

LGBTQ+ Extra Care Housing Scheme
Russell Road, Manchester
Transport Assessment
240711/SK223104/TA01(-01)

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Project	Document	Rev	Description	Authorised by	Signed	Date
SK223104	TA	00	Draft for Comment	L Speers	LGS	23/05/2024
SK223104	TA	01	Updated Layout	L Speers	LGS	11/07/2024

1 Introduction

- 1.1 SK has been appointed by the Great Places Housing Group to prepare a Transport Assessment (TA) that assesses the impact of a LGBTQ+ extra care development and shared ownership apartment scheme of Russell Road in the Whalley Range area of Manchester.
- 1.2 The planning application seeks consent for 80 extra care units, 40 shared ownership apartments and associated access and landscape arrangements. The proposed site plan is attached as Appendix A.
- 1.3 The assessment has been undertaken in line with the following policy and assessment guidance:
 - Chartered Institution of Highways & Transportation (2019), Better planning, better transport, better places
 - Department for Levelling Up, Housing & Communities (2023), National Planning Policy Framework
 - Department for Levelling Up, Housing & Communities (2023), Planning Practice Guidance
 - Greater Manchester Combined Authority (2024), Places for Everyone Joint Development Plan 2022 to 2039
 - Manchester City Council (2012), Local Development Framework: Core Strategy Development Plan Document
 - Transport for Greater Manchester (2013), Transport for Sustainable Communities
 - Transport for Greater Manchester (2017), Greater Manchester Transport Strategy 2040
 - TRICS (2023), TRICS Good Practice Guidance 2024
- 1.4 The proposed development has taken on board comments received from the Local Highway Authority, Manchester City Council (MCC) during pre-application discussions.

2 Baseline Situation

Site Location

- 2.1 The location of the site is shown on Figure 2.1.
- 2.2 The site sits in an established residential area in Whalley Range, to the northeast of Chorlton and southwest of Moss Side.
- 2.3 To the north of the site sits Our Ladies RC Primary School. The site is bounded to the north by Whalley Road, to the east adjacent properties, to the south Carlton Road and to the west Russell Road.

Baseline Site Use

- 2.4 The site comprises the Former Spire Hospital Site. The site is cleared off all buildings and is vacant.
- 2.5 Existing vehicle access bellmouths are present on Whalley Road, Carlton Road and Russell Road. There are two access bellmouths on Russell Road.

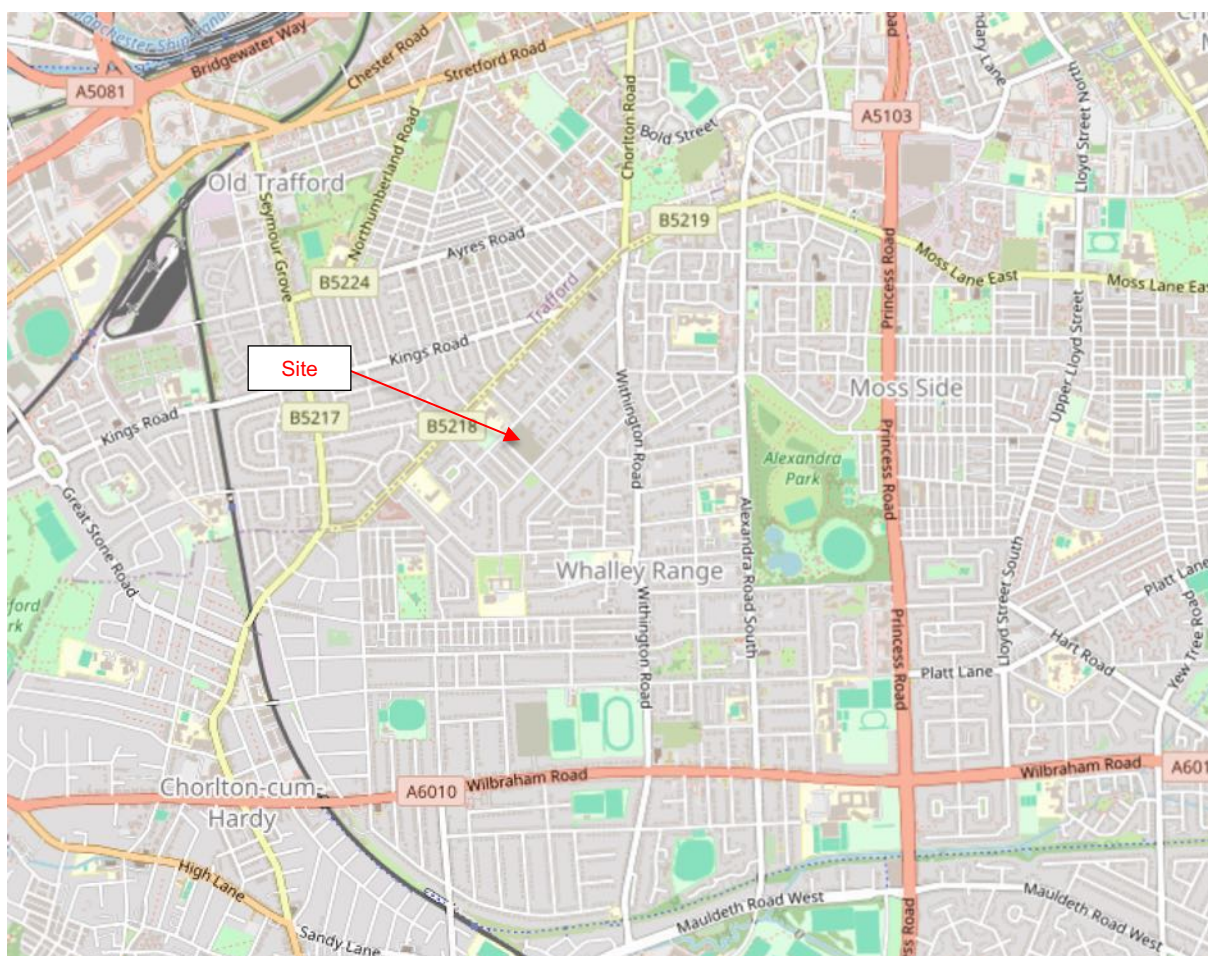


Figure 2.1: Site Location
[source: Open Street Map Contributors/ISO4 License]

Local Transport Network

- 2.6 Whalley Road on the north-western boundary of the site is a 7.5m wide road with 2.5m-3m footways on both sides of the road. The road has traffic calming features (speed humps) and is subject to a 20mph speed limit. Details of the Traffic Regulation Orders (TRO) in force on the road are detailed later in the report, including the Our Ladies RC Primary School Streets Scheme.
- 2.7 Carlton Road on the south-western boundary of the site is a 7.5m wide road with 2.8m footways on both sides of the road. The road has traffic calming features (speed humps) and is subject to a 20mph speed limit.
- 2.8 Russell Road on the South-eastern boundary of the site is a 6.8m wide road with 2.7m-2.9m wide footways on both sides of the road. The road is subject to a 20mph speed limit.

Traffic Regulation Orders

- 2.9 There are no TRO controls on the roads in the vicinity of the site, other than the School Keep Clear markings outside Our Ladies RC Primary School opposite the site on Whalley Road.
- 2.10 Figure 2.2 shows the School Streets scheme that is in operation in the area in the AM peak (between 8.30am and 9.20am and 2.30pm and 4pm). The School Streets scheme creates a pedestrian and cycle zone during the periods of operation on Whalley Road (between the junction of Wood Road and Sylvan Avenue) and is complemented with vehicle restrictions on Russell Road and Rowan Avenue. The controls apply to all vehicles (cars and motorcycles) other than vehicles requiring access to properties.

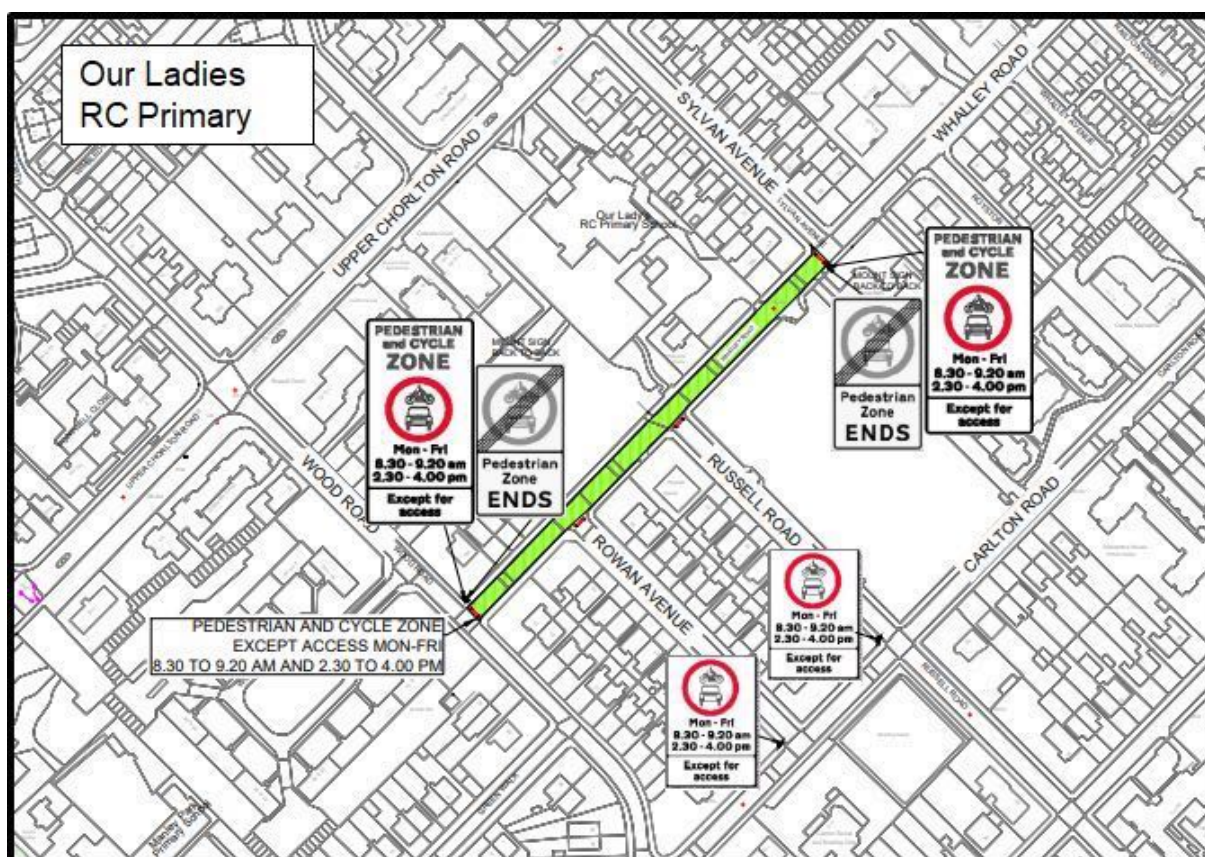


Figure 2.2: Our Ladies School Street Scheme
[source: Manchester City Council]

Road Safety Patterns

- 2.11 The [TfGM database](#) has been used to establish collision patterns over the most recent five-year period available.¹ The TfGM database states that the current data available is for five years to 31st December 2023. The next update is due in June 2024.
- 2.12 The database shows that there has been a single collision at the Whalley Road junction with Russell Road. The collision occurred in 2020 and was classified as slight. The collision did not involve a pedestrian or cyclist.
- 2.13 The database shows that there has been a single collision at the Russell Road with Carlton Road. The collision occurred in 2021 and was classified as slight. The collision did not involve a pedestrian or cyclist.
- 2.14 There have been no other collisions on the roads in the vicinity of the site.

3 Development Proposal

- 3.1 The site plan is attached as Appendix A. The planning application seeks consent for 80 extra care units, 40 shared ownership apartments and associated access and landscape arrangements.
- 3.2 Pedestrian access is provided from segregated locations on each site frontage with the public highway (Whalley Road, Russell Road and Carlton Road).
- 3.3 The footway bounding the site on Russell Road will be resurfaced and redundant accesses closed and reinstated, subject to discussions with the design team arboriculturist regarding impacts on the existing trees.
- 3.4 It is the intention to reuse the existing access junctions to the site, the access points being reused will be reconstructed to standardised geometry with 4.5m kerb radii and 6m access width and

¹ <https://www.gmtu.gov.uk/gmaccidents/>

incorporating dropped kerb crossing points. Vehicle access to the extra care units will be provided to facilitate a one-way system on site, with access provided from Whalley Road and egress onto Russell Road. The on-site access road connecting the access points has a 6m width provided internally where access to parking spaces is required. The access junctions and visibility splays are shown in the plan in Appendix B. No pedestrian facilities are provided at the vehicle access junctions as traffic-free/segregated provision is provided on all frontages to connect with internal pedestrian access routes.

- 3.5 Vehicle access to the shared ownership dwellings will be provided from Carlton Road. Tactile paving and dropped kerbs will be provided at the site access junction. Again, a 6m internal road width is proposed for access to parking spaces. The access arrangement and visibility splays are shown in the plan in Appendix B. No pedestrian facilities are provided at the vehicle access junctions as traffic-free/segregated provision is provided.
- 3.6 20 parking spaces are provided for the extra care units, a rate of 25%. Two of the spaces (10%) will be marked for use by blue badge holders. A mix of parking space sizes are proposed for the extra care units with a proportion being to standard 2.4m x 4.8m dimensions and the remainder to 6m x 3.6m to meet client specification for extra care, this is a standard size for accessible parking and will allow flexibility in terms of allocation of spaces. 6m aisle widths are provided to allow access to all parking spaces. The parking spaces will not be allocated and therefore 20% EV charging spaces are required. The layout provides five EV spaces (25%). Spaces are also provided for ambulance and to accommodate drop-off activity.
- 3.7 20 parking spaces are provided for the shared ownership units, a rate of 50%, of which two are to disabled standard (10%). Standard bays are 4.8m x 2.4m and disabled parking bays are 6m x 4.8m with the 1.2m clearance zone provided to three sides of each space. The parking spaces will not be allocated and therefore at least 20% need to be EV charging spaces. The layout provides five EV spaces (25%).
- 3.8 32 cycle parking spaces (sheffield stands) are provided in covered store behind the courtyard secure line (40%). The cycle store close to the main entrance can be used by visitors to the development. 46 cycle parking spaces are provided in a covered and secure store for the shared ownership apartments (105%), 42 spaces are in a two tier rack and four are sheffield stands.
- 3.9 MCC does not maintain any car or cycle parking standards for residential land uses and each development is considered on its own merits. The suitability of the proposed levels of parking is examined later in the TA.
- 3.10 Refuse collection and delivery activity will occur within the site and swept paths have been prepared for the largest vehicle requiring regular access (a MCC specification refuse vehicle) and is attached as Appendix C. Day-to-day delivery movements will also occur within the site and these will be smaller vehicles. A fire tender swept path has also been prepared based on the advice on locations needing to be served from the Fire Engineer. This is also attached as Appendix C.
- 3.11 The development will be supported by a Travel Plan and a Framework version of this has been prepared for the planning application. The Travel Plan is attached as Appendix D.

4 Accessibility Assessment

Active Travel Routes

- 4.1 The roads in the vicinity of the site are residential streets that are subject to a 20mph speed limit creating a suitable environment for active travel trips. The footways on all site frontages are over 2.5m wide and this is typical of the surrounding area. This exceeds the minimum footway width of 2m recommended by the Department for Transport (DfT) to comfortably allow two wheelchairs to pass and reflected in typical urban design standards.²
- 4.2 Figure 4.1 shows the active travel network serving the site from the [TfGM website](#).³ As noted earlier, the local streets in the vicinity of the site are residential streets that are subject to a 20mph

² Department for Transport (2022), Inclusive Mobility: Making Transport Accessible for Passengers & Pedestrians

³ <https://tfgm.pindarcreative.co.uk>

speed limit. These provide a connection to more formal routes on the cycle network, including cycle routes on Moss Lane, Kings Road, and Alexandra Road. Access can also be gained to Route 6 of the National Cycle Network and the recently improved cycle route on Chorlton Road, Upper Chorlton Road and Manchester Road. This route has been improved as part of the Bee Network Chorlton Cycleway Scheme.

- 4.3 The existing walking and cycling infrastructure provide opportunities for active trips to/from the site.

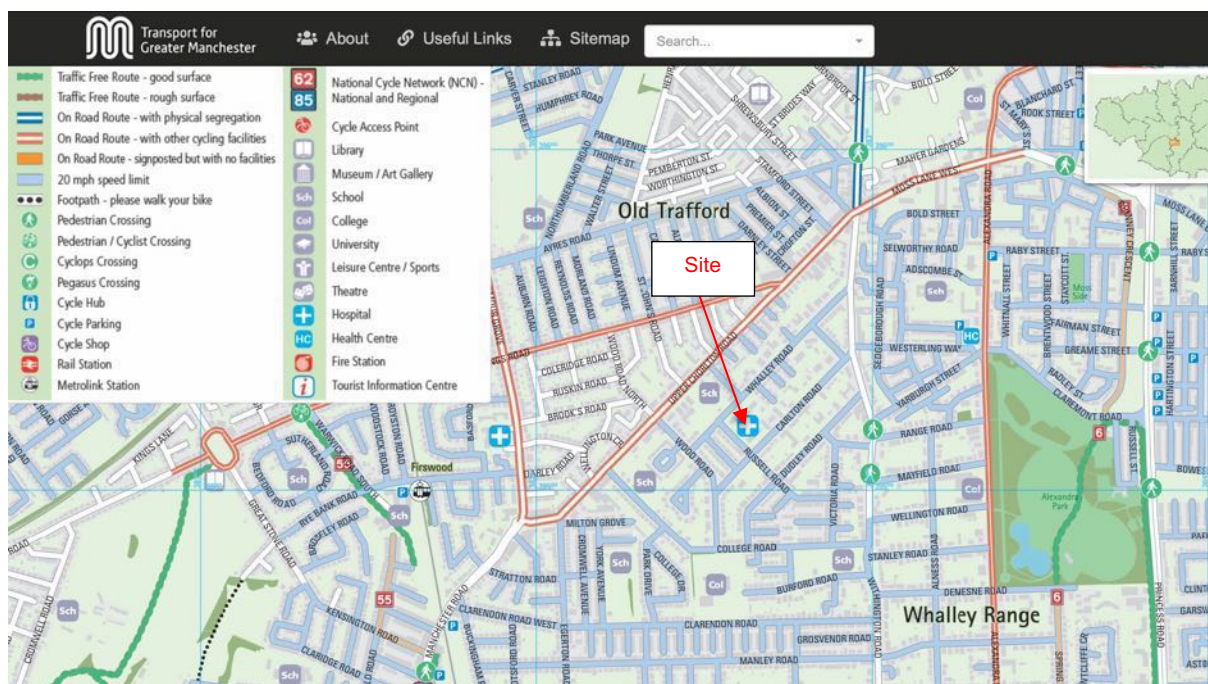


Figure 4.1: Cycle Network
[source: Transport for Greater Manchester]

Public Transport Routes

- 4.4 Figure 4.2 shows [TfGM's public transport network map](https://tfgm.com/maps) for the local area.⁴
- 4.5 The site is located 300m (less than a four-minute walk) from the bus stops on Upper Chorlton Road. The bus stops on Upper Chorlton Road have been recently upgraded as part of the Chorlton Cycleway Scheme works and crossings are provided to facilitate access to the northbound bus stop.

⁴ <https://tfgm.com/maps>

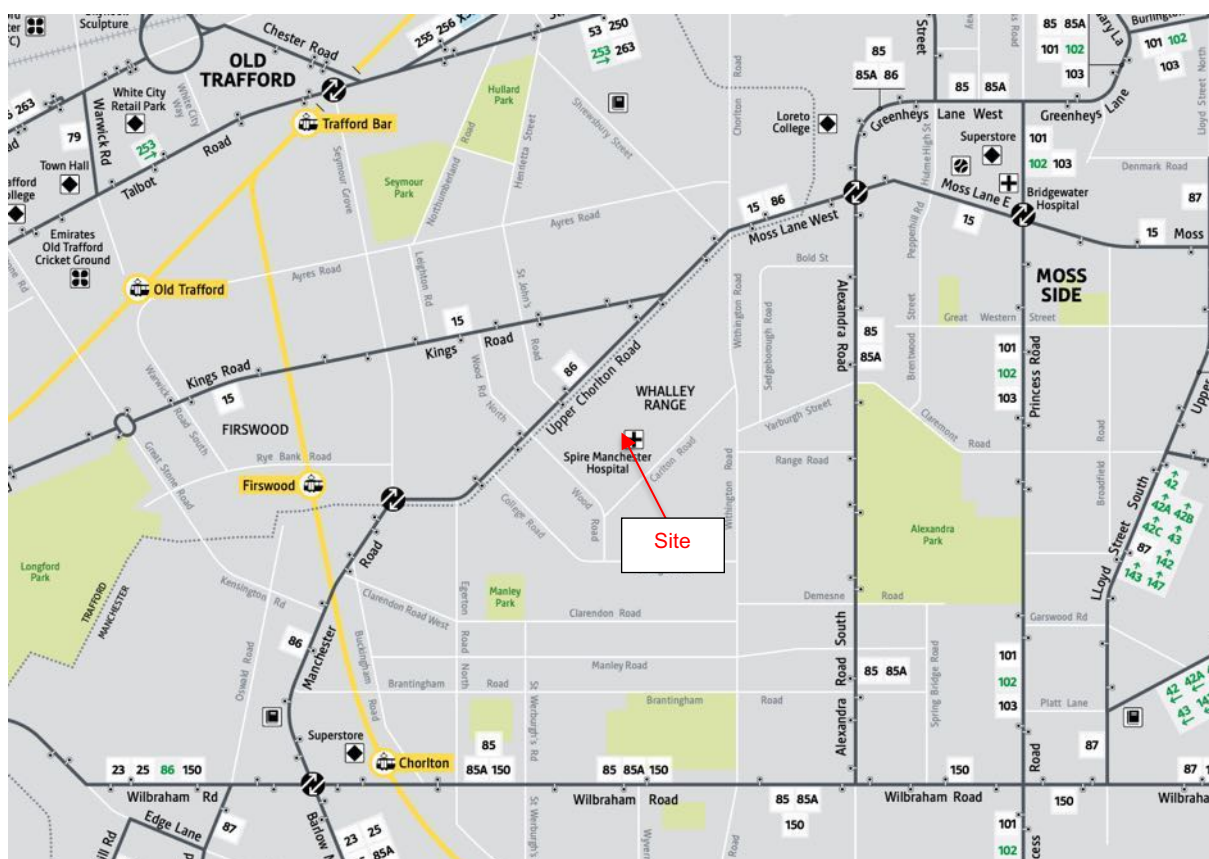


Figure 4.2: Public Transport Network
[source: Transport for Greater Manchester]

- 4.6 Table 4.1 provides a summary of the bus services using these stops taken from [TfGM timetables](#) at the time of preparing the report.⁵

No.	Route	Weekday (Buses per hour/each way)			Weekend (Buses per hour/each way)	
		Peak	Day	Evening	Saturday	Sunday
86	Manchester – Sale	9	5	4	5	3

Table 4.1: Bus Services
[source: Transport for Greater Manchester]

- 4.7 The nearest tram stop the site is Firwood, 1km from the site (just over 12-minute walk). [Metrolink tram services](#) connect the site to other areas of the City Centre, Altrincham, Eccles, East Didsbury, Media City, Ashton, the Airport, Rochdale, Bury, Salford Quays and the Trafford Centre.⁶ Tram services operate with a 12-minute frequency (each way) during the day (Monday to Saturday) and with a 15-minute frequency (each way) on a Sunday.
- 4.8 The above confirms that the site is well served by existing public transport services.

Accessibility Assessment

- 4.9 One of the principal factors to be considered when assessing the suitability of a site for development is the proximity and connectivity of a site to local amenities and services. It is generally held that walking has the potential to replace short car trips for distances up to 2km (equating to a 25-minute walk time). The Chartered Institution of Highways and Transportation

⁵ <https://tfgm.com/public-transport/bus>

⁶ <https://tfgm.com/public-transport/tram>

(CIHT) provides further guidance on suitable walk distances, setting maximum preferred distances as replicated in Table 4.2.⁷

Destination Type	Walk Distance (m)	Walk Time (mins)*
Commuting	2000	25
Local Centre/Local Retail	800	10
Other	1200	15

*Based on an all-age average walk speed of 80m/min

Table 4.2: CIHT Walk Distances
[source: Chartered Institution of Highways & Transportation]

4.10 Figure 4.3 shows walking isochrones from the site based on the CIHT guidance in Table 4.2.

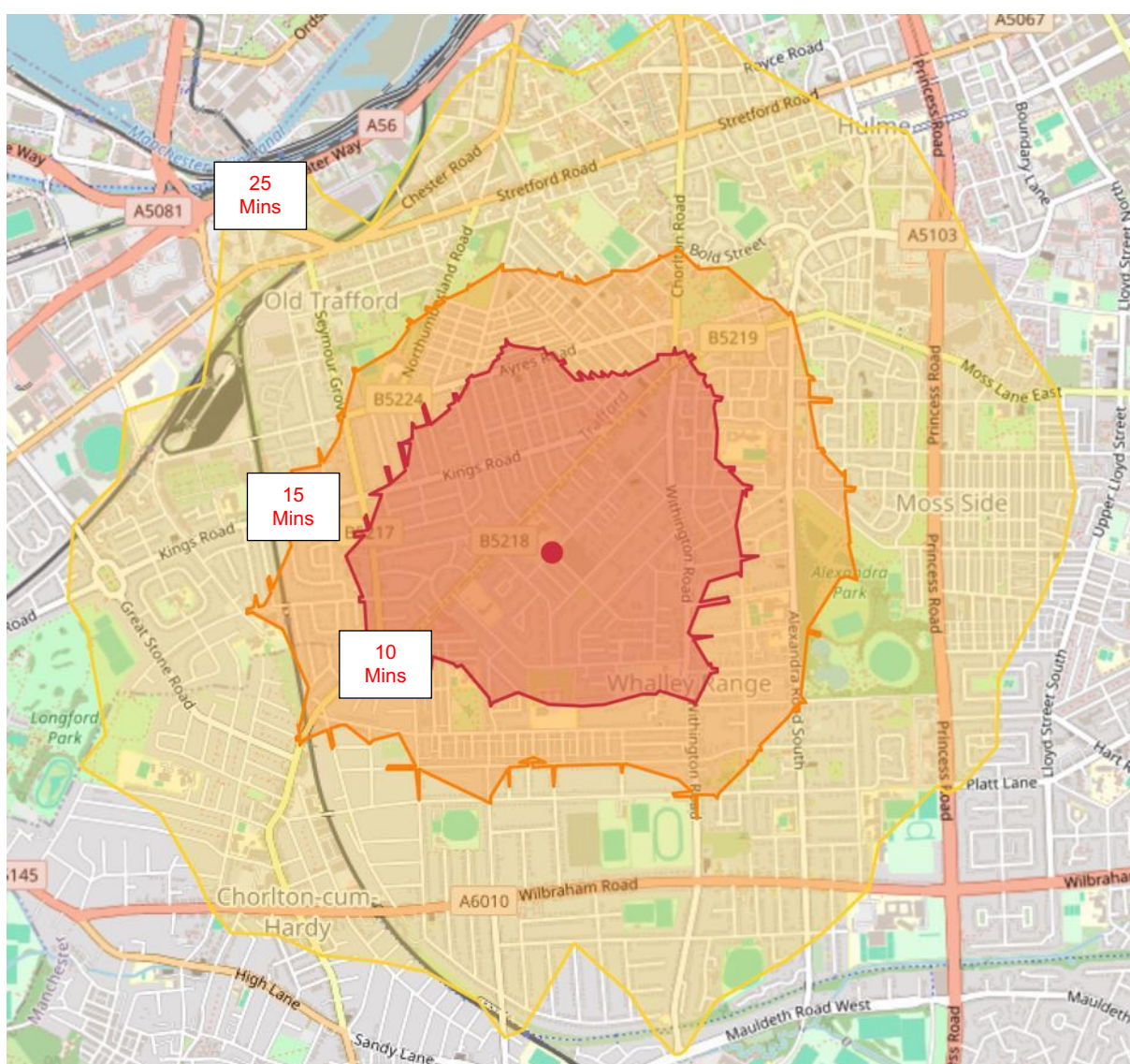


Figure 4.3: Walking Isochrones
[source: [ISO4app](#) and [OpenStreetMap Foundation](#) licensed under the [Open Database License](#)]

⁷ Chartered Institution of Highways & Transportation (2000), Guidelines for Providing for Journeys on Foot

- 4.11 Figure 4.3 shows that within a 10-minute walk of the site access can be gained to:
- Withington Road Local Centre (convenience retail, health, etc)
 - St Lukes Centre, Whalley Road
 - St Margarets Church, Whalley Road
 - Tesco Express, Upper Chorlton Road
 - New Testament Church of God, Upper Chorlton Road
 - Ashville Surgery, Upper Chorlton Road
 - Booze and Food, Upper Chorlton Road
 - Elliotts Pharmacy, Upper Chorlton Road
 - Jam Street Café, Upper Chorlton Road
 - U Mart Convenience Store, Upper Chorlton Road
 - New Century Barber, Upper Chorlton Road
 - Brooks Bar Dental Practice, Chorlton Road
- 4.12 Within a 15-minute walk of the site access can be gained to further convenience retail on Clarendon Road, Manley Park, Alexandra Park, Hullard Park, Seymour Park and Old Trafford Allotments. Chorlton district centre and Old Trafford is within a 25-minute walk of the site.
- 4.13 The assessment confirms that the site is well located to allow access to local services and amenities on foot.
- 4.14 A [Greater Manchester Accessibility Level](#) (GMAL) calculation has been undertaken for the site. A GMAL is calculated using the interactive tool managed and maintained by TfGM.⁸ This tool measures accessibility by public transport of a point of interest and provides a rate between 1 and 8, where 1 is a poor level of accessibility and 8 is an exceptional level of accessibility usually found in the city centre.
- 4.15 The site has a GMAL of 5, which is a good level of public transport accessibility for a site in a suburban area.

Policy Compliance

- 4.16 The assessment confirms that the site is well located in terms of access to active and sustainable transport routes, and also in relation to local amenities and services.
- 4.17 110 of NPPF supports developments that allow appropriate opportunities for sustainable transport modes to be taken up.⁹ This is echoed in Policy JP-C1 (An Integrated Network) of PfE aims to help deliver an accessible, low carbon Greater Manchester by supporting developments that minimises the need to travel and is located where a significant proportion of trips can be made by walking, cycling and public transport.¹⁰ The proposal accords with these requirements.
- 4.18 Policy JP-C3 (Public Transport) states that support will be given to improved public transport routes and services and Policy JP-C6 (Walking and Cycling) states that active travel routes should be of suitable standard to allow connections for the community and to ensure direct and easily navigable links to public transport nodes. The assessment confirms that the existing infrastructure serving the site is of good quality and the development includes site layout measures such as secure cycle parking, EV charging facilities, pedestrian access facilities, localised improvements to bounding footway treatments, tactile paving/dropped kerbs at the vehicle access junctions, and a Travel Plan. The proposal therefore accords with both policies.
- 4.19 The proposal also accords with Policy JP-C8 (Transport Requirements for New Developments) of PfE in that it provides suitable facilities for pedestrians, disabled, EV charging and cyclists, and is located adjacent to existing public transport facilities.

⁸ <https://www.gmtu.gov.uk/gmbusroute/GMAL%20Calculation%20Guide.pdf>

⁹ Department for Levelling Up, Housing & Communities (2023), National Planning Policy Framework

¹⁰ Greater Manchester Combined Authority (2024), Places for Everyone Joint Development Plan 2022-2039

5 Impact Assessment

Extra Care Trip Generation

5.1 TRICS has been used to establish a suitable trip generation for the extra care units on the site. The following parameters have been set:

- Survey Types: Multimodal
- TRICS Land Use: 03 – Residential – N – Retirement Flats
- Regions: Default
- Location: Edge of Town Centre/Suburban Area
- Scale: Default
- Date Range: Expanded to Increase Sample Size
- Servicing Vehicles: Included
- Covid Surveys: Excluded

5.2 The TRICS output is attached as Appendix E with a peak hour summary provided below.

	Person Trip Rates (per unit)			Total Vehicle Trip Rates (per unit)			LGV Trip Rates (per unit)			OGV Trip Rates (per unit)		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	0.155	0.722	0.877	0.057	0.226	0.283	0.007	0.021	0.028	0	0	0
PM Peak Hour	0.494	0.287	0.781	0.159	0.089	0.248	0.014	0.005	0.019	0	0.002	0.002
	Person Trips			Total Vehicle Trips			LGV Trips			OGV Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	10	16	26	4	8	12	0	0	0	0	0	0
PM Peak Hour	13	10	23	7	6	13	1	1	2	0	0	0

Table 5.1: Trip Rates & Development Trips – Extra Care Units

Shared Ownership Apartments Trip Generation

5.3 TRICS has been used to establish a suitable trip generation for the extra care units on the site. The following parameters have been set:

- Survey Types: Multimodal
- TRICS Land Use: 03 – Residential – C – Flats Privately Owned
- Regions: Default
- Location: Edge of Town Centre/Suburban Area
- Scale: 15 to 100
- Date Range: Default
- Servicing Vehicles: Included
- Covid Surveys: Excluded

5.4 Privately owned flat trip rates have been used to provide a robust forecast of development effects.

5.5 The sample includes two sites located in the outer areas of Greater London. Both of the Greater London sites have a PTAL level of 2, which is worse than the level accessibility at the proposal site (GMAL 5).

5.6 The TRICS output is attached as Appendix E with a peak hour summary provided below.

	Person Trip Rates (per unit)			Total Vehicle Trip Rates (per unit)			LGV Trip Rates (per unit)			OGV Trip Rates (per unit)		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	0.155	0.722	0.877	0.057	0.226	0.283	0.007	0.021	0.028	0	0	0.155
PM Peak Hour	0.494	0.287	0.781	0.159	0.089	0.248	0.014	0.005	0.019	0	0.002	0.494
	Person Trips			Total Vehicle Trips			LGV Trips			OGV Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	6	29	35	2	9	11	0	1	1	0	0	0
PM Peak Hour	20	11	31	6	4	10	1	0	1	0	0	0

Table 5.2: Trip Rates & Development Trips – Shared Ownership Apartments

Residual Traffic Flows

- 5.7 Table 5.3 provides a summary of the peak hour residual traffic flows that will be generated by the development.

	Total Vehicle Trips		
	In	Out	Total
AM Peak Hour	6	17	23
PM Peak Hour	13	9	22

Table 5.3: Total Development Traffic Flows

Net Traffic Impact

- 5.8 Table 5.3 shows that the proposal will not results in a significant increase in traffic flows during the critical peak hours, with a maximum traffic flow of 23 vehicles generated in the AM peak hour.
- 5.9 Based on the above the proposal will not have an impact on highway operation or road safety.

Parking Assessment

- 5.10 MCC's parking standards are set out in the Core Strategy.¹¹ MCC does not maintain any parking standards for residential land uses and states that each development will be considered on its own merits.
- 5.11 In the absence of an adopted policy, reference has been made to data provided of later living facilities (Sheltered Accommodation Category 2) located close to the site. The data is shown in Table 5.4. The number of parking spaces includes all types of spaces at the site.

Site	Postcode	Units	Parking Spaces	Resident Cars
Cardinal Court	M14 4LZ	50	12	9
Hartshorne Court	M14 4EG	30	8	6
Total		80	20	15

Table 5.4: Parking Precedents

¹¹ MCC (2012), Manchester's Local Development Framework: Core Strategy Development Plan

- 5.12 The average parking space rate for extra care accommodation nearby is 25% with a 19% resident car ownership rate. In line with this, the proposed development provides 25% car parking rate that is meaning that sufficient parking is provided at the site to meet both resident, staff and visitor parking demand.
- 5.13 In terms of the shared ownership apartments, the site sits in Census area Manchester 028. 2021 Census data shows that 52% of residents in flats in the area live without a car and 48% live with a car. The layout provides 50% parking for the shared ownership apartments, which is in excess of the car ownership level for the local area.
- 5.14 The evidence set out above demonstrates that the level of the parking is appropriate for the location and use types proposed and therefore there will be no overspill parking on surrounding streets.

Policy Compliance

- 5.15 Paragraph 109 of NPPF states that:

‘The planning system should actively manage patterns of growth in support of these objectives. 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 health.’¹²

- 5.16 The above national policy echoes that adopted in PfE, such as Policy JP-C8 (Transport Requirements for New Development).¹³ The development is in line with both regional and national policy in that it is located where access can be gained by non-car modes, and it is demonstrated that the existing sustainable infrastructure is sufficient to meet the requirements of the development.
- 5.17 Policy JP-C8 (Transport Requirements for New Development) states that a TA and Travel Plan should be prepared to assess development impacts and determine whether mitigation is required on the Strategic Road Network and local transport network. The TA confirms that the development will not have an impact on network operation and that the measures proposed within the site layout and the Travel Plan will result in a benefit to future site users without recourse to wider network mitigation.
- 5.18 MCC does not maintain any parking standards for residential land uses and each development is taken on its own merits. Evidence is presented in the TA that shows that the development provides sufficient parking for the proposed scale and type of land uses proposed. It is therefore concluded that there will be no road safety or amenity effects generated by the development.
- 5.19 Paragraph 115 of NPPF states that developments should only be prevented on highway grounds if there would be an unacceptable impact on highway safety or where residual cumulative impacts would be severe. The assessment shows that the proposal will not have negative effects on highway operation or road safety.

6 Conclusions

- 6.1 SK has been appointed to prepare a TA that examines the impact of developing an extra care and shared ownership development off Russell Road in the Whalley Range area of Manchester. The development will deliver 80 extra care units and 40 shared ownership apartments.
- 6.2 The TA has been prepared in line with standard appraisal methods and prevailing policy and assessment guidance.
- 6.3 The assessment confirms that the site occupies an accessible location which provides opportunities for access by active and sustainable modes. The site has a GMAL of 5, which is a

¹² Department for Levelling Up, Housing & Communities (2023), National Planning Policy Framework

¹³ Greater Manchester Combined Authority (2024), Places for Everyone Joint Development Plan 2022-2039

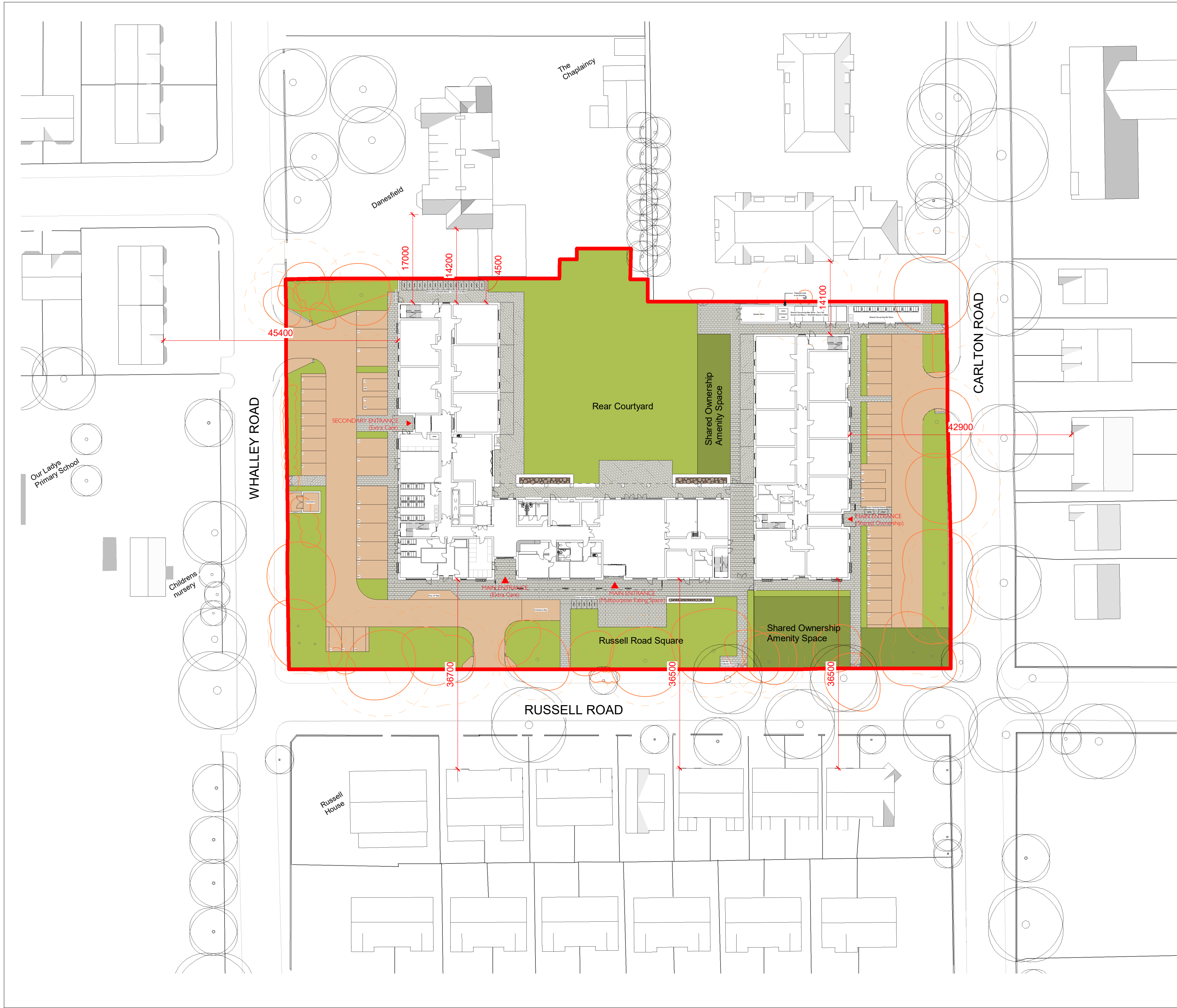
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good level of accessibility in a suburban location. The site is shown to be well located in relation to local amenities and services. The proposal includes measures to support sustainable movement including secure cycle parking, EV charging facilities, pedestrian access facilities, localised improvements to bounding footway treatments, tactile paving/dropped kerbs at the vehicle access junctions and a Travel Plan.

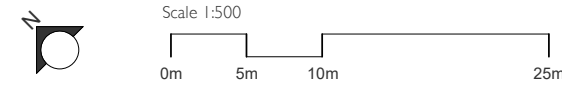
- 6.4 The TA confirms that there are no road safety issues on routes bounding the site. A trip generation exercise has been undertaken and this confirms that the development will not be associated with a significant level of traffic during the network peak hours and so it is concluded that there will be no negative effects on road safety or highway operation. Vehicle access to the site is retained from the existing locations and the junctions will be modified to incorporate tactile paving and dropped kerbs. Swept path analysis has been undertaken and this shows that servicing and refuse collection activity can be suitably accommodated within the site.
- 6.5 In the absence of adopted parking standards reference has been made to local evidence to inform the proposed parking levels. The level of parking proposed is shown to accord with this evidence and therefore it is concluded that there will be no road safety or amenity effects generated by the development.

Appendix A



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- CHECK ALL DIMENSIONS ON SITE.
- DRAWING TO BE READ IN CONJUNCTION WITH THE HEALTH & SAFETY PLAN, AND ALL RELEVANT RISK ASSESSMENTS AND THE FOLLOWING DRAWINGS:



NB.: Please refer to Landscape Plan for detailed landscaping proposals

- Vehicle access areas
- Pedestrian access areas
- Amenity landscaping
- Amenity landscaping (Shared Ownership only)
- Existing tree - root protection area indicated. Refer to arboricultural report for details.
- Existing tree - refer to arboricultural report for details
- Neighbouring building

P01 15.07.24 MM Issued for planning
Rev Date By Remarks

Client:		Great Places Housing Group	
Project No. / Project Name:		22-036 / Russell Road Extra Care Housing	
Drawing Name:		Proposed Site Plan	
Drawing Purpose:		PLANNING	
Project:	Origin.:	Vol/Sys:	Level:
RUS - TRI - ZZ - 00 - DR - A - 2010			
Status:	Scale @ A2	Drawn	Check
1 : 500		JM	MM
Date		JAN 2024	
Revision		P01	



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Appendix B

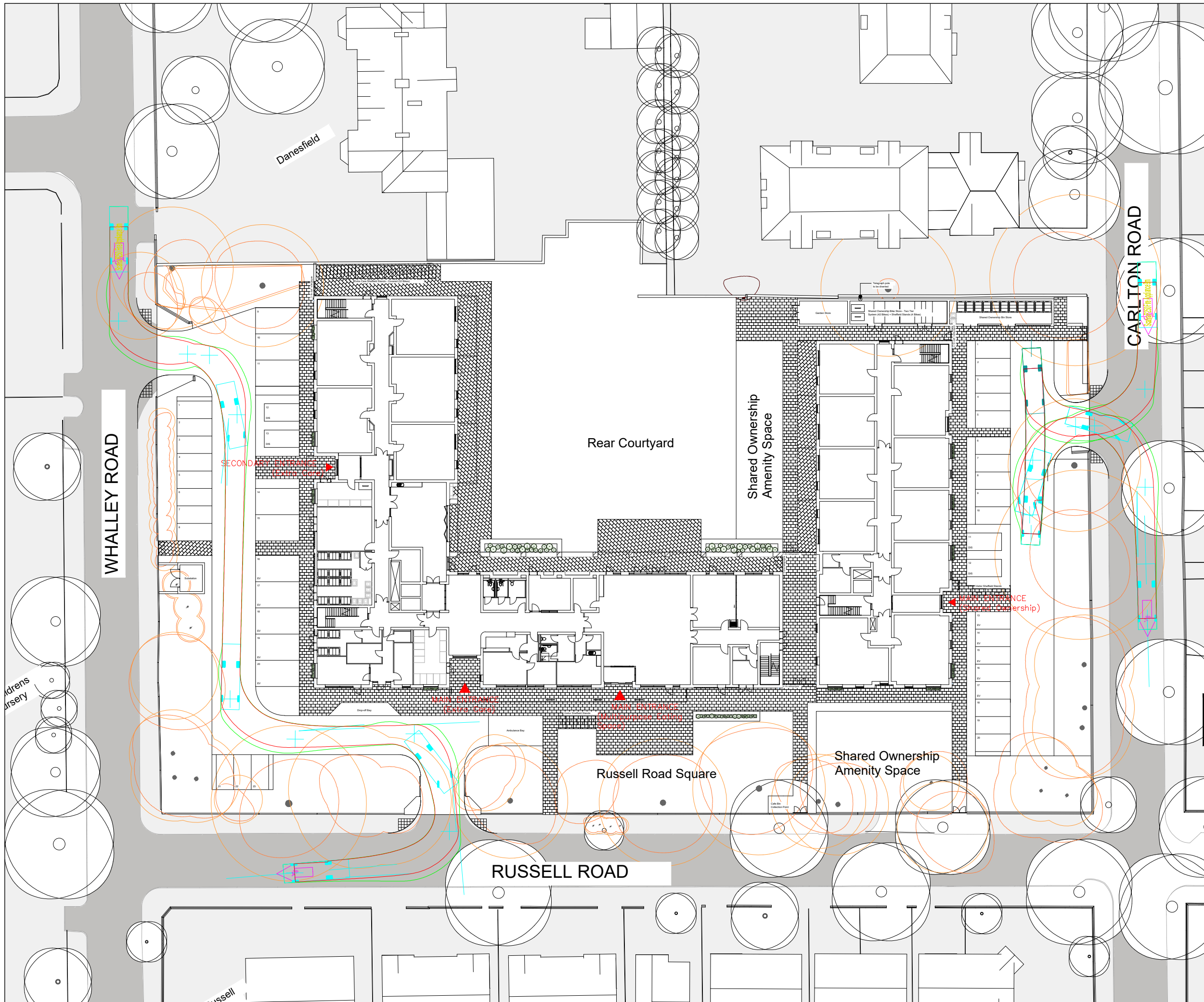
NOTES

The site plan illustrates a residential development with the following features and annotations:

- Streets:** WHALLEY ROAD, RUSSELL ROAD, CARLTON ROAD, and Danesfield.
- Buildings:** Residential units are shown with internal layouts and external walls.
- Open Spaces:**
 - Rear Courtyard:** A central open area between buildings.
 - Shared Ownership Amenity Space:** A designated area for shared ownership residents.
 - Russell Road Square:** A square area at the bottom of the site, with a note: "Resurface Russell Road footway subject to arboricultural constraints".
- Access and Circulation:**
 - Existing access reconstructed to standardised geometry with crossing point - entry only:** Located at the top left and top right.
 - Existing access reconstructed to standardised geometry with crossing point:** Located on the right side.
 - Existing access reconstructed to standardised geometry with crossing point - exit only:** Located at the bottom left.
 - Reinstate redundant access point as continuous footway:** Located on the right side.
 - SECOND ENTRY:** A red arrow points to a new entry point on the left side.
- Visibility and Safety:**
 - Visibility splay 2.4m x 43m:** Multiple locations along the streets.
 - Visibility splay 2.4m to end of street:** Located at the bottom left.
 - R4.5m:** Radius callouts for various corners and curves.
 - 6.0m:** Width callouts for various sections.
- Other Features:**
 - Drop-off Bay:** Located near the bottom left.
 - Anticipation Bay:** Located near the bottom center.
 - Shared Ownership Amenity Space:** A large area on the right side.
 - Shared Ownership Amenity Space:** A smaller area on the left side.

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Appendix C



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

NOTES

Vehicle Profile

Scania P250 Fire Appliance 9m	9.000m
Overall Length	2.540m
Overall Width	3.531m
Overall Body Height	0.416m
Min Body Ground Clearance	2.490m
Track Width	3.00 sec
Lock to Lock Time	8.550m
Kerb to Kerb Turning Radius	

Revision Details	By	Date	Suffix
	Check		

Drawing Number

SK223104-023

Russell Road, Manchester

Drawing Title

**Swept Path Analysis
Fire Service Vehicle**

Scale at A3

1:500

Drawn	Approved
JAT	LGS
Check	Date
LGS	12.07.24

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Appendix D

LGBTQ+ Extra Care Housing Scheme

Russell Road, Manchester

Framework Travel Plan

240712/SK223104/FTP01(-01)

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Project	Document	Rev	Description	Authorised by	Signed	Date
SK223104	FTP01	00	First Draft – Text Only Issue	L Speers	LGS	23/05/2024
SK223104	FTP01	01	Updated Layout	L Speers	LGS	11/07/2024

1 Introduction

Background

- 1.1 SK has been appointed by Great Places Housing Group to prepare Framework Travel Plan to accompany a planning application for a LGBTQ+ extra care development and shared ownership apartment scheme off Russell Road in the Whalley Range area of Manchester.
- 1.2 A Transport Assessment (TA) has been prepared for the planning application and this should be referred to for full details of the development proposals and the transport implications. Details of the development relevant to the Travel Plan are summarised below.

Development Overview

- 1.3 The site plan is attached as Appendix A of the TA. The planning application seeks consent for 80 extra care units, 40 shared ownership apartments and associated access and landscape arrangements.
- 1.4 Pedestrian access is provided from segregated locations on each site frontage with the public highway (Whalley Road, Russell Road and Carlton Road).
- 1.5 The footway bounding the site on Russell Road will be resurfaced and redundant accesses closed and reinstated, subject to discussions with the design team arboriculturist regarding impacts on the existing trees.
- 1.6 It is the intention to reuse the existing access junctions to the site, the access points being reused will be reconstructed to standardised geometry with 4.5m kerb radii and 6m access width and incorporating dropped kerb crossing points. Vehicle access to the extra care units will be provided to facilitate a one-way system on site, with access provided from Whalley Road and egress onto Russell Road. The on-site access road connecting the access points has a 6m width provided internally where access to parking spaces is required. The access junctions and visibility splays are shown in the plan in Appendix B of the TA.
- 1.7 Vehicle access to the shared ownership dwellings will be provided from Carlton Road. Tactile paving and dropped kerbs will be provided at the site access junction. Again, a 6m internal road width is proposed for access to parking spaces. The access arrangement and visibility splays are shown in the plan in Appendix B. No pedestrian facilities are provided at the vehicle access junctions as traffic-free/segregated provision is provided.
- 1.8 20 parking spaces are provided for the extra care units, a rate of 25%. Two of the spaces (10%) will be marked for use by blue badge holders. A mix of parking space sizes are proposed for the extra care units with a proportion being to standard 2.4m x 4.8m dimensions and the remainder to 6m x 3.6m to meet client specification for extra care, this is a standard size for accessible parking and will allow flexibility in terms of allocation of spaces. 6m aisle widths are provided to allow access to all parking spaces. The parking spaces will not be allocated and therefore 20% EV charging spaces are required. The layout provides five EV spaces (25%). Spaces are also provided for ambulance and to accommodate drop-off activity.
- 1.9 20 parking spaces are provided for the shared ownership units, a rate of 50%, of which two are to disabled standard (10%). Standard bays are 4.8m x 2.4m and disabled parking bays are 6m x 4.8m with the 1.2m clearance zone provided to three sides of each space. The parking spaces will not be allocated and therefore at least 20% need to be EV charging spaces. The layout provides five EV spaces (25%).
- 1.10 32 cycle parking spaces (sheffield stands) are provided in covered store behind the courtyard secure line (40%). The cycle store close to the main entrance can be used by visitors to the development. 46 cycle parking spaces are provided in a covered and secure store for the shared ownership apartments (105%), 42 spaces are in a two tier rack and four are sheffield stands.
- 1.11 MCC does not maintain any car or cycle parking standards for residential land uses and each development is considered on its own merits. The suitability of the proposed levels of parking is examined in the TA.

- 1.12 Refuse collection and delivery activity will occur within the site and swept paths have been prepared for the largest vehicle requiring regular access (a MCC specification refuse vehicle) and is attached as Appendix C of the TA. Day-to-day delivery movements will also occur within the site and these will be smaller vehicles. A fire tender swept path has also been prepared based on the advice on locations needing to be served from the Fire Engineer. This is also attached as Appendix C of the TA.

2 Travel Plan Process, Benefits & Objectives

Travel Plan Process

- 2.1 The Travel Plan has been prepared in line with the following guidance:
- Department for Transport (2009), Good Practice Guidelines: Delivering Travel Plans through the Planning Process
 - Manchester City Council (2012), Core Strategy
 - Department for Levelling Up, Housing & Communities (2023), National Planning Policy Framework
 - Department for Levelling Up, Housing & Communities (2023), Planning Practice Guidance
 - Greater Manchester Combined Authority (2024), Places for Everyone Joint Development Plan 2022 to 2039
 - Transport for Greater Manchester (2013), Transport for Sustainable Communities
 - Transport for Greater Manchester (2017), Greater Manchester Transport Strategy 2040
- 2.2 A Travel Plan is a tool for managing access to a site that sets out a management strategy that seeks to promote sustainable travel choices and reduce single occupancy car use to achieve stated objectives. It should contain a package of measures designed to meet the objective to reduce single-occupancy car use generated from the site by supporting sustainable modes of transport, where practicable.
- 2.3 A Travel Plan should include a mixture of site infrastructure, strategy, marketing, and communication measures to assist the plan to meet defined objectives. Within a Travel Plan there is a need to set targets and indicators, the purpose of which is to monitor change and review policies overtime to allow it to meet the needs of the users of a site.
- 2.4 A Travel Plan should also outline the existing accessibility of the site, infrastructure measures included as part of the development, and management and policy measures for adoption at the site to promote use of sustainable modes.
- 2.5 This framework version of the Travel Plan has been prepared for the planning application to set out the principles that will be adopted in the full Travel Plan for the site. The requirement to prepare a full Travel Plan will be a condition of planning.

Travel Plan Pyramid

- 2.6 The Department of Transport (DfT) states that:
- “... it can be helpful to view a travel plan for a new development as a pyramid of measures and actions, which is constructed from the ground up, with each new layer building on the last and all set within the context of the outcomes sought.”¹
- 2.7 The DfT pyramid is shown in Figure 2.1.

¹ Department for Transport (2009), Good Practice Guidelines: Delivering Travel Plans through the Planning Process

- 2.8 At the bottom of the pyramid is the location of the site and characteristics of access to the site by all modes of travel. The location of the development provides the foundation for good accessibility, and this is examined in Section 3 and 4 of the Plan.
- 2.9 At the next level the physical aspects of the proposed development are set out to allow acknowledgement of that some Travel Plan measures are built-in to the layout to influence travel, such as pedestrian access measures and car and cycle parking provision. These aspects are set out in Section 1 and 6.
- 2.10 The remaining levels outline the management, promotion and strategy measures that are to be adopted as part of the Travel Plan to reinforce the site location, infrastructure proposals and access opportunities. These are set out in Sections 5 and 6 of the Plan.
- 2.11 Section 7 sets out the monitoring plan which details how and when the travel plan will be reviewed. This includes how and when surveys will be undertaken, and the targets that will be set to meet the stated objectives.
- 2.12 Section 8 provides a summary of the actions identified in the Travel Plan along with timescales for implementation and funding / budget details.

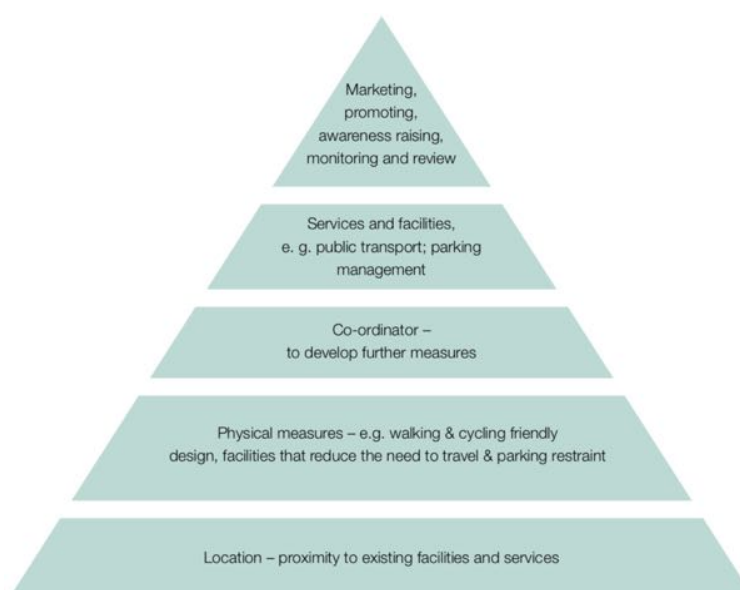


Figure 2.1: Travel Plan Pyramid
[source: Department for Transport]

Travel Plan Benefits

- 2.13 Travel Plans result in a variety of health, financial, environmental and site operation benefits, which are set out below.
- 2.14 Reduced levels of single occupancy car use can lead to an improvement in air quality both surrounding the site and across the wider area. In addition, increases in active travel have very real impact on health as moderate physical activity can help prevent obesity, mental health issues, cancer, high blood pressure and cardiovascular disease.
- 2.15 The financial benefits of Travel Plans include personal cost savings from using more cost-effective modes of travel and indirect and wider cost savings relating to reduced illness and reduced accident rates.
- 2.16 The environmental benefits of Travel Plans include reduced carbon emissions and air quality issues.
- 2.17 Travel Plans also bring societal benefits including a happier and healthier community, and more social interaction.

Objectives

2.18 The objectives of the Travel Plan are to:

Objective 1: To increase trips by active/sustainable modes of travel.

Objective 2: To reduce the number of single occupancy private car trips.

3 Site Context

3.1 The location of the site is shown on Figure 3.1.

3.2 The site sits in an established residential area in Whalley Range, to the northeast of Chorlton and southwest of Moss Side.

3.3 To the north of the site sits Our Ladies RC Primary School. The site is bounded to the north by Whalley Road, to the east adjacent properties, to the south Carlton Road and to the west Russell Road.

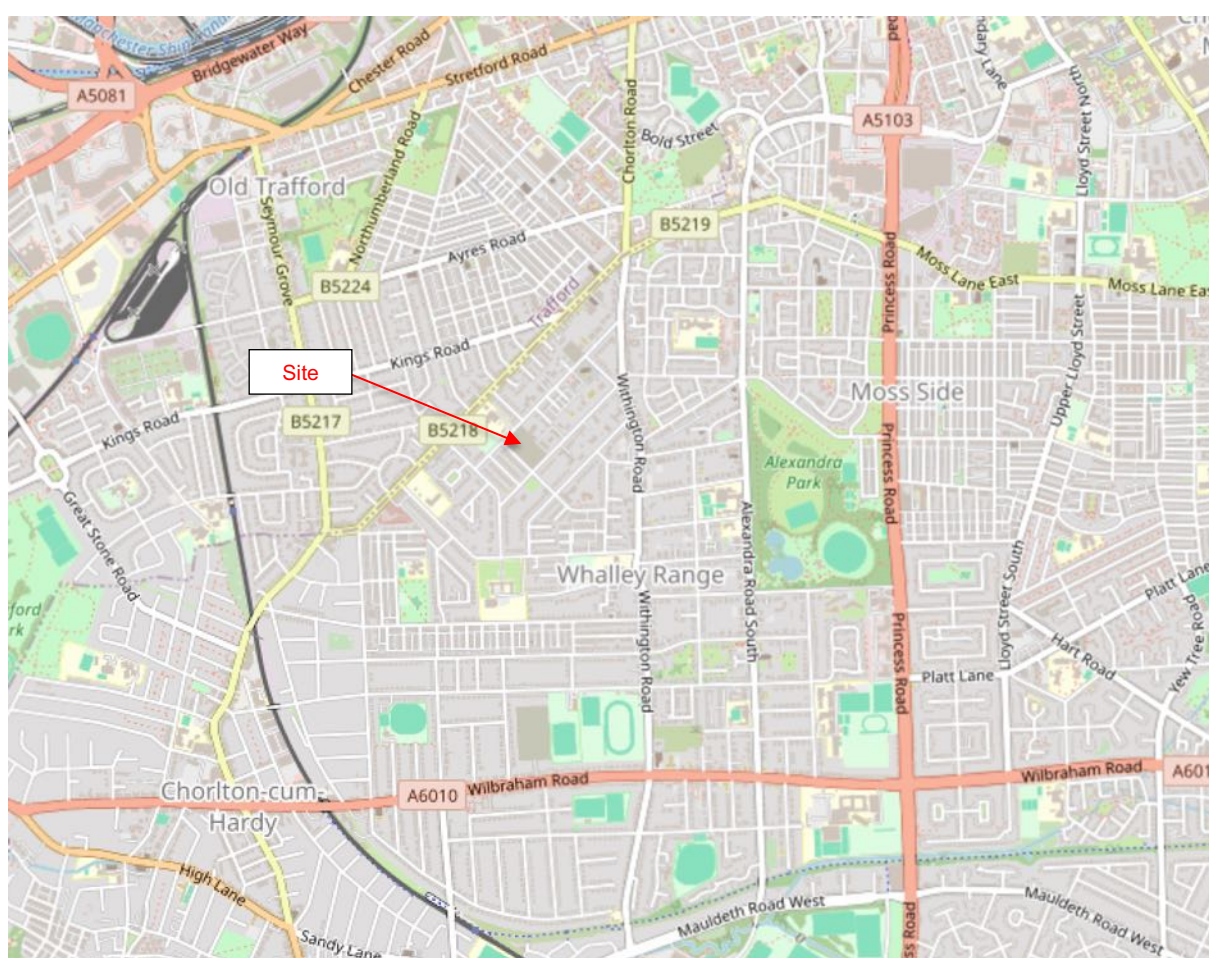


Figure 3.1: Site Location

[source: OpenStreetMap Foundation licensed under the Open Database License]

Local Transport Network

3.4 Whalley Road on the north-western boundary of the site is a 7.5m wide road with 2.5m-3m footways on both sides of the road. The road has traffic calming features (speed humps) and is subject to a 20mph speed limit. Details of the Traffic Regulation Orders (TRO) in force on the road are detailed later in the report, including the Our Ladies RC Primary School Streets Scheme.

- 3.5 Carlton Road on the south-western boundary of the site is a 7.5m wide road with 2.8m footways on both sides of the road. The road has traffic calming features (speed humps) and is subject to a 20mph speed limit.
- 3.6 Russell Road on the South-eastern boundary of the site is a 6.8m wide road with 2.7m-2.9m wide footways on both sides of the road. The road is subject to a 20mph speed limit.

Traffic Regulation Orders

- 3.7 There are no TRO controls on the roads in the vicinity of the site, other than the School Keep Clear markings outside Our Ladies RC Primary School opposite the site on Whalley Road.
- 3.8 Figure 2.2 of the TA shows the School Streets scheme that is in operation in the area in the AM peak (between 8.30am and 9.20am and 2.30pm and 4pm). The School Streets scheme creates a pedestrian and cycle zone during the periods of operation on Whalley Road (between the junction of Wood Road and Sylvan Avenue) and is complemented with vehicle restrictions on Russell Road and Rowan Avenue. The controls apply to all vehicles (cars and motorcycles) other than vehicles requiring access to properties.

Road Safety Patterns

- 3.9 The TA confirms that there has been a single collision at the Whalley Road junction with Russell Road. The collision occurred in 2020 and was classified as slight. The collision did not involve a pedestrian or cyclist.
- 3.10 The database shows that there has been a single collision at the Russell Road with Carlton Road. The collision occurred in 2021 and was classified as slight. The collision did not involve a pedestrian or cyclist.
- 3.11 There have been no other collisions on the roads in the vicinity of the site.

4 Accessibility Audit

Active Travel Routes

- 4.1 The roads in the vicinity of the site are residential streets that are subject to a 20mph speed limit creating a suitable environment for active travel trips. The footways on all site frontages are over 2.5m wide and this is typical of the surrounding area. This exceeds the minimum footway width of 2m recommended by the Department for Transport (DfT) to comfortably allow two wheelchairs to pass and reflected in typical urban design standards.²
- 4.2 Figure 4.1 shows the active travel network serving the site from the [TfGM website](#).³ As noted earlier, the local streets in the vicinity of the site are residential streets that are subject to a 20mph speed limit. These provide a connection to more formal routes on the cycle network, including cycle routes on Moss Lane, Kings Road, and Alexandra Road. Access can also be gained to Route 6 of the National Cycle Network and the recently improved cycle route on Chorlton Road, Upper Chorlton Road and Manchester Road. This route has been improved as part of the Bee Network Chorlton Cycleway Scheme.
- 4.3 The existing walking and cycling infrastructure provide opportunities for active trips to/from the site.

² Department for Transport (2022), Inclusive Mobility: Making Transport Accessible for Passengers & Pedestrians

³ <https://tfgm.pindarcreative.co.uk>

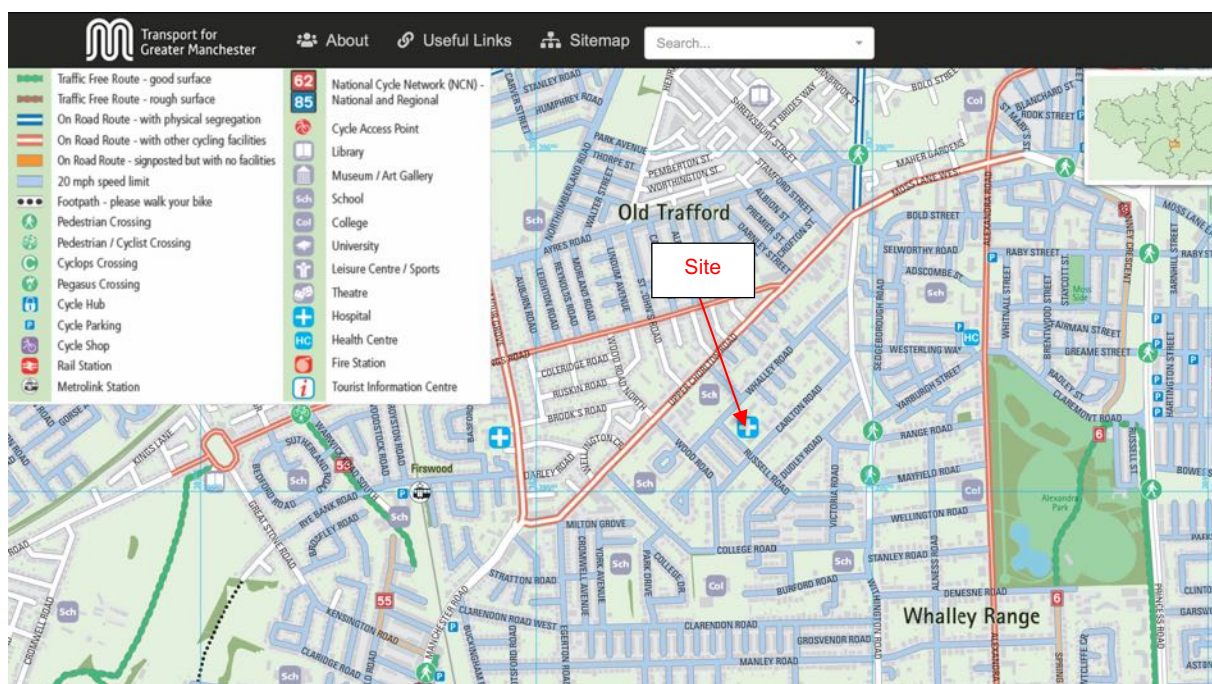


Figure 4.1: Cycle Network
[source: Transport for Greater Manchester]

- 4.4 One of the principal factors to be considered when assessing the suitability of a site for development is the proximity and connectivity of a site to local amenities and services. It is generally held that walking has the potential to replace short car trips for distances up to 2km (equating to a 25-minute walk time). The Chartered Institution of Highways and Transportation (CIHT) provides further guidance on suitable walk distances, setting maximum preferred distances as replicated in Table 4.1.⁴

Destination Type	Walk Distance (m)	Walk Time (mins)*
Commuting	2000	25
Local Centre/Local Retail	800	10
Other	1200	15

*Based on an all-age average walk speed of 80m/min

Table 4.1: CIHT Walk Distances
[source: Chartered Institution of Highways & Transportation]

- 4.5 Figure 4.2 shows walking isochrones from the site based on the CIHT guidance in Table 4.1.

- 4.6 Figure 4.2 shows that within a 10-minute walk of the site access can be gained to:

- Withington Road Local Centre (convenience retail, health, etc)
- St Lukes Centre, Whalley Road
- St Margarets Church, Whalley Road
- Tesco Express, Upper Chorlton Road
- New Testament Church of God, Upper Chorlton Road
- Ashville Surgery, Upper Chorlton Road
- Booze and Food, Upper Chorlton Road
- Elliotts Pharmacy, Upper Chorlton Road
- Jam Street Café, Upper Chorlton Road
- U Mart Convenience Store, Upper Chorlton Road
- New Century Barber, Upper Chorlton Road

⁴ Chartered Institution of Highways & Transportation (2000), Guidelines for Providing for Journeys on Foot
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- Brooks Bar Dental Practice, Chorlton Road
- 4.7 Within a 15-minute walk of the site access can be gained to further convenience retail on Clarendon Road, Manley Park, Alexandra Park, Hullard Park, Seymour Park and Old Trafford Allotments. Chorlton district centre and Old Trafford is within a 25-minute walk of the site.
- 4.8 The assessment confirms that the site is well located to allow access to local services and amenities on foot.

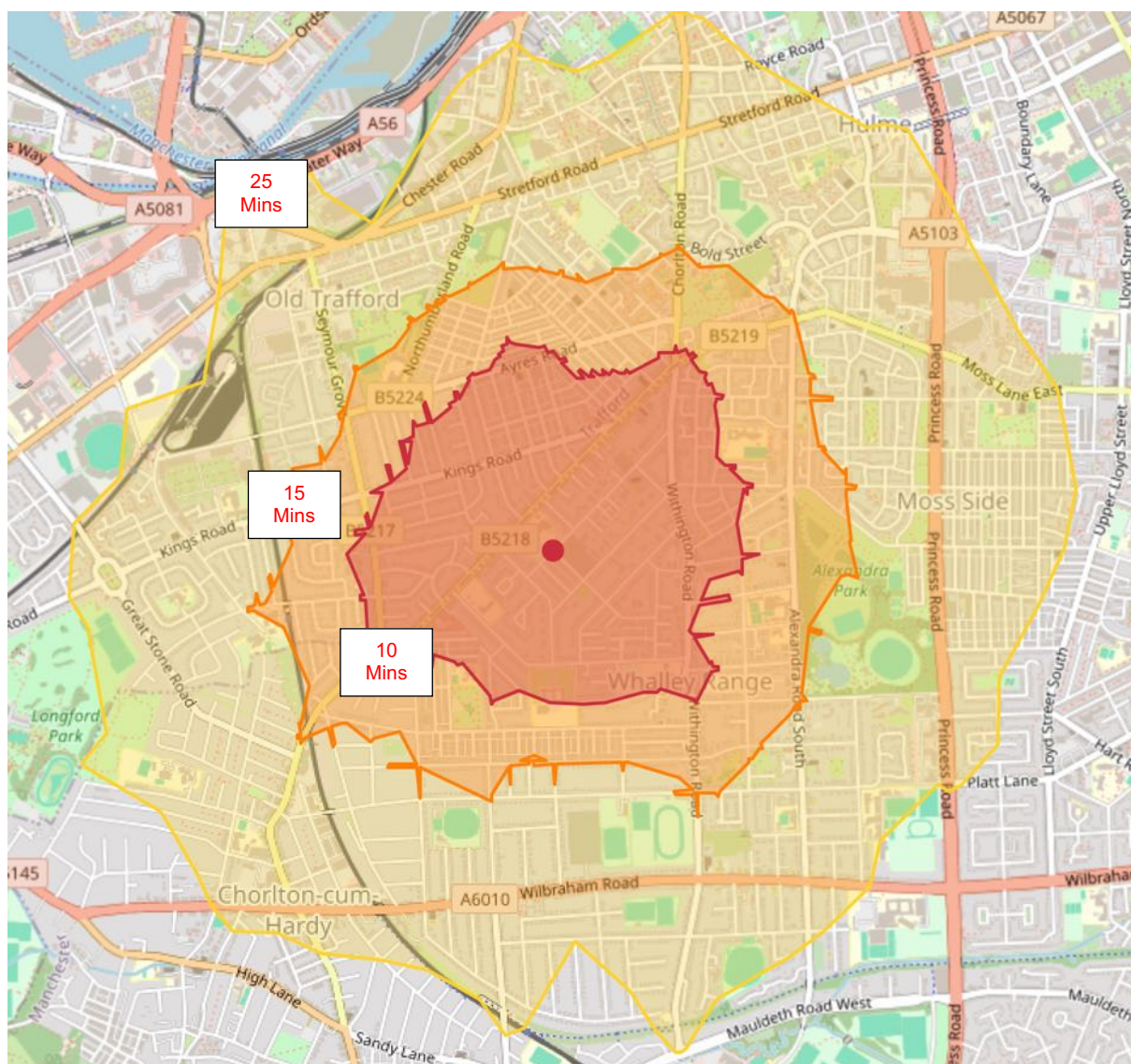


Figure 4.2: Walking Isochrones

[source: [ISO4app](#) and [OpenStreetMap Foundation](#) licensed under the [Open Database License](#)]

Public Transport Routes

- 4.9 Figure 4.3 shows [TfGM's public transport network map](#) for the local area.⁵
- 4.10 The site is located 300m (less than a four-minute walk) from the bus stops on Upper Chorlton Road. The bus stops on Upper Chorlton Road have been recently upgraded as part of the Chorlton Cycleway Scheme works and crossings are provided to facilitate access to the northbound bus stop.

⁵ <https://tfgm.com/maps>

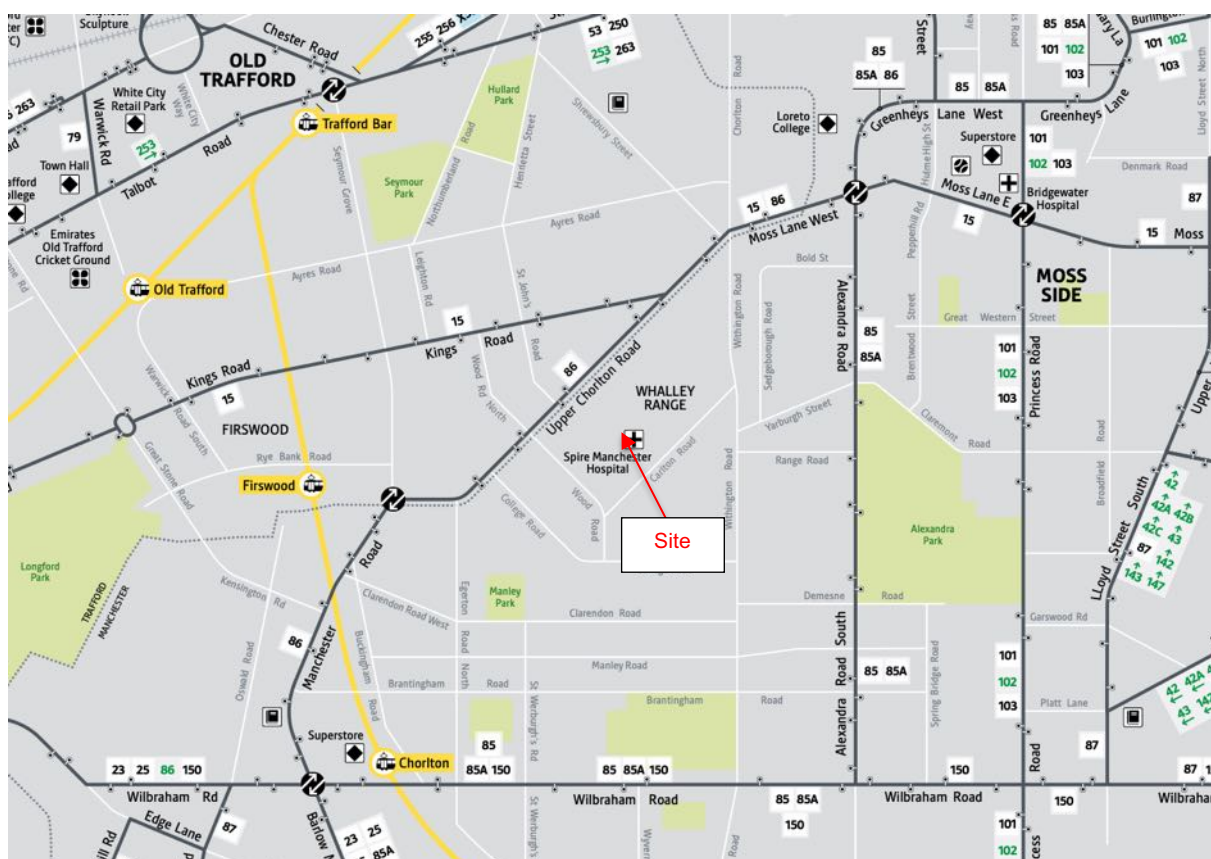


Figure 4.3: Public Transport Network
[source: Transport for Greater Manchester]

- 4.11 Table 4.2 provides a summary of the bus services using these stops taken from [TfGM timetables](#) at the time of preparing the report.⁶

No.	Route	Weekday (Buses per hour/each way)			Weekend (Buses per hour/each way)	
		Peak	Day	Evening	Saturday	Sunday
86	Manchester – Sale	9	5	4	5	3

Table 4.2: Bus Services
[source: Transport for Greater Manchester]

- 4.12 The nearest tram stop the site is Firwood, 1km from the site (just over 12-minute walk). [Metrolink tram services](#) connect the site to other areas of the City Centre, Altrincham, Eccles, East Didsbury, Media City, Ashton, the Airport, Rochdale, Bury, Salford Quays and the Trafford Centre.⁷ Tram services operate with a 12-minute frequency (each way) during the day (Monday to Saturday) and with a 15-minute frequency (each way) on a Sunday.
- 4.13 A [Greater Manchester Accessibility Level](#) (GMAL) calculation has been undertaken for the site. A GMAL is calculated using the interactive tool managed and maintained by TfGM.⁸ This tool measures accessibility by public transport of a point of interest and provides a rate between 1 and 8, where 1 is a poor level of accessibility and 8 is an exceptional level of accessibility.

⁶ <https://tfgm.com/public-transport/bus>

⁷ <https://tfgm.com/public-transport/tram>

⁸ <https://www.gmtu.gov.uk/gmbusroute/GMAL%20Calculation%20Guide.pdf>

- 4.14 The site has a GMAL of 5, which is a good level of public transport accessibility for a site in a suburban area.
- 4.15 The above confirms that the site is well served by existing public transport services.

5 Travel Plan Management

Management Structure

- 5.1 An effective Travel Plan needs a clear hierarchy of responsibility. The applicant has been closely involved in the development of the Travel Plan and is committed to its successful implementation.
- 5.2 The applicant will continue to have an overseeing role in the progress of the Plan and is committed to funding the resources required for its implementation.
- 5.3 The applicant will appoint a Travel Plan Co-ordinator prior to occupation of the development.

Travel Plan Co-ordinator

- 5.4 Travel Plan Co-ordinators play an important role in developing, managing, and promoting Travel Plans. A Travel Plan Co-ordinator for the site will be identified prior to occupation.
- 5.5 The Travel Plan Co-ordinator will be responsible for the day-to-day running of the Travel Plan and will also develop, implement, market, and monitor the Travel Plan's effectiveness.
- 5.6 In summary, the Travel Plan Co-ordinator's main responsibilities are:
 - Implementing the Plan measures.
 - Providing a point of contact for residents, site staff and the Council.
 - Publicising and raising awareness of local and national initiatives.
 - Preparing and issuing travel packs.
 - Providing regular updates to residents and staff on changes to local services and facilities.
 - Monitoring and surveying travel patterns.
 - Periodically reporting to the Council.
- 5.7 Should the Travel Plan Co-ordinator at the site change then the applicant will provide the Council with the replacement's full contact details in a timely manner.

Future Management & Handover Arrangements

- 5.8 Should the interest in the site be sold, the responsibility for the Travel Plan implementation will transfer to the successor in title. If this should be the case, then full contact details of the new site owner and the new Travel Plan Co-ordinator will be provided to the Council in a timely manner to allow the Travel Plan to continue uninterrupted at the site.

6 Measures Toolkit

Communication Measures

- 6.1 The measures set out in the Travel Plan will be continually and clearly communicated to site users to maximise effectiveness and encourage greater levels of take-up.
- 6.2 The Communications Strategy is a vital component of the Travel Plan as it will be used to ensure that site users are aware of the travel options and initiatives available to them and will be the means of communicating the progress of the Plan. The Travel Plan Co-ordinator will be responsible for marketing and promoting the Travel Plan and providing and disseminating information to site users.
- 6.3 Table 6.1 shows the measures that will be used in the communications strategy.

Initiative	Description
Promotional Materials	Distribution of materials/updates to residents and staff.
Travel Packs	Preparation and issue of travel packs for residents and staff.

Table 6.1: Communications Initiatives

- 6.4 Travel packs are an important means of disseminating information and making sure that residents and staff are aware of the travel choices available to them.
- 6.5 The travel packs will be issued to residents when they move in. The travel packs will contain the following types of information:
1. Travel Plan Co-ordinator contact details.
 2. Information on on-line and phone app journey planning software.
 3. Information on cycle and walking routes.
 4. Information on bus routes and frequencies.
 5. Information on bus ticketing arrangements.
 6. Information on the building's delivery arrangements.

Journey Planning

- 6.6 Residents and staff will be encouraged to familiarise themselves with the following journey planning resources:
- [TfGM journey planning software](#)⁹
 - [Public transport maps](#)¹⁰
 - [Active Travel route software](#)¹¹
 - [Walking and cycling route maps](#)¹²
 - Links to [Google Play](#)¹³ and [Apple Store](#)¹⁴ Bee Network app
- 6.7 The Travel Plan Co-ordinator will also offer a personal travel planning service to help residents and staff that require assistance with planning their common journeys to/from the site.

Active Travel Measures

- 6.8 Table 6.2 summarises the active travel measures that will be used.

⁹ <https://tfgm.com/plan-a-journey>

¹⁰ <https://tfgm.com/maps>

¹¹ <https://beeactive.tfgm.com>

¹² <https://tfgm.pindarcreative.co.uk>

¹³ <https://play.google.com/store/apps/details?id=com.tfgm.beenetwork>

¹⁴ <https://apps.apple.com/gb/app/bee-network/id1669705230>

Initiative	Description
Active Travel Benefits	The Travel Plan Co-ordinator will promote the benefits of walking and cycling to site users using the communications strategy.
Local Route Awareness	The Travel Plan Co-ordinator will provide information via the communications strategy on active travel routes.
New Infrastructure	The development will provide new pedestrian and cycle infrastructure at the site.
Safety Tips	The Travel Plan Co-ordinator will provide information via the communications strategy on walking and cycling safety tips.
Cycle Training/Hire Schemes	The Travel Plan Co-ordinator will provide information on TfGM's cycle training schemes and local cycle hire schemes.

Table 6.2: Active Travel Initiatives

6.9 Active travel provides the following benefits:

- **Builds activity into daily routines.**
It'll help to meet the government guidelines which recommend young people get at least 60 minutes of physical activity every day and that adults should get at least 150 minutes of moderate activity per week.
- **Boost mental health and wellbeing.**
According to the Mental Health Foundation physical activity increases mental alertness and helps to reduce stress and anxiety.
- **Fewer cars equals cleaner air.**
People experience five times higher pollution levels in a car than walking or on a bike.
- **Save money.**
Not only will less money be spent on petrol, but money can also be saved on gym or fitness centre fees.

- 6.10 Section 4 confirms that the site relates well to existing active travel routes. The Travel Plan Co-ordinator will provide information on these routes to residents and staff via the travel pack.
- 6.11 The proposed development will provide active travel infrastructure including secure cycle parking, segregated pedestrian access facilities, localised improvements to bounding footway treatments, and tactile paving/dropped kerbs at the vehicle access junctions.
- 6.12 The Travel Plan Co-ordinator will be responsible for raising awareness of the health benefits of active travel using the travel pack.
- 6.13 The Travel Plan Co-ordinator will provide walking and cycling safety tips by providing residents with resources provided by [TfGM](#)¹⁵, [GMWalking](#)¹⁶, [Sustrans](#)¹⁷ and [Cycling UK](#)¹⁸.
- 6.14 TfGM provides [cycle training sessions](#)¹⁹ for adults and family groups. This scheme will be promoted to residents.
- 6.15 The Travel Plan Co-ordinator will provide information to residents on how they can try cycling, without committing to the purchase of a bike. Resources that will be used include the [Beryl Bike Hire Scheme](#)²⁰, [TfGM's Bike Libraries](#)²¹ lending scheme, and a [number of charities](#)²² that provide bike loan services.

¹⁵ <https://beeactive.tfgm.com>

¹⁶ <https://gmwalking.co.uk>

¹⁷ www.sustrans.org.uk/

¹⁸ www.cyclinguk.org/

¹⁹ <https://beeactive.tfgm.com/cycling/courses-and-bike-maintenance/>

²⁰ <https://beryl.cc/scheme/greater-manchester>

²¹ <https://beeactive.tfgm.com/cycling/bike-libraries/>

²² <https://beeactive.tfgm.com/cycling/get-a-bike/>

Public Transport Measures

- 6.16 Table 6.2 shows the measures that will be used to encourage site users to travel by public transport.

Initiative	Description
Local Route Awareness	The Travel Plan Co-ordinator will provide information via the communications strategy on public transport routes and services.
Ticketing Arrangements	The Travel Plan Co-ordinator will ensure that site users are aware of TfGM ticketing arrangements.
Regular Review	The Travel Plan Co-ordinator will regularly review the TfGM database so that any service changes can be relayed to site users.

Table 6.2: Public Transport Initiatives

- 6.17 Section 4 shows that the site is well located for access to local bus and tram services.
- 6.18 The Travel Plan Co-ordinator will make sure that residents and staff are aware of ticketing arrangements available to residents using information from [TfGM ticketing information](#).²³
- 6.19 The following ticketing incentives are currently offered in Greater Manchester:
- [Bus Travel](#)²⁴
Adult single fares are capped at £2 and day tickets capped at £5. Weekly adult tickets are available for £21. Individual bus operators may provide their own weekly bus ticket but the 7 Day Any Bus Adult travelcard allows travel all week with any operator in Greater Manchester.
 - [Tram Travel](#)²⁵
The Clipper ticket provides 10 days' travel for the price of 9 with journeys that can be taken over 56 days. The Contactless Early Bird Bonus saves money on travel before 7am on weekdays. Weekly Contactless is capped at £31 even if you travel in all zones.
 - [Train Travel](#)²⁶
The Flexi Season Ticket offers 8 days of travel in 28 days – anytime between two named stations.
- 6.20 The following concessionary ticketing arrangements are available:
- [Concessionary Travel](#)²⁷
Free bus travel passes are available to people living in Greater Manchester that are state pension age. An additional £10 per year can be paid to allow access to tram services. The passes permit travel on bus and/or tram services outside the peak periods during the week and at all times at the weekend.
 - [Disabled Travel](#)²⁸
Certain disabilities and levels of disability qualify for low cost or free travel across Greater Manchester.

Sustainable Vehicle Measures

- 6.21 Table 6.3 shows the measures that will be used to encourage sustainable vehicle use.

²³ <https://tfgm.com/tickets-and-passes/find-a-ticket>

²⁴ <https://tfgm.com/get-on-board>

²⁵ <https://tfgm.com/tickets-and-passes/ways-to-pay/smart-card>

²⁶ <https://www.northernrailway.co.uk/tickets/flexi>

²⁷ <https://tfgm.com/tickets-and-passes/discounted-and-free-travel/travel-pass-for-older-people>

²⁸ <https://tfgm.com/tickets-and-passes/discounted-and-free-travel/disabled-people>

Initiative	Description
EV Charging	The development provides appropriate levels of EV charging.
Car Sharing	Staff and residents will be encouraged to car share for common journeys.

Table 6.3: Sustainable Car Use Initiatives

- 6.22 Appropriate levels of EV charging are provided at the site and the use of these will be explained to residents and staff.
- 6.23 Car sharing is recognised as a method of achieving sustainable car use and is a good means of encouraging behaviour change for people that need to use their car or are reluctant to travel by public transport or active travel. The Travel Plan Co-ordinator will promote the benefits of car sharing and the use of [Liftshare](https://liftshare.com/uk) so that residents and staff can find people to car share with.²⁹

7 Monitoring & Review Mechanisms

Baseline Travel Patterns

- 7.1 Surveying and monitoring travel patterns is an important tool in measuring the progress of the Travel Plan and success of the Plan in terms of meeting the declared objectives and targets.
- 7.2 Baseline resident and staff travel surveys will be undertaken within six months of occupancy the development. The travel surveys will be undertaken using a simple questionnaire that will collect information on typical travel patterns to frequently accessed destinations.
- 7.3 The results from the first survey will be used to set the targets for the Travel Plan and to update the measures, if required. The updated Travel Plan will be submitted to the Council within three months of completion of the baseline/first surveys.

Monitoring Surveys

- 7.4 Surveys will be undertaken every two years for a period of five years (baseline/year one, year three and year five). Following each survey period, a short monitoring report will be issued to the Council for discussion. The monitoring report will be issued within three months of each survey period. Survey results will also be shared with residents by email update.

Exercise	Key Information	Frequency	Responsibility
Issue of travel packs	Dissemination of travel information and travel survey to residents and staff	On occupation	Travel Plan Co-ordinator
Baseline resident/staff surveys	Data to be used to establish baseline trip patterns and to allow appropriate targets to be set	Within 6 months of occupation/final Travel Plan to be submitted within 3 months of survey completion (Year 1)	Travel Plan Co-ordinator
Updated Travel Plan	Travel Plan updated with survey and targets firmed up	Within 3 months of the survey/audit	Travel Plan Co-ordinator
Monitoring resident/staff surveys	Data to be used to establish progress of the Plan and review success of measures	Year 3 and Year 5	Travel Plan Co-ordinator
Preparation of Monitoring Report	Set out mode share, targets, and any changes proposed to the Plan	3 months after each monitoring survey period	Travel Plan Co-ordinator

Table 7.1: Monitoring Plan

²⁹ <https://liftshare.com/uk>

Targets

- 7.5 Targets are measurable goals against which the progress of the Travel Plan can be assessed. Targets should be SMART – Specific, Measurable, Achievable, Realistic and Time-Related.
- 7.6 The targets are split into two different types, Output Targets and Outcome Targets. Output Targets are non-quantifiable and action-based that need to be achieved in a set time period. Outcome Targets are quantifiable and will be based on the results of the travel surveys.
- 7.7 The following Output Targets have been set for the Travel Plan:
 - Appoint Travel Plan Co-ordinator on occupation.
 - Provide contact details of Travel Plan Co-ordinator to the Council on occupation.
 - Provide the travel pack to all new households and staff on occupation.
 - Undertake the baseline travel surveys within 6 months of occupation.
 - Update the Travel Plan and issue to the Council within 3 months of survey.
 - Undertake monitoring travel surveys in years 3 and 5.
 - Prepare a monitoring report and issue to the Council within 3 months of each monitoring survey.
- 7.8 The Outcome Target for the Travel Plan is to increase the proportion of site residents and staff travelling by sustainable modes and reduce single occupancy car trips from the baseline mode share. The baseline mode share will be established on completion of the baseline/year one surveys and at this point a quantitative target will be set.
- 7.9 Preliminary Outcome Targets are set out in Table 7.2.

Provision of Travel Packs

Specific	The Travel Plan Co-ordinator will provide residents with a travel pack. These resources will be kept up to date.
Measurable	Verified as part of the monitoring reports.
Achievable	Will be the responsibility of the Travel Plan Co-ordinator.
Realistic	The travel packs will be provided to individual households and new staff.
Timebound	Ongoing.

Undertake Resident/Staff Surveys

Specific	Resident and staff travel patterns will be periodically monitored.
Measurable	Will be recorded as part of the baseline and monitoring survey programme.
Achievable	Will be the responsibility of the Travel Plan Co-ordinator.
Realistic	Yes.
Timebound	Ongoing.

Increase the Proportion of Residents/Staff Traveling Sustainably

Specific	Increase the proportion of residents and staff travelling by walking, cycling, public transport and car sharing.
Measurable	Verified using the baseline and monitoring surveys. Quantifiable targets to be set following baseline surveys.
Achievable	Location and accessibility level of the site coupled with development infrastructure means that residents and staff can travel sustainably.
Realistic	Yes.
Timebound	During lifetime of the Plan.

Reduce the Proportion of Residents/Staff Traveling by Single Occupancy Private Car Trip

Specific	Reduce the proportion of residents and staff travelling by single occupancy car trip.
Measurable	Verified using the baseline and monitoring surveys. Quantifiable targets to be set following baseline surveys.
Achievable	Location and accessibility level of the site coupled with development infrastructure will make it highly likely that residents will travel sustainably.
Realistic	Yes.
Timebound	During lifetime of the Plan.

Table 7.2: Preliminary Travel Plan SMART Targets

8 Interim Action Plan & Funding

- 8.1 The applicant is committed to the implementation and successful delivery of the Travel Plan's measures to meet the stated objectives.
- 8.2 The applicant has confirmed that it will fund the costs associated with the operation and implementation of the full Travel Plan. The applicant will also fund the Travel Plan Co-ordinator's costs.

Measure	Action	Responsibility	Target Delivery/Method
Management/ Monitoring	Appoint Travel Plan Co-ordinator	Applicant	Prior to occupation
	Confirm Travel Plan Co-ordinator details to Council	Applicant	On occupation
	Provide/maintain travel pack	Travel Plan Co-ordinator	Prior to occupation/on-going with regular updates
	Baseline/Year 1 surveys	Travel Plan Co-ordinator	In line with monitoring programme
	Travel Plan update	Travel Plan Co-ordinator	Within 3 months of baseline survey
	Monitoring surveys	Travel Plan Co-ordinator	On-going in line with monitoring programme
	Monitoring Reports	Travel Plan Co-ordinator	Within 3 months of baseline survey
Active Travel	Provide development walking and cycling site infrastructure as per TA	Applicant	On occupation
	Promote and support walking by distributing information set out in Section 6	Travel Plan Co-ordinator	Travel pack – on occupation/on-going
	Promote and support cycling by distributing information set out in Section 6	Travel Plan Co-ordinator	Travel pack – on occupation/on-going
Public Transport	Offer personalised journey planning for residents/staff	Travel Plan Co-ordinator	On occupation/on-going
	Promote and support public transport by distributing information set out in Section 6. Regular review of services and ticketing	Travel Plan Co-ordinator	Travel pack – on occupation/on-going
Sustainable Vehicles	Provide EV charging	Applicant	On occupation
	Promote measures set out in Section 6 such as car sharing	Travel Plan Co-ordinator	Travel pack – on occupation/on-going

Table 8.1: Action Plan

Appendix E

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EN ENFIELD	1 days
	KI KINGSTON	1 days
02	SOUTH EAST	
	CT CENTRAL BEDFORDSHIRE	1 days
	HF HERTFORDSHIRE	1 days
	PO PORTSMOUTH	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
10	WALES	
	CO CONWY	1 days

Primary Filtering selection:

Parameter: No of Dwellings
 Actual Range: 20 to 91 (units:)
 Range Selected by User: 15 to 100 (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: 01/01/15 to 09/06/22

Selected survey days:

Monday	3 days
Tuesday	2 days
Wednesday	2 days
Thursday	1 days

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	3

Selected Location Sub Categories:

Residential Zone	5
Built-Up Zone	3

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	15 days - Selected
Servicing vehicles Excluded	6 days - Not Selected

Secondary Filtering selection:

Use Class:

C3	8 days
----	--------

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 15,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	4 days
50,001 to 100,000	1 days

Population within 5 miles:

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

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	3 days

Travel Plan:

Yes	2 days
No	6 days

PTAL Rating:

No PTAL Present	7 days
2 Poor	1 days

LIST OF SITES relevant to selection parameters

1	CO-03-C-01	BLOCKS OF FLATS	CONWY
	MOSTYN BROADWAY		
	LLANDUDNO		
	Edge of Town Centre		
	Built-Up Zone		
	Total No of Dwellings:	37	
	Survey date: MONDAY	26/03/18	Survey Type: MANUAL
2	CT-03-C-02	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE
	STANBRIDGE ROAD		
	LEIGHTON BUZZARD		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	62	
	Survey date: TUESDAY	15/05/18	Survey Type: MANUAL
3	DY-03-C-03	BLOCKS OF FLATS	DERBY
	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	EN-03-C-03	BLOCKS OF FLATS	ENFIELD
	NORTH CIRCULAR ROAD		
	PALMERS GREEN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	27	
	Survey date: WEDNESDAY	08/11/17	Survey Type: MANUAL
5	HF-03-C-03	BLOCK OF FLATS	HERTFORDSHIRE
	SHENLEY ROAD		
	BOREHAMWOOD		
	Edge of Town Centre		
	Built-Up Zone		
	Total No of Dwellings:	91	
	Survey date: THURSDAY	14/11/19	Survey Type: MANUAL
6	KI-03-C-03	BLOCK OF FLATS	KINGSTON
	PORTSMOUTH ROAD		
	SURBITON		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	20	
	Survey date: MONDAY	11/07/16	Survey Type: MANUAL
7	NF-03-C-02	MIXED FLATS & HOUSES	NORFOLK
	HALL ROAD		
	NORWICH		
	LAKENHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	82	
	Survey date: MONDAY	18/11/19	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8

PO-03-C-01
CROSS STREET
PORTSMOUTH

BLOCKS OF FLATS

PORTSMOUTH

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 90
Survey date: TUESDAY 05/06/18 Survey Type: MANUAL

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
MA-03-C-01	Covid Survey
MS-03-C-04	Covid Survey

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.81

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	8	55	0.043	8	55	0.146	8	55	0.189
08:00 - 09:00	8	55	0.057	8	55	0.226	8	55	0.283
09:00 - 10:00	8	55	0.075	8	55	0.096	8	55	0.171
10:00 - 11:00	8	55	0.055	8	55	0.066	8	55	0.121
11:00 - 12:00	8	55	0.073	8	55	0.084	8	55	0.157
12:00 - 13:00	8	55	0.116	8	55	0.116	8	55	0.232
13:00 - 14:00	8	55	0.071	8	55	0.073	8	55	0.144
14:00 - 15:00	8	55	0.052	8	55	0.082	8	55	0.134
15:00 - 16:00	8	55	0.118	8	55	0.055	8	55	0.173
16:00 - 17:00	8	55	0.130	8	55	0.059	8	55	0.189
17:00 - 18:00	8	55	0.159	8	55	0.089	8	55	0.248
18:00 - 19:00	8	55	0.180	8	55	0.112	8	55	0.292
19:00 - 20:00	2	24	0.234	2	24	0.213	2	24	0.447
20:00 - 21:00	2	24	0.149	2	24	0.106	2	24	0.255
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.512			1.523			3.035

Parameter summary

Trip rate parameter range selected:20 - 91 (units:)

Survey date date range:01/01/15 - 09/06/22

Number of weekdays (Monday-Friday):8

Number of Saturdays:0

Number of Sundays:0

Surveys automatically removed from selection:0

Surveys manually removed from selection:2

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TAXIS
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	8	55	0.005	8	55	0.005	8	55	0.010
08:00 - 09:00	8	55	0.000	8	55	0.000	8	55	0.000
09:00 - 10:00	8	55	0.002	8	55	0.002	8	55	0.004
10:00 - 11:00	8	55	0.000	8	55	0.000	8	55	0.000
11:00 - 12:00	8	55	0.011	8	55	0.011	8	55	0.022
12:00 - 13:00	8	55	0.011	8	55	0.011	8	55	0.022
13:00 - 14:00	8	55	0.005	8	55	0.005	8	55	0.010
14:00 - 15:00	8	55	0.000	8	55	0.000	8	55	0.000
15:00 - 16:00	8	55	0.005	8	55	0.005	8	55	0.010
16:00 - 17:00	8	55	0.007	8	55	0.007	8	55	0.014
17:00 - 18:00	8	55	0.002	8	55	0.002	8	55	0.004
18:00 - 19:00	8	55	0.009	8	55	0.009	8	55	0.018
19:00 - 20:00	2	24	0.000	2	24	0.000	2	24	0.000
20:00 - 21:00	2	24	0.000	2	24	0.000	2	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.057			0.057			0.114

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS
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	8	55	0.007	8	55	0.007	8	55	0.014
08:00 - 09:00	8	55	0.000	8	55	0.000	8	55	0.000
09:00 - 10:00	8	55	0.002	8	55	0.002	8	55	0.004
10:00 - 11:00	8	55	0.000	8	55	0.000	8	55	0.000
11:00 - 12:00	8	55	0.000	8	55	0.000	8	55	0.000
12:00 - 13:00	8	55	0.000	8	55	0.000	8	55	0.000
13:00 - 14:00	8	55	0.000	8	55	0.000	8	55	0.000
14:00 - 15:00	8	55	0.000	8	55	0.000	8	55	0.000
15:00 - 16:00	8	55	0.000	8	55	0.000	8	55	0.000
16:00 - 17:00	8	55	0.002	8	55	0.000	8	55	0.002
17:00 - 18:00	8	55	0.000	8	55	0.002	8	55	0.002
18:00 - 19:00	8	55	0.000	8	55	0.000	8	55	0.000
19:00 - 20:00	2	24	0.000	2	24	0.000	2	24	0.000
20:00 - 21:00	2	24	0.000	2	24	0.000	2	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.011			0.022

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL CYCLISTS
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	8	55	0.002	8	55	0.014	8	55	0.016
08:00 - 09:00	8	55	0.007	8	55	0.025	8	55	0.032
09:00 - 10:00	8	55	0.005	8	55	0.011	8	55	0.016
10:00 - 11:00	8	55	0.000	8	55	0.009	8	55	0.009
11:00 - 12:00	8	55	0.002	8	55	0.002	8	55	0.004
12:00 - 13:00	8	55	0.000	8	55	0.000	8	55	0.000
13:00 - 14:00	8	55	0.007	8	55	0.000	8	55	0.007
14:00 - 15:00	8	55	0.009	8	55	0.011	8	55	0.020
15:00 - 16:00	8	55	0.009	8	55	0.007	8	55	0.016
16:00 - 17:00	8	55	0.011	8	55	0.005	8	55	0.016
17:00 - 18:00	8	55	0.014	8	55	0.011	8	55	0.025
18:00 - 19:00	8	55	0.014	8	55	0.007	8	55	0.021
19:00 - 20:00	2	24	0.021	2	24	0.000	2	24	0.021
20:00 - 21:00	2	24	0.064	2	24	0.000	2	24	0.064
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.165			0.102			0.267

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
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	8	55	0.052	8	55	0.198	8	55	0.250
08:00 - 09:00	8	55	0.073	8	55	0.346	8	55	0.419
09:00 - 10:00	8	55	0.091	8	55	0.125	8	55	0.216
10:00 - 11:00	8	55	0.068	8	55	0.084	8	55	0.152
11:00 - 12:00	8	55	0.091	8	55	0.107	8	55	0.198
12:00 - 13:00	8	55	0.155	8	55	0.173	8	55	0.328
13:00 - 14:00	8	55	0.105	8	55	0.089	8	55	0.194
14:00 - 15:00	8	55	0.068	8	55	0.096	8	55	0.164
15:00 - 16:00	8	55	0.171	8	55	0.066	8	55	0.237
16:00 - 17:00	8	55	0.198	8	55	0.082	8	55	0.280
17:00 - 18:00	8	55	0.219	8	55	0.118	8	55	0.337
18:00 - 19:00	8	55	0.273	8	55	0.150	8	55	0.423
19:00 - 20:00	2	24	0.277	2	24	0.255	2	24	0.532
20:00 - 21:00	2	24	0.170	2	24	0.128	2	24	0.298
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.011			2.017			4.028

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
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	8	55	0.018	8	55	0.100	8	55	0.118
08:00 - 09:00	8	55	0.055	8	55	0.196	8	55	0.251
09:00 - 10:00	8	55	0.066	8	55	0.091	8	55	0.157
10:00 - 11:00	8	55	0.064	8	55	0.093	8	55	0.157
11:00 - 12:00	8	55	0.050	8	55	0.068	8	55	0.118
12:00 - 13:00	8	55	0.118	8	55	0.073	8	55	0.191
13:00 - 14:00	8	55	0.075	8	55	0.077	8	55	0.152
14:00 - 15:00	8	55	0.077	8	55	0.084	8	55	0.161
15:00 - 16:00	8	55	0.128	8	55	0.075	8	55	0.203
16:00 - 17:00	8	55	0.116	8	55	0.089	8	55	0.205
17:00 - 18:00	8	55	0.164	8	55	0.137	8	55	0.301
18:00 - 19:00	8	55	0.123	8	55	0.105	8	55	0.228
19:00 - 20:00	2	24	0.106	2	24	0.128	2	24	0.234
20:00 - 21:00	2	24	0.128	2	24	0.021	2	24	0.149
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.288			1.337			2.625

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
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	8	55	0.005	8	55	0.071	8	55	0.076
08:00 - 09:00	8	55	0.021	8	55	0.155	8	55	0.176
09:00 - 10:00	8	55	0.018	8	55	0.057	8	55	0.075
10:00 - 11:00	8	55	0.030	8	55	0.018	8	55	0.048
11:00 - 12:00	8	55	0.023	8	55	0.018	8	55	0.041
12:00 - 13:00	8	55	0.041	8	55	0.032	8	55	0.073
13:00 - 14:00	8	55	0.021	8	55	0.036	8	55	0.057
14:00 - 15:00	8	55	0.027	8	55	0.027	8	55	0.054
15:00 - 16:00	8	55	0.059	8	55	0.025	8	55	0.084
16:00 - 17:00	8	55	0.071	8	55	0.018	8	55	0.089
17:00 - 18:00	8	55	0.098	8	55	0.021	8	55	0.119
18:00 - 19:00	8	55	0.064	8	55	0.009	8	55	0.073
19:00 - 20:00	2	24	0.170	2	24	0.000	2	24	0.170
20:00 - 21:00	2	24	0.128	2	24	0.000	2	24	0.128
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.776			0.487			1.263

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 2.81

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	8	55	0.077	8	55	0.383	8	55	0.460
08:00 - 09:00	8	55	0.155	8	55	0.722	8	55	0.877
09:00 - 10:00	8	55	0.180	8	55	0.285	8	55	0.465
10:00 - 11:00	8	55	0.162	8	55	0.205	8	55	0.367
11:00 - 12:00	8	55	0.166	8	55	0.196	8	55	0.362
12:00 - 13:00	8	55	0.314	8	55	0.278	8	55	0.592
13:00 - 14:00	8	55	0.207	8	55	0.203	8	55	0.410
14:00 - 15:00	8	55	0.182	8	55	0.219	8	55	0.401
15:00 - 16:00	8	55	0.367	8	55	0.173	8	55	0.540
16:00 - 17:00	8	55	0.396	8	55	0.194	8	55	0.590
17:00 - 18:00	8	55	0.494	8	55	0.287	8	55	0.781
18:00 - 19:00	8	55	0.474	8	55	0.271	8	55	0.745
19:00 - 20:00	2	24	0.574	2	24	0.383	2	24	0.957
20:00 - 21:00	2	24	0.489	2	24	0.149	2	24	0.638
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.237			3.948			8.185

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL CARS
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	8	55	0.025	8	55	0.130	8	55	0.155
08:00 - 09:00	8	55	0.050	8	55	0.203	8	55	0.253
09:00 - 10:00	8	55	0.059	8	55	0.084	8	55	0.143
10:00 - 11:00	8	55	0.050	8	55	0.052	8	55	0.102
11:00 - 12:00	8	55	0.050	8	55	0.064	8	55	0.114
12:00 - 13:00	8	55	0.096	8	55	0.087	8	55	0.183
13:00 - 14:00	8	55	0.059	8	55	0.059	8	55	0.118
14:00 - 15:00	8	55	0.043	8	55	0.077	8	55	0.120
15:00 - 16:00	8	55	0.103	8	55	0.043	8	55	0.146
16:00 - 17:00	8	55	0.107	8	55	0.043	8	55	0.150
17:00 - 18:00	8	55	0.139	8	55	0.075	8	55	0.214
18:00 - 19:00	8	55	0.159	8	55	0.096	8	55	0.255
19:00 - 20:00	2	24	0.191	2	24	0.191	2	24	0.382
20:00 - 21:00	2	24	0.149	2	24	0.106	2	24	0.255
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.280			1.310			2.590

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL LGVS
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	8	55	0.005	8	55	0.005	8	55	0.010
08:00 - 09:00	8	55	0.007	8	55	0.021	8	55	0.028
09:00 - 10:00	8	55	0.009	8	55	0.005	8	55	0.014
10:00 - 11:00	8	55	0.005	8	55	0.011	8	55	0.016
11:00 - 12:00	8	55	0.011	8	55	0.009	8	55	0.020
12:00 - 13:00	8	55	0.009	8	55	0.018	8	55	0.027
13:00 - 14:00	8	55	0.002	8	55	0.007	8	55	0.009
14:00 - 15:00	8	55	0.009	8	55	0.005	8	55	0.014
15:00 - 16:00	8	55	0.009	8	55	0.007	8	55	0.016
16:00 - 17:00	8	55	0.011	8	55	0.009	8	55	0.020
17:00 - 18:00	8	55	0.014	8	55	0.005	8	55	0.019
18:00 - 19:00	8	55	0.007	8	55	0.005	8	55	0.012
19:00 - 20:00	2	24	0.021	2	24	0.000	2	24	0.021
20:00 - 21:00	2	24	0.000	2	24	0.000	2	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.119			0.107			0.226

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL MOTOR CYCLES
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	8	55	0.002	8	55	0.000	8	55	0.002
08:00 - 09:00	8	55	0.000	8	55	0.002	8	55	0.002
09:00 - 10:00	8	55	0.002	8	55	0.002	8	55	0.004
10:00 - 11:00	8	55	0.000	8	55	0.002	8	55	0.002
11:00 - 12:00	8	55	0.000	8	55	0.000	8	55	0.000
12:00 - 13:00	8	55	0.000	8	55	0.000	8	55	0.000
13:00 - 14:00	8	55	0.005	8	55	0.002	8	55	0.007
14:00 - 15:00	8	55	0.000	8	55	0.000	8	55	0.000
15:00 - 16:00	8	55	0.002	8	55	0.000	8	55	0.002
16:00 - 17:00	8	55	0.002	8	55	0.000	8	55	0.002
17:00 - 18:00	8	55	0.005	8	55	0.005	8	55	0.010
18:00 - 19:00	8	55	0.005	8	55	0.002	8	55	0.007
19:00 - 20:00	2	24	0.021	2	24	0.021	2	24	0.042
20:00 - 21:00	2	24	0.000	2	24	0.000	2	24	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.044			0.036			0.080

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : N - RETIREMENT FLATS
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	AL CALDERDALE	1 days
11	SCOTLAND	
	GC GLASGOW CITY	1 days

Primary Filtering selection:

Parameter: No of Dwellings
 Actual Range: 34 to 38 (units:)
 Range Selected by User: 17 to 57 (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: 01/01/08 to 18/04/23

Selected survey days:

Monday	1 days
Tuesday	2 days
Wednesday	1 days
Thursday	1 days

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	2

Selected Location Sub Categories:

Residential Zone	4
Built-Up Zone	1

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	8 days - Selected
Servicing vehicles Excluded	5 days - Not Selected

Secondary Filtering selection:

Use Class:

C3	5 days
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Population within 500m Range:

All Surveys Included

Population within 1 mile:

25,001 to 50,000	4 days
50,001 to 100,000	1 days

Population within 5 miles:

75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days
500,001 or More	1 days

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 days
1.6 to 2.0	1 days

Travel Plan:

Yes	1 days
No	4 days

PTAL Rating:

No PTAL Present	5 days
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Site Ref	Reason for Deselection
BG-03-N-01	covid survey

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.82

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	5	36	0.045	5	36	0.045	5	36	0.090
08:00 - 09:00	5	36	0.050	5	36	0.095	5	36	0.145
09:00 - 10:00	5	36	0.123	5	36	0.112	5	36	0.235
10:00 - 11:00	5	36	0.123	5	36	0.128	5	36	0.251
11:00 - 12:00	5	36	0.112	5	36	0.089	5	36	0.201
12:00 - 13:00	5	36	0.095	5	36	0.084	5	36	0.179
13:00 - 14:00	5	36	0.101	5	36	0.101	5	36	0.202
14:00 - 15:00	5	36	0.123	5	36	0.140	5	36	0.263
15:00 - 16:00	5	36	0.106	5	36	0.101	5	36	0.207
16:00 - 17:00	5	36	0.095	5	36	0.073	5	36	0.168
17:00 - 18:00	5	36	0.084	5	36	0.073	5	36	0.157
18:00 - 19:00	5	36	0.056	5	36	0.056	5	36	0.112
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.113			1.097			2.210

Parameter summary

Trip rate parameter range selected:34 - 38 (units:)

Survey date date range:01/01/08 - 18/04/23

Number of weekdays (Monday-Friday):5

Number of Saturdays:0

Number of Sundays:0

Surveys automatically removed from selection:2

Surveys manually removed from selection:1

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL TAXIS
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	5	36	0.000	5	36	0.000	5	36	0.000
08:00 - 09:00	5	36	0.000	5	36	0.000	5	36	0.000
09:00 - 10:00	5	36	0.017	5	36	0.017	5	36	0.034
10:00 - 11:00	5	36	0.022	5	36	0.017	5	36	0.039
11:00 - 12:00	5	36	0.017	5	36	0.022	5	36	0.039
12:00 - 13:00	5	36	0.011	5	36	0.011	5	36	0.022
13:00 - 14:00	5	36	0.006	5	36	0.000	5	36	0.006
14:00 - 15:00	5	36	0.006	5	36	0.011	5	36	0.017
15:00 - 16:00	5	36	0.017	5	36	0.017	5	36	0.034
16:00 - 17:00	5	36	0.006	5	36	0.006	5	36	0.012
17:00 - 18:00	5	36	0.006	5	36	0.006	5	36	0.012
18:00 - 19:00	5	36	0.006	5	36	0.006	5	36	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.114			0.113			0.227

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL OGVS
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	5	36	0.000	5	36	0.000	5	36	0.000
08:00 - 09:00	5	36	0.000	5	36	0.000	5	36	0.000
09:00 - 10:00	5	36	0.000	5	36	0.000	5	36	0.000
10:00 - 11:00	5	36	0.006	5	36	0.006	5	36	0.012
11:00 - 12:00	5	36	0.000	5	36	0.000	5	36	0.000
12:00 - 13:00	5	36	0.006	5	36	0.006	5	36	0.012
13:00 - 14:00	5	36	0.000	5	36	0.000	5	36	0.000
14:00 - 15:00	5	36	0.000	5	36	0.000	5	36	0.000
15:00 - 16:00	5	36	0.000	5	36	0.000	5	36	0.000
16:00 - 17:00	5	36	0.000	5	36	0.000	5	36	0.000
17:00 - 18:00	5	36	0.000	5	36	0.000	5	36	0.000
18:00 - 19:00	5	36	0.000	5	36	0.000	5	36	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL CYCLISTS
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	5	36	0.000	5	36	0.000	5	36	0.000
08:00 - 09:00	5	36	0.011	5	36	0.000	5	36	0.011
09:00 - 10:00	5	36	0.000	5	36	0.000	5	36	0.000
10:00 - 11:00	5	36	0.011	5	36	0.011	5	36	0.022
11:00 - 12:00	5	36	0.000	5	36	0.000	5	36	0.000
12:00 - 13:00	5	36	0.000	5	36	0.000	5	36	0.000
13:00 - 14:00	5	36	0.000	5	36	0.000	5	36	0.000
14:00 - 15:00	5	36	0.000	5	36	0.000	5	36	0.000
15:00 - 16:00	5	36	0.000	5	36	0.006	5	36	0.006
16:00 - 17:00	5	36	0.000	5	36	0.006	5	36	0.006
17:00 - 18:00	5	36	0.000	5	36	0.000	5	36	0.000
18:00 - 19:00	5	36	0.000	5	36	0.000	5	36	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.023			0.045

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL VEHICLE OCCUPANTS
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	5	36	0.061	5	36	0.061	5	36	0.122
08:00 - 09:00	5	36	0.061	5	36	0.112	5	36	0.173
09:00 - 10:00	5	36	0.145	5	36	0.140	5	36	0.285
10:00 - 11:00	5	36	0.128	5	36	0.151	5	36	0.279
11:00 - 12:00	5	36	0.123	5	36	0.095	5	36	0.218
12:00 - 13:00	5	36	0.095	5	36	0.101	5	36	0.196
13:00 - 14:00	5	36	0.128	5	36	0.123	5	36	0.251
14:00 - 15:00	5	36	0.145	5	36	0.156	5	36	0.301
15:00 - 16:00	5	36	0.151	5	36	0.128	5	36	0.279
16:00 - 17:00	5	36	0.123	5	36	0.089	5	36	0.212
17:00 - 18:00	5	36	0.095	5	36	0.078	5	36	0.173
18:00 - 19:00	5	36	0.067	5	36	0.067	5	36	0.134
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.322			1.301			2.623

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL PEDESTRIANS
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	5	36	0.017	5	36	0.028	5	36	0.045
08:00 - 09:00	5	36	0.034	5	36	0.034	5	36	0.068
09:00 - 10:00	5	36	0.017	5	36	0.039	5	36	0.056
10:00 - 11:00	5	36	0.028	5	36	0.045	5	36	0.073
11:00 - 12:00	5	36	0.039	5	36	0.045	5	36	0.084
12:00 - 13:00	5	36	0.095	5	36	0.050	5	36	0.145
13:00 - 14:00	5	36	0.022	5	36	0.028	5	36	0.050
14:00 - 15:00	5	36	0.028	5	36	0.017	5	36	0.045
15:00 - 16:00	5	36	0.017	5	36	0.034	5	36	0.051
16:00 - 17:00	5	36	0.056	5	36	0.050	5	36	0.106
17:00 - 18:00	5	36	0.039	5	36	0.039	5	36	0.078
18:00 - 19:00	5	36	0.034	5	36	0.028	5	36	0.062
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.426			0.437			0.863

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL PUBLIC TRANSPORT USERS
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	5	36	0.000	5	36	0.034	5	36	0.034
08:00 - 09:00	5	36	0.017	5	36	0.050	5	36	0.067
09:00 - 10:00	5	36	0.006	5	36	0.000	5	36	0.006
10:00 - 11:00	5	36	0.017	5	36	0.022	5	36	0.039
11:00 - 12:00	5	36	0.022	5	36	0.028	5	36	0.050
12:00 - 13:00	5	36	0.034	5	36	0.028	5	36	0.062
13:00 - 14:00	5	36	0.017	5	36	0.011	5	36	0.028
14:00 - 15:00	5	36	0.017	5	36	0.011	5	36	0.028
15:00 - 16:00	5	36	0.034	5	36	0.006	5	36	0.040
16:00 - 17:00	5	36	0.028	5	36	0.039	5	36	0.067
17:00 - 18:00	5	36	0.028	5	36	0.006	5	36	0.034
18:00 - 19:00	5	36	0.017	5	36	0.011	5	36	0.028
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.237			0.246			0.483

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.82

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	5	36	0.078	5	36	0.123	5	36	0.201
08:00 - 09:00	5	36	0.123	5	36	0.196	5	36	0.319
09:00 - 10:00	5	36	0.168	5	36	0.179	5	36	0.347
10:00 - 11:00	5	36	0.184	5	36	0.229	5	36	0.413
11:00 - 12:00	5	36	0.184	5	36	0.168	5	36	0.352
12:00 - 13:00	5	36	0.223	5	36	0.179	5	36	0.402
13:00 - 14:00	5	36	0.168	5	36	0.162	5	36	0.330
14:00 - 15:00	5	36	0.190	5	36	0.184	5	36	0.374
15:00 - 16:00	5	36	0.201	5	36	0.173	5	36	0.374
16:00 - 17:00	5	36	0.207	5	36	0.184	5	36	0.391
17:00 - 18:00	5	36	0.162	5	36	0.123	5	36	0.285
18:00 - 19:00	5	36	0.117	5	36	0.106	5	36	0.223
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.005			2.006			4.011

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL CARS
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	5	36	0.039	5	36	0.039	5	36	0.078
08:00 - 09:00	5	36	0.045	5	36	0.089	5	36	0.134
09:00 - 10:00	5	36	0.084	5	36	0.078	5	36	0.162
10:00 - 11:00	5	36	0.095	5	36	0.101	5	36	0.196
11:00 - 12:00	5	36	0.078	5	36	0.056	5	36	0.134
12:00 - 13:00	5	36	0.067	5	36	0.056	5	36	0.123
13:00 - 14:00	5	36	0.084	5	36	0.089	5	36	0.173
14:00 - 15:00	5	36	0.101	5	36	0.112	5	36	0.213
15:00 - 16:00	5	36	0.073	5	36	0.067	5	36	0.140
16:00 - 17:00	5	36	0.089	5	36	0.067	5	36	0.156
17:00 - 18:00	5	36	0.067	5	36	0.056	5	36	0.123
18:00 - 19:00	5	36	0.039	5	36	0.045	5	36	0.084
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.861			0.855			1.716

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL LGVS
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	5	36	0.006	5	36	0.006	5	36	0.012
08:00 - 09:00	5	36	0.006	5	36	0.006	5	36	0.012
09:00 - 10:00	5	36	0.022	5	36	0.017	5	36	0.039
10:00 - 11:00	5	36	0.000	5	36	0.006	5	36	0.006
11:00 - 12:00	5	36	0.006	5	36	0.006	5	36	0.012
12:00 - 13:00	5	36	0.011	5	36	0.011	5	36	0.022
13:00 - 14:00	5	36	0.011	5	36	0.011	5	36	0.022
14:00 - 15:00	5	36	0.017	5	36	0.017	5	36	0.034
15:00 - 16:00	5	36	0.017	5	36	0.017	5	36	0.034
16:00 - 17:00	5	36	0.000	5	36	0.000	5	36	0.000
17:00 - 18:00	5	36	0.011	5	36	0.011	5	36	0.022
18:00 - 19:00	5	36	0.006	5	36	0.006	5	36	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.113			0.114			0.227

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
MULTI-MODAL MOTOR CYCLES
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	5	36	0.000	5	36	0.000	5	36	0.000
08:00 - 09:00	5	36	0.000	5	36	0.000	5	36	0.000
09:00 - 10:00	5	36	0.000	5	36	0.000	5	36	0.000
10:00 - 11:00	5	36	0.000	5	36	0.000	5	36	0.000
11:00 - 12:00	5	36	0.006	5	36	0.000	5	36	0.006
12:00 - 13:00	5	36	0.000	5	36	0.000	5	36	0.000
13:00 - 14:00	5	36	0.000	5	36	0.000	5	36	0.000
14:00 - 15:00	5	36	0.000	5	36	0.000	5	36	0.000
15:00 - 16:00	5	36	0.000	5	36	0.000	5	36	0.000
16:00 - 17:00	5	36	0.000	5	36	0.000	5	36	0.000
17:00 - 18:00	5	36	0.000	5	36	0.000	5	36	0.000
18:00 - 19:00	5	36	0.006	5	36	0.000	5	36	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.000			0.012

Appendix F

Appendix G

Appendix H

Appendix I