Major Street. There are dropped kerbs across all surrounding junctions to footways on opposite side of the carriageways.
- 4.3 Beyond the site bounds, to the north there are signal controlled pedestrian crossing with dropped kerbs and paving, across Portland Street, which provides access to Piccadilly Gardens metro stop, and northbound bus stops on Portland Street.
- 4.4 There are signal controlled pedestrian crossings across A6 Aytoun Street which leads to pedestrian bridge over London Road, to provide access to Manchester Piccadilly Railway Station.
- 4.5 The footways on Major Street, lead to bus stop on Chorlton Street, and Manchester Coach Station.
- 4.6 According to the Chartered Institute of Highways and Transportation (CIHT) *Providing for Journeys on Foot* report (2000), two kilometres is considered the maximum preferred walking distance for local journeys. This extent is shown in Figure 4A.

Figure 4A Walking Isochrone Map



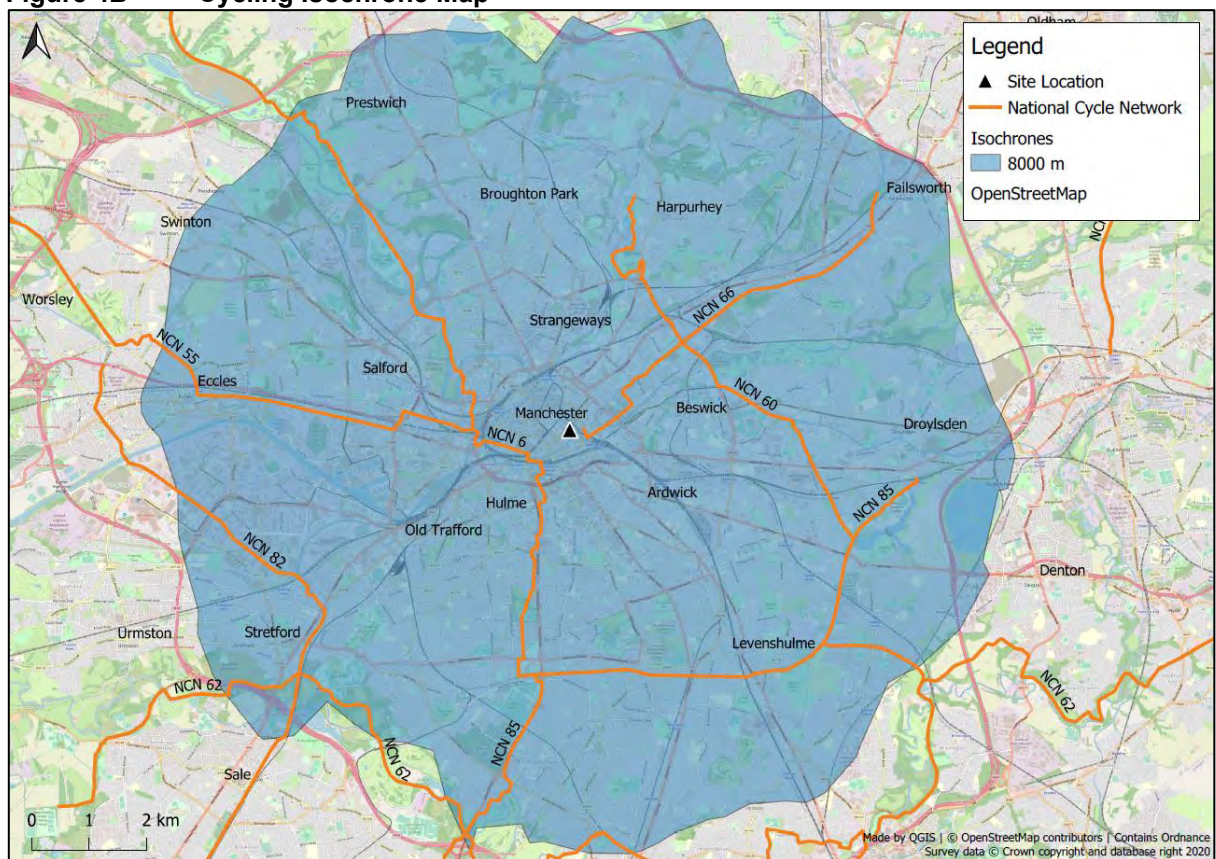
- 4.7 Figure 4A demonstrates that the site is located in a very sustainable location in Manchester City Centre. There is therefore an abundance of amenities within walking distance of the site, which would be of benefit to the students and staff of the development.
- 4.8 Figure 4A also shows that several railway stations are within walking distance of the site. There are also several tram stops within walking distance of the site. This promotes the use of these modes of transport to and from the site, from within Manchester, and farther afield.
- 4.9 Overall, the pedestrian infrastructure in the immediate vicinity of the site is considered to be excellent.

Cycling

- 4.10 Many of the streets within the vicinity of the site are subject to 20mph speed limit and operate a one-way system. They are therefore considered to be suitable for cycling.

- 4.11 The site is approximately 450 metres from the National Cycle Network (NCN) Route 66, at London Road and Store Street. This is predominately traffic-free cycle route along the Rochdale Canal. Other NCN routes which pass through Manchester City Centre include NCN Route 6, 50 and 60. These routes are shown in Figure 4B.
- 4.12 According to the DfT's LTN 1/20 *Cycle Infrastructure Design*, eight kilometres is considered a suitable distance to cycle for local journeys. This extent is shown in Figure 4B.

Figure 4B Cycling Isochrone Map



- 4.13 Figure 4B shows the extent which is considered to be within cycling distance of the site. This is the extent to which site users could be expected to cycle to/from the site.
- 4.14 Overall, the site's accessibility by cycling is considered to be very good. This, in combination with the cycle parking provision provided as part of the development, is conducive to the uptake of cycling as a mode of travel to and from the site.

Bus

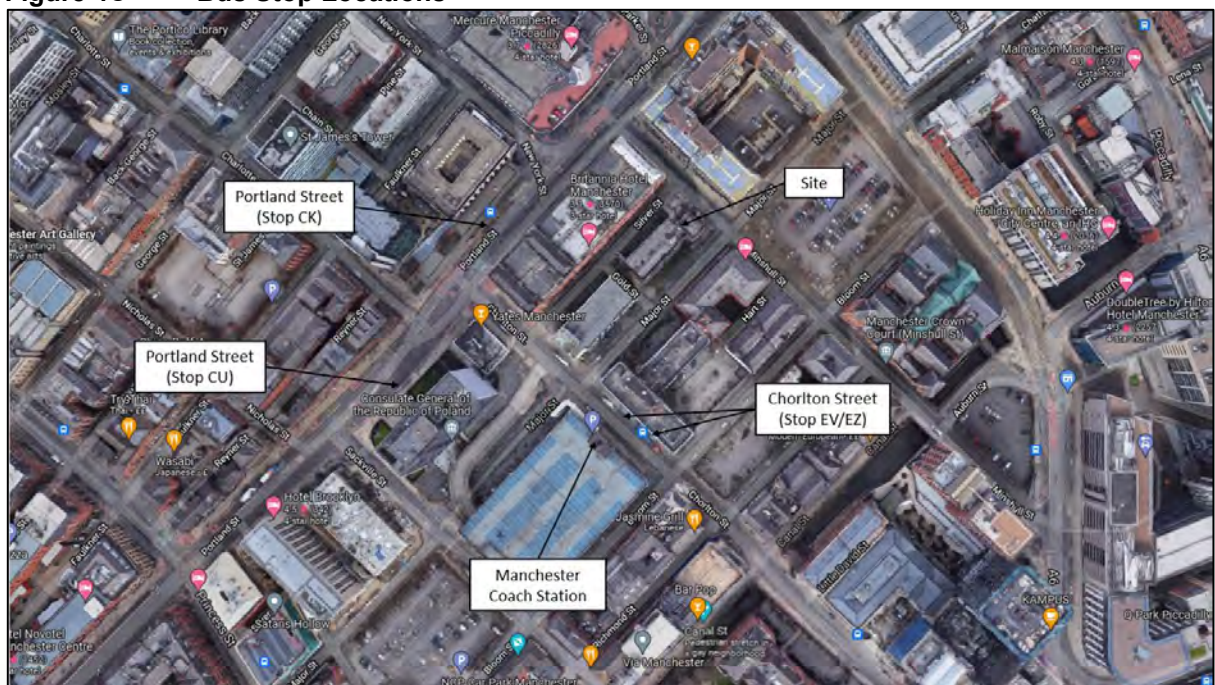
Local Services

4.15 According to CIHT's *Buses in Urban Development* report (2018) 250 metres is considered the maximum walking distance to bus stops in town/city centre locations. Within this distance from the site, there are the following bus stops:

- Portland Street (Stop CK + CU)
- Chorlton Street (Stop EV + EZ)
- Manchester Coach Station

4.16 The location of these bus stops is shown in Figure 4C.

Figure 4C Bus Stop Locations



4.17 A summary of the bus routes that serve these stops is provided in Table 4A below.

Table 4A Bus Services

Service No	Route	Frequency		
		Mon-Fri	Sat	Sun
3 Free Bus	Manchester City Centre - Castlefield - Shudehill circular	6 / hr	6 / hr	5 / hr
15	Flixton - Urmston - Stretford - Hulme - Piccadilly Gardens	3 / hr	1 / hr	1 / hr
18	Langley - Middleton - Blackley - Manchester Royal Infirmary	6 / hr	4 / hr	4 / hr
33	Shudehill - Ordsall - Weaste - Eccles - Winton - Worsley	2 / hr	1 / hr	1 / hr
33B	Brookhouse Estate - Langworthy - Ordsall - Shudehill	2 / hr	2 / hr	1 / hr
34/34A	Bryn - Golborne - Leigh - Salford - Piccadilly Gardens	2 / hr	2 / hr	2 / hr
38	Logistics North - Swinton - Salford - Piccadilly Gardens	6 / hr	6 / hr	2 / hr
41 CrossCity	Middleton - Higher Blackley - Bowker Vale - Didsbury - Sale	3 / hr	3 / hr	2 / hr
42	Piccadilly Gardens - Didsbury - Heaton Mersey - Stockport	2 / hr	2 / hr	1 / hr
42A	North Reddish - Heaton Chapel - Piccadilly Gardens	2 / hr	2 / hr	1 / hr
42B/42C	Piccadilly Gardens - Cheadle - Cheadle Hulme - Woodford	2 / hr	2 / hr	1 / hr
43	Manchester Airport - Wythenshawe - Piccadilly Gardens	6 / hr	6 / hr	2 / hr
44	Piccadilly Gardens - Withington - Wythenshawe Hospital	1 / hr	1 / hr	-
85/85A/86	Chorlton - Whalley Range - Hulme - Piccadilly Gardens	6 / hr	6 / hr	3 / hr
101	Piccadilly Gardens - Moss Side - Baguley - Wythenshawe	4 / hr	4 / hr	3 / hr
102/102	Chorlton - Withington - Moss Side - Piccadilly Gardens	4 / hr	4 / hr	2 / hr
108	Timperley - Brooklands - Northern Moor - Piccadilly Gardens	3 / day	-	-
111	Chorlton - Withington - Moss Side - Piccadilly Gardens	6 / hr	6 / hr	3 / hr
113	Middleton - Greengate - Moston - Piccadilly Gardens	1 / day	-	-
114	Albert Square - Moston - Greengate - Middleton - Boarshaw	3 / hr	2 / hr	1 / hr
142	East Didsbury - Fallowfield - Rusholme - Piccadilly Gardens	6 / hr	6 / hr	6 / hr
143	Piccadilly Gardens - Rusholme - Fallowfield - West Didsbury	6 / hr	6 / hr	6 / hr
250/X50	Piccadilly Gardens - Trafford Park - The Trafford Centre	6 / hr	6 / hr	6 / hr
253/255	Partington - Carrington - Stretford - Piccadilly Gardens	2 / hr	2 / hr	2 / hr
256	Flixton - Lostock - Stretford - Hulme - Piccadilly Gardens	5 / hr	5 / hr	2 / hr
263 Sapphire	Piccadilly Gardens - Hulme - Stretford - Sale - Altrincham	4 / hr	3 / hr	2 / hr
X41 Red Express	Manchester City Centre - Haslingden - Baxenden - Accrington	1 / hr	1 / hr	1 / hr
X43 Witchway	Manchester City Centre - Salford - Rawtenstall - Queensgate	3 / hr	3 / hr	2 / hr

Source: <https://tfgm.com/public-transport/bus> as of 13/01/2022

- 4.18 Table 4A demonstrates that the bus stops in the vicinity of the site serve approximately 99 bus services Monday to Friday, in either direction, and approximately 92 buses in each direction on Saturday, and approximately 62 in each direction on a Sunday. This provision of bus services is considered to be excellent.

National Services

4.19 Manchester Coach Station is located on Chorlton Street, less than 250 metres walking distance from the site. The coach station provides intercity buses, operated by national express. The following routes serve this coach station:

- National Express 120: Birmingham – Manchester
- National Express 121: Blackpool – Birmingham
- National Express 170: Liverpool – Leeds
- National Express 171: Manchester – Leeds
- National Express 172: Newcastle – Manchester
- National Express 173: Leeds – Blackpool
- National Express 175: Manchester – Llandudno
- National Express 181: Birmingham – Glasgow
- National Express 182: Edinburgh – Birmingham
- National Express 422: London – Manchester
- National Express 540: Manchester – London

Train

National Rail

4.20 Manchester Piccadilly railway Station is approximately 500 metres from the site (7-minute walk or 3-minute cycle). The station location in relation the siter is shown in Figure 4D.

Figure 4D Train Station Locations



- 4.21 The station is equipped with 43 cycle parking spaces and step-free access to all platforms, via escalators and lifts. This is Manchester's principal railway station, with links to major UK cities, as well as locally.

Tram / Metro

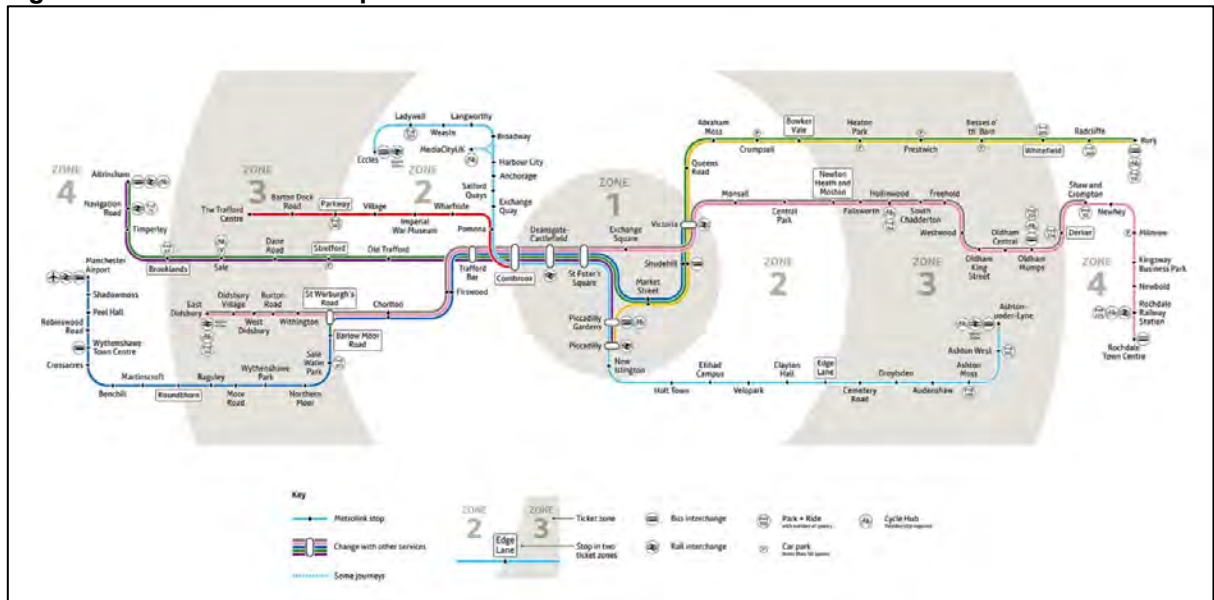
- 4.22 Manchester City Centre benefits from a tram/metro network, which runs near the site, operated by Metrolink. The nearest stop is Piccadilly Gardens, which is approximately 150 metres north of the site (location shown in Figure 4D).

- 4.23 Piccadilly Gardens is served by the following lines:

- Blue Line: Ashton-Under-Lyne – Eccles
- Purple Line: Piccadilly – Altrincham
- Yellow Line: Piccadilly – Bury

- 4.24 There are trams between approximately 05:16 AM and 00:06 AM, with services up to every 12 minutes in each direction during the day. The Metrolink map is shown in Figure 4E.

Figure 4E Metrolink Map



4.25 It is concluded that the accessibility of the site by walking, cycling and public transport is very good, and this is conducive to facilitating sustainable travel.

5.0 Proposed Development

5.1 This application seeks full planning permission for the following development:

“Change of use at 5th floor level from office to flexible office (Use Class E) and education (Use Class F.1).”

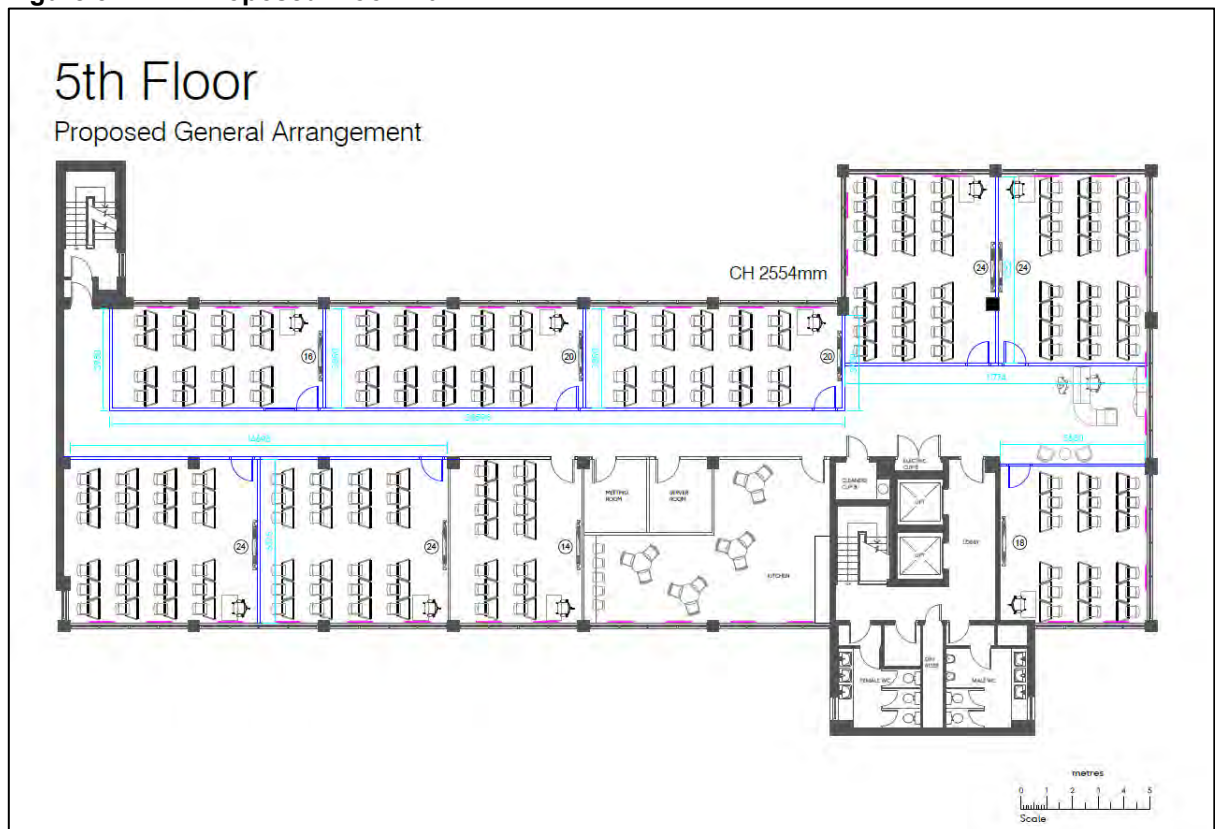
5.2 This will involve the following:

- The proposed change of use of 5th floor level (523sqm) from office to flexible office and education use for Arden University;
- The site will bring forward nine additional staff across academic and professional services;
- A maximum of nine classes will take place at any given time, with an average of 20 students in each class;
- A total of 120 students would be in attendance at any time;
- Operational hours will run from 09:00 – 13:00, 13:30 – 17:30, 17:30 – 21:30 Monday to Friday;

- 42 cycle spaces will be provided;
- Aside from the introduction of additional cycle parking spaces, no physical changes are proposed; and
- No changes are proposed to the servicing arrangements.

5.3 The proposed 5th floor plan is shown in Figure 5A.

Figure 5A **Proposed Floor Plan**



5.4 As per the existing situation, the 5th floor use will be car free. Cycle parking is provided to meet the Council's standards for higher education use. Site users would not be permitted to use the car parking spaces fronting Silver Street.

5.5 Manchester's Core Strategy was adopted on 11 July 2012 and is the key Development Plan document in the Local Development Framework. The Council seeks to ensure that development includes adequate parking provision for cars and bicycles. This should be based on the parking standards described in Appendix B.

5.6 The minimum cycle parking standards are as follows for higher and further education:

Proposed Higher Education Use

- Staff: 1 per 5 members of staff 2 spaces
- Students: 1 per 3 students 40 spaces
- **Total:** **42 spaces**

5.7 It is proposed to provide 42 cycle parking spaces in the form of two-tier racks, close to the building entrance, fronting Major Street. This would be covered, secure, lit and accessible to students and staff.

5.8 A plan of the proposed cycle parking is provided as Appendix 2.0.

6.0 Trip Generation: Higher Education Use

6.1 As mentioned previously, the space will allow for 120 students and nine staff members at any time. It is anticipated that students and staff will arrive via walking, cycling, or public transport (as per the existing situation), given the highly accessible location of the building.

6.2 The TRICS output for total person trips for college/university use is provided as Appendix 3.1 and the mode split is provided as Appendix 3.2. This is summarised in Table 6A.

6.3 It should be noted that there are no car free sites in TRICS for land use college / university, therefore the mode split has been adjusted to take into account the lack of single / multi vehicle occupants.

Table 6A Daily Trips: Higher Education Use

Mode	Mode Split from TRICS (%)	Adjusted Mode Split (%)	Daily Trips (Two-Way)
Pedestrians	47.5%	76.5%	171
Cyclists	2.7%	4.4%	10
Single Vehicle Occupants	20.6%	0%	0
Multi Vehicle Occupants	17.4%	0%	0
Bus/Tram Passengers	9.5%	15.2%	34
Coach Passengers	0.1%	0.2%	1
Total Rail Passengers	2.3%	3.7%	8
Total	100%	100%	224

- 6.4 Table 6A shows that the proposed use of the site would generate 224 two-way person trips on a daily basis. 171 two-way trips would be made by pedestrians, 10 two-way trips made by cyclist, and 43 trips by public transport users.
- 6.5 The proposed multimodal trips are compared to the existing multimodal trips in Table 6B.

Table 6B Daily Trips: Comparison Existing and Proposed

Mode	Existing (Two-Way)	Proposed (Two-Way)	Difference
Pedestrians	77	171	+94
Cyclists	2	10	+8
Single Vehicle Occupants	56	0	-56
Multi Vehicle Occupants	34	0	-34
Bus/Tram Passengers	24	34	+10
Coach Passengers	-	1	+1
Total Rail Passengers	9	8	-1
Total	202	224	+22

- 6.6 Table 6B demonstrates that the proposed use of the site would likely generate more pedestrian, cyclist and public transport user trips than the existing use. As shown in Section 4.0 of this Transport Note, the accessibility of the site to these sustainable modes of transport is very good.
- 6.7 There is zero on-site car parking available to students and staff associated with the proposed 5th floor use, therefore there would no impact on local highway network, given all site users would likely travel by sustainable modes.

7.0 Summary and Conclusions

- 7.1 ADL Traffic & Highways Engineering Ltd (ADL) have been appointed by Arden University to prepare this Transport Note (TN) to support an application for full planning permission for the change of use at 5th floor level from office to flexible office (Use Class E) and education (Use Class F.1) at Barlow House, Minshull Street, Manchester, M1 3DZ.
- 7.2 The site will bring forward nine additional staff across academic and professional services. A maximum of nine classes will take place at any given time, with an average of 20 students in each class. A total of 120 students would be in attendance at any time.
- 7.3 42 cycle spaces will be provided, in a covered, secure and lit cycle store, fronting Major Street. This adheres to Manchester Core Strategy (2012) minimum cycle parking standards.

- 7.4 Aside from the introduction of additional cycle parking spaces, no changes are proposed to the servicing arrangements. As per the existing situation, the development will be car free. Cycle parking is provided to meet the Council's standards for higher education use. Site users would not be permitted to use the car parking spaces fronting Silver Street.
- 7.5 The accessibility of the site to these sustainable modes of transport is very good. It is anticipated that students and staff will arrive via walking, cycling, or public transport (as per the existing situation), given the highly accessible location of the building.

APPENDIX 1.0

TRICS: EXISTING USE

1.1

Total Person Trips

1.2

Mode Split

Calculation Reference: AUDIT-733701-220114-0147

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
09	NORTH	
	TV TEES VALLEY	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 1930 to 3950 (units: sqm)
 Range Selected by User: 178 to 70291 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 19/04/21

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	1 days
Tuesday	1 days
Thursday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	1
Edge of Town Centre	2

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

Selected Location Sub Categories:

Commercial Zone	1
Built-Up Zone	1
No Sub Category	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:

Not Known 3 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000 1 days

15,001 to 20,000 1 days

20,001 to 25,000 1 days

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

Population within 5 miles:

25,001 to 50,000 1 days

250,001 to 500,000 1 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 1 days

1.1 to 1.5 2 days

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

Travel Plan:

Yes 1 days

No 2 days

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

PTAL Rating:

No PTAL Present 3 days

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

LIST OF SITES relevant to selection parameters

1	GM-02-A-09	LEASED OFFICES	GREATER MANCHESTER
	NEW MOUNT STREET		
	MANCHESTER		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	2500 sqm	
	Survey date: MONDAY	26/09/16	Survey Type: MANUAL
2	NY-02-A-02	DISTRICT COUNCIL OFFICES	NORTH YORKSHIRE
	STATION ROAD		
	RICHMOND		
	Edge of Town Centre		
	No Sub Category		
	Total Gross floor area:	1930 sqm	
	Survey date: THURSDAY	14/03/19	Survey Type: MANUAL
3	TV-02-A-04	COUNCIL OFFICES	TEES VALLEY
	CORPORATION ROAD		
	MIDDLESBROUGH		
	Town Centre		
	Commercial Zone		
	Total Gross floor area:	3950 sqm	
	Survey date: TUESDAY	08/10/13	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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BD-02-A-03	Parking not representative
BR-02-A-02	Parking not representative
CA-02-A-05	Parking not representative
CB-02-A-02	Parking not representative
DS-02-A-01	Parking not representative
ES-02-A-12	Parking not representative
ES-02-A-13	Parking not representative
EX-02-A-03	Parking not representative
GM-02-A-08	Parking not representative
HF-02-A-03	Parking not representative
HF-02-A-04	Parking not representative
MS-02-A-02	Parking not representative
NF-02-A-02	Parking not representative
NF-02-A-03	Parking not representative
NY-02-A-01	Parking not representative
SF-02-A-02	Parking not representative
SO-02-A-01	Parking not representative
SO-02-A-02	Parking not representative
TW-02-A-07	Parking not representative
WK-02-A-01	Parking not representative

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

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.51

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	3	2793	0.549	3	2793	0.048	3	2793	0.597
08:00 - 09:00	3	2793	1.527	3	2793	0.358	3	2793	1.885
09:00 - 10:00	3	2793	1.241	3	2793	0.477	3	2793	1.718
10:00 - 11:00	3	2793	0.835	3	2793	0.561	3	2793	1.396
11:00 - 12:00	3	2793	0.585	3	2793	0.561	3	2793	1.146
12:00 - 13:00	3	2793	0.728	3	2793	0.585	3	2793	1.313
13:00 - 14:00	3	2793	0.764	3	2793	0.764	3	2793	1.528
14:00 - 15:00	3	2793	0.549	3	2793	0.692	3	2793	1.241
15:00 - 16:00	3	2793	0.322	3	2793	0.692	3	2793	1.014
16:00 - 17:00	3	2793	0.465	3	2793	1.193	3	2793	1.658
17:00 - 18:00	3	2793	0.119	3	2793	1.134	3	2793	1.253
18:00 - 19:00	3	2793	0.072	3	2793	0.537	3	2793	0.609
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.756			7.602			15.358

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:	1930 - 3950 (units: sqm)
Survey date range:	01/01/13 - 19/04/21
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	20

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 TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

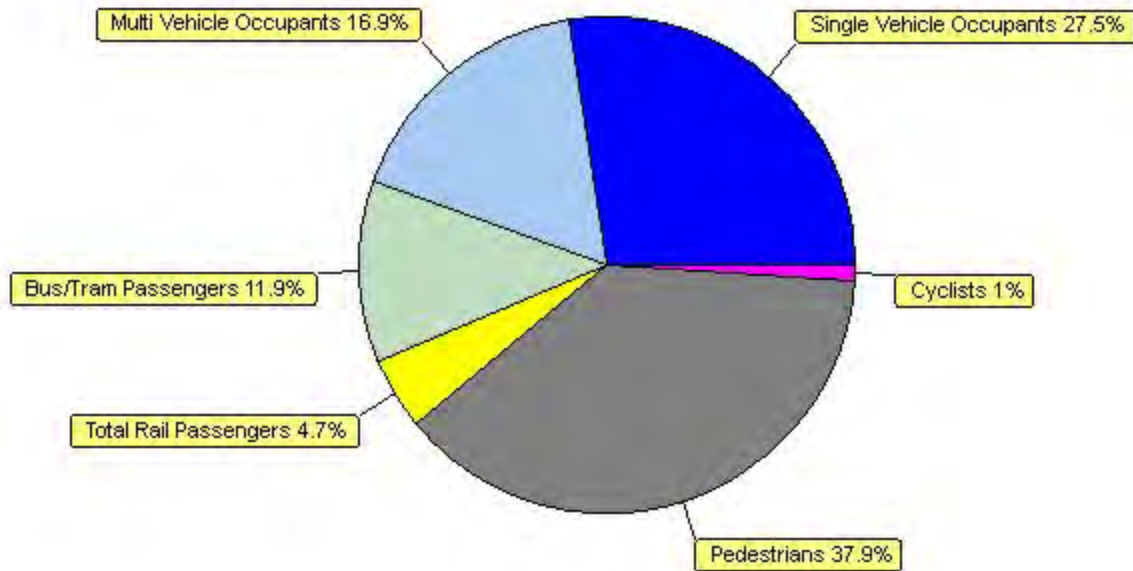
Total People to Total Vehicles ratio (all time periods and directions): 2.51

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	3	2793	0.716	3	2793	0.000	3	2793	0.716
08:00 - 09:00	3	2793	2.959	3	2793	0.430	3	2793	3.389
09:00 - 10:00	3	2793	3.031	3	2793	0.931	3	2793	3.962
10:00 - 11:00	3	2793	1.790	3	2793	1.169	3	2793	2.959
11:00 - 12:00	3	2793	1.432	3	2793	1.396	3	2793	2.828
12:00 - 13:00	3	2793	2.088	3	2793	2.828	3	2793	4.916
13:00 - 14:00	3	2793	2.733	3	2793	2.852	3	2793	5.585
14:00 - 15:00	3	2793	2.053	3	2793	2.029	3	2793	4.082
15:00 - 16:00	3	2793	1.348	3	2793	1.933	3	2793	3.281
16:00 - 17:00	3	2793	0.907	3	2793	2.053	3	2793	2.960
17:00 - 18:00	3	2793	0.167	3	2793	2.291	3	2793	2.458
18:00 - 19:00	3	2793	0.084	3	2793	1.253	3	2793	1.337
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			19.308			19.165			38.473

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.

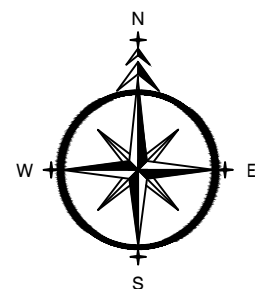
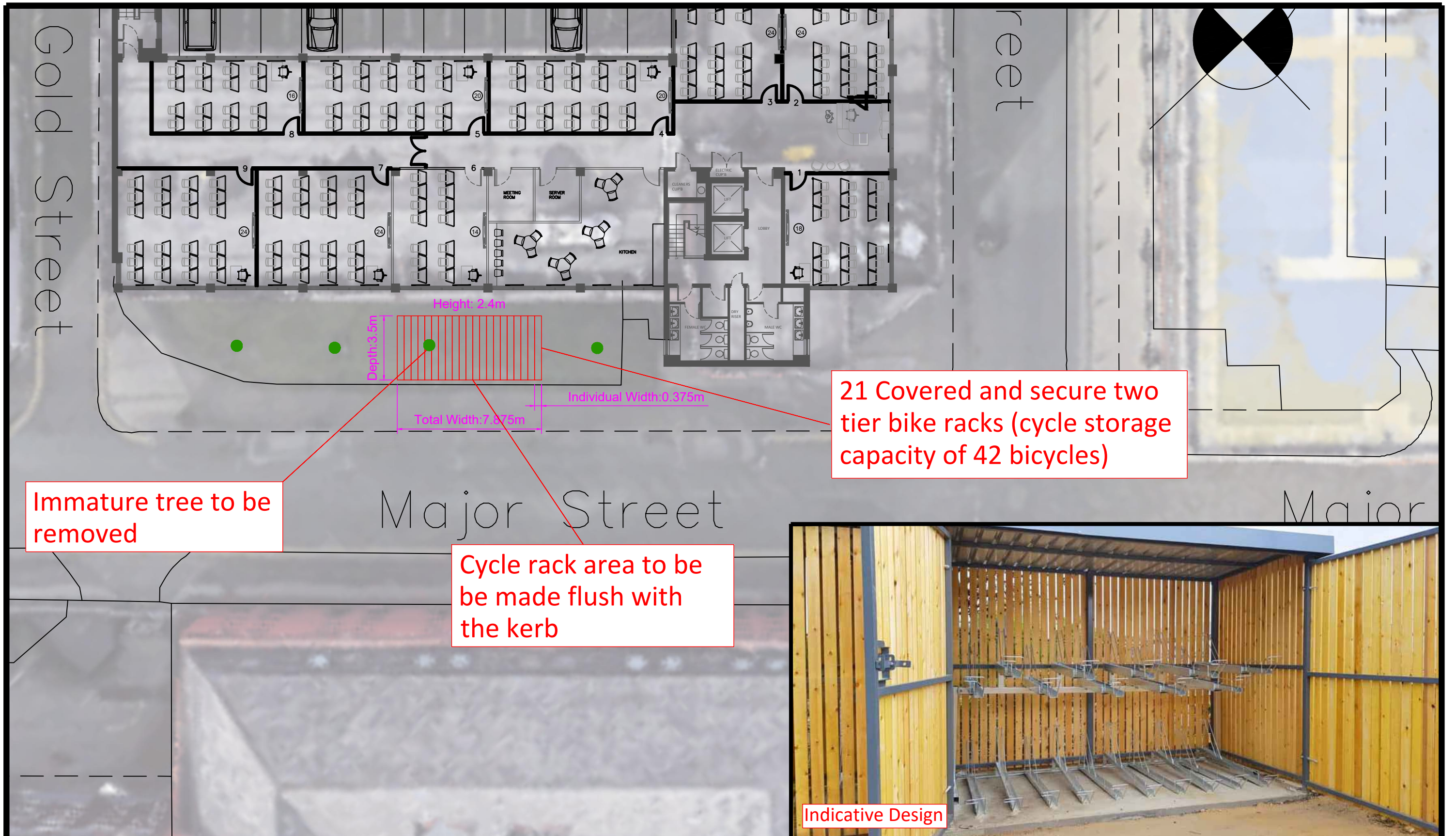
Modal Split Percentages



Time Range/Peak Period Selection

Direction: Totals / Use All Times

PROPOSED CYCLE PARKING PLAN



ADL
T R A F F I C &
H I G H W A Y S

ADL House
The Oaklands Business Park
Yate, Bristol
BS37 5NA
Tel : 01454 332100
Fax : 01454 327983
E-Mail : CAD@ADLTRAFFIC.CO.UK

NOTES

1. PRELIMINARY DESIGN PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. ALL DETAILS ARE SUBJECT TO INCLUDING CHECKING STATUTORY SERVICE APPARATUS.
2. DO NOT SCALE FROM THIS DRAWING.
3. BACKGROUND PLAN IS BASED UPON A DIGITAL OSBASE.
4. ALL DETAILS TO BE CONFIRMED ON SITE AND ON A TOPOGRAPHICAL SURVEY.
5. ALL TRACKS ASSUME GRADIENTS AND CAMBERS DO NOT EXCEED 1:60 AND 1:40 RESPECTIVELY OTHERWISE VEHICLE MANOEUVRABILITY MAY BE AFFECTED.
6. ALL LAND OWNERSHIP DETAILS, EXTENT OF ADOPTED HIGHWAY AND RIGHTS OF WAY TO BE CONFIRMED.
7. ASSUMES ALL LANDSCAPING CAN BE ALTERED AND NO TREES ARE SUBJECT TO TPO.

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AMENDMENTS

REF.	DATE	DESCRIPTION

ADL Job No.

5373

Project
BARLOW HOUSE,
MANCHESTER

Title
PROPOSED CYCLE
PARKING

Date
18/01/2021

Drawn
MAW

Checked
Date
Approved
Date

Scale
1:100 @ A3

Dwg No.
Appendix 2.0

Rev.

TRICS: PROPOSED USE

3.1	Total Person Trips
3.2	Mode Split

Calculation Reference: AUDIT-733701-220114-0103

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BU BUCKINGHAMSHIRE	1 days
	WS WEST SUSSEX	2 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Number of students
 Actual Range: 1456 to 3795 (units:)
 Range Selected by User: 360 to 16000 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 25/04/18

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	1 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	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	4
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	2
No Sub Category	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:

F1(a) 4 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

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

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

Population within 5 miles:

50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	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	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:

Yes	3 days
No	1 days

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

PTAL Rating:

No PTAL Present	4 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BU-04-C-01	UNIVERSITY		BUCKINGHAMSHIRE
	QUEEN ALEXANDRA ROAD			
	HIGH WYCOMBE			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of students:	3795		
	Survey date: TUESDAY	24/01/17	Survey Type: MANUAL	
2	CA-04-C-02	COLLEGE		CAMBRIDGESHIRE
	BROOK STREET			
	PETERBOROUGH			
	Edge of Town Centre			
	Built-Up Zone			
	Total Number of students:	3000		
	Survey date: MONDAY	17/10/16	Survey Type: MANUAL	
3	WS-04-C-06	UNIVERSITY OF CHICHESTER		WEST SUSSEX
	UPPER BOGNOR ROAD			
	BOGNOR REGIS			
	Edge of Town Centre			
	Residential Zone			
	Total Number of students:	1456		
	Survey date: WEDNESDAY	25/04/18	Survey Type: MANUAL	
4	WS-04-C-07	UNIVERSITY OF CHICHESTER		WEST SUSSEX
	COLLEGE LANE			
	CHICHESTER			
	Edge of Town Centre			
	No Sub Category			
	Total Number of students:	3574		
	Survey date: TUESDAY	24/04/18	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 TOTAL PEOPLE

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

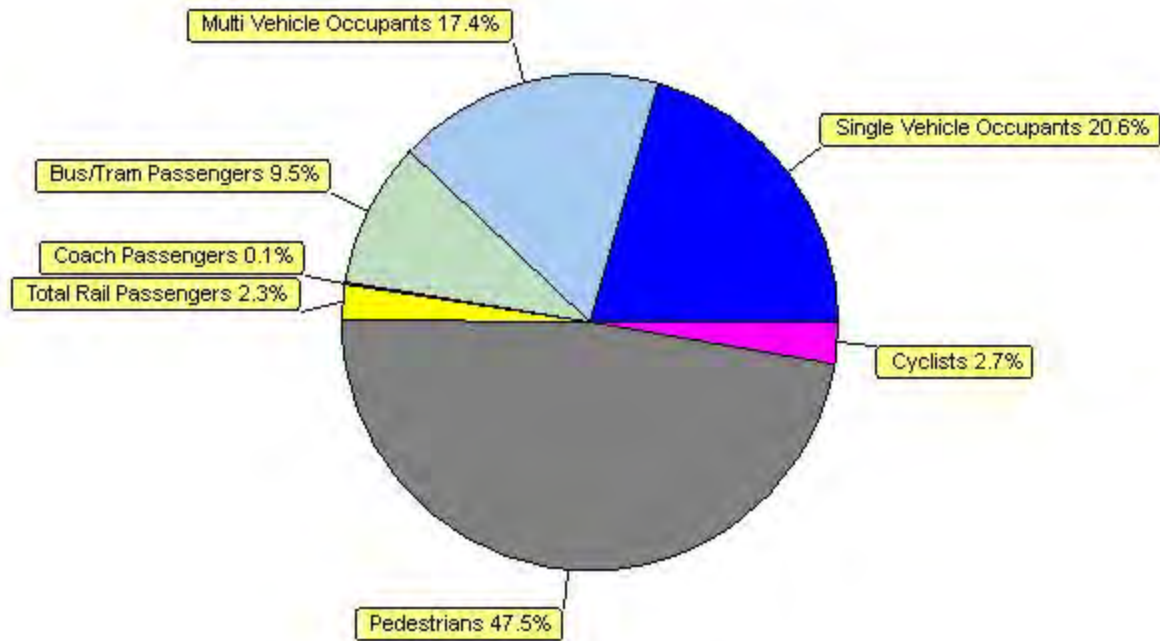
Total People to Total Vehicles ratio (all time periods and directions): 3.49

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	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	4	2956	0.031	4	2956	0.010	4	2956	0.041
08:00 - 09:00	4	2956	0.122	4	2956	0.034	4	2956	0.156
09:00 - 10:00	4	2956	0.121	4	2956	0.043	4	2956	0.164
10:00 - 11:00	4	2956	0.083	4	2956	0.052	4	2956	0.135
11:00 - 12:00	4	2956	0.071	4	2956	0.061	4	2956	0.132
12:00 - 13:00	4	2956	0.083	4	2956	0.099	4	2956	0.182
13:00 - 14:00	4	2956	0.084	4	2956	0.083	4	2956	0.167
14:00 - 15:00	4	2956	0.068	4	2956	0.083	4	2956	0.151
15:00 - 16:00	4	2956	0.060	4	2956	0.086	4	2956	0.146
16:00 - 17:00	4	2956	0.045	4	2956	0.094	4	2956	0.139
17:00 - 18:00	4	2956	0.050	4	2956	0.085	4	2956	0.135
18:00 - 19:00	4	2956	0.048	4	2956	0.060	4	2956	0.108
19:00 - 20:00	4	2956	0.037	4	2956	0.061	4	2956	0.098
20:00 - 21:00	4	2956	0.019	4	2956	0.042	4	2956	0.061
21:00 - 22:00	4	2956	0.013	4	2956	0.030	4	2956	0.043
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.935				0.923	1.858	

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Modal Split Percentages



Time Range/Peak Period Selection

Direction: Totals / Use All Times