

**3175-01-TS01
February 2022**

**PROPOSED RESIDENTIAL DEVELOPMENT
FORMER VASA CLUB, WHITE MOSS ROAD, MANCHESTER**

Transport Statement

Prepared on behalf of:

AIY Ltd



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CONTENTS

1.0	INTRODUCTION	4
1.1	Purpose of This Report	4
1.2	Report Structure	4
2.0	EXISTING CONDITIONS.....	5
2.1	Site Location.....	5
2.2	Local Highway Network.....	6
2.3	Highway Safety	6
3.0	ACCESSIBILITY.....	8
3.1	General.....	8
3.1	Pedestrian Accessibility	8
3.2	Cycle Accessibility	9
3.3	Accessibility by Public Transport.....	11
4.0	PROPOSED DEVELOPMENT.....	13
4.1	General.....	13
4.2	Access Arrangements	13
4.3	Traffic Generation Forecasts.....	14
5.0	CAR PARKING	18
5.1	General.....	18
5.2	Accessibility.....	19
5.3	2011 Census Car Ownership Levels	19
5.4	Car Parking Accumulation.....	20
6.0	SUMMARY AND CONCLUSIONS.....	22

PLANS

Plan 2.1 – Local Highway Network	5
Plan 2.2 – PIA Data (2018 - 2020 inclusive).....	7
Plan 3.1 – 2km Walk Catchment	9
Plan 3.2 – 5km Cycle Catchment	10

TABLES

Table 3.1 – Bus Services	11
Table 3.2 – Rail Services (Moston Railway Station)	12
Table 4.1 – Proposed Traffic Generation (Apartments)	15
Table 4.2 – Proposed Traffic Generation (Houses)	16
Table 4.3 – Proposed Traffic Generation (Total).....	17
Table 5.1 – 2011 Census Data – Local Car Ownership Levels	20
Table 5.2 - Car Parking Accumulation	21

APPENDICES

APPENDIX 1 – PROPOSED SITE LAYOUT PLANS

APPENDIX 2 – DRAWING NO. 3175-01-ATR01: SWEPT PATH ANALYSIS AND VISIBILITY

SPLAYS

APPENDIX 3 – TRICS OUTPUTS

APPENDIX 4 – CAR PARKING ACCUMULATION EXERCISE

1.0 INTRODUCTION

1.1 Purpose of This Report

- 1.1.1 AXIS has been appointed by AIY Ltd to provide highways and transport advice in relation to a proposed residential development of the former Vasa Club off White Moss Road in Manchester.
- 1.1.2 The proposal is for the demolition of the existing Vasa Club and the redevelopment of the site to feature 20 no. houses and 16 no. apartments. The proposed site layout plan is provided in **Appendix 1**.
- 1.1.3 This Transport Statement (TS) has been prepared to inform the Local Planning Authority (LPA) and Local Highway Authority (LHA) of the highways and transport related implications of the proposal. The LPA and LHA in this context is Manchester City Council (MCC).

1.2 Report Structure

- 1.2.1 The structure of this TS is as follows:
- **Chapter 2** describes the existing conditions on and around the site, including reference to the local highway network and a review of the accident record;
 - **Chapter 3** provides a review of the site's accessibility by walking, cycling and public transport modes;
 - **Chapter 4** sets out details of the proposed development, including a description of the anticipated traffic generating potential of the development and site access and servicing arrangements;
 - **Chapter 5** provides a review of the proposed parking arrangements; and,
 - **Chapter 6** provides the summary and conclusions.

2.0 EXISTING CONDITIONS

2.1 Site Location

2.1.1 The application site is located on the site of the former Vasa Club off White Moss Road in Manchester. The site is situated approximately 1.65km north-east of North Manchester General Hospital and approximately 2.6km west of Moston Railway Station. The area surrounding the site is primarily residential in nature.

2.1.2 The location of the site in relation to the local highway network is shown on **Plan 2.1**.

Plan 2.1 – Local Highway Network



2.1.3 The application site currently comprises the Vasa Club, which is closed. The site is bordered by Blackley Community Fire Station to the north, White Moss Road to the east and south, and Rochdale Road to the west.

2.2 Local Highway Network

White Moss Road

2.2.1 White Moss Road is a two-way single lane road that runs in an approximately north-east / south-west alignment in the vicinity of the site. The road runs from the White Moss Road / Rochdale Road ghost island right turn priority junction at the south-western corner of the site, to a point circa 900m north-east where the road terminates with bollards.

2.2.2 The road features a circa 7.0m carriageway width with a circa 3.0m wide footway on the northern side of the road and a circa 2.0m wide footway on the southern side of the road. White Moss Road is subject to a 20mph speed limit and is well lit with street lighting.

Rochdale Road

2.2.3 Rochdale is a two-way, two-lane road that runs in an approximately north / south alignment along the western boundary of the site. The road is a major arterial route into / out of Manchester and runs from the Rochdale Road / Ring Road signalised junction circa 5km to the south of the site to the Rochdale Road / Oldham Road / Park Road Roundabout circa 2.5km north of the site.

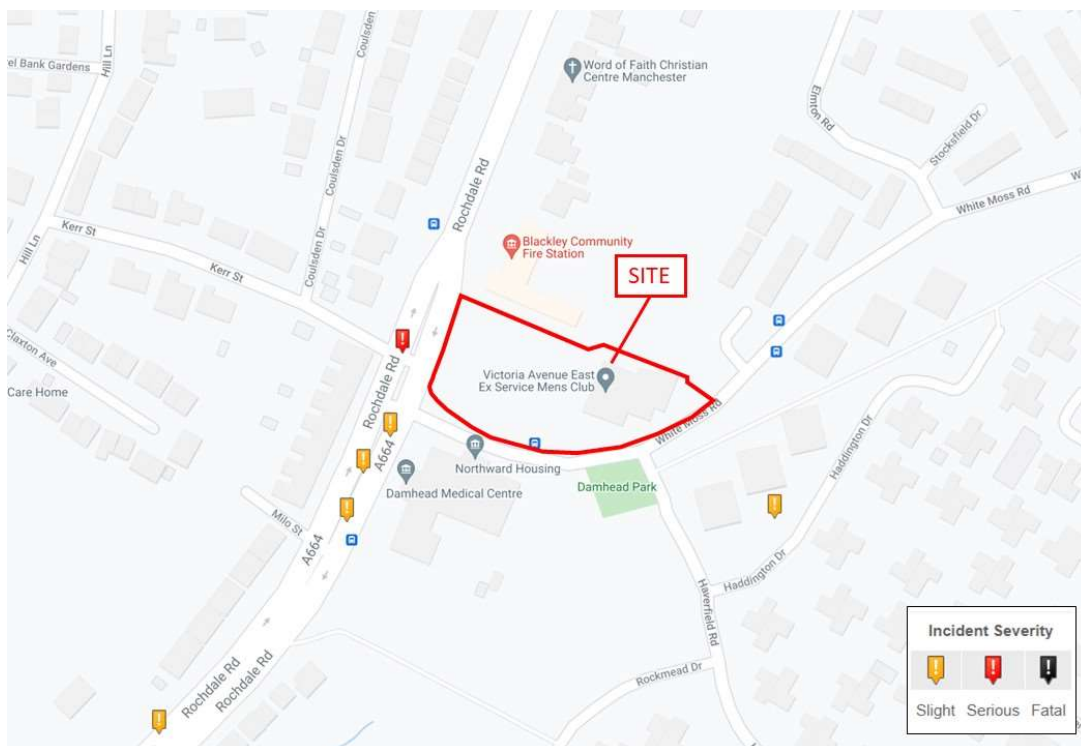
2.2.4 The road features a circa 16.5m – 17.5m carriageway width in the vicinity of the site, including bus lanes on both sides of the road and a ghost island right turn lane in the vicinity of the Rochdale Road / White Moss Road junction.

2.2.5 There are circa 3.0m wide pedestrian footways on both sides of the road, with pedestrian crossing infrastructure including tactile paving crossing points and a staggered pelican crossing in the vicinity of the site. Rochdale Road is subject to a 30mph speed limit and is well lit with street lighting.

2.3 Highway Safety

2.3.1 Personal Injury Accident (PIA) data for the highway network adjacent to the site has been obtained from the online CrashMap resource (www.crashmap.co.uk). Data was extracted for the most recently available three-year period which is 2018 to 2020 inclusive. The location and severity of the accidents are shown on **Plan 2.2**.

Plan 2.2 – PIA Data (2018 - 2020 inclusive)



2.3.2 **Plan 2.2** shows that 6 accidents have occurred during the assessed period, with 5 accidents resulting in 'slight' injury and 1 accident resulting in 'serious' injury. When considered volumetrically this equates to 2 accident per year on average.

2.3.3 The accident record is not considered to be unusually onerous, especially given that Rochdale Road carries in the region of 17,000+ daily two-way trips at this location. Therefore, it is considered that the existing accident record does not present a material concern in the context of the proposed development.

3.0 ACCESSIBILITY

3.1 General

3.1.1 Paragraph 105 of the NPPF states that:

“Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.”

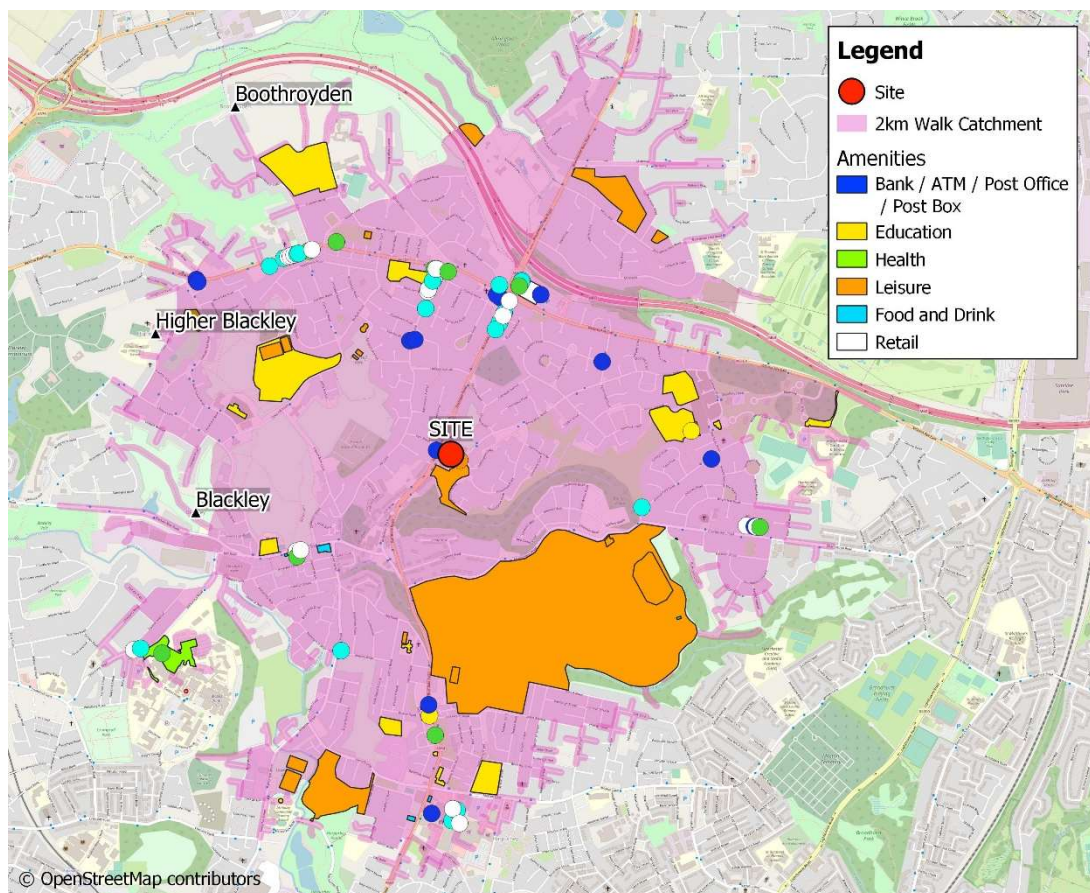
3.1.2 To demonstrate the site’s compliance with the above, this section of the report examines the accessibility of the site by non-car modes of transport through consideration of the following modes:

- Accessibility on foot;
- Accessibility by cycle; and,
- Accessibility on public transport.

3.1 Pedestrian Accessibility

3.1.1 Access between the site and local areas by foot has been assessed using the 2km preferred maximum walking distance suggested in the Institution for Highways and Transportation’s (IHT’s, now CIHT’s) *“Guideline for Providing for Journeys on Foot”* document, as shown on **Plan 3.1**. This equates to a 24 minute walk, assuming a 1.4m/s walk speed.

Plan 3.1 – 2km Walk Catchment



3.1.2 As illustrated on **Plan 3.1**, the site is within walking distance of a large part of the built up area surrounding Blackley.

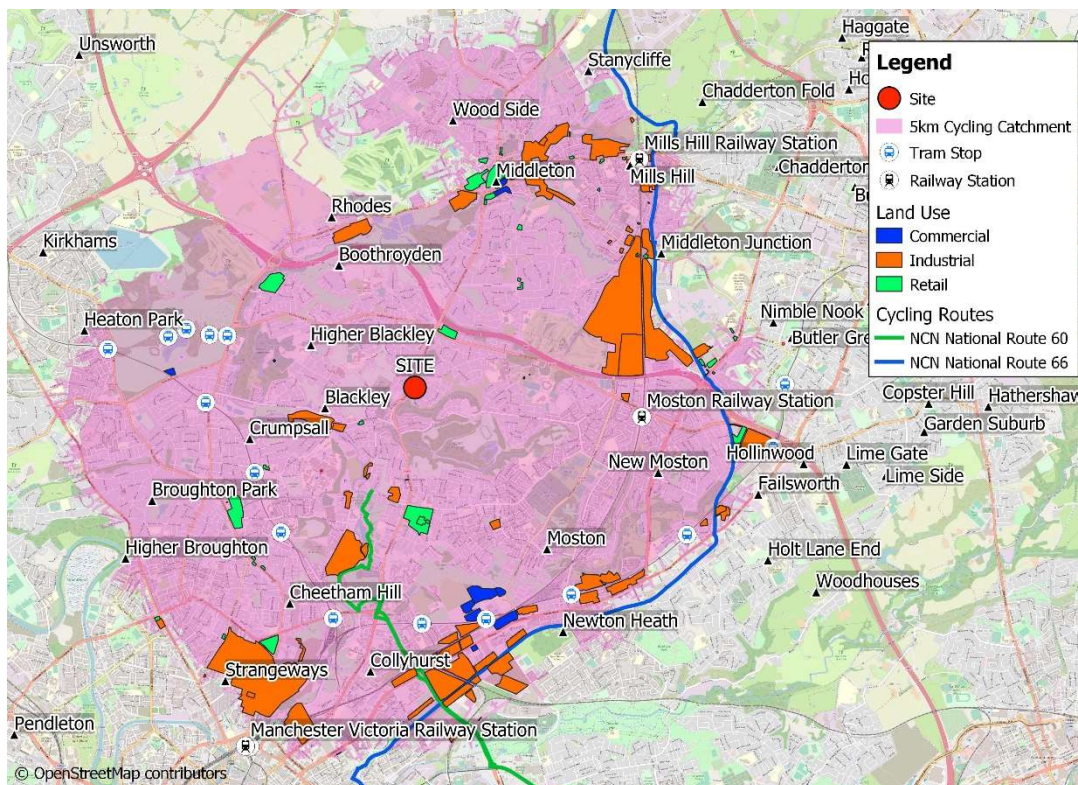
3.1.3 **Plan 3.1** shows that there are a wide range of local amenities within a reasonable waking distance to and from the site. The site is well connected to these amenities via good quality existing pedestrian infrastructure which includes wide footways, tactile paving crossing points and street lighting.

3.2 Cycle Accessibility

3.2.1 Previous transport guidance identifies that cycling represents a realistic and healthy alternative to the private car when making journeys up to 5km as a whole journey or as part of a longer journey by public transport.

3.2.2 The accessibility of the development has been assessed to determine reachable areas for a 5km cycle journey from the site, as shown on **Plan 3.2**.

Plan 3.2 – 5km Cycle Catchment



- 3.2.3 **Plan 3.2** shows that a large part of Manchester, including Moston, Cheetham Hill and Middleton amongst others all lie within a 5km cycle distance from the site.
- 3.2.4 In addition to the amenities outlined on **Plan 3.1** earlier, there are a significant number of commercial, industrial and retail employment opportunities within a 5km cycle of the site, thus allowing potential residents to commute to work by cycle.
- 3.2.5 **Plan 3.2** shows that there are two national cycle routes in the area; the National Cycle Network (NCN) Route 60 and Route 66. These provide a combination of high quality on and off-street cycle infrastructure. The site is therefore well situated to allow prospective residents to carry out longer journeys by cycle.
- 3.2.6 Moston Railway Station is located circa 3.2km cycle from the site. The site is therefore well located to allow multimodal trips to be made by cycle / rail.
- 3.2.7 It should also be noted that the local highway network surrounding the application site is well-lit by street lighting, and the topography of the area is largely flat, thereby providing conditions which are conducive to cycling.

3.3 Accessibility by Public Transport

Bus

3.3.1 The site is located within a short walk of a number of bus stops served by regular bus services. Key local bus stops are located as follows:

- White Moss Road (eastbound) (circa 45m walk distance from the proposed pedestrian access);
- White Moss Road (westbound) (circa 150m walk distance);
- Rochdale Road (northbound) (circa 70m walk distance); and,
- Rochdale Road (southbound) (circa 80m walk distance).

3.3.2 Guidance from the Chartered Institution of Highways and Transportation (CIHT) document *“Guidelines for Planning for Public Transport in Development”* recommends that the walk distance from a new development should ideally be 300m, or a maximum of 400m. The bus stops near the site are therefore within the CIHT’s ideal 300m walk distance threshold.

3.3.3 The bus services available from the bus stops are summarised in **Table 3.1**.

Table 3.1 – Bus Services

Service Number	Route	Frequency (per hour)
115	Middleton - North Manchester General Hospital (via Harpurhey)	1
116	Middleton - North Manchester General Hospital	1
119	Manchester - Middleton	2
17	Rochdale Interchange to Manchester Shudehill Interchange	6
18	Langley to Manchester Royal Infirmary	6
18	Manchester Royal Infirmary to Langley	6
163	Bury Interchange to Manchester Piccadilly	5
163	Manchester Piccadilly to Bury Interchange	5
Total		32

3.3.4 **Table 3.1** shows that in total the nearby bus stops provide 32 services per hour which equates to roughly one service every 2 minutes on average. This is considered to be a very high rate.

Rail

- 3.3.5 The rail services available from the closest railway station (Moston Railway Station) are summarised in **Table 3.2**.

Table 3.2 – Rail Services (Moston Railway Station)

Destination	Frequency
Clitheroe	1 per hour
Leeds	1 per 2 hours
Manchester Victoria	1 per 2 hours
Rochdale	1 per hour
Total	3 per hour

- 3.3.6 **Table 3.2** shows that in total Moston Railway Station provides 3 services per hour which equates to roughly one service every 20 minutes. Based on the evidence presented above, the existing rail infrastructure therefore provides a realistic opportunity for site-related trips to be made by rail.

4.0 PROPOSED DEVELOPMENT

4.1 General

4.1.1 The proposal is for a residential development comprising 20 no. houses and 16 no. apartments.

4.1.2 The proposed site layout plans are provided in **Appendix 1**.

4.2 Access Arrangements

4.2.1 Vehicular access to the site will be provided via a new site access junction off White Moss Road. The existing site access will be removed as part of the proposal.

4.2.2 The proposed site access junction will feature a simple priority-controlled design with circa 2.5m corner radii and a circa 5.5m width on the internal site access road.

4.2.3 3 no. direct access parking bays are proposed off White Moss Road. White Moss Road is a slowly trafficked residential road with good forward visibility on the approach to the proposed direct access bays. **Drawing No. 3175-01-ATR01** in **Appendix 2** shows that it will be possible to achieve 2m x 2m pedestrian visibility splays from each of the proposed driveways, measured from the rear of the footway crossing in accordance with the measurement methodology outlined on Figure 3.3 of the Design Manual for Roads and Bridges (DMRB) CD123. It is not therefore considered that direct access could reasonably result in any material impact on highway safety.

4.2.4 **Drawing No. 3175-01-ATR01** in **Appendix 2** demonstrates that it will be possible for a family saloon car to access and manoeuvre within the site satisfactorily. The drawing also shows that it will be possible for a family saloon car to access and egress the proposed direct access parking bays off White Moss Road.

4.2.5 **Drawing No. 3175-01-ATR01** in **Appendix 2** also demonstrates that the minimum junction visibility splay requirements of 2.4m x 22m to the east and west of the proposed site access junction will be achievable, in accordance with standards outlined in Table 7.1 of the Manual for Streets (MfS) for a 20mph road. The proposed site access is thereby considered to provide sufficient visibility for turning vehicles to safely egress the site.

4.2.6 Pedestrian access to the site will be provided via a new pedestrian footway link into the site from Rochdale Road, as shown on the site layout plan in **Appendix 1**.

4.2.7 **Servicing**

4.2.8 Refuse collection will be taken directly off Rochdale Road from the proposed bin collection point on the western side of the site, and off White Moss Road from the side-alleys of the proposed houses on the eastern side of the site.

4.2.9 Rochdale Road features a no-loading zone from 7:00am – 10:00am and 4:00pm – 7:00pm. Refuse collection will therefore be conducted outside of these times. This accords with the refuse collection strategy for other dwellings accessed off Rochdale Road.

4.2.10 **Drawing No. 3072-01-ATR01** in **Appendix 2** shows that it will be possible for a refuse vehicle to park within 25m of the proposed bin stores in accordance with paragraph 6.8.9 of the Manual for Streets (MfS).

4.3 **Traffic Generation Forecasts**

4.3.1 The traffic-generating potential of the proposed development has been forecast using trip rates from the industry-standard TRICS Database.

Proposed Apartments

4.3.2 The following search criteria has been applied within TRICS to obtain suitable trip rates for the apartments element of the proposal:

- 'Residential – Flats Privately Owned';
- Sites in Greater London and Ireland excluded;
- Weekday surveys only;
- Only sites in 'Edge of Town Centre' and 'Suburban Area' locations have been selected;
- Selection by number of dwellings (5 to 35 dwellings); and,
- The default date range has been selected.

4.3.3 The full TRICS outputs are contained in **Appendix 3**.

4.3.4 **Table 4.1** shows the weekday peak hour two-way vehicle trip rates and the resultant traffic forecasts when these trip rates are applied to the proposed apartments element of the development (16 apartments).

Table 4.1 – Proposed Traffic Generation (Apartments)

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Trip Rate (per dwelling)			
Arrivals	0.073	0.195	1.262
Departures	0.185	0.122	1.312
Two-way	0.258	0.317	2.574
Trip Generation (16 dwellings)			
Arrivals	1	3	20
Departures	3	2	21
Two-way	4	5	41

4.3.5 **Table 4.1** shows that the apartments element of the proposed development is forecast to result in an increase of 4 two-way vehicle movements in the AM peak hour and 5 two-way vehicle movements in the PM peak hour. Additionally, there will be an increase of around 41 two-way vehicle movements over the course of an average weekday.

Proposed Houses

4.3.6 The following search criteria has been applied within TRICS to obtain suitable trip rates for the housing element of the proposal:

- 'Residential – Houses Privately Owned';
- Sites in Greater London and Ireland excluded;
- Weekday surveys only;
- Only sites in 'Edge of Town Centre' and 'Suburban Area' locations have been selected;
- Selection by number of dwellings (10 to 40 dwellings); and,
- The default date range has been selected.

4.3.7 The full TRICS outputs are contained in **Appendix 3**.

- 4.3.8 **Table 4.2** shows the weekday peak hour two-way vehicle trip rates and the resultant traffic forecasts when these trip rates are applied to the proposed housing element of the development (20 houses).

Table 4.2 – Proposed Traffic Generation (Houses)

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Trip Rate (per dwelling)			
Arrivals	0.182	0.303	2.427
Departures	0.413	0.2	2.544
Two-way	0.595	0.503	4.971
Trip Generation (20 dwellings)			
Arrivals	4	6	49
Departures	8	4	51
Two-way	12	10	99

- 4.3.9 **Table 4.2** shows that the housing element of the proposed development is forecast to result in an increase of 12 two-way vehicle movements in the AM peak hour and an increase of 10 two-way vehicle movements in the PM peak hour. Additionally, there will be an increase of around 99 two-way vehicle movements over the course of an average weekday.

Total Traffic Generation

- 4.3.10 The combined traffic generation of the proposed apartments and houses are shown in **Table 4.3**.

Table 4.3 – Proposed Traffic Generation (Total)

	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)	Daily
Trip Generation			
Arrivals	5	9	69
Departures	11	6	72
Two-way	16	15	140

- 4.3.11 **Table 4.3** shows that in total the proposed development is expected to generate approximately 16 two-way vehicle movements in the AM peak hour and 15 two-way vehicle movements in the PM peak hour. Additionally, the proposed uses are expected to give rise to around 140 two-way vehicle movements over the course of a typical weekday.
- 4.3.12 When considered volumetrically this equates to approximately one additional movement every 4 minutes during the AM and PM peak hours, on average. This is an immaterial amount that would be imperceptible to a casual observer.

5.0 CAR PARKING

5.1 General

5.1.1 MCC's car parking standards are outlined in Appendix B of the "*Manchester's Local Development Framework Core Strategy Development Plan Document*" (2012). However, the document does not provide parking standards for a C3 use class (dwelling houses).

5.1.2 It is understood that MCC Highways adopt the position that the parking levels at residential sites should be determined on a case by case basis. Subsequent sections of this chapter therefore provide evidence that the proposed parking arrangements are appropriate in this case.

5.1.3 As shown on the proposed site layout plans in **Appendix 1**, the proposed development will feature 36 no. car parking bays and 46 no. cycle parking spaces. Overall, this equates to a 100% car parking provision and a 128% cycle parking provision.

5.1.4 At the national policy level, paragraph 107 of the National Planning Policy Framework (NPPF, 2021) provides the following guidance:

"If setting local parking standards for residential and non-residential development, policies should take into account:

a) the accessibility of the development;

b) the type, mix and use of development;

c) the availability of and opportunities for public transport;

d) local car ownership levels; and

e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles."

5.1.5 With regard to the particular guidance set out above, subsequent sections of this chapter provide further evidence that the proposed level of parking is appropriate in this case.

5.2 Accessibility

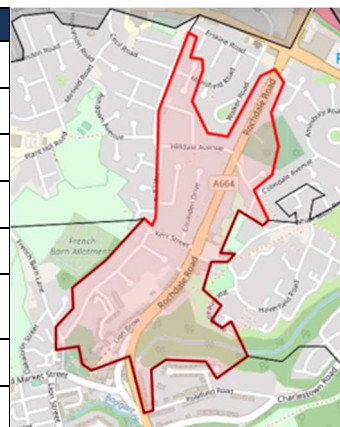
- 5.2.1 The provision of fewer car parking bays in sustainably located developments, where there is good access to alternative forms of transport to the private car encourages the use of those alternative modes, including travel by foot, cycle and public transport.
- 5.2.2 As detailed in **Chapter 3** earlier, it is considered that the site benefits from a high level of accessibility by the main non-car modes of transport, being within walking distance of a number of local amenities, within cycling distance of various settlements via high quality routes and having good access to bus and rail services.
- 5.2.3 In these circumstances, the requirement for car ownership is less than might otherwise be the case, and the proposed level of parking should therefore be more than sufficient to cater for the proposed development. The use of these more sustainable travel modes will be encouraged further still amongst prospective residents through measures included in the Framework Travel Plan which accompanies this application.

5.3 2011 Census Car Ownership Levels

- 5.3.1 In the absence of any definitive parking standards, the level of residential parking in the surrounding area has been derived from 2011 census data for car ownership.
- 5.3.2 The 2011 census data has been interrogated to determine the existing local car ownership levels around the site. Data for the smallest census 'output area' (within which the site lies) has been obtained. This will therefore give an indication of how many cars might be owned by occupants of the proposed development.
- 5.3.3 It should be noted that the majority of the dwellings within the output area are houses and are therefore likely to have a higher ownership level than the proposed apartments, therefore this comparison / analysis is likely to be robust.
- 5.3.4 The census data for car ownership is summarised in **Table 5.1**.

Table 5.1 – 2011 Census Data – Local Car Ownership Levels

Car/Van Availability	Manchester 002C Output Area
Total Households	637
No Cars or Vans in Household	206
1 Cars or Vans in Household	287
2 Cars or Vans in Household	122
3 Cars or Vans in Household	15
4 or More Cars or Vans in Household	7
All Cars or Vans in Area	604
Percentage Car Ownership	95%



5.3.5 **Table 5.1** shows that car ownership is at only 95% within the local Census output area.

5.3.6 Given that the proposed development will ultimately comprise 36 total residential units, on the basis of local car ownership levels it might therefore be expected that the development would give rise to a maximum parking demand for 34 parking spaces.

5.3.7 The proposed level of parking (36 car parking spaces) can therefore comfortably accommodate the expected parking demand of the development with an additional capacity of 2 car parking bays to cater for any occasional spike in parking demand.

5.4 Car Parking Accumulation

5.4.1 The car parking demand of the proposed development has also been forecast utilising the anticipated traffic generation of the development as outlined in **Section 4.3**. The results of this car parking accumulation assessment are detailed in **Table 5.2** and the full car park accumulation / demand assessment is contained in **Appendix 4**.

Table 5.2 - Car Parking Accumulation

Hour	Car Parking Accumulation
00:00-01:00	34
01:00-02:00	34
02:00-03:00	34
03:00-04:00	34
04:00-05:00	34
05:00-06:00	34
06:00-07:00	34
07:00-08:00	33
08:00-09:00	30
09:00-10:00	29
10:00-11:00	28
11:00-12:00	29
12:00-13:00	30
13:00-14:00	29
14:00-15:00	29
15:00-16:00	29
16:00-17:00	30
17:00-18:00	32
18:00-19:00	33
19:00-20:00	33
20:00-21:00	33
21:00-22:00	33
22:00-23:00	33
23:00-24:00	33

5.4.2 **Table 5.2** above demonstrates that the maximum level of car park occupancy is expected to be overnight with a maximum car parking demand of 34 vehicles.

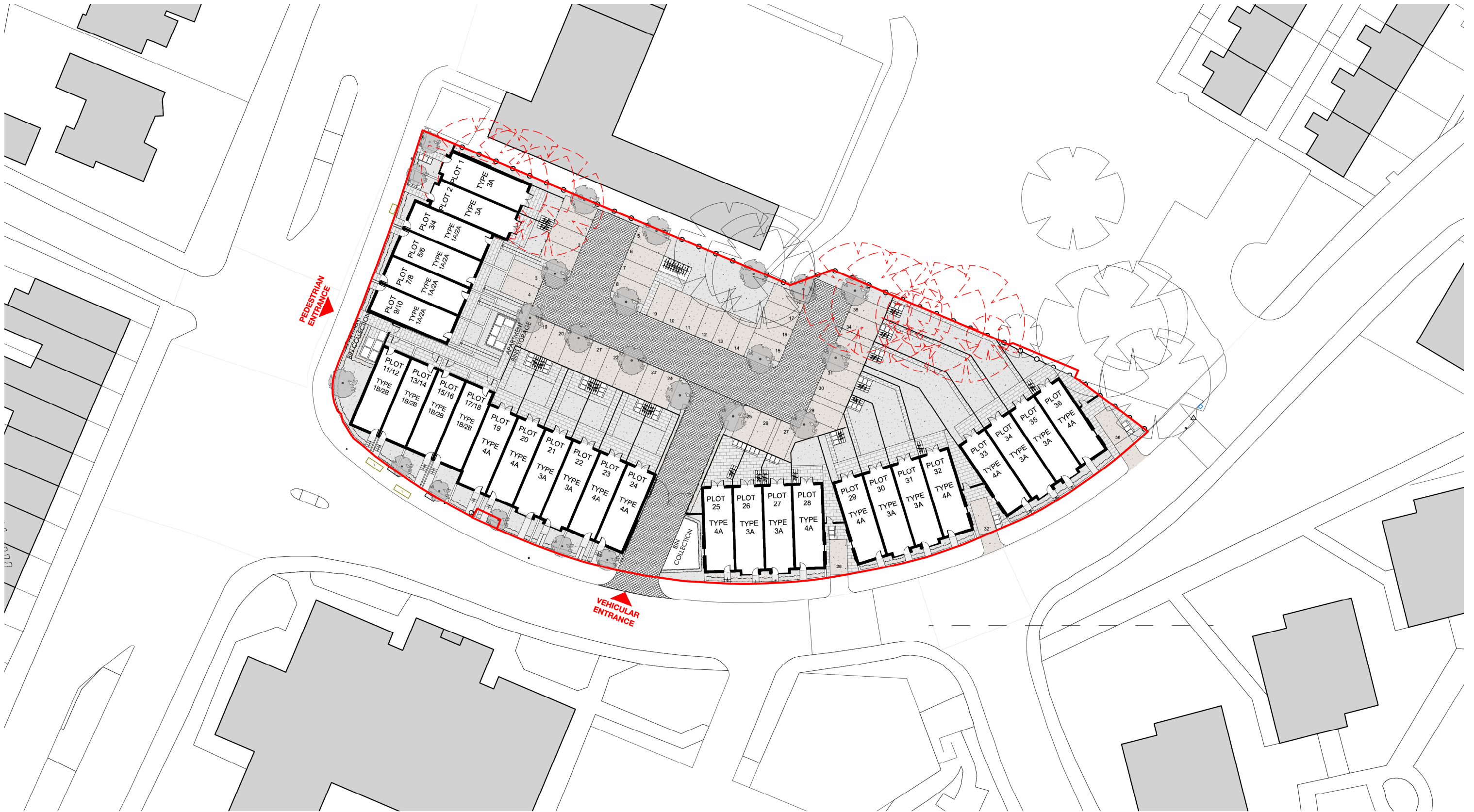
5.4.3 It can therefore be concluded that the 36 proposed car parking spaces would be more than sufficient to accommodate resident parking and would cater for any occasional spikes in demand that might occur. This also reinforces the census-based car ownership analysis provided in **Section 5.3**.

6.0 SUMMARY AND CONCLUSIONS

- 6.1.1 AXIS has been appointed by AIY Ltd to provide highways and transport advice in relation to a proposed residential development of the former Vasa Club off White Moss Road in Manchester.
- 6.1.2 A high-level review of accidents on the local highway network within the most recently available three-year period (2018-2020 inclusive) has been carried out. The analysis does not indicate that there are any existing highway safety issues that could be worsened by the proposed development.
- 6.1.3 The sustainability of the site has been assessed in terms of its accessibility by walking, cycling and public transport modes of transport. Accessibility by these modes has been found to be high, with good pedestrian and cycle friendly infrastructure and public transport provision in the area. Overall, the site is considered to be accessible to sustainable travel modes.
- 6.1.4 Vehicular access to the site will be provided via a new site access junction off White Moss Road. 3 no. direct access parking bays are also proposed off White Moss Road. White Moss Road is a slowly trafficked residential road with good forward visibility on the approach to the proposed direct access bays. It will be possible to achieve 2m x 2m pedestrian visibility splays from each of the proposed driveways. It is not therefore considered that direct access could reasonably result in any material impact on highway safety.
- 6.1.5 Swept path analysis demonstrates that it will be possible for a family saloon car to access and manoeuvre within the site satisfactorily.
- 6.1.6 The minimum junction visibility splay requirements of 2.4m x 22m to the east and west of the proposed site access junction will be achievable, in accordance with standards outlined in Table 7.1 of the Manual for Streets (MfS) for a 20mph road. The proposed site access is thereby considered to provide sufficient visibility for turning vehicles to safely egress the site.
- 6.1.7 Refuse collection for the proposed apartments will be taken directly off Rochdale Road and White Moss Road. This accords with the refuse collection strategy for other dwellings in the area which are serviced from the roadside.

- 6.1.8 The proposed development would result in an increase of 16 two-way vehicle movements in the AM peak hour and 15 two-way vehicle movements in the PM peak hour. Additionally, the proposed development is expected to result in an increase of 140 two-way vehicle movements over the course of an average weekday.
- 6.1.9 When considered volumetrically this equates to approximately one additional movement every 4 minutes during the AM and PM peak hours, on average. This is an immaterial amount that would be imperceptible to a casual observer.
- 6.1.10 It is understood that MCC do not provide car parking requirements for residential developments. The proposed level of car parking has been justified with reference to the high level of accessibility of the site and a car parking accumulation exercise. The analysis indicates that the proposed level of parking is sufficient to cater for the anticipated parking demand of the development.
- 6.1.11 Paragraph 111 of the National Planning Policy Framework states that:
- “Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe”.*
- 6.1.12 Based on the evidence presented in this TS, no unacceptable impact would be created by the development and it is commended for approval.

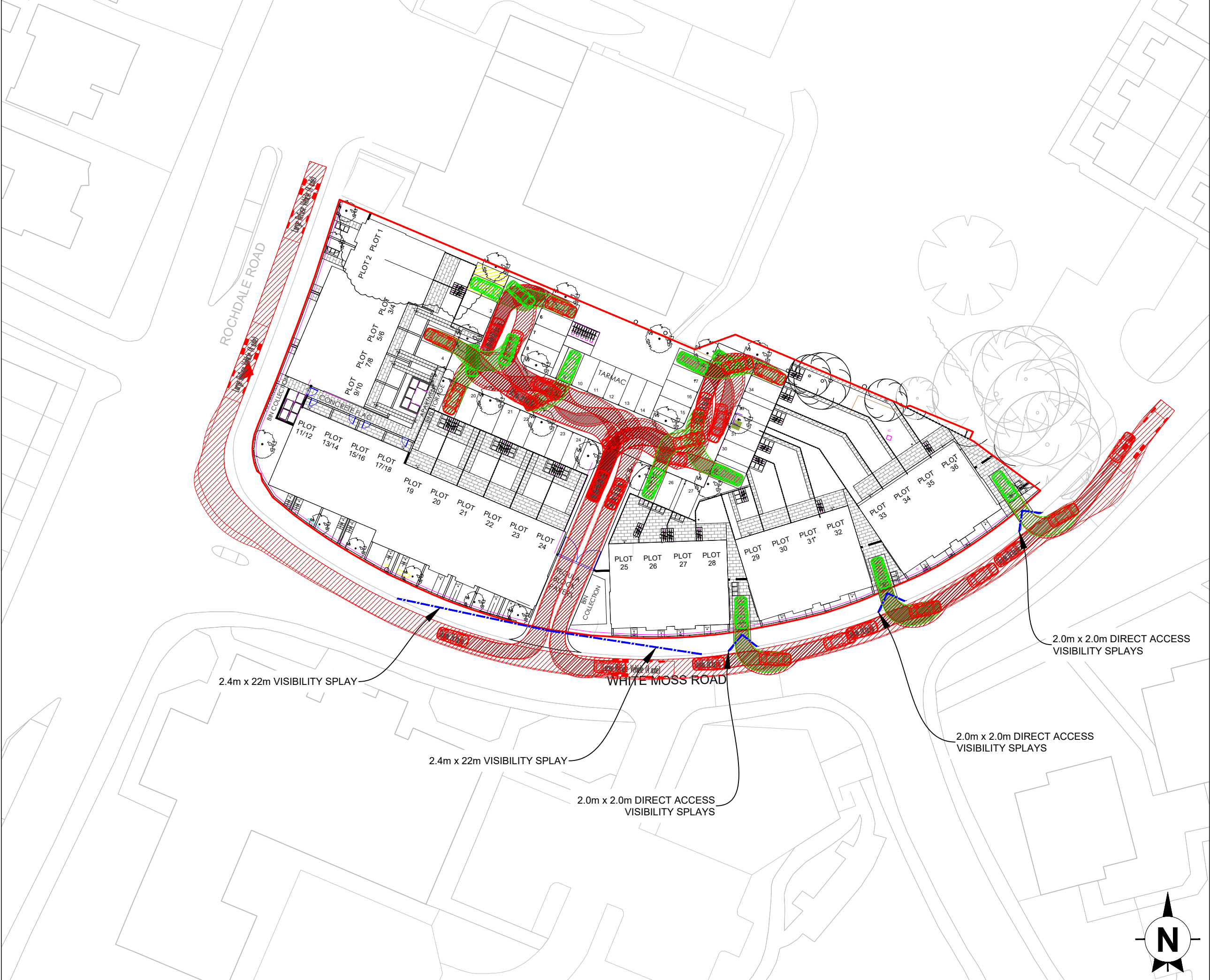
APPENDIX 1 – PROPOSED SITE LAYOUT PLANS



PROPOSED SITE PLAN
1:500



**APPENDIX 2 – DRAWING NO. 3175-01-ATR01: SWEPT PATH ANALYSIS AND
VISIBILITY SPLAYS**



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Revision History		Date

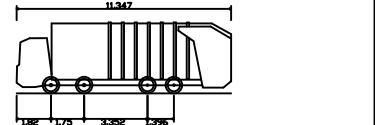
KEY:

APPLICATION SITE BOUNDARY

VEHICLES USED IN TRACKING:



Skoda Octavia
Overall Length 4.572m
Overall Width 1.765m
Overall Body Height 1.488m
Min Body Ground Clearance 0.249m
Max Track Width 1.713m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.100m



Large Refuse Vehicle (4 axle)
Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 6.00s
Wall to Wall Turning Radius 11.350m

Chester Office: Well House Barns Bruton Cheshire CH4 5DH		South Manchester Office: Canilla House 76 Water Lane Wilmslow SK9 5BB		axis
0844 8700 007 - www.axispred.co.uk				
client: AIY LTD				
project: FORMER VASA CLUB, WHITE MOSS ROAD				
drawing title: SWEPT PATHS AND VISIBILITY SPLAYS				
date: 04.02.22		drawn by:	checked:	
drawing number: 3175-01-ATRO1		JW	LK	
scale(s): 1:500@A3		status:	PRELIM	
		rev:	--	
planning environment design				

APPENDIX 3 – TRICS OUTPUTS

Axis 76 Water Lane Wilmslow

Licence No: 339901

Calculation Reference: AUDIT-339901-220204-0202

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED

TOTAL VEHICLESSelected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
08	NORTH WEST	
	MS MERSEYSIDE	2 days
09	NORTH	
	CB CUMBRIA	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 6 to 33 (units:)
 Range Selected by User: 5 to 35 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 09/06/21

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	3 days
Tuesday	3 days
Wednesday	2 days
Friday	1 days

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

Selected survey types:

Manual count	9 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	3
Suburban Area (PPS6 Out of Centre)	6

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:

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

Secondary Filtering selection:

Use Class:

C3 9 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	2 days
20,001 to 25,000	4 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:

25,001 to 50,000	1 days
50,001 to 75,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	2 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	3 days
1.1 to 1.5	6 days

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

Travel Plan:

No 9 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 9 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	CB-03-C-03	FLATS & BUNGALOWS	CUMBRIA
	LOUND STREET KENDAL		
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	33	
	Survey date: MONDAY	09/06/14	Survey Type: MANUAL
2	DC-03-C-02	FLATS IN BLOCKS	DORSET
	PALM COURT WEYMOUTH SPA ROAD		
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	14	
	Survey date: FRIDAY	28/03/14	Survey Type: MANUAL
3	DS-03-C-03	BLOCKS OF FLATS	DERBYSHIRE
	CAESAR STREET DERBY		
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	30	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL
4	DV-03-C-01	BLOCK OF FLATS	DEVON
	BONHAY ROAD EXETER		
	Edge of Town Centre Residential Zone Total No of Dwellings:	27	
	Survey date: MONDAY	10/07/17	Survey Type: MANUAL
5	EB-03-C-01	BLOCKS OF FLATS	CITY OF EDINBURGH
	MYRESIDE ROAD EDINBURGH CRAIGLOCKHART		
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	32	
	Survey date: TUESDAY	26/05/15	Survey Type: MANUAL
6	EX-03-C-01	FLATS	ESSEX
	WESTCLIFF PARADE SOUTHEND-ON-SEA WESTCLIFF		
	Edge of Town Centre Residential Zone Total No of Dwellings:	6	
	Survey date: TUESDAY	22/10/13	Survey Type: MANUAL
7	MS-03-C-03	BLOCK OF FLATS	MERSEYSIDE
	MARINERS WHARF LIVERPOOL QUEENS DOCK		
	Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:	9	
	Survey date: TUESDAY	13/11/18	Survey Type: MANUAL
8	MS-03-C-04	BLOCK OF FLATS	MERSEYSIDE
	HOY DRIVE NEWTON-LE-WILLOWS EARLESTOWN		
	Edge of Town Centre Residential Zone Total No of Dwellings:	24	
	Survey date: MONDAY	12/04/21	Survey Type: MANUAL

Axis 76 Water Lane Wilmslow

Licence No: 339901

LIST OF SITES relevant to selection parameters (Cont.)

9	SF-03-C-03	BLOCKS OF FLATS	SUFFOLK
	TOLLGATE LANE		
	BURY ST EDMUNDS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	30	
	Survey date: WEDNESDAY	03/12/14	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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

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

TOTAL VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	23	0.068	9	23	0.132	9	23	0.200
08:00 - 09:00	9	23	0.073	9	23	0.185	9	23	0.258
09:00 - 10:00	9	23	0.098	9	23	0.102	9	23	0.200
10:00 - 11:00	9	23	0.063	9	23	0.117	9	23	0.180
11:00 - 12:00	9	23	0.122	9	23	0.098	9	23	0.220
12:00 - 13:00	9	23	0.073	9	23	0.059	9	23	0.132
13:00 - 14:00	9	23	0.073	9	23	0.088	9	23	0.161
14:00 - 15:00	9	23	0.112	9	23	0.122	9	23	0.234
15:00 - 16:00	9	23	0.083	9	23	0.073	9	23	0.156
16:00 - 17:00	9	23	0.151	9	23	0.112	9	23	0.263
17:00 - 18:00	9	23	0.195	9	23	0.122	9	23	0.317
18:00 - 19:00	9	23	0.151	9	23	0.102	9	23	0.253
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.262			1.312			2.574

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:	6 - 33 (units:)
Survey date range:	01/01/13 - 09/06/21
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Axis 76 Water Lane Wilmslow

Licence No: 339901

Calculation Reference: AUDIT-339901-220204-0221

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

TOTAL VEHICLESSelected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
03	SOUTH WEST	
	DV DEVON	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	PS POWYS	2 days
11	SCOTLAND	
	FA FALKIRK	1 days
	HI HIGHLAND	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 10 to 40 (units:)
 Range Selected by User: 10 to 40 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 16/06/21

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	6 days
Wednesday	4 days
Thursday	4 days
Friday	3 days

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

Selected survey types:

Manual count	17 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.

Axis 76 Water Lane Wilmslow

Licence No: 339901

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	16
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:

C3	17 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:

5,001 to 10,000	7 days
10,001 to 15,000	1 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	5 days

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

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	1 days
50,001 to 75,000	3 days
75,001 to 100,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	5 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	7 days
1.1 to 1.5	9 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	15 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	17 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	CA-03-A-05	DETACHED HOUSES	CAMBRIDGESHIRE
	EASTFIELD ROAD		
	PETERBOROUGH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	28	
	Survey date: MONDAY	17/10/16	Survey Type: MANUAL
2	CH-03-A-11	TOWN HOUSES	CHESHIRE
	LONDON ROAD		
	NORTHWICH		
	LEFTWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	24	
	Survey date: THURSDAY	06/06/19	Survey Type: MANUAL
3	DV-03-A-01	TERRACED HOUSES	DEVON
	BRONSHILL ROAD		
	TORQUAY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	37	
	Survey date: WEDNESDAY	30/09/15	Survey Type: MANUAL
4	FA-03-A-01	SEMI-DETACHED/TERRACED	FALKIRK
	MANDELA AVENUE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	37	
	Survey date: THURSDAY	30/05/13	Survey Type: MANUAL
5	HC-03-A-17	HOUSES & FLATS	HAMPSHIRE
	CANADA WAY		
	LIPHOOK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	36	
	Survey date: THURSDAY	12/11/15	Survey Type: MANUAL
6	HI-03-A-14	SEMI-DETACHED & TERRACED	HIGHLAND
	KING BRUDE ROAD		
	INVERNESS		
	SCORGUIE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	40	
	Survey date: WEDNESDAY	23/03/16	Survey Type: MANUAL
7	LC-03-A-30	SEMI-DETACHED	LANCASHIRE
	WATSON ROAD		
	BLACKPOOL		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	24	
	Survey date: FRIDAY	14/06/13	Survey Type: MANUAL
8	LN-03-A-04	DETACHED & SEMI-DETACHED	LINCOLNSHIRE
	EGERTON ROAD		
	LINCOLN		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	30	
	Survey date: MONDAY	29/06/15	Survey Type: MANUAL

Axis 76 Water Lane Wilmslow

Licence No: 339901

LIST OF SITES relevant to selection parameters (Cont.)

9	MS-03-A-03	DETACHED		MERSEYSIDE
	BEMPTON ROAD			
	LIVERPOOL			
	OTTERSPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	15		
	Survey date: FRIDAY	21/06/13		Survey Type: MANUAL
10	NY-03-A-08	TERRACED HOUSES		NORTH YORKSHIRE
	NICHOLAS STREET			
	YORK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	21		
	Survey date: MONDAY	16/09/13		Survey Type: MANUAL
11	NY-03-A-13	TERRACED HOUSES		NORTH YORKSHIRE
	CATTERICK ROAD			
	CATTERICK GARRISON			
	OLD HOSPITAL COMPOUND			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	10		
	Survey date: WEDNESDAY	10/05/17		Survey Type: MANUAL
12	PS-03-A-01	MIXED HOUSES		POWYS
	BRYN GLAS			
	WELSHPOOL			
	Edge of Town Centre			
	Residential Zone			
	Total No of Dwellings:	16		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL
13	PS-03-A-02	DETACHED/SEMI-DETACHED		POWYS
	GUNROG ROAD			
	WELSHPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	28		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL
14	ST-03-A-06	SEMI-DET. & TERRACED		STAFFORDSHIRE
	STANFORD ROAD			
	WOLVERHAMPTON			
	BLAKENHALL			
	Edge of Town Centre			
	No Sub Category			
	Total No of Dwellings:	17		
	Survey date: FRIDAY	09/05/14		Survey Type: MANUAL
15	TW-03-A-02	SEMI-DETACHED		TYNE & WEAR
	WEST PARK ROAD			
	GATESHEAD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	16		
	Survey date: MONDAY	07/10/13		Survey Type: MANUAL
16	WK-03-A-03	DETACHED HOUSES		WARWICKSHIRE
	BRESE AVENUE			
	WARWICK			
	GUY'S CLIFFE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	23		
	Survey date: WEDNESDAY	25/09/19		Survey Type: MANUAL

Axis 76 Water Lane Wilmslow

Licence No: 339901

LIST OF SITES relevant to selection parameters (Cont.)

17 WL-03-A-02 SEMI DETACHED
HEADLANDS GROVE
SWINDON

WILTSHIRE

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total No of Dwellings:

27

Survey date: THURSDAY

22/09/16

Survey Type: MANUAL

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

Axis 76 Water Lane Wilmslow

Licence No: 339901

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	17	25	0.082	17	25	0.268	17	25	0.350
08:00 - 09:00	17	25	0.182	17	25	0.413	17	25	0.595
09:00 - 10:00	17	25	0.166	17	25	0.159	17	25	0.325
10:00 - 11:00	17	25	0.154	17	25	0.163	17	25	0.317
11:00 - 12:00	17	25	0.152	17	25	0.170	17	25	0.322
12:00 - 13:00	17	25	0.205	17	25	0.200	17	25	0.405
13:00 - 14:00	17	25	0.186	17	25	0.196	17	25	0.382
14:00 - 15:00	17	25	0.186	17	25	0.219	17	25	0.405
15:00 - 16:00	17	25	0.282	17	25	0.205	17	25	0.487
16:00 - 17:00	17	25	0.296	17	25	0.179	17	25	0.475
17:00 - 18:00	17	25	0.303	17	25	0.200	17	25	0.503
18:00 - 19:00	17	25	0.233	17	25	0.172	17	25	0.405
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.427			2.544			4.971

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: 10 - 40 (units:)
 Survey date range: 01/01/13 - 16/06/21
 Number of weekdays (Monday-Friday): 17
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

APPENDIX 4 – CAR PARKING ACCUMULATION EXERCISE

CAR PARK ACCUMULATION ASSESSMENT

Land Use:	Apartments
No. of Dwellings	16
No. of required overnight spaces/ Manually adjusted initial occupation no.	15 (calculated based on census car ownership levels)

Hour	Trip Rate In	Trip Rate Out	Vehicle Arrivals	Vehicle Departures	Parking Demand
Time Range					
00:00-01:00	0.000	0.000	0	0	15
01:00-02:00	0.000	0.000	0	0	15
02:00-03:00	0.000	0.000	0	0	15
03:00-04:00	0.000	0.000	0	0	15
04:00-05:00	0.000	0.000	0	0	15
05:00-06:00	0.000	0.000	0	0	15
06:00-07:00	0.000	0.000	0	0	15
07:00-08:00	0.068	0.132	1	2	14
08:00-09:00	0.073	0.185	1	3	12
09:00-10:00	0.098	0.102	2	2	12
10:00-11:00	0.063	0.117	1	2	11
11:00-12:00	0.122	0.098	2	2	12
12:00-13:00	0.073	0.059	1	1	12
13:00-14:00	0.073	0.088	1	1	12
14:00-15:00	0.112	0.122	2	2	12
15:00-16:00	0.083	0.073	1	1	12
16:00-17:00	0.151	0.112	2	2	12
17:00-18:00	0.195	0.122	3	2	14
18:00-19:00	0.151	0.102	2	2	14
19:00-20:00	0.000	0.000	0	0	14
20:00-21:00	0.000	0.000	0	0	14
21:00-22:00	0.000	0.000	0	0	14
22:00-23:00	0.000	0.000	0	0	14
23:00-24:00	0.000	0.000	0	0	14

Maximum Parking Demand: 15

Peak Demand Period: 09:00 - 16:00

	Car Park Accumulation / Demand Assessment - Apartment Dwelling	07 February 2022
	Type	3175-01
	Proposed Residential Redevelopment, White Moss Road, Manchester	Appendix 4

CAR PARK ACCUMULATION ASSESSMENT

Proposed Land Use: Houses

No. of dwellings: 20

No. of required overnight spaces/

Manually adjusted initial occupation no. 19 (calculated based on census car ownership levels)

Hour	Trip Rate In	Trip Rate Out	Vehicle Arrivals	Vehicle Departures	Parking Demand
Time Range					
00:00-01:00	0.000	0.000	0	0	19
01:00-02:00	0.000	0.000	0	0	19
02:00-03:00	0.000	0.000	0	0	19
03:00-04:00	0.000	0.000	0	0	19
04:00-05:00	0.000	0.000	0	0	19
05:00-06:00	0.000	0.000	0	0	19
06:00-07:00	0.000	0.000	0	0	19
07:00-08:00	0.030	0.045	1	1	19
08:00-09:00	0.060	0.104	1	2	18
09:00-10:00	0.015	0.060	0	1	17
10:00-11:00	0.060	0.075	1	2	17
11:00-12:00	0.045	0.015	1	0	17
12:00-13:00	0.060	0.030	1	1	18
13:00-14:00	0.060	0.075	1	2	18
14:00-15:00	0.060	0.060	1	1	18
15:00-16:00	0.045	0.075	1	2	17
16:00-17:00	0.104	0.075	2	2	18
17:00-18:00	0.090	0.045	2	1	18
18:00-19:00	0.030	0.030	1	1	18
19:00-20:00	0.000	0.000	0	0	18
20:00-21:00	0.000	0.000	0	0	18
21:00-22:00	0.000	0.000	0	0	18
22:00-23:00	0.000	0.000	0	0	18
23:00-24:00	0.000	0.000	0	0	18

Maximum Parking Demand: 19

Peak Demand Period: 00:00-01:00

axis

Car Park Accumulation / Demand Assessment - Apartment Dwelling Type
Proposed Residential Redevelopment, White Moss Road, Manchester

07 February 2022

3175-01

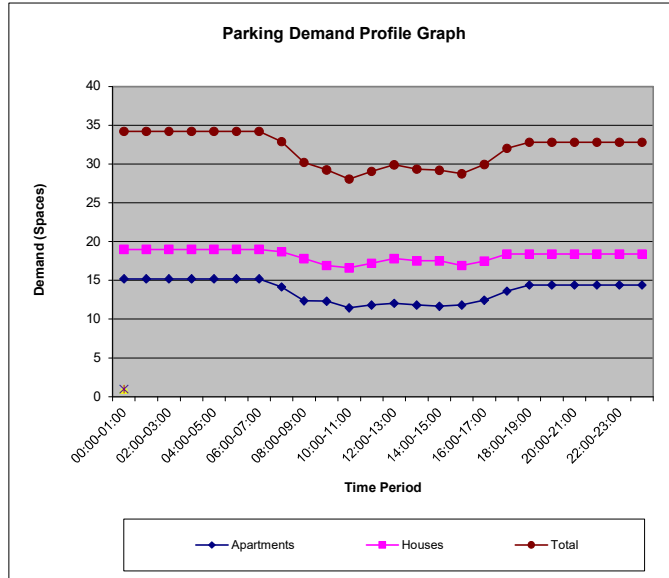
Appendix 4

CAR PARK ACCUMULATION ASSESSMENT - TOTAL

The total car parking accumulation / demand at the proposed development is the sum of the demand for the proposed apartments and houses dwelling types, as follows:-

Time Range	Apartments	Houses	Total
00:00-01:00	15	19	34
01:00-02:00	15	19	34
02:00-03:00	15	19	34
03:00-04:00	15	19	34
04:00-05:00	15	19	34
05:00-06:00	15	19	34
06:00-07:00	15	19	34
07:00-08:00	14	19	33
08:00-09:00	12	18	30
09:00-10:00	12	17	29
10:00-11:00	11	17	28
11:00-12:00	12	17	29
12:00-13:00	12	18	30
13:00-14:00	12	18	29
14:00-15:00	12	18	29
15:00-16:00	12	17	29
16:00-17:00	12	18	30
17:00-18:00	14	18	32
18:00-19:00	14	18	33
19:00-20:00	14	18	33
20:00-21:00	14	18	33
21:00-22:00	14	18	33
22:00-23:00	14	18	33
23:00-24:00	14	18	33

Maximum Parking Demand: 34



axis

Car Park Accumulation / Demand Assessment - Apartment Dwelling Type

Proposed Residential Redevelopment, White Moss Road, Manchester

07 February 2022

3175-01

Appendix 4