



Project 500
Proposed Residential Development,
Queens Road, Manchester

The Guinness Partnership

Transport Statement

December 2022

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1. INTRODUCTION

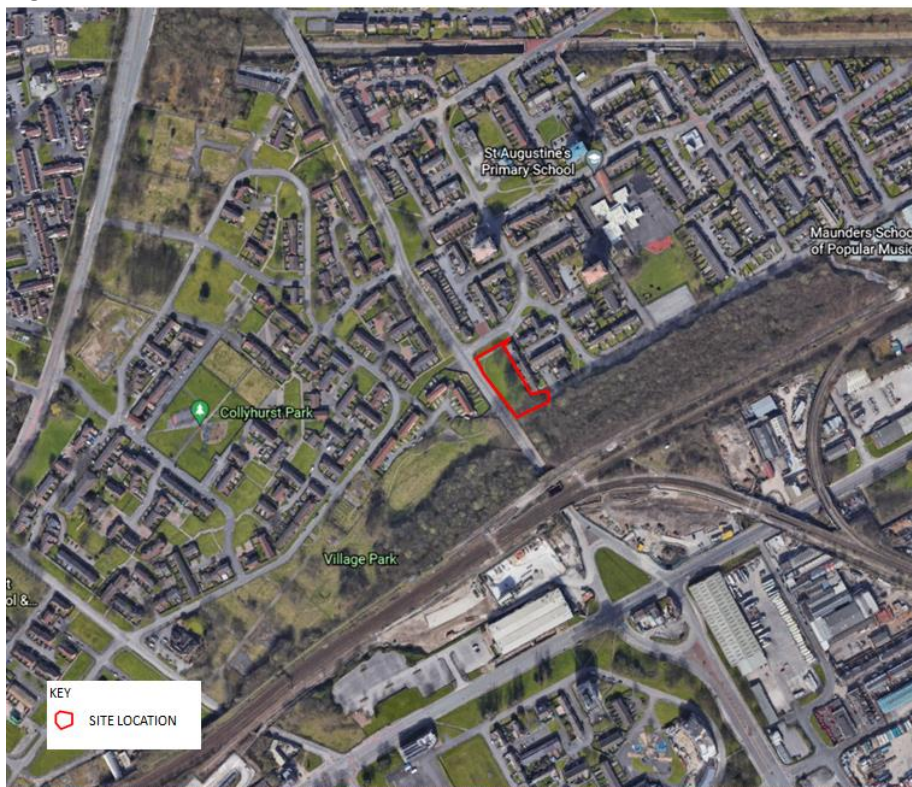
Introduction

- 1.1 TPS Transport Consultants Ltd. (TPS) has been appointed by the Guinness Partnership to prepare a Transport Statement to accompany a full planning application for up to 8 dwellings on land to the east of Queens Road, Manchester.
- 1.2 This site forms part of Manchester City Council's Project 500, which comprises of development opportunities, mainly consisting of smaller infill sites in the north and east of Manchester, helping to deliver the Council's requirements to deliver 6,400 affordable homes by 2025.

Site Location and Development Proposals

- 1.3 The site is located in the Monsall area of east Manchester and is approximately 3.5km east of Manchester city centre. The site is currently an area of open space. The site is bound by residential properties to the east, by a footpath linking to Trimley Avenue to the south, by Queens Road to the west and by Sedgeford Road to the north. The site location is shown in **Figure 1.1**, whilst the proposed site layout is provided at **Appendix A**.

Figure 1.1: Indicative Site Location



(Source: Google Maps)



- 1.4 The proposals are for a residential development comprising 8 dwellings with a mix of 2 and 3 bedroom properties. The planning application is in full, with all matters reserved, except for access. The dwellings will have frontage onto Queens Road at the western boundary of the site, for pedestrian access only. There will be a dedicated parking area for the development, located to the southeast corner of the site, to be accessed from an extension to Trimley Avenue.

Report Structure

- 1.5 Following this introductory section:

Section 2 describes the transport planning policy context within which the proposals will be assessed;

Section 3 details the accessibility of the development site by non-car modes;

Section 4 describes the existing highway network in the vicinity of the development and key routes to the site, with reference to historic road safety records;

Section 5 summarises the anticipated trip generation associated with the development proposals;

Section 6 considers the access, parking and servicing arrangements; and

Section 7 offers a summary and conclusion.



2. POLICY REVIEW

Introduction

- 2.1 This section of the Transport Statement identifies the policy context within which the development proposals have been assessed; it clearly demonstrates how the proposed development would contribute to the overarching principles of national and local transport policy.

National Policy Context

National Planning Policy Framework (NPPF – MHCLG, July 2021)

- 2.2 The revised National Planning Policy Framework was published in July 2021 and sets out the government's planning policies for England and how these are expected to be applied. It continues to encourage development through the planning system, with a presumption in favour of sustainable development.
- 2.3 The NPPF states that *“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe”* (Paragraph 111). Paragraph 112 sets out that development proposals should seek to:
- Give priority first to pedestrian and cycle movements, both within the scheme and connecting with neighbouring areas; and second – so far as possible – to facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
 - Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
 - Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
 - Allow for the efficient delivery of goods, and access by service and emergency vehicles; and
 - Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.



- 2.4 This Transport Statement will demonstrate that the development proposals take full advantage of existing facilities for sustainable travel, locally, and will not result in a significant traffic impact on the local road network, therefore, satisfying the requirements of NPPF.

Local Policy

Greater Manchester Transport Strategy 2040 – Transport for Greater Manchester (TfGM), February 2017

- 2.5 The Greater Manchester Transport Strategy outlines TfGM's ambitions for a radical new approach to planning the transport system in support of long-term needs and aspirations across Greater Manchester. The Transport Strategy builds on that vision, highlighting the priority interventions needed to achieve it.
- 2.6 The overarching vision for Greater Manchester by 2040 is to have *“world class connections that support long-term, sustainable economic growth and access to opportunity for all”*. The specific transport visions, which aim to achieve the overarching vision for Greater Manchester are as follows:
- *“Supporting sustainable economic growth;*
 - *Protecting our environment;*
 - *Improving quality of life for all; and*
 - *Developing an innovative city-region.”*
- 2.7 The following policy has been acknowledged as relevant to the development proposals:
- **Policy 4:** *“TfGM will continue to work with planning authorities and developers to ensure the accessibility of new development by sustainable modes and to reduce the impact on the highway network”.*
- 2.8 The development proposals will meet the policy aspirations of the TfGM Greater Manchester Transport Strategy by providing new residential dwellings that are located in a highly accessible location for sustainable modes of transport, which will contribute towards a reduction in the impact on the highway network particularly due to the public transport options close to the site and the facilities available within a short walking distance of the site.

Manchester City Council Core Strategy – 2012 to 2027

- 2.9 The Core Strategy forms the key document in Manchester's Local Development Framework and was adopted in 2012. It sets out a number of strategic policies that will guide the



development of the city. Policy SP1 sets out the spatial principles that will guide development to 2027.

2.10 Policy T1 of the Core Strategy concerns sustainable transport. It states that the Council will support proposals that:

- *“Improve choice by developing alternatives to the private car;*
- *Improve pedestrian routes and the pedestrian environment;*
- *Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:*
 1. *Pedestrians and disabled people;*
 2. *Cyclists, Public Transport;*
 3. *Commercial access;*
 4. *General off-peak traffic; and*
 5. *General peak time traffic.*

2.11 The development proposals are in line with these policy objectives, ensuring that the site will be accessible to all users by a range of different transport modes.

Summary

2.12 This Transport Statement has been prepared taking into account the overarching themes of both national and local policy guidance, which seeks to encourage development that is readily accessible by means other than the private car, whilst taking into account the specific nature of the proposals, which inherently means that a proportion of trips will be by car.



3. ACCESSIBILITY

Introduction

- 3.1 This section of the Transport Statement describes the existing infrastructure that will facilitate and encourage trips to the site by foot, bicycle or public transport, rather than by car.

Active Travel Options

Pedestrian Facilities

- 3.2 The Institution for Highways and Transportation (IHT) offers guidance on walking distance by journey purpose, this is summarised in **Table 3.1** below.

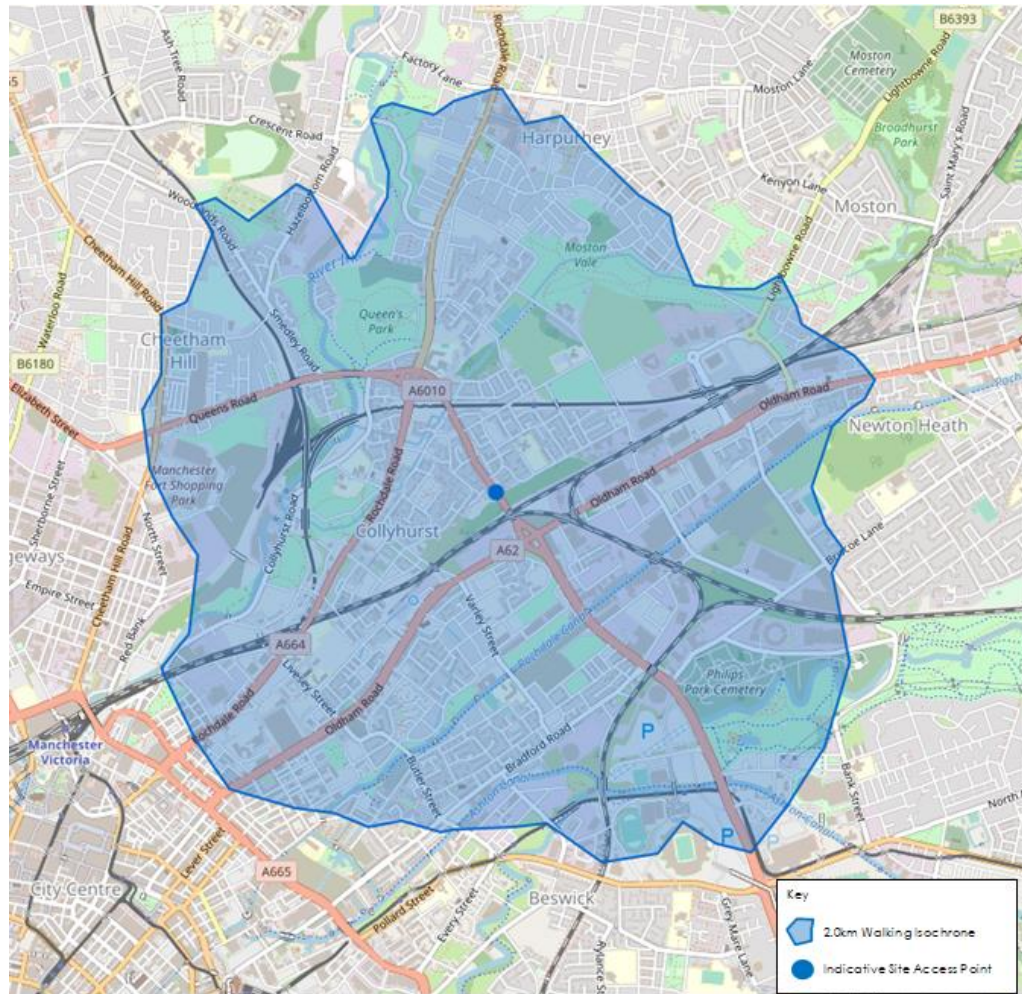
Table 3.1: Walking Distances by Journey Type

Criteria	Town Centres	Commuting / School	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1000m	800m
Preferred Maximum	800m	2000m	1200m

(Source: IHT)

- 3.3 As **Table 3.1** shows, a 2km catchment is the preferred maximum walking distance for 'commuting / school'. A 2km walking catchment from the site includes a large portion of Collyhurst and Harpurhey areas. The 2km walking area also includes a large number of facilities, such as retail, employment and education. The 2km walking catchment is illustrated in **Figure 3.1**, overleaf.

Figure 3.1: 2km Walking Catchment



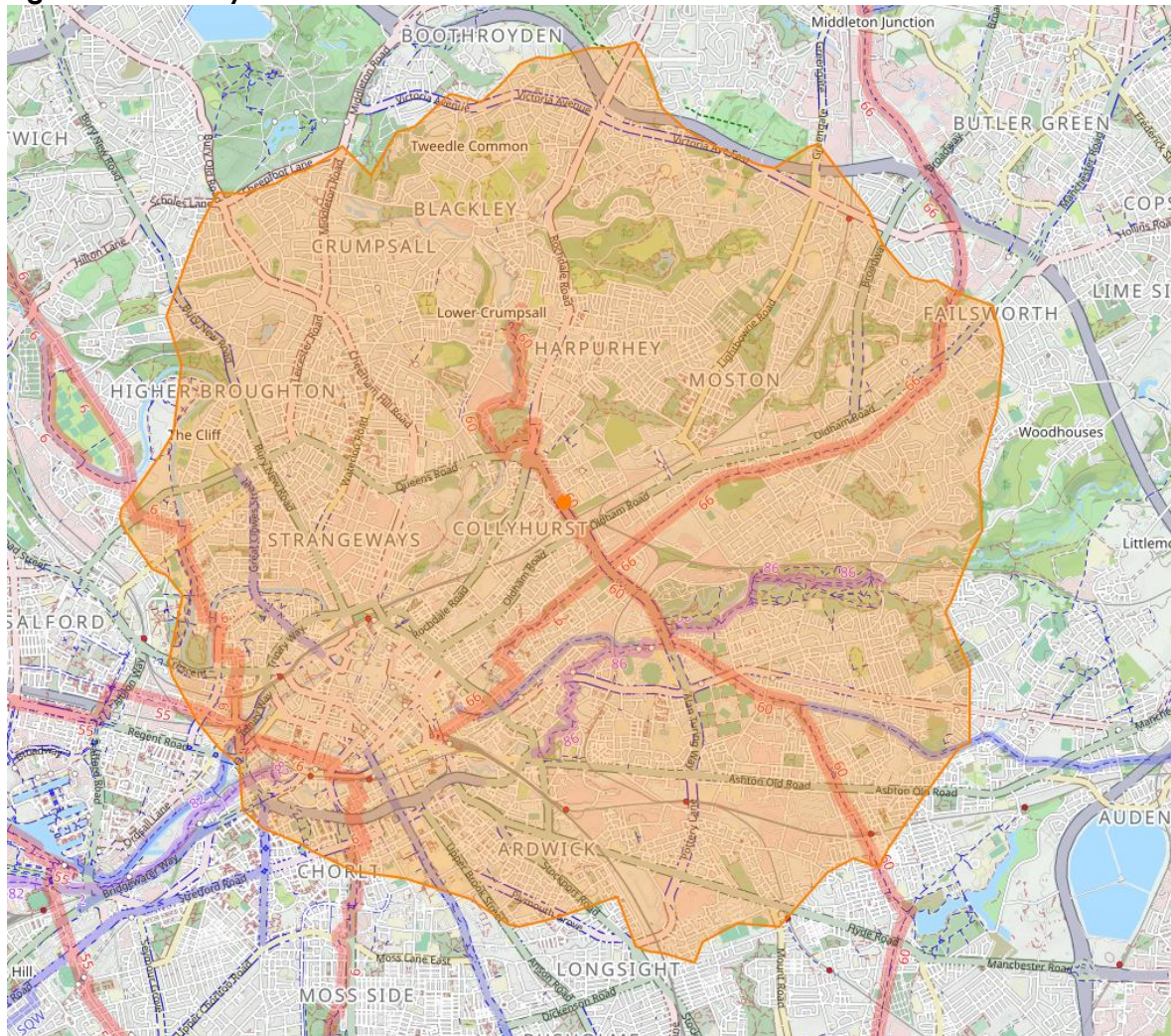
(Source: Open Street Map)

- 3.4 Pedestrian access to the site will be taken via the existing footways on Queens Road along the western boundary of the site. Pedestrian access will also be provided from the dedicated parking to the southeast of the site, onto Queens Road and to the existing footway which runs along the north-eastern boundary of the site, where access will be provided into each of the dwellings' gardens.
- 3.5 The walking catchment covers several commercial/retail/employment areas that would allow residents to commute on foot. Given the proximity of the site to the facilities located along Queens Road and St Augustine's Primary School, walking would also be an attractive travel option for leisure and education purposes. Details of the amenities located within walking distance of the site are provided in the latter part of this section.

Cycle Access

- 3.6 Cycling can be a substitute for car trips, particularly those of up to 5km, as well as forming part of longer journeys by public transport. Cycling, therefore, plays an important role in reducing the need to travel by car. As well as the areas encompassed in the walking catchment in **Figure 3.1**, the cycling catchment includes Harpurhey, Blackley, Moston and Ardwick. **Figure 3.2** below illustrates a 5km cycle catchment from the site.

Figure 3.2: 5km Cycle Catchment

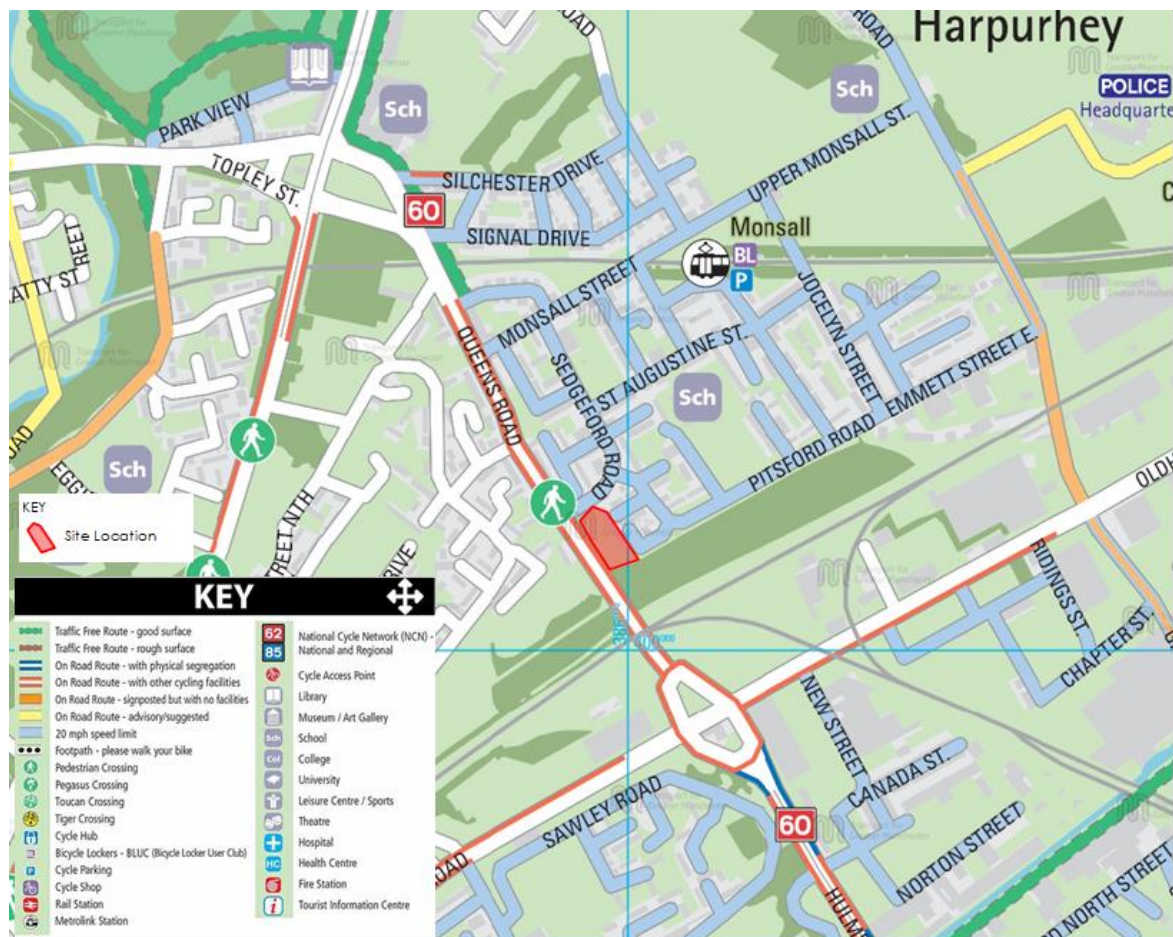


(Source: Open Street Map)

- 3.7 As can be seen in **Figure 3.2**, Queens Road along the western boundary of the site is part of National Cycle Network Route 60, which runs between north and east Manchester, forming part of the Fallowfield loopline. To the south of the site, it connects with National Cycle Network Route 66 which connects Manchester to Spurn Head via Bradford, Leeds, York, Beverley and Kingston upon Hull.

- 3.8 TfGM have partnered with British Cycling to inspire more people to cycle and to promote enjoyable, safe and responsible cycling. They have committed to the target of increasing the total number of journeys made by bike across the city region from 2% today to 10% by 2025. This will be achieved through an investment program upgrading cycle routes, raising awareness, and by creating cycle hubs at bus, train and metrolink stops.
- 3.9 The Website: <http://cycling.tfgm.com/> gives more information on upcoming events and cycling initiatives within Greater Manchester, including the Bee Network, which will see £163m invested in walking and cycling routes. The nearest Bee Network route is the Rochdale Canal to the south of the site and can be accessed via Queens Road.
- 3.10 **Figure 3.3** shows an extract of the Manchester cycle map, which illustrates cycle facilities in the vicinity of the site.

Figure 3.3: Local Cycle Routes



- 3.11 **Figure 3.3** demonstrates that Queens Road to the west of the site is dedicated as on road cycle route, with other cycling facilities. Given the formal cycle routes in the vicinity of the



site, it is considered that cycling would represent an attractive option for regular commuting, given that a number of employment areas, including Manchester city centre, are located within a reasonable cycling distance of the site. There are also a range of amenities located within cycling distance of the site that may be utilised by residents and visitors; these are detailed in the latter part of this section.

Public Transport

Bus Services

- 3.12 The closest bus stops are located on Queens Road, to the west of the site. The southbound bus stop is located along the site frontage and the northbound bus stop is located approximately 110m further north. The southbound bus stop, has a shelter with timetable information, whilst the northbound bus stop has a flag only. From these stops, there are services to Manchester, Pendleton and Cheetham Hill. **Table 3.2** summarises the bus services that can be accessed from the stops.

Table 3.2: Bus Services

Service		Frequency		
		Weekday	Saturday	Sunday
Queens Road				
53	Cheetham Hill – Harpurhey – Manchester – Salford	30 mins	30 mins	60 mins
114	Manchester – Middleton	20 mins	30 mins	60 mins

(Source: Public Transport Operator Websites)

Metrolink Services

- 3.13 The closest Metrolink station to the site is Monsall, located an approximate 7-minute walk from the site. Monsall is located on the Pink Line of the Metrolink tram network, providing a route towards East Didsbury, Shaw & Crompton and Rochdale, as well as a range of destinations along the route. Residents of the proposed development could utilise these tram services in order to access employment and leisure opportunities.

Local Amenities

- 3.14 **Table 3.4** provides a summary of local facilities, which are available within the preferred maximum walking (2km) or cycling (5km) distances of the site.



Table 3.4: Local Facilities

Amenity	Distance	Walk Time	Cycle Time
St Augustine's Primary School	350m	4 mins	<1 min
Cohen's Chemist	350m	4 mins	<1 min
Select & Save Convenience Store	350m	4 mins	<1 min
Miles Platting Post Office	350m	4 mins	< 1min
Asda Eastlands	2.2km	28 mins	8 mins
Manchester City Centre	3.4 km	39 mins	11 mins

(Source: Google Maps)

Summary

- 3.15 This section of the Transport Statement has sought to identify the existing opportunities for travel by sustainable modes within the vicinity of the site. It has been identified that there are existing pedestrian routes, which can be utilised by residents to commute and access leisure facilities. Furthermore, there are a wide range of destinations from which the site is accessible by public transport, including both bus and tram.

4. LOCAL HIGHWAY NETWORK

Introduction

- 4.1 This section of the Transport Statement considers the nature of the existing highway network and summarises the historic accident data for the area surrounding the site.

Highway Network

- 4.2 A description is provided below of the local highway network in the immediate vicinity of the site; for ease, it is also shown in **Figure 4.1**.

Figure 4.1: Existing Highway Network



(Source: Google Maps)

- 4.3 The proposed parking area associated with the site will take access from Trimley Avenue, at the southeast corner of the site. Trimley Avenue is a residential cul de sac, providing access to a parking area associated with the existing residential dwellings, along the eastern



boundary of the site. There is an existing raised table speed reduction measure on Trimley Avenue. It has an approximate carriageway width of 5.5m and is bound by an approximate 2m wide footway to the northern side of the carriageway. Trimley Avenue currently terminates to the south of property no. 25. There is a footway from this point of termination, west, connecting with Queens Road. The intention is to extend Trimley Avenue west, where it will form a gated parking courtyard for the development.

- 4.4 Trimley Avenue continues east from the site and forms the minor arm of a priority T-junction with Pitsford Road; providing access to the residential area to the northeast of the site. Pitsford Road is bound by footways to both sides of the carriageway and is street lit along its length. Pitsford Road is subject to a 30mph speed limit and has speed tables to help reduce traffic speeds.
- 4.5 Pitsford Road continues north from the junction with Trimley Avenue, before forming the minor arm of a priority T-junction with Sedgeford Road.
- 4.6 Sedgeford Road provides vehicular access into the residential area to the north and to Queens Road to the west. It forms the minor arm of a priority T-junction with Queens Road, at the northwest corner of the development site.
- 4.7 Queens Road in this location performs the function of a primary distributor road, and is part of the A6010, which provides an inner ring road around Manchester city centre. Queens Road has an approximate carriageway width of 7m and is bound by wide footways to both sides. It is street lit along its length and subject to a 30mph speed limit.
- 4.8 To the south of the site, Queens Road provides a routes around the east of Manchester, with radial routes forming junctions with the A6010, for access west towards Manchester city centre and east towards the surrounding residential areas. To the north of the site, Queens Road continues through the Monsall residential area, before turning west where it meets Rochdale Road to the north of the site.
- 4.9 As confirmed in the following section, the proposals are anticipated to generate a negligible number of trips in the network peak periods and, as such, there will be no discernible impact on the operation of the local network, as described above.

Road Safety

- 4.10 Accident data for the most recent 5-year period (2016 - 2020) has been sought from www.crashmap.co.uk for the highway network surrounding the site. Crashmap offers a

definitive map of the official road collision statistics. The locations of accidents recorded within the vicinity of the site are shown in **Figure 4.2**.

- 4.11 As can be seen, one slight collision has been recorded on Queens Road, at the junction of Queens Road / Sedgeford Road to the northwest of the site during the most recent 5-year period.

Figure 4.2: Locations of Recorded Accidents



(Source: Crash Map)

- 4.12 Based on the level of accidents recorded and the locations they were recorded at, it is not considered that there are any existing road safety issues that would be exacerbated by the development proposals.

5. TRIP GENERATION

Introduction

- 5.1 This section of the Transport Statement considers likely trip generation associated with the development proposals.

Trip Generation

- 5.2 The TRICS database has been interrogated to derive representative trip rates associated with the proposed affordable residential use; the following TRICS parameters have been selected:

- Land Use: Residential, Affordable/Local Authority Houses;
- Range: 16 – 68;
- Date Range: 01/01/2013 – 19/10/18; and
- Location: Suburban Area, Edge of Town.

- 5.3 **Table 5.1** summarises the trip rates and resultant trip generation, whilst the full TRICS output is provided at **Appendix B**.

Table 5.1: Trip Rates / Traffic Generation

	AM			PM		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Trip Rates	0.181	0.295	0.476	0.310	0.238	0.548
Trip Generation	1	2	3	2	2	4

(Source: TRICS)

- 5.4 As can be seen in **Table 5.1**, the proposals are anticipated to generate just 3 two-way trips in the AM peak hour and 4 two-way trips in the PM peak hour. This level of vehicle trip generation is not considered as material and as such, no further assessment has been undertaken.

Summary

- 5.5 It has been demonstrated the proposals will have a negligible impact on traffic movements in the network peak hours and, consequently, will not have a material impact on the highway capacity of the local road network. As such, no further assessment has been undertaken.



6. PARKING AND SERVICING

Introduction

- 6.1 This section of the Transport Statement considers the proposed access, parking and servicing arrangements for the site.

Access

- 6.2 The proposed development is to take vehicular access from Trimley Avenue at the southeast corner of the site. The proposed access will provide a route into the parking area associated with the development. It is proposed for the access to form an extension to the existing carriageway on Trimley Avenue, whilst maintaining the existing footway provision.
- 6.3 The drawing attached at **Appendix C**, demonstrates the proposed site access layout onto Trimley Avenue, with the new car park access forming the minor arm of an informal junction with Trimley Avenue.

Parking

- 6.4 Manchester's Residential Quality Guidance provides a guide to providing parking in new residential developments. The Residential Quality Guidance states the following:
- "There is a need to balance the provision of sufficient parking with the need to encourage different, more sustainable modes of transport and working towards reducing the dependence on the car". It goes on to state: "Providing sufficient car parking in an appropriate manner is important in ensuring that cars do not dominate the street".*
- 6.5 The residential quality guidance goes on to state that *"for residential schemes within Manchester's suburban areas, new development will continue to be required to accord with existing policy and standards (MCC Core Strategy; Appendix B)."* From reviewing the core strategy, Appendix B, there is no reference to a specific standard for residential car parking.
- 6.6 With the above in mind, the level of parking to be provided for the proposed dwellings, has been designed to meet the expected operational needs of each of the dwellings and to minimise the need for vehicles associated with the proposed dwellings to park on-street. It is proposed for there to be 12 parking spaces within the parking courtyard accessed from Trimley Avenue. This equates to 1.5 spaces per dwelling for the development, which is deemed sufficient to meet the expected operational requirements of the site.



- 6.7 Swept path analysis of the proposed parking courtyard is attached at **Appendix D**.

Servicing

General Servicing and Refuse Collection

- 6.8 It is expected that the site will be serviced from the roadside on Queens Road, to the western boundary of the site, as part of an existing collection route.

Fire Appliance Access

- 6.9 Manual for Streets (MfS) indicates that the access requirements for emergency vehicles are generally stipulated by the Fire Service. Table 8 of the *The Building Regulations 2010 'Fire Safety' (2013) Approved Document B Section 5 'Access and Facilities for the Fire and Rescue Service'*, sets out that a minimum road width of 3.7m be provided and turning facilities should be provided in any cul-de-sac that is more than 20m long. Fire tenders and emergency vehicles will access the site from Queens Road in the event of an emergency, given that all dwellings front onto Queens Road.



7. SUMMARY & CONCLUSIONS

Summary

7.1 TPS has prepared this Transport Statement to accompany a full planning application for up to 8 dwellings on land to the west of Queens Road, Manchester. The following summarises the key points:

- The proposals are in keeping with both the local and national transport and land use planning policy agenda;
- The site is located within easy access of local amenities, including retail opportunities, health facilities and schools;
- Opportunities for walking, cycling and public transport have also been outlined;
- An analysis of historic accident data suggests that there are no accident trends that might be exacerbated by the addition of development-related traffic;
- The development proposals are anticipated to generate just 3 two-way trips in the AM peak hour and 4 two-way trips in the PM peak hour;
- The servicing arrangements for the site have been considered; the site will be serviced from the roadside on Queens Road, to the western boundary of the site; and
- Car parking and cycle parking will be provided to meet the operational requirements of the site, in the absence of specific council guidance.

Conclusion

7.2 Given the above, it is considered that the proposals will not result in a 'severe residual cumulative impact' (the test set out in NPPF); indeed, they will be complementary to the prevailing policy agenda. As such, there are no substantive highway grounds why the development should not be granted consent.



Appendix A

Indicative Site Layout



Appendix B

TRICS Output

Calculation Reference: AUDIT-640801-211118-1116

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : B - AFFORDABLE/LOCAL AUTHORITY HOUSES
TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	WL WILTSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	3 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
11	SCOTLAND	
	DU DUNDEE CITY	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: 16 to 68 (units:)
Range Selected by User: 11 to 75 (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 19/10/18

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

Selected survey days:

Tuesday	3 days
Wednesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	7 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:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	3

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	5
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,

Secondary Filtering selection:

Use Class:

C3 7 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:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	2 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	1 days
25,001 to 50,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	2 days
250,001 to 500,000	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	5 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:

No 7 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 7 days

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

LIST OF SITES relevant to selection parameters

1	DU-03-B-01	TERRACED BUNGALOWS	DUNDEE CITY
	307-441 BALUNIE DRIVE		
	DUNDEE		
	DOUGLAS & ANGUS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	68	
	Survey date: FRIDAY	21/04/17	Survey Type: MANUAL
2	GM-03-B-01	TERRACED HOUSES	GREATER MANCHESTER
	NEWBOLD		
	ROCHDALE		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	43	
	Survey date: WEDNESDAY	21/10/15	Survey Type: MANUAL
3	MS-03-B-01	TERRACED	MERSEYSIDE
	TARBOCK ROAD		
	LIVERPOOL		
	SPEKE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	16	
	Survey date: TUESDAY	18/06/13	Survey Type: MANUAL
4	WL-03-B-01	TERRACED HOUSES	WILTSHIRE
	BUTTERFIELD DRIVE		
	AMESBURY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	54	
	Survey date: TUESDAY	18/09/18	Survey Type: MANUAL
5	WY-03-B-02	MIXED HOUSES	WEST YORKSHIRE
	WHITEACRE STREET		
	HUDDERSFIELD		
	DEIGHTON		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	54	
	Survey date: TUESDAY	17/09/13	Survey Type: MANUAL
6	WY-03-B-03	TERRACED HOUSES	WEST YORKSHIRE
	LINCOLN GREEN ROAD		
	LEEDS		
	Suburban Area (PPS6 Out of Centre)		
	Built-Up Zone		
	Total No of Dwellings:	29	
	Survey date: THURSDAY	19/09/13	Survey Type: MANUAL
7	WY-03-B-04	TERRACED HOUSES	WEST YORKSHIRE
	SYKES CLOSE		
	BATLEY		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	17	
	Survey date: FRIDAY	19/10/18	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 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

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	7	40	0.085	7	40	0.153	7	40	0.238
08:00 - 09:00	7	40	0.181	7	40	0.295	7	40	0.476
09:00 - 10:00	7	40	0.192	7	40	0.238	7	40	0.430
10:00 - 11:00	7	40	0.160	7	40	0.160	7	40	0.320
11:00 - 12:00	7	40	0.117	7	40	0.121	7	40	0.238
12:00 - 13:00	7	40	0.142	7	40	0.132	7	40	0.274
13:00 - 14:00	7	40	0.128	7	40	0.128	7	40	0.256
14:00 - 15:00	7	40	0.164	7	40	0.174	7	40	0.338
15:00 - 16:00	7	40	0.295	7	40	0.199	7	40	0.494
16:00 - 17:00	7	40	0.253	7	40	0.199	7	40	0.452
17:00 - 18:00	7	40	0.310	7	40	0.238	7	40	0.548
18:00 - 19:00	7	40	0.192	7	40	0.160	7	40	0.352
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.219			2.197			4.416

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: 16 - 68 (units:)
 Survey date range: 01/01/13 - 19/10/18
 Number of weekdays (Monday-Friday): 7
 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 C

Site Access Proposals

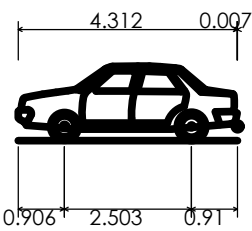
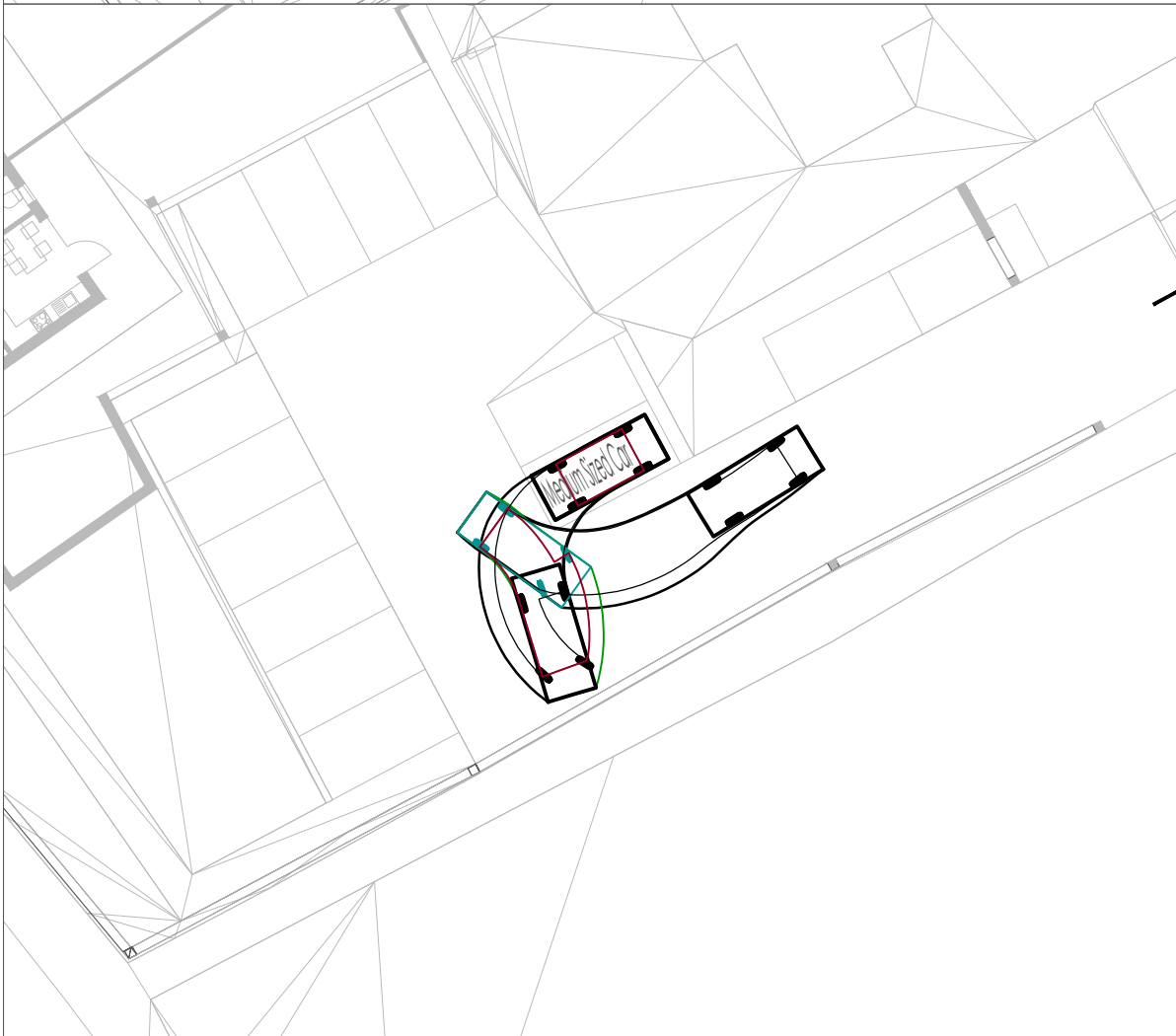
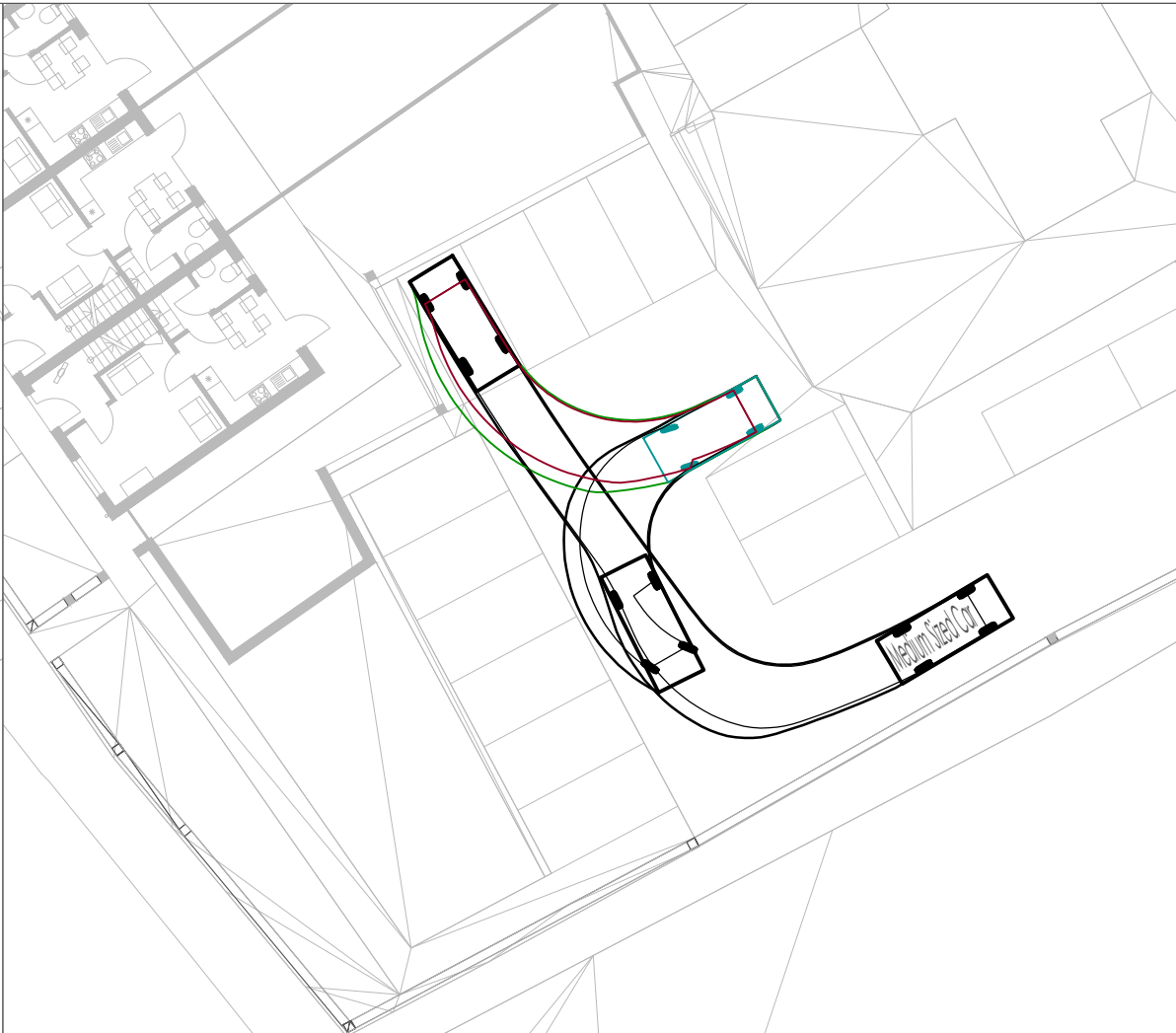


Date	Rev	Description	Drawn	Chkd
				
Project Project 500 - Queens Road			Revision -	
Title Proposed Access Design			Scale @ A3 1:200	
TPS Project Number P1809		Drawing Number D-1003		



Appendix D

Swept Path Analysis



Medium Sized Car
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to lock time
Kerb to Kerb Turning Radius

4.319m
1.686m
1.466m
0.228m
1.591m
4.00s
5.042m

Date	Rev	Description	Drawn	Chkd
				
Project			Revision	
Project 500 - Queens Road			-	
Title			Scale @ A3	
Swept Path Analysis			1:250	
TPS Project Number	Drawing Number			
P1809	T-1003			