

Roost Architects

**Proposed Residential and
Community Space Development
Land South of Rolls Crescent,
Hulme, Manchester
Transport Statement**

April 2020

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Client Commission

Client:	Roost Architects	Date Commissioned:	November 2019
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LTP PROJECT TEAM

As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CVs are available upon request to demonstrate our experience and credentials.

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PROPOSED RESIDENTIAL AND COMMUNITY SPACE DEVELOPMENT

LAND SOUTH OF ROLLS CRESCENT, HULME, MANCHESTER

TRANSPORT STATEMENT

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I. INTRODUCTION

I.1 Background

- 1.1.1 Local Transport Projects Ltd (LTP) has been commissioned to produce a Transport Statement (TS) in support of a planning application for a proposed residential (28 apartments) and community space development at previously developed land to the south of Rolls Crescent in Hulme, Manchester. This TS provides an appraisal of the expected transport impacts associated with the proposed development. A plan of the proposed site layout is attached as Appendix 1.
- 1.1.2 The local planning and highway authority for the site is Manchester City Council (MCC).

I.2 Scope

- 1.2.1 The scope of this report has been discussed with MCC Highways (Muniza Usmani) as part of pre-application discussions, and is written in accordance with the Government's 'National Planning Policy Framework' (MHCLG, 2019) and 'Planning Practice Guidance' (DCLG, 2014), as summarised below:

- **Introduction & Description of Proposals:**
 - Description of the development site, including location and any existing sites uses and access arrangements;
 - Summary of relevant planning and allocation history for the site;
 - Description of the proposed development including site layout, pedestrian/cycle facilities and proposed access arrangements.
- **Site Assessment:**
 - Site assessments to determine existing traffic conditions, such as posted speed limits, road restrictions, highway geometry, on-street parking restrictions and any other relevant features of the local area;
 - Assessment of the sustainable transport infrastructure (pedestrian, cycle and public transport) local to the site.
- **Road Casualty Appraisal:** Examination of road collision records (5-year study period) and assessment of the road safety impact of the proposed development on the local highway network.
- **Traffic Impact:**
 - Calculation of the projected trip generation for the proposed development, utilising data from comparable sites within the latest TRICS database;
 - Assessment of the likely traffic impact of the proposed development on the operation of the local highway network.
- **Access, Parking & Internal Layout:** Description of the proposed access arrangements and internal layout of the site, including suitability of the proposed parking arrangements, access/servicing arrangements and suitability of the proposed access arrangements.

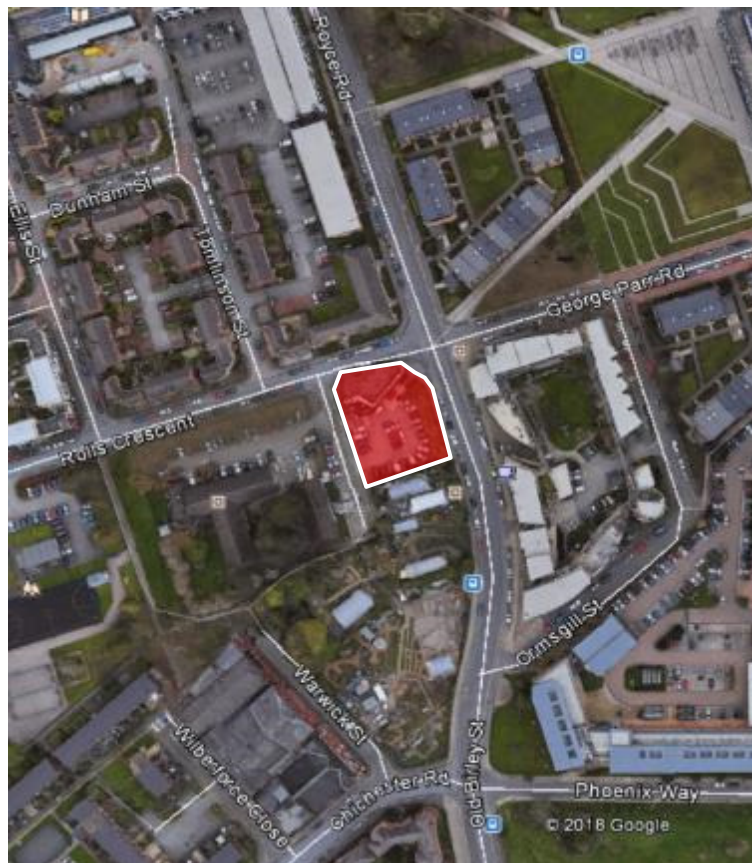
- **Conclusions:** Conclusions summarising the outcomes of the TS, including a commentary on the suitability of the proposals in terms of traffic impact and road safety.
- 1.2.2 This TS has been prepared in accordance with the agreed scope and reference has been made to the following documents where appropriate:
- National Planning Policy Framework (MHCLG, 2019);
 - Greater Manchester Transport Strategy 2040 (TfGM, 2017);
 - Manchester Residential Quality Guidance (MCC, 2017);
 - Planning Practice Guidance (DCLG, 2014);
 - Manchester's Local Development Framework, Core Strategy Development Plan Document (MCC, 2012);
 - Manual for Streets 2: Wider Application of the Principles (CIHT, 2010);
 - Guidance on Transport Assessment (DfT, 2007a); and
 - Manual for Streets (DfT, 2007b).

2. SITE BACKGROUND

2.1 Site Location

- 2.1.1 The application site, which forms brownfield land, is located on land to the south of Rolls Crescent in Hulme, Manchester. A Public House, the Junction Hotel, operated from the northern part of the site until June 2016, with the southern part of the site occupied by the pub's car park. The car park is accessed from an unnamed access road on the site's western boundary. Although the pub has been closed for a number of years, the car park continues to be used by visitors to the area. It is understood that this use is informal and without the landowner's specific permission.
- 2.1.2 The site is bound by Rolls Crescent to the north, Old Birley Street to the east, Hulme Community Garden Centre to the south and an unnamed road to the west. Rolls Crescent Primary School is located approximately 150m west of the site on Rolls Crescent. The surrounding area is predominantly residential in nature, including various blocks of student accommodation associated with the nearby Manchester Metropolitan University (MMU). The approximate boundary of the application site is shown in Figure 1.

Figure 1: Site Location



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Photo 1: Junction Hotel Building



Photo 2: Junction Hotel Car Park



2.2 Development Proposals & Access Arrangements

- 2.2.1 This TS is based upon the proposals outlined on the site layout plan attached as Appendix 1. The development proposals involve the provision of 28 apartments, consisting of (4 N° 1 beds and 24 N° 2 beds) alongside a multi-purpose community space.

- 2.2.2 The 28 apartments will be split between a new 3-storey apartment block (24 N°) and within the renovated Junction Hotel building (4 N°). The community space provides a total Gross Floor Area (GFA) of 110m² that is to be divided between four individual units. The community space would front Old Birley Street and has been designed so that it can be used on a flexible basis which best serves local needs. Likely uses include occupation by start-up enterprises, community art workshops and meeting space for community groups.
- 2.2.3 An 18-space car parking area for the apartments is to be provided at the site and is to be accessed via two vehicular access points provided on the eastern side of the unnamed access road which flanks the site's western boundary. The southern access point is the existing 5.0m wide access to the pub car park and is to be retained as existing. The northern access is to be a newly constructed access and will also measure 5.0m in width. It is intended that one of the accesses will form an 'in only' and the other an 'exit only' so that car park circulation is undertaken on a one-way basis.
- 2.2.4 Secure pedestrian building access points to both the new apartment block and renovated Junction Hotel building are to be provided and can be easily accessed from the footways on Rolls Crescent, Old Birley Street and the unnamed access road.
- 2.2.5 All refuse from the site will be collected kerbside on the unnamed access road and the swept path analysis included as Appendix 2 demonstrates that a refuse vehicle can enter and exit the unnamed access road in a forward gear.

2.3 Proposed Parking Provision

- 2.3.1 As outlined above, an 18-space car park is to serve the apartments at the site and is to consist of 16 standard spaces and 2 spaces for people with disabilities. All 18 spaces will be provided with electrical charging facilities.
- 2.3.2 Given that the proposed ground floor community uses will cover a small floor space and will primarily serve the local community, no specific on-site car parking facilities are to be provided for this use. However, if required, some short-stay kerbside parking is likely to be available on nearby streets which form part of a Controlled Parking Zone (CPZ) and permit maximum stays of 3-hours for non-permit holders during the Monday-Friday daytime period.
- 2.3.3 The adopted Manchester parking standards are outlined within Appendix B of the '*Manchester's Local Development Framework, Core Strategy Development Plan Document*' (MCC, 2012), however no references to residential parking standards are made within the document.
- 2.3.4 Further guidance on parking is provided within the document '*Manchester Residential Quality Guidance*', which states that "*there is no 'one size fits all' approach to car parking and it should be considered on a site by site basis*" (MCC, 2017). The document states that 100% parking provision should be a starting point, but that reduced on-site provision may be justified on that basis of factors such as cycle parking in excess of 50% provision, and evidence demonstrating that lower levels of parking demand would be appropriate.

- 2.3.5 Three covered cycle storage areas providing a total of 38 cycle parking spaces are to be located within the car park at the site. Of the 38 cycle parking spaces, 28 spaces are to be for the exclusive use of residents (representing 100% cycle parking provision), with the remaining 10 shared between residents and users of the community space. The proposed level of cycle parking provision is therefore significantly in excess of minimum requirements.
- 2.3.6 The proposed provision of 18 on-site car parking spaces at the site represents 0.64 car parking spaces per dwelling.
- 2.3.7 In order to determine the suitability of the proposed car parking provision, the 2011 National Census (ONS, 2013) dataset 'KS404EW - Car or van availability' has been interrogated to determine the existing residential parking demand within the local area. The dataset has been interrogated for the households within the Lower-Layer Super Output Area (LSOA) 'Manchester 019D' which covers the proposed development site, as summarised within Table 1.

Table 1: Local Car or Van Availability

	Manchester 019D LSOA		
	Households	Households (%)	Cars
No cars or vans	454	44.8%	0
1 car or van	464	45.8%	464
2 cars or vans	82	8.1%	164
3 cars or vans	11	1.1%	33
4 or more cars or vans	2	0.2%	8
Total Households	1013	100%	669
Cars per Household	0.66		

* Totals may not represent the sum of their parts due to rounding

- 2.3.8 Table 1 demonstrates that approaching half of all households within the Manchester 019D LSOAs do not have any cars in the household. Where households do have cars available, the majority have only 1 car. Overall, households in the Manchester 019D LSOA within which the site is located have 0.66 cars per household, and it is therefore considered reasonable to assume that the apartments at the proposed development site would have a similar car availability.
- 2.3.9 As demonstrated within Section 3 of this TS, the site is highly accessible by sustainable modes with excellent access to walking and cycling infrastructure and public transport. It is also expected that specific measures to further encourage travel to and from the site by sustainable modes could be included as part of a development 'Travel Plan'.
- 2.3.10 Given the above, it is considered that the proposed on-site car parking provision of 18 spaces is suitable to accommodate the projected demand, as it reflects the excellent access to sustainable transport infrastructure and is in line with the existing local car per household ratio.

2.4 Allocation Status & Planning History

- 2.4.1 There are no relevant, recent planning applications relating to the proposed development site.

3. SITE ASSESSMENT

3.1 Local Highway Network

- 3.1.1 Rolls Crescent is a two-way single carriageway that connects Old Birley Street to the A5067 Stretford Road in Hulme. The road provides access to a number of residential side-streets within the vicinity of the site, including Tomlinson Street and Ellis Street. The road measures approximately 8.0m in width within the vicinity of the site and is subject to a 20mph speed limit, with vertical traffic calming features provided along the majority of the route. Rolls Crescent forms part of a Controlled Parking Zone (CPZ), with on-street parking spaces provided in marked bays. Within the immediate vicinity of the site, unless a H4 permit holder, parking is limited to a maximum of 3 hours (no return within 1 hour) between Monday and Friday 8am – 6pm. Outside of marked parking spaces, No Waiting At Any Time (NWAAT) restrictions are in place on Rolls Crescent.

Photo 3: Rolls Crescent



- 3.1.2 The ACCG Claremont Resource Centre is located on the southern side of Rolls Crescent approximately 60m west of the application site. The centre provides person-centred health and social care to the local African Caribbean community. The centre has a car parking area which is accessed from the western side of the unnamed access road located south of Rolls Crescent. Approximately 90m further west on Rolls Crescent is Rolls Crescent Primary School. School Keep Clear Road markings (no stopping Monday – Friday 8am – 5pm) are in place on the southern side of the road and protect the school's vehicular and pedestrian access points as well as the wider school frontage.

- 3.1.3 An unnamed access road forms a priority junction with Rolls Crescent approximately 40m west of Old Birley Street. The unnamed access road is approximately 60m in length and provides access to the existing pub car park as well as the car park serving the ACCG Claremont Resource Centre. In addition to this, a total of 15 perpendicular parking bays which form part of the CPZ described above are located on the western side of the road. NWAAT restrictions are provided along the remainder of the route.

Photo 4: Unnamed Access Road



- 3.1.4 At its eastern end, Rolls Crescent forms a four-arm cross-roads junction with Old Birley Street (northern and southern arms) and George Parr Road (eastern arm). Old Birley Street forms the priority route, with users on Rolls Crescent and George Parr Road required to give way. North of Rolls Crescent, Old Birley extends for approximately 170m and forms a four-arm traffic signal junction with the A5067 Stretford Road and Royce Road. The western side of this length of Old Birley Street forms part of the previously described CPZ, with NWAAT restrictions provided throughout the eastern side. The section of Old Birley Street to the south of Rolls Crescent is approximately 325m in length and at its southern end forms a three-arm traffic signal junction with Greenheys Lane West. Again, a similar CPZ regime (with some variations on length of permitted stay) applies on this section of Old Birley Street. The entire length of Old Birley Street is subject to a 20mph speed limit.
- 3.1.5 George Parr Road is approximately 130m in length, with the section between Old Birley Street and George Parr Road accommodating two-way flows and the section east of Ormsgill Street being one way eastbound. As per the above streets, a 20mph speed limit and CPZ regime is in place on George Parr Road. The MMU Brooks Building which provides meeting, conferencing and residential facilities is located immediately north east of the eastern end of George Parr Road.

Photo 5: Old Birley Street (north of Rolls Crescent)



Photo 6: George Parr Road



3.2 Pedestrian Provision

- 3.2.1 Guidance from the Chartered Institution of Highways & Transportation (CIHT) suggests a preferred maximum walking distance of 2km for a number of trips, including commuting and school trips (IHT, 2000). The proposed development site is located within a 2km walking distance of a number of local trip attractors, as summarised in Table 2.

Table 2: Key Trip Attractors by Foot

Trip Attractor	Walking Route	Walking Distance*
University Education		
Manchester Metropolitan University	Rolls Crescent – Bonsall Street – Boundary Lane – Higher Cambridge Street – Boundary Street West – Higher Chatham Street	1.2km
The University of Manchester	Rolls Crescent – George Parr Road – Archway – steps & bridge over Princess Road – Poynton Street – Freeman Square – Booth Street West – Oxford Road	1.3km
Other Education		
Rolls Crescent Primary School	Rolls Crescent (westbound)	150m
Bright Eyes Day Nursery	Rolls Crescent – Old Birley Street – Royce Road	400m
St Wilfrid's RC Primary School	Rolls Crescent – Tomlinson Street – Dunham Street – Ellis Street – Stretford Road – Dearden Street – Royce Road	550m
St Philips C of E Primary School	Rolls Crescent – footway route across MMU campus – Stretford Road – Newbold Walk	600m
Loreto College	Rolls Crescent – Preston Street – Wilberforce Close – Chichester Road – Bold Street – Chichester Road South	630m
Manchester Federation of EBSD Schools (Castlefield Campus)	Rolls Crescent – Tomlinson Street – Dunham Street – Ellis Street – Stretford Road – Dearden Street – Royce Road – Chevassut Street – St Wilfrid's Street – St Nicholas Road – Jackson Crescent	975m
Trinity C of E High School	Rolls Crescent – George Parr Road – Archway – steps & bridge over Princess Road – Poynton Street – Epping Street – Ruby Street – Boundary Lane – Higher Cambridge Street	1km
St Alphonsus RC Primary School	Rolls Crescent – Yew Street – Marple Street – Erskine Street – Cornbrook Grove – Hamilton Street	1.1km
St Mary's C of E Primary School	Rolls Crescent – Preston Street – Wilberforce Close – Chichester Road – Bold Street – Chichester Road South – Alexandra Road – Adcombe Street	1.2km
Holy Name RC School / Webster Primary School	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Greenheys Lane West – Greenheys Lane – Charles Halle Road – Denmark Road	1.3km
Manchester Academy High School	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Greenheys Lane West – Greenheys Lane – Charles Halle Road – Denmark Road	1.7km
Retail		
Stretford Road shops/cafes/Post Office	Rolls Crescent – Old Birley Street – Stretford Road	300m-450m
Co-op Food	Rolls Crescent – Old Birley Street – Bonsall Street	300m
Hulme High Street shops/café	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Hulme High Street	450m-700m
Hulme High Street Retail Park (Asda, B&M, Argos, KFC)	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Hulme High Street	600m
Oxford Road shops/bars/restaurants	Rolls Crescent – Bonsall Street – Stretford Road – Cavendish Street – Oxford Road	1.2km-1.8km
Healthcare		
The Arch Medical Practice	Rolls Crescent – Old Birley Street – Royce Road	300m
Cornbrook Medical Practice	Rolls Crescent – George Parr Road – Archway – steps & bridge over Princess Road – Poynton Street – Freeman Square – Booth Street West	800m
Parsonage Dental Practice	Rolls Crescent – Preston Street – Wilberforce Close – Chichester Road – Bold Street – Chichester Road South – Parsonage Street	700m

Trip Attractor	Walking Route	Walking Distance*
Windsor Dental	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Hulme High Street – Moss Lane East – Denhill Road	950m
Manchester Royal Infirmary	Rolls Crescent – George Parr Road – Archway – steps & bridge over Princess Road – Poynton Street – Freeman Square – Booth Street West – Lime Grove – Oxford Road	2km
Leisure		
Hulme Park	Rolls Crescent – Old Birley Street – Royce Road	500m
Bold Street Sports Ground	Rolls Crescent – Preston Street – Holdgate Close – Bold Street	500m
Moss Side Leisure Centre	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Hulme High Street	650m
Hulme High Street Library	Rolls Crescent – Warwick Street – Chichester Road – Old Birley Street – Hulme High Street	650m
Rail Stations		
Manchester Deansgate Rail Station	Rolls Crescent – Old Birley Street – Royce Road – Jackson Crescent – bridge (steps and ramp) over A57(M) –	1.6km
Manchester Oxford Road Rail Station	Rolls Crescent – Bonsall Street – Stretford Road – Cavendish Street – Oxford Road – Caley Street – Great Jackson Street – Deansgate	1.7km
Worship		
Ascension C of E Church	Rolls Crescent – Old Birley Street – Stretford Road	270m
Church of St Mary, Hulme	Rolls Crescent – Warwick Street – Chichester Road – Bold Street – Chichester Road South – St Mary's Street	600m

*Walking distances are approximate (measured along footways, rather than as the crow flies) and have been measured from the site's northern vehicular access.

- 3.2.2 Table 2 demonstrates that the site is located within a 2km walk of a considerable number of facilities, amenities and employment opportunities. As well as specific trip attractors in the Hulme and Moss Side areas, the southern part of Manchester city centre (Oxford Road / Deansgate areas) is within a 2km walk.
- 3.2.3 Pedestrian infrastructure around the application site is well developed due to the site being located in a predominantly urban residential area which currently caters for significant pedestrian movements. Footways of suitable width flank all roads within the vicinity of the site. A number of footways within the vicinity of the site are of generous widths of in excess of 3.0m, including on the southern side of Rolls Crescent and the eastern side of Old Birley Street. The campus layout of MMU accommodation within the area surrounding the site means that a number of away from carriageway direct footway routes are available which could be used by users of the application site. Signal controlled pedestrian crossing facilities are provided at the Old Birley Street junctions with Stretford Road and Greenheys Lane West.

Photo 7: Footway on Stretford Road



Photo 8: Footway Route within vicinity of MMU Accommodation



Photo 9: Stretford Road / Old Birley Street Signal Controlled Pedestrian Crossing Facilities

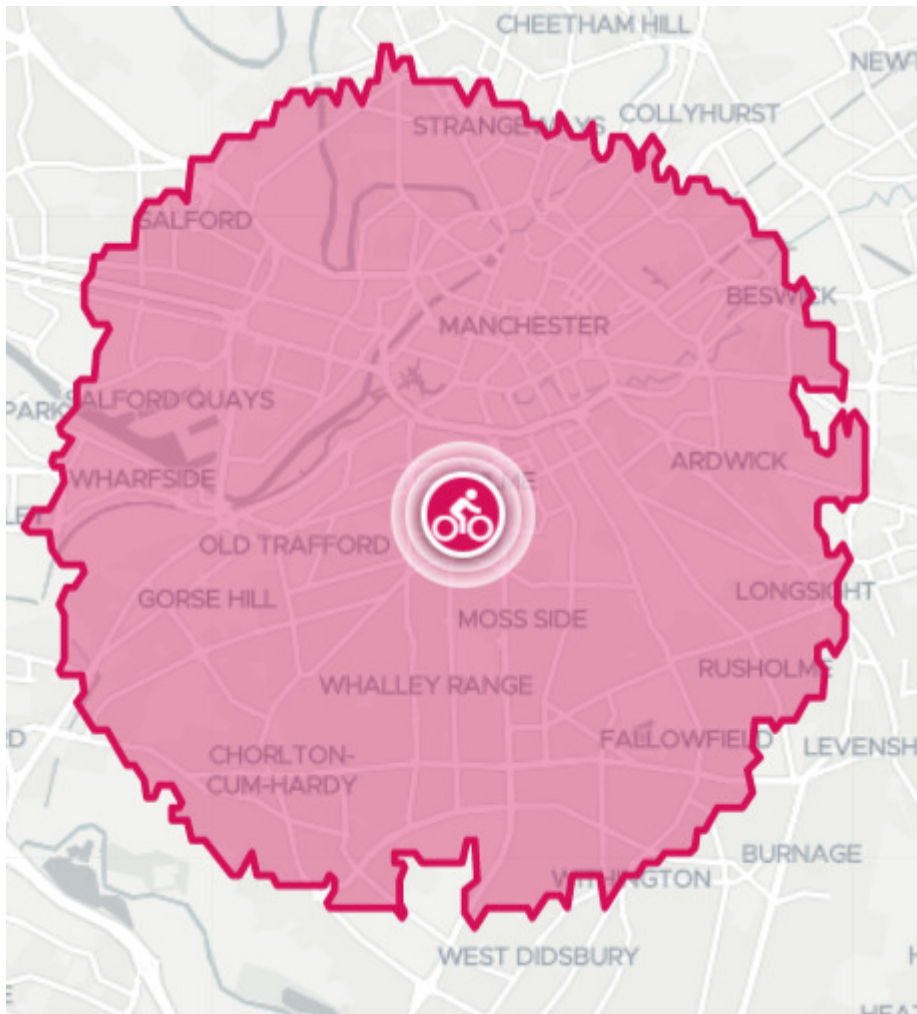


- 3.2.4 Given the pedestrian infrastructure within the vicinity of the site, it is considered that a high level of pedestrian access is available to the site.

3.3 Cycling Provision

- 3.3.1 Cycling is a low cost and healthy alternative to car use, which can substitute for short car trips, or can form part of a longer journey by public transport. The Department for Transport (DfT) states that *"in common with other modes, many utility cycle journeys are under three miles (5km), although, for commuter journeys, a trip distance of over five miles (8km) is not uncommon"* (DfT, 2008).
- 3.3.2 The proposed development site is located within a reasonable cycle ride, up to 5km (approximately 15 minutes at the average cycling speed of 12mph), of Manchester city centre, along with the areas of Old Trafford, Gorse Hill, Moss Side, Whalley Range, Chorlton-cum-Hardy and Ardwick, as shown on the isochrone map within Figure 2:

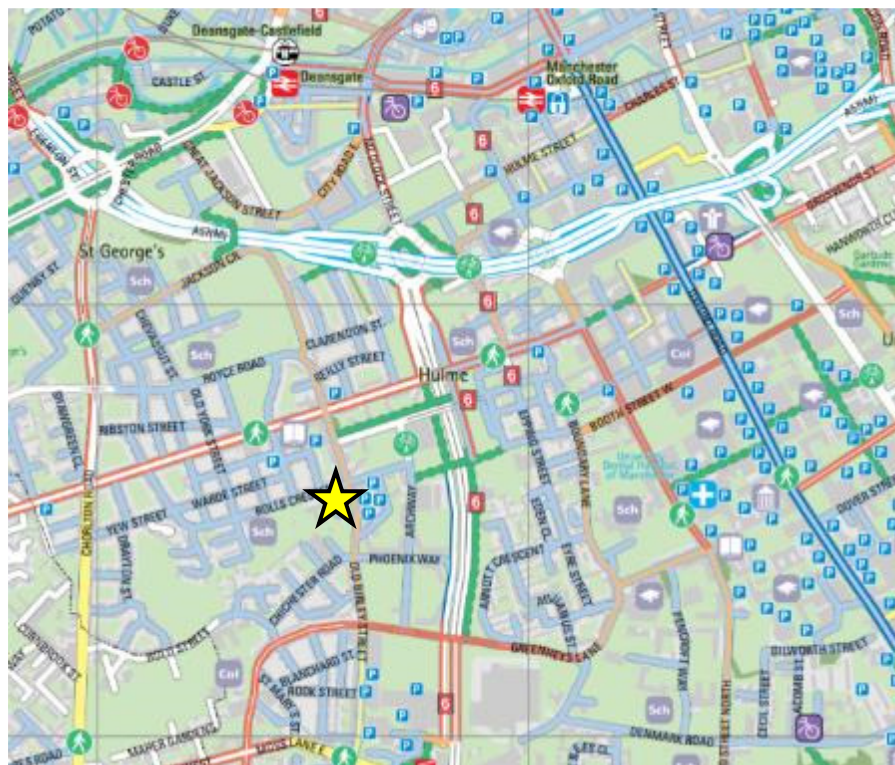
Figure 2: 15 Minute Cycle Isochrone



Source: TTM, 2019

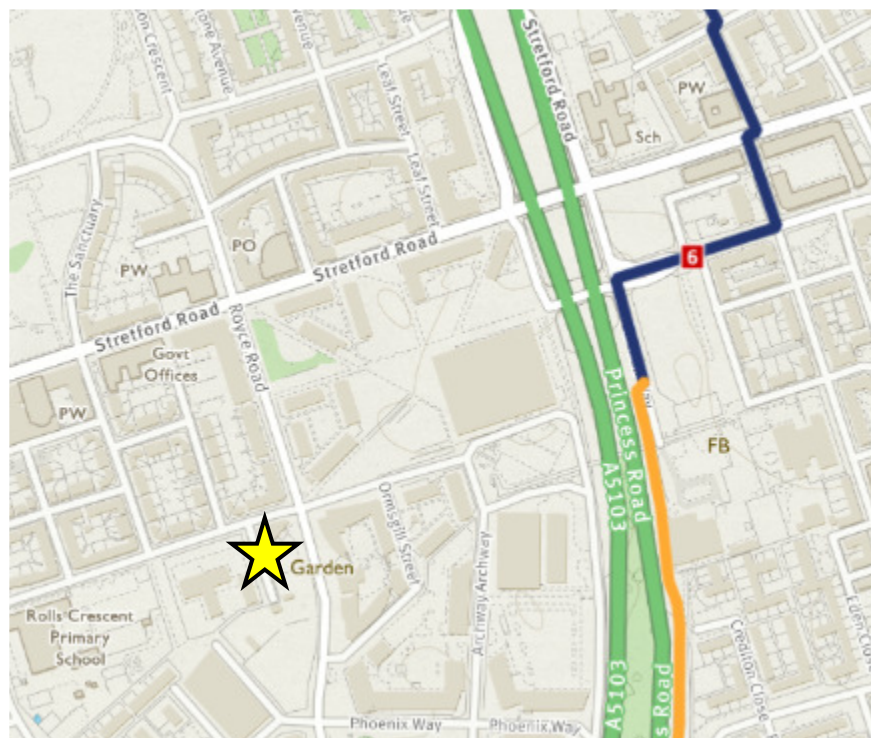
- 3.3.3 An extract from the Manchester Cycle Map (TfGM, 2019) is provided as Figure 3 and demonstrates that there are a number of on and off-road cycle facilities within the vicinity of the site, with on-road routes shown in dark blue and red, off-road routes in dark green and 20mph streets in light blue. The location of the proposed development site is indicated by the yellow star.
- 3.3.4 Figure 3 demonstrates that on-road cycle lanes are provided on both sides of Stretford Road and Greenheys Lane West within the vicinity of the site. Local streets including Rolls Crescent, Old Birley Street and Royce Road are subject to a 20mph speed limit and are therefore considered to be conducive to encouraging cycling. An off-road cycle connection is provided between Old Birley Street and Stretford Road and Princess Road. Route 6 of the National Cycle Network (NCN) also runs to the east of the A5103 Princess Road (see Figure 4) and connects, Chorlton-cum-Hardy, Moss Side, Hulme and Manchester city centre. Oxford Road is also home to innovative 'Dutch-style' cycle lanes that are separated from traffic on both sides of the road along with cycle bypasses at bus stops.

Figure 3: Extract of Manchester Cycle Map



Source: TfGM, 2019

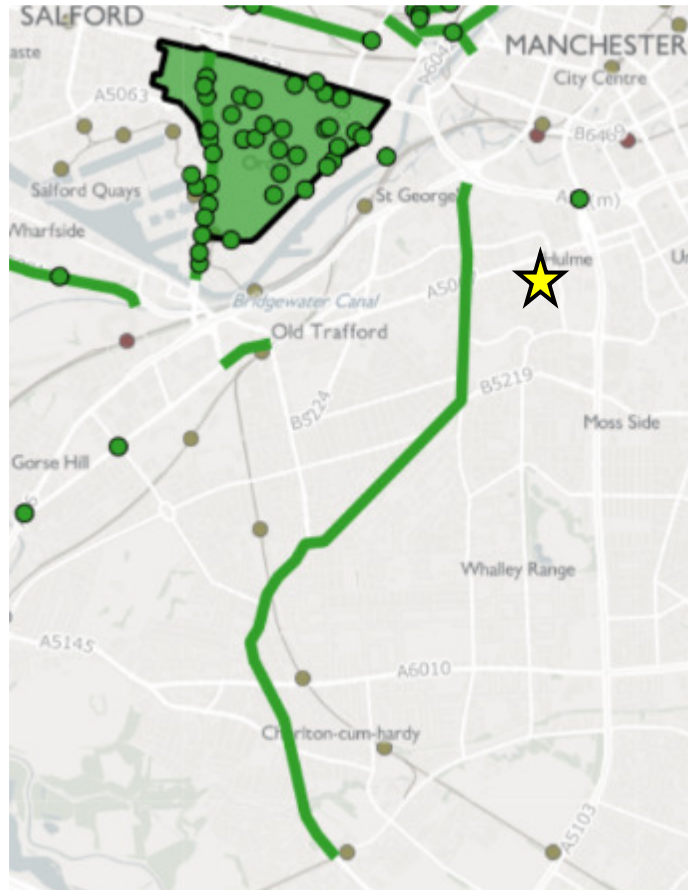
Figure 4: National Cycle Network Route 6



Source: OS Maps, 2019

- 3.3.5 The 'Bee Network' is a proposed network of fully joined up walking and cycling routes, which is expected to cover a total distance of 1,800 miles within Greater Manchester. The Chorlton-cum-Hardy to Manchester route represents a 'confirmed infrastructure' scheme and will be accessible approximately 600m west of the development site at the Chorlton Road / Yew Street junction (see Figure 5). The route between the site and the start of the Bee Network route is already traffic calmed and subject to a 20mph and therefore provides generally attractive conditions for cycling.

Figure 5: Manchester Bee Network Proposals



Source: GMCA, 2019

Photo 10: Cycle Lanes on Stretford Road



Photo 11: Off-road Cycle Connection from Old Birley Street



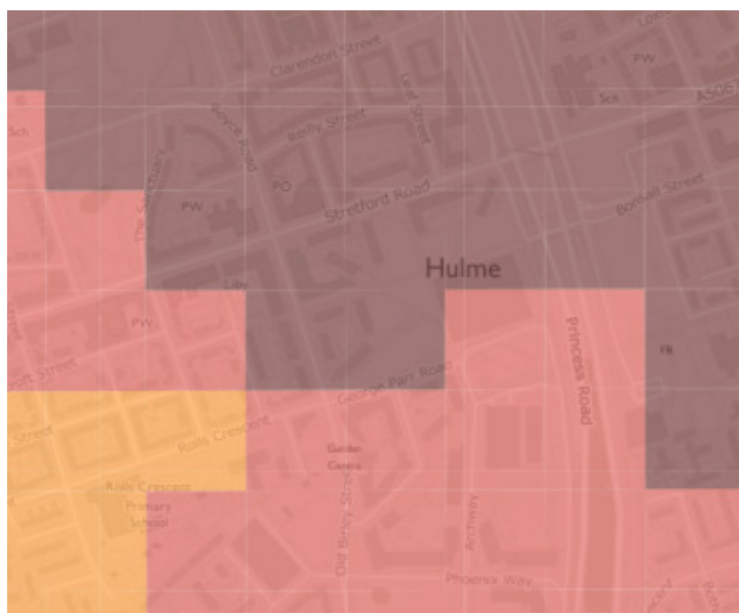
Photo 12: Cycle Lanes on Greenheys Lane West



3.4 Greater Manchester Accessibility Level (GMAL)

- 3.4.1 The proposed development site is located in an area with a Greater Manchester Accessibility Level (GMAL) rating of 7, where a rating of 1 indicates a very low level of accessibility and 8 indicates a very high level of accessibility. The site is therefore considered to have very good access to public transport (bus, Metrolink and rail), as shown within Figure 6 below:

Figure 6: Greater Manchester Accessibility Level (GMAL)



Source: GMCA, 2019

3.5 Public Transport Provision – Bus

- 3.5.1 Guidance outlined within ‘Guidelines for Public Transport in Development’ (IHT, 1999) states that the generally acceptable maximum walking distance that a bus stop should be located from a development site is 400m, although it is acknowledged that actual walking distances can be notably longer.
- 3.5.2 There are bus stops on both sides of Old Birley Street that are within a 250m walk of the proposed development site. There are also bus stops on both sides of Stretford Road within a 350m walking distance and on both sides of Greenheys Lane West within a 475m walking distance. A summary of the bus services available from the local stops is provided in Table 3:

Table 3: Local Bus Services

Service No.	Main Stopping Points	Approx. Mon-Sat Daytime Frequency*	Approx. Sunday/ Evening Frequency
Services from Old Birley Street			
86	Manchester Piccadilly Garden – Manchester Portland Street – Manchester Oxford Road – University of Manchester – Booth Street West – Bonsall Street – Stretford Road (Hulme) – Old Birley Street – Upper Chorlton Road – Manchester Road (Chorlton)	Every 10 Minutes	Every 10 Minutes
Services from Stretford Road			
53	Cheetham Hill – North Manchester General Hospital – Blackley – Harpurhey – Collyhurst – Sportcity – Beswick – Gorton – Belle Vue – Longsight – Rusholme – University of Manchester – Stretford Road – Old Trafford – Salford Quays – MediaCity UK – Pendleton	Every 30 Minutes	Every 60 Minutes
86	As per Old Birley Street service above	Every 10 Minutes	Every 10 Minutes
250	intu Trafford Centre – Trafford Park – Old Trafford – Stretford Road – Booth Street West – Oxford Road – Manchester city centre	Every 10 Minutes	Every 10 Minutes
253 (EB only)	Partington – Carrington – Flixton – Urmston – Stretford – Old Trafford – Stretford Road – Oxford Road – Manchester city centre	Every 30 Minutes	Every 30 Minutes
256	Flixton – Trafford General Hospital – Dayhulme – Lostock – Stretford – Old Trafford – Royce Road (Hulme) – Stretford Road – Princess Road – Manchester city centre	Every 10 Minutes	Every 30 Minutes
263	Altrincham Interchange – Broadheath Sinderland Road – Sale – Stretford – Trafford Bar – Chorlton – Stretford Road – Oxford Road – Manchester city centre	Every 15 Minutes	Every 15 Minutes
Services from Greenheys Lane West			
85	Manchester Piccadilly Garden – Manchester Portland Street – Manchester Oxford Road – University of Manchester – Booth Street West – Greenheys Lane (Hulme) – Greenheys Lane West – Alexandra Road – Wilbraham Road (Chorlton Metrolink) – Barlow Moor Road (Chorlton)	Every 10 Minutes	Every 20 Minutes
86	As per Old Birley Street service above	Every 10 Minutes	Every 10 Minutes

*Refers to the general frequency of services between 08:00 and 19:00

Photo 13: Bus Stop on Old Birley Street (Eastern Side)



Photo 14: Bus Stop on Stretford Road (Northern Side)



- 3.5.3 Table 3 demonstrates that frequent bus services are available from local stops to destinations including Manchester city centre, Chorlton, Trafford Park, Old Trafford, Stretford, into Trafford Centre, Sale, Altrincham and North Manchester General Hospital, including on evenings and at weekends.

3.6 Public Transport Provision – Rail & Metrolink

- 3.6.1 The nearest railway stations to the proposed development site are Manchester Deansgate Station and Manchester Oxford Road Station, located an approximate 1.6km and 1.7km walk north of the site respectively. Both stations area also within a comfortable cycle ride of the site and all of the bus services listed in Table 3 (except the 53/256 services) serve the Oxford Road corridor within the immediate vicinity of Oxford Road Station.
- 3.6.2 Manchester Oxford Road accommodates regular rail services to a range of towns and cities across the country, including Liverpool, Warrington, Chester, Crewe, Preston, Blackpool, Leeds, Sheffield, Manchester Piccadilly and Manchester Airport. Manchester Deansgate Station provides regular services to Manchester Oxford Road, Manchester Piccadilly and Manchester Airport.
- 3.6.3 Manchester Deansgate Station is linked to the Deansgate-Castlefield Metrolink Station by a footbridge. The Metrolink Station serves all lines across Greater Manchester with the exception of the Bury line. During peak periods, the Metrolink station provides 10 trams per hour to Altrincham and East Didsbury and 5 trams per hour to destinations including Ashton-under-Lyne, Bury, Eccles, Manchester Airport, MediaCityUK, Rochdale and Manchester Victoria.
- 3.6.4 A zonal fare system is operational on the Metrolink, with the Deansgate-Castlefield Station located within Zone 1. Relevant zonal travel passes are available, and train tickets to/from Manchester city centre are also valid for travel on Metrolink services within Zone 1.

4. ROAD CASUALTY APPRAISAL

4.1 Collision Record

- 4.1.1 Personal Injury Collision (PIC) data for the highway network local to the site for the most recent available five-year study period (01/01/2014 to 31/12/2018) was obtained via a search of the Department for Transport's (DfT) road safety data (DfT, 2019).
- 4.1.2 A total of 11 collisions occurred within the study area, which includes Rolls Crescent, George Parr Road, Old Birley Street and a number of local junctions. The study area and the locations of the collisions are shown on the plan attached as Appendix 3. Table 4 below outlines the collision history of the study area.

Table 4: Collision History

Year	2014	2015	2016	2017	2018	Total
Fatal	-	-	-	-	-	0
Serious	-	-	-	-	-	0
Slight	3	3	2	2	1	11
Total	3	3	2	2	1	11

- 4.1.3 The collision records show that the number of collisions has decreased during the study period. All recorded collisions were slight in severity.

4.2 Collision Conditions

- 4.2.1 Table 5 below summarises the collisions by road surface, weather and lighting conditions:

Table 5: Collision Conditions

Road Surface	Collisions	%
Dry	8	72.7%
Wet or damp	3	27.3%
Weather	Collisions	%
Fine	8	72.7%
Rain	2	18.2%
Lighting	Collisions	%
Daylight	10	90.9%
Dark	1	9.1%

- 4.2.2 As illustrated in Table 5, the majority of collisions did not occur in adverse weather or lighting conditions or when the road surface was wet/damp.

4.3 Collision Times

4.3.1 Table 6 summarises the collisions by time of year:

Table 6: Collisions by Time of Year

Time of Year	Collisions	%
Winter (Dec-Feb)	5	45.5%
Spring (Mar-May)	0	-
Summer (Jun-Aug)	2	18.2%
Autumn (Sep-Nov)	4	36.4%

4.3.2 Table 6 shows a peak of collisions during the winter months (December to February) with 5 collisions (45.5%). No collisions were recorded during the spring months (March to May).

4.3.3 Table 7 below summarises the collisions by day of week and also the time of day:

Table 7: Collisions by Day & Time

	Morning (06:00- 11:00)	Lunch (11:00- 14:00)	Afternoon (14:00- 19:00)	Evening (19:00- 01:00)	Night (01:00- 06:00)	Total	%
Monday	2	1	-	-	-	3	27.3%
Tuesday	-	-	2	-	-	2	18.2%
Wednesday	-	-	1	-	-	1	9.1%
Thursday	-	-	1	-	-	1	9.1%
Friday	-	1	2	-	-	3	27.3%
Saturday	-	1	-	-	-	1	9.1%
Sunday	-	-	-	-	-	0	-
Total	2	3	6	0	0	11	
%	18.2%	27.3%	54.5%	-	-		

4.3.4 Table 7 highlights that over half of collisions occurred during the afternoon period (54.5%), with no collisions occurring during the evening or night period. Collisions were relatively spread out across the week, albeit with no collisions occurring on a Sunday.

4.4 Collision Locations

4.4.1 The locations of the 11 study collisions (shown on the plot attached as Appendix 3) can be summarised as follows:

- 5 PICs occurred at the Old Birley Street/Stretford Road signalised junction;
- 2 PICs occurred at the Old Birley Street/Phoenix Way/Chichester Road priority crossroads junction;
- 2 PICs occurred at the Rolls Crescent/Old Birley Street/George Parr Road priority crossroads junction;
- 1 PIC occurred at the Rolls Crescent/Shearsby Close priority T-junction; and
- 1 PIC occurred at the Old Birley Street/Greenheys Lane West/Hulme High Street signalised junction.

4.5 Casualties

- 4.5.1 A total of 12 casualties resulted from the 11 recorded injury collisions during the study period. Table 8 below provides a breakdown of the casualties according to the mode of travel and age group:

Table 8: Casualty Road User Groups

Road User Group	Age (years)						Total	%
	0 to 15	16 to 20	21 to 25	26 to 45	46 to 65	66+		
Pedestrian	-	-	-	1	1	-	2	16.7%
Cyclist	1	-	1	2	-	-	4	33.3%
Car Driver	-	-	-	4	1	-	5	41.7%
Car Passenger	-	-	-	1	-	-	1	8.3%
Total	1	0	1	8	2	0	12	
%	8.3%	-	8.3%	66.7%	16.7%	-		

- 4.5.2 Table 8 shows that half of casualties were car occupants, with a third of casualties being cyclists and the remaining casualties being pedestrians (16.7%). Two-thirds of casualties were aged between 26 and 45 years, with no casualties aged between 16 and 20 years and 66 years and over.

4.6 Road Safety Impact

- 4.6.1 A total of 11 collisions, resulting in 12 casualties, have occurred within the study area during the five-year study period. The collisions have generally been recorded away from Rolls Crescent and the immediate vicinity of the site. Analysis of the study collisions has not revealed any identifiable existing collision issues associated with the expected movements of the proposed development; therefore, it is considered that there are no existing road safety issues pertinent to the development of the site.

5. TRAFFIC IMPACT

5.1 Person Trip Generation

- 5.1.1 The TRICS database is an industry-standard collection of traffic counts and trip generation statistics for calculating trip rates at development sites. The TRICS database has been interrogated to find suitable data to assist in projecting the trip generation of the proposed development.
- 5.1.2 In order to derive reflective vehicle trip rates for the proposed apartments at the site, trip generation statistics within the 'Residential – Flats Privately Owned' category (03-C) of the TRICS database have been interrogated.
- 5.1.3 To ensure that only trip generation statistics for comparable sites were used in calculations, the TRICS sites were filtered to the following criteria:
- Database version: v7.6.3;
 - Survey type: Multi-modal sites;
 - Size: Between 15 and 50 units;
 - TRICS location type: 'Edge of Town Centre', 'Edge of Town' and 'Suburban Area';
 - Regions: England and Scotland only, excluding Greater London;
 - Weekday survey data only (exclusion of Saturday and Sunday surveys); and
 - Recent survey data only (exclusion of surveys undertaken prior to 01/01/2011).
- 5.1.4 As there were less than 20 comparable sites in the database after filtering (8 survey sites), mean trip rates (as weighted and calculated by the TRICS software) have been used to project the person trip generation of the proposed apartments, in accordance with good practice guidelines (TCL, 2016). Details of the site selection and trip rates taken from the TRICS database are attached in full within Appendix 4, with the projected person trip rates and generation shown in Table 9.

Table 9: Projected Person Trip Generation – Apartments

Apartments	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)		Daily (07:00-19:00)	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Person Trip Rates (per dwelling)	0.063	0.370	0.470	0.159	2.189	2.262
Proposed Person Trips (28 dwellings)	2	10	13	4	61	63

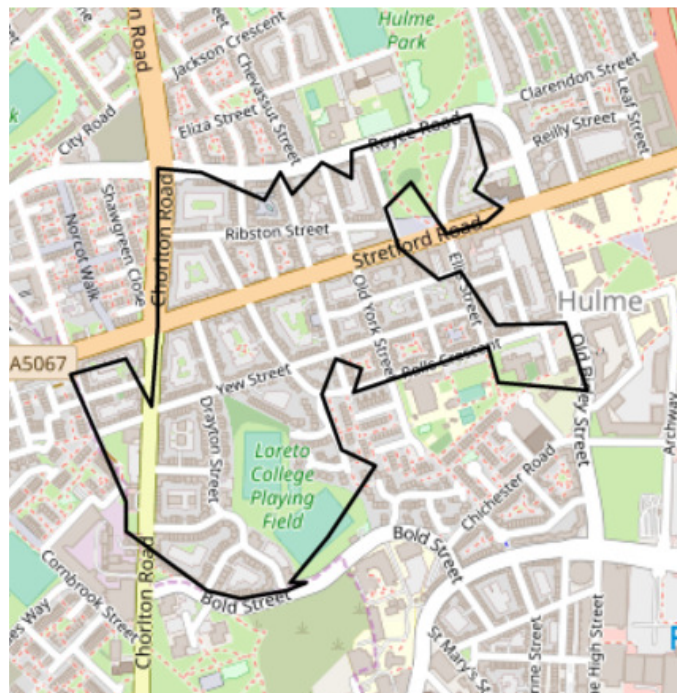
- 5.1.5 The person trip generation projections shown in Table 9 indicate that the apartments could generate 12 two-way person trips during the AM peak (08:00-09:00) peak and 17 two-way person trips during the PM peak (17:00-18:00). A maximum of 63 two-way daily (07:00-19:00) person trips are expected to be generated.

- 5.1.6 Given that the proposed ground floor community uses cover a small floor space and will primarily serve the local community, it is expected that these uses will generate a negligible number of vehicle trips, with the majority of trips likely to be made by sustainable modes, and any vehicle trips expected to form part of a longer journey (i.e. pass-by and diverted trips). Separate trip generation projections have therefore not been calculated for these uses.

5.2 Modal Split & Vehicle Trip Generation

- 5.2.1 In order to forecast the modal split of the person trips generated by the proposed apartments, local travel patterns have been interrogated using 'Method of Travel to Work' data from the 2011 National Census (ONS, 2013). The site modal split has been predicted based on the average for the resident population of the Lower-Layer Super Output Area (LSOA) 'Manchester 019D' which covers the proposed development site, as shown within Figure 7:

Figure 7: Manchester 013C LSOA



Source: ONS, 2013

- 5.2.2 The Census-derived modal split has been applied to the person trip generation projections outlined within Table 9 to calculate the number of trips by each mode, as outlined within Table 10 and provided in full within Appendix 5:

Table 10: Projected Modal Split & Vehicle Trip Generation

Mode of Travel	Modal Split	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)		Daily (07:00-19:00)	
		Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Car Driver	34.7%	1	3	2	1	21	22
Powered Two-Wheeler	0.8%	0	0	0	0	0	1
Taxi	0.1%	0	0	0	0	0	0
Vehicle Trip Generating	35.6%	1	3	2	1	21	23
Car Passenger	2.1%	0	0	0	0	1	1
Pedestrian	26.8%	1	3	2	1	16	17
Pedal-cycle	4.9%	0	0	0	0	3	3
Public Transport	29.2%	1	3	2	1	18	18
Other	1.3%	0	0	0	0	1	1
ALL MODES	100%	2	10	7	4	61	63

* Totals may not represent the sum of their parts due to rounding

5.2.3 The projections within Table 10 indicate that the proposed development would be expected to generate a total of 4 two-way vehicle trips during the AM peak hour, and 3 two-way vehicle trips during the PM peak hour. The high level of public transport (29.2%) and pedestrian trips (26.8%) is a reflection of the site's level of accessibility by sustainable transport modes.

5.3 Impact on the Highway Network

5.3.1 The DfT has previously issued guidance that transport assessment of development impacts could be based on a threshold of "30 two-way peak hour vehicle trips" (DfT, 2007a). This guidance acknowledged that this threshold was not to be applied rigidly, but rather that it provided "a useful point of reference from which to commence discussions".

5.3.2 This national DfT guidance has now been superseded and replaced with the 'National Planning Policy Framework' (NPPF) (MHCLG, 2019) and its accompanying 'Planning Practice Guidance' (PPG) (DCLG, 2014). NPPF and PPG require that transport assessment is undertaken for "developments that generate significant amounts of movement", although this is not defined. It is therefore acknowledged that there is no set threshold for assessment within the current national planning policy. In determining whether the development site is expected to have a material impact on the local highway network, the traffic projections for the development site have been compared against the current and previous Government guidance.

5.3.3 In regards to the residential development, the proposals are expected to generate a maximum of 4 two-way vehicle trip movements during the AM peak hour and 3 two-way vehicle trips during the PM peak hour. The proposed community uses of the site are expected to generate a negligible number of trips during the peak hours.

- 5.3.4 Based on the above traffic projections, it is considered that the proposals should have a negligible impact on the operation of the local highway network. Therefore, as the impact of the proposals at the site is not expected to be severe, the proposals are considered to be in accordance with the NPPF, which states that *“development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe”* (MHCLG, 2019).

6. CONCLUSIONS

- 6.1.1 This Transport Statement (TS) provides an appraisal of the expected transport impacts associated with a proposed residential (28 apartments) and community space development at previously developed land to the south of Rolls Crescent in Hulme, Manchester.
- 6.1.2 The proposals involve the provision of 28 apartments, consisting of (4 N° 1 beds and 24 N° 2 beds) alongside a multi-purpose community space. The 28 apartments will be split between a new 3-storey apartment block (24 N°) and within the renovated Junction Hotel building (4 N°). The community space provides a total Gross Floor Area (GFA) of 110m² that is to be divided between four individual units. The community space would front Old Birley Street and has been designed so that it can be used on a flexible basis which best serves local needs. Likely uses include occupation by start-up enterprises, community art workshops and meeting space for community groups.
- 6.1.3 An 18-space car parking area for the apartments is to be provided at the site and is to be accessed via two vehicular access points provided on the eastern side of the unnamed access road which flanks the site's western boundary. Secure pedestrian building access points to both the new apartment block and renovated Junction Hotel building are to be provided and can be easily accessed from adjacent footways. All refuse from the site will be collected kerbside on the unnamed access road and it has been demonstrated that a refuse vehicle can enter and exit this street in a forward gear.
- 6.1.4 The proposed level of car parking provision at the site is considered suitable to accommodate the projected level of demand as it reflects the excellent access to sustainable transport infrastructure and is in line with the existing local car per household ratio.
- 6.1.5 The application site is particularly well placed to generate trips by sustainable modes of transport. The site is located within a 2km walk of a number of local amenities, including retail/leisure facilities, employment opportunities and a range of educational establishments. Cycle access to/from the site is also very good with Manchester city centre and other destinations including Old Trafford, Gorse Hill, Moss Side and Whalley Range within a 15 minute cycle ride of the site. Dedicated cycle facilities are provided on a number of streets within the vicinity of the site, including Stretford Road, Greenheys Lane West, Princess Road and Oxford Road.
- 6.1.6 The site has a GMAL rating of 7, which represents a very high level of accessibility by public transport. There are bus stops on both sides of Old Birley Street and Stretford Road that are within the recommended maximum walking distance of 400m of the site (further stops are provided on Greenheys Lane West approximately 475m from the site). These stops provide access to frequent services to Manchester city centre, Chorlton, Trafford Park, Old Trafford, Stretford, intu Trafford Centre, Sale, Altrincham and North Manchester General Hospital, including on evenings and at weekends.

- 6.1.7 Rail services at Manchester Oxford Road and Manchester Deansgate stations are available within a 1.7km walk of the site. Manchester Deansgate Station is also connected to the Deansgate-Castlefield Metrolink Station which serves destinations across the Greater Manchester area.
- 6.1.8 A road casualty appraisal showed that 11 PICs (Personal Injury Collisions) occurred within the study area around the site during the five-year study period. Analysis of the study collisions has not revealed any identifiable existing collisions issues associated with the expected movements generated by the proposed development; therefore, it is considered that there are no existing road safety issues pertinent to the development site.
- 6.1.9 The person trip generation of the proposed residential aspect of the development has been projected using the industry-standard TRICS database, with data from the 2011 National Census utilised to project the likely modal split of the residential development. The projections show that the proposed apartments are expected to generate a total of 4 two-way vehicle trips during the AM peak hour, and 3 two-way vehicle trips during the PM peak hour. The reasonably low level of projected vehicle trip generation is a reflection of the site's accessibility by sustainable modes, particularly by walking and public transport.
- 6.1.10 The proposed ground floor community uses are expected to primarily serve the local community and as such are expected to generate a negligible number of vehicle trips.
- 6.1.11 Based on the assessments, this TS indicates that the proposed development would be expected to have a negligible impact on the operation of the local highway network. Therefore, as the impact of the proposals at the site is not expected to be severe, the proposals are considered to be in accordance with the NPPF, which states that *"development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"* (MHCLG, 2019).
- 6.1.12 It is concluded from the assessments within this TS that the proposed development would not be expected to have a detrimental impact in terms of sustainable travel, road safety and traffic impact.

7. REFERENCES

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Appendix I – Proposed Site Layout

1. DO NOT SCALE FROM THIS DRAWING - USE FIGURED DIMENSIONS ONLY
2. READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS/SPECIALISTS DRAWINGS. REPORT ANY DISCREPANCIES BEFORE AFFECTED WORK COMMENCES
3. ALL SETTING OUT DRAWINGS TO BE CHECKED ON SITE BY CONTRACTOR BEFORE WORK COMMENCES
4. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT BUILDING REGULATION, PLANNING REQUIREMENTS AND CODES OF PRACTICE. MATERIALS USED TO COMPLY WITH CURRENT BRITISH STANDARDS.
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ROLLS CRESCENT

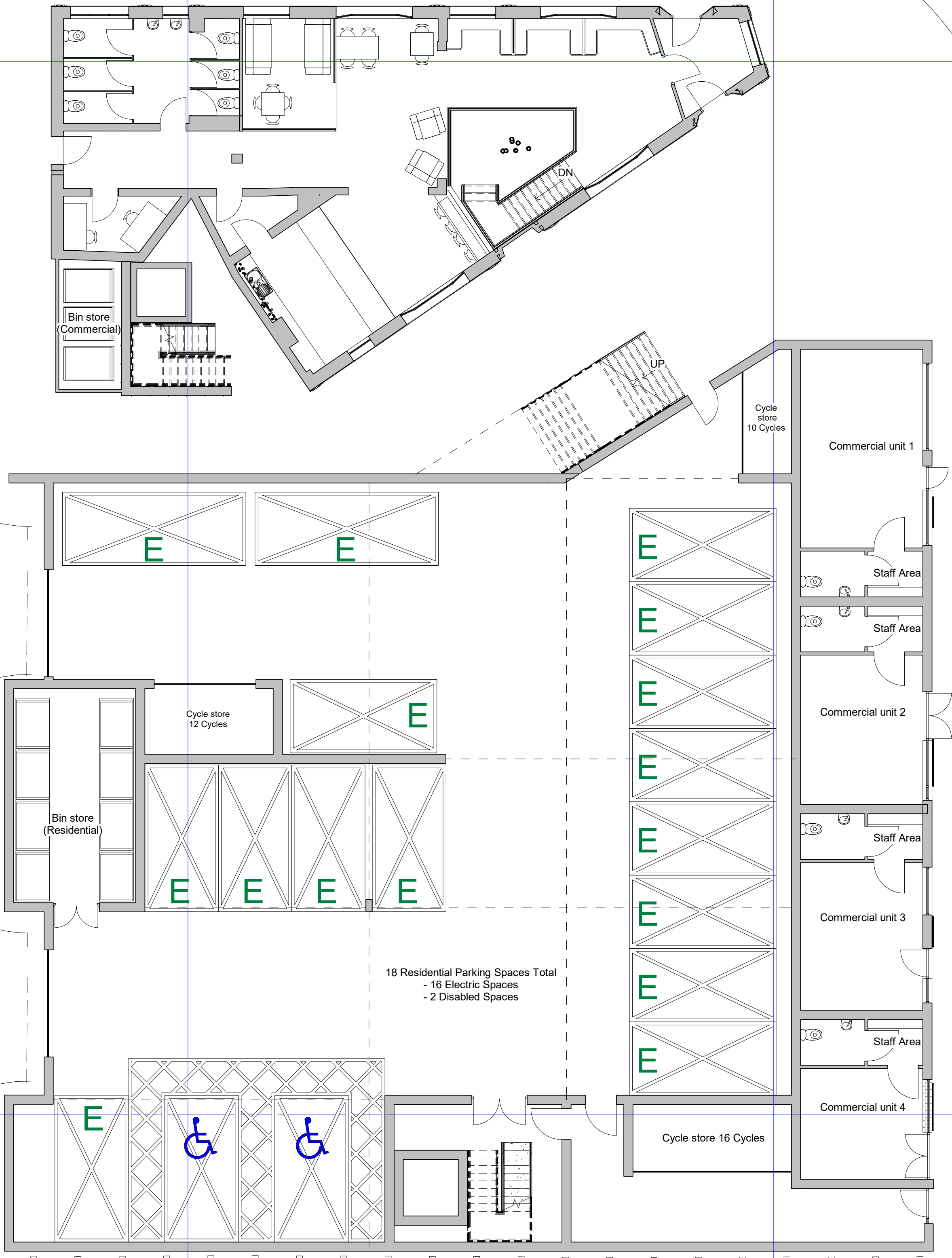
OLD BIRLEY STREET

D

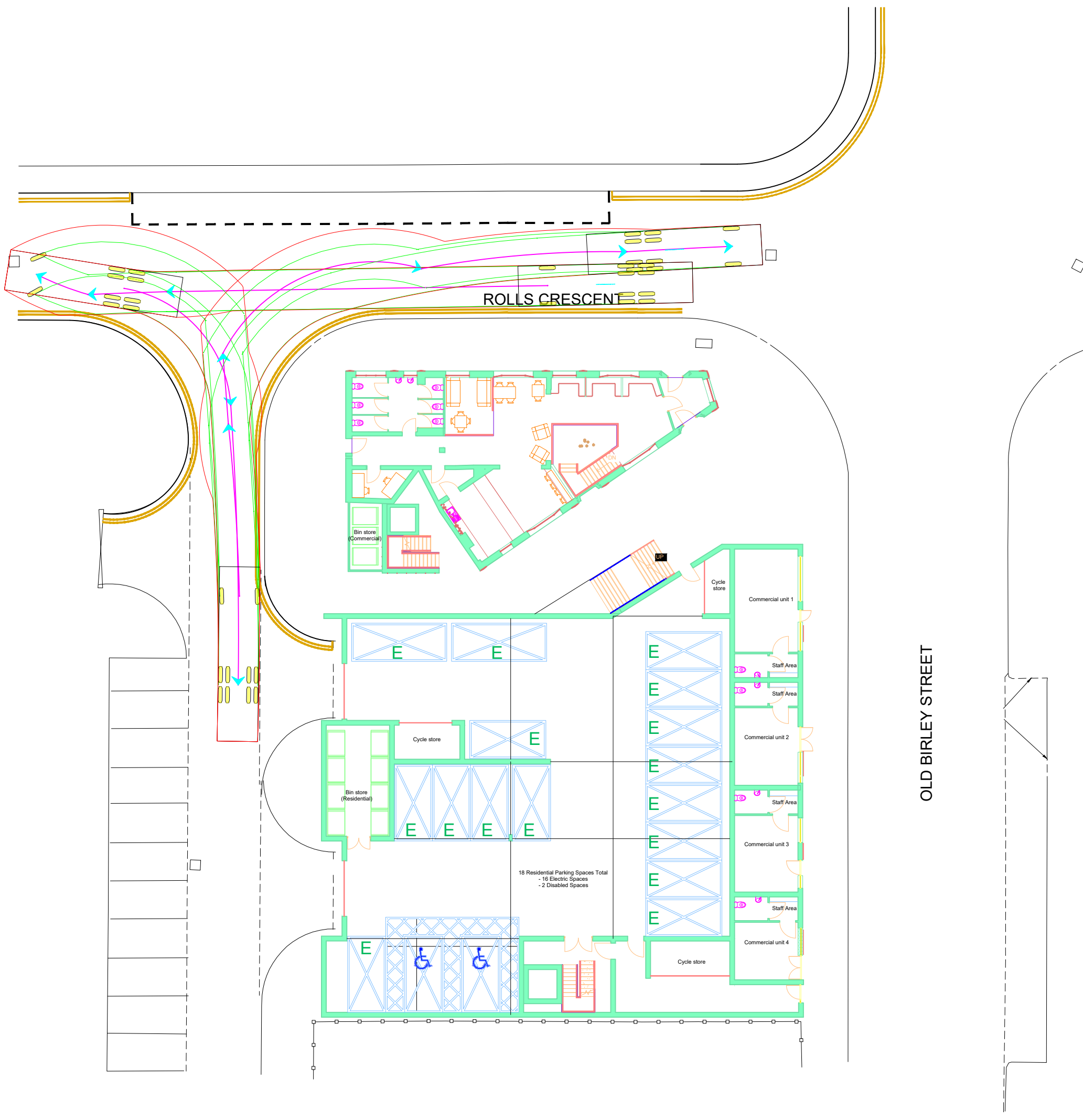
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A



Appendix 2 – Swept Path Analysis



10mm

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A3

Notes:-

	Outer Wheel Track
	Vehicle Swept Path
	Vehicle Centreline and Direction

Design Vehicle

Refuse Vehicle

Width	mm
Track	: 2550
Lock to Lock Time	: 2500
Steering Angle	: 6.0
	: 34.9

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i.

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ii.

Reference should be made to the project's drawing register to ensure the latest drawing is being referred to.

iii.

All dimensions are to be checked by the contractor prior to commencement of work. Any discrepancy shall be reported immediately to Local Transport Projects Ltd

iv.

All work shall be carried out in accordance with local authority, statutory authority and health & safety requirements & regulations

v.

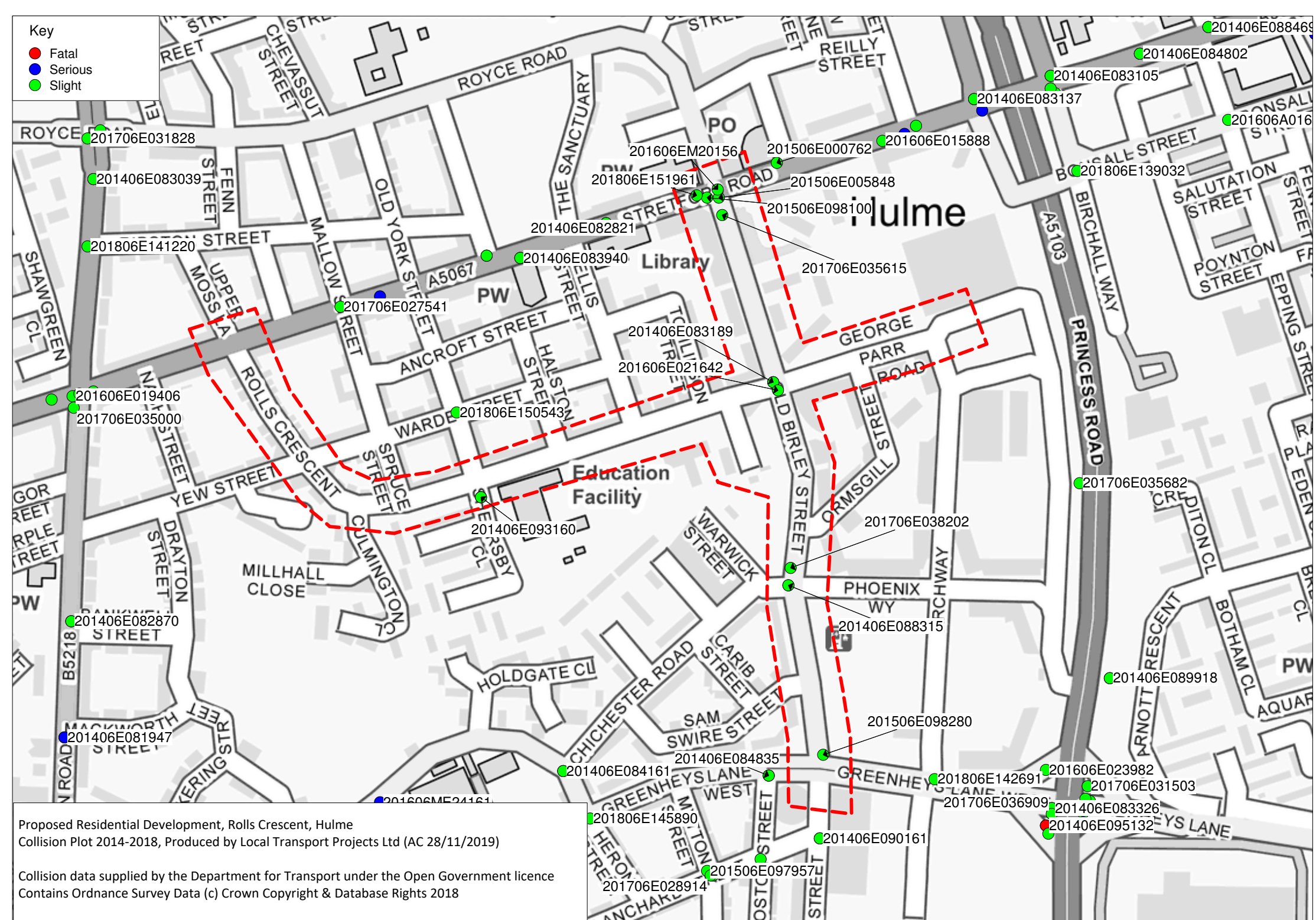
Base plan provided by Client

0	-	-	-	-
Rev.	Date	By	Chk	Description
Client				
Roost Architects				
Project				
Proposed Commercial/Residential Development, Rolls Crescent, Manchester				
Title				
Refuse Wagon Accessing Site Sheet 2 of 2				
local transport projects traffic engineering and transport planning Office 2, Armstrong House, The Flemington Centre, Armstrong Way, Beverley, East Riding of Yorkshire. HU17 0NW. 01482 679 911 info@local-transport-projects.co.uk www.local-transport-projects.co.uk Registered No. 5295328				
Drawn	SL	Date	28 11 19	
Scale	1 : 250	Checked	RP	
Status				
INTERNAL DRAFT DRAFT APPROVED PRELIMINARY CONSTRUCTION AS BUILT				
Drawing number				
Project	Job	Drawing	Sheet	Revision
LTP/3675/	P1/	001/	02	0

Appendix 3 – Personal Injury Collision Details

Key

- Fatal
- Serious
- Slight



Appendix 4 – TRICS Data

Calculation Reference: AUDIT-342901-191202-1239

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
09	NORTH	
	CB CUMBRIA	2 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	SR STIRLING	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 20 to 48 (units:)
 Range Selected by User: 15 to 50 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 26/05/15

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

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	3 days
Saturday	1 days

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

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	2

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

Selected Location Sub Categories:

Residential Zone	6
No Sub Category	2

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

Secondary Filtering selection:

Use Class:

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

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

Population within 1 mile:

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

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

Population within 5 miles:

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

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	6 days

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

Travel Plan:

No	8 days
----	--------

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

PTAL Rating:

No PTAL Present	8 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	CA-03-C-02	BLOCK OF FLATS		CAMBRIDGESHIRE
	WESTFIELD ROAD			
	PETERBOROUGH			
	NETHERTON			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	44		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
2	CB-03-C-02	BLOCK OF FLATS		CUMBRIA
	BRIDGE LANE			
	PENRITH			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	35		
	Survey date: WEDNESDAY	11/06/14		Survey Type: MANUAL
3	CB-03-C-03	FLATS & BUNGALOWS		CUMBRIA
	LOUND STREET			
	KENDAL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	33		
	Survey date: MONDAY	09/06/14		Survey Type: MANUAL
4	DS-03-C-02	FLATS		DERBYSHIRE
	BURTON ROAD			
	DERBY			
	NEW NORMANTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: SATURDAY	09/07/11		Survey Type: MANUAL
5	EB-03-C-01	BLOCKS OF FLATS		CITY OF EDINBURGH
	MYRESIDE ROAD			
	EDINBURGH			
	CRAIGLOCKHART			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	32		
	Survey date: TUESDAY	26/05/15		Survey Type: MANUAL
6	RI-03-C-01	FLATS		EAST RIDING OF YORKSHIRE
	465 PRIORY ROAD			
	HULL			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	20		
	Survey date: TUESDAY	13/05/14		Survey Type: MANUAL
7	SF-03-C-03	BLOCKS OF FLATS		SUFFOLK
	TOLLGATE LANE			
	BURY ST EDMUNDS			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	30		
	Survey date: WEDNESDAY	03/12/14		Survey Type: MANUAL
8	SR-03-C-02	FLATS		STIRLING
	ROSEBERRY TERRACE			
	STIRLING			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	48		
	Survey date: WEDNESDAY	18/06/14		Survey Type: MANUAL

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

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

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

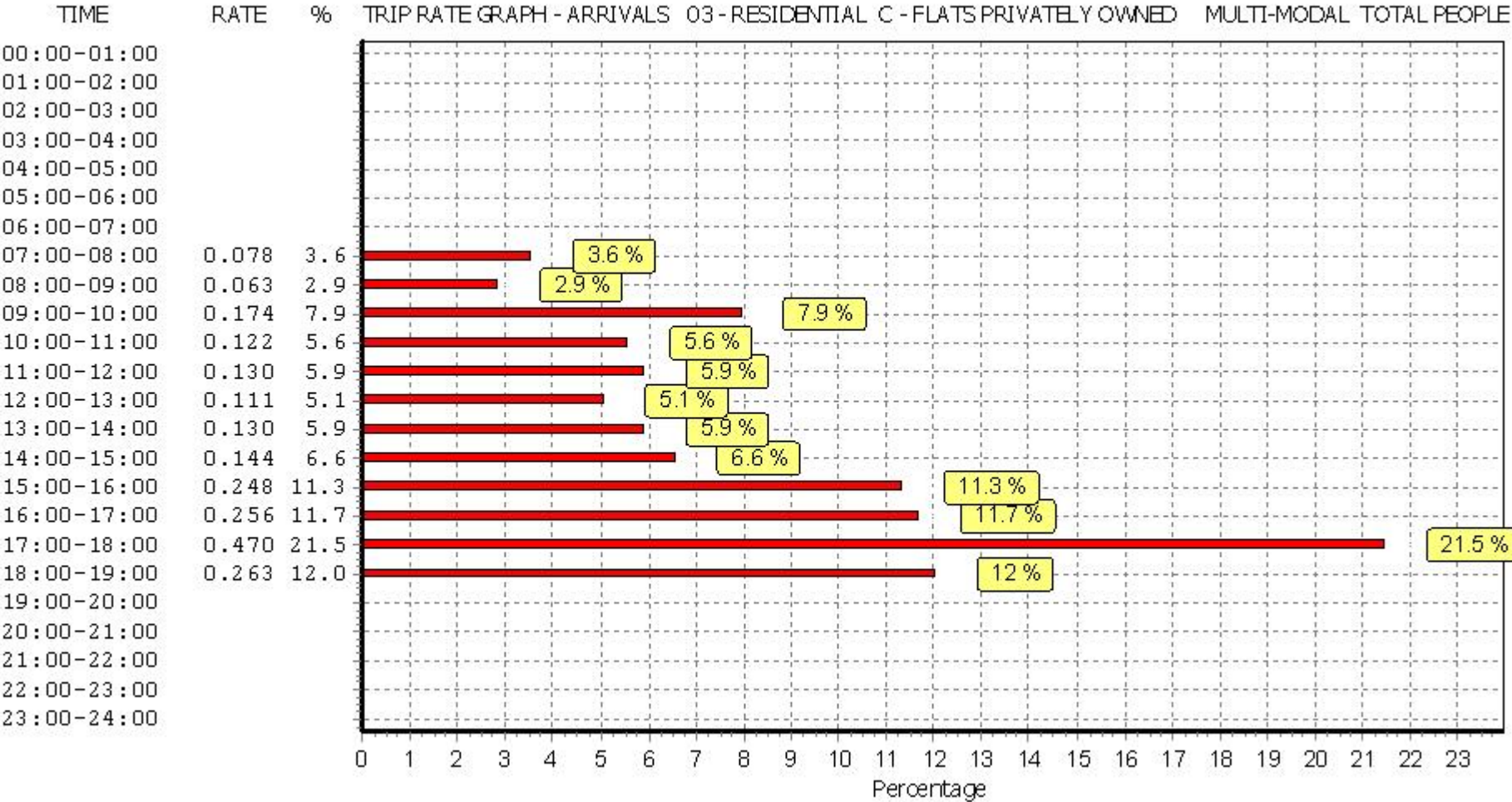
Estimated TRIP rate value per 28 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

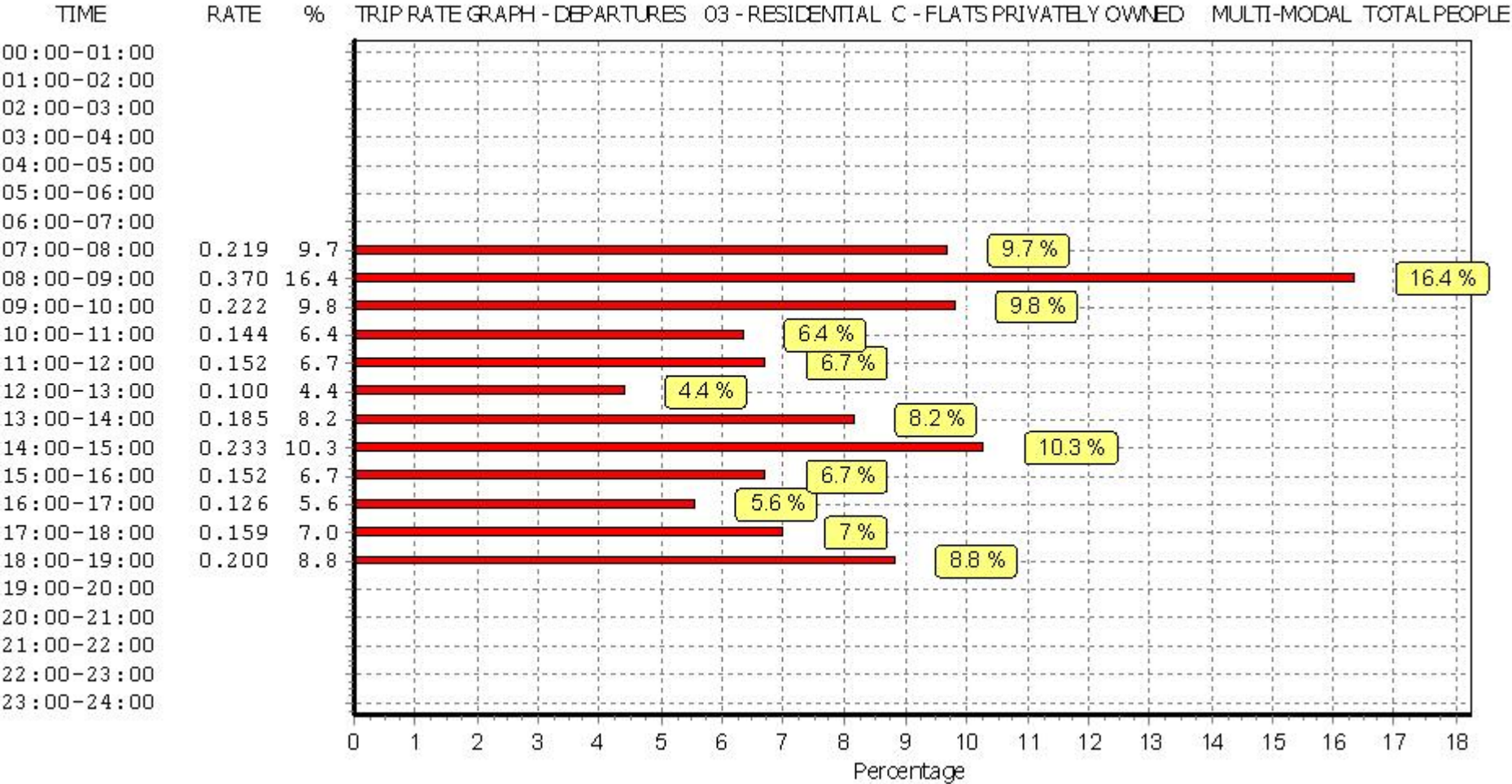
Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	8	34	0.078	2.178	8	34	0.219	6.119	8	34	0.297	8.297
08:00 - 09:00	8	34	0.063	1.763	8	34	0.370	10.370	8	34	0.433	12.133
09:00 - 10:00	8	34	0.174	4.874	8	34	0.222	6.222	8	34	0.396	11.096
10:00 - 11:00	8	34	0.122	3.422	8	34	0.144	4.044	8	34	0.266	7.466
11:00 - 12:00	8	34	0.130	3.630	8	34	0.152	4.252	8	34	0.282	7.882
12:00 - 13:00	8	34	0.111	3.111	8	34	0.100	2.800	8	34	0.211	5.911
13:00 - 14:00	8	34	0.130	3.630	8	34	0.185	5.185	8	34	0.315	8.815
14:00 - 15:00	8	34	0.144	4.044	8	34	0.233	6.533	8	34	0.377	10.577
15:00 - 16:00	8	34	0.248	6.948	8	34	0.152	4.252	8	34	0.400	11.200
16:00 - 17:00	8	34	0.256	7.156	8	34	0.126	3.526	8	34	0.382	10.682
17:00 - 18:00	8	34	0.470	13.170	8	34	0.159	4.459	8	34	0.629	17.629
18:00 - 19:00	8	34	0.263	7.363	8	34	0.200	5.600	8	34	0.463	12.963
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			2.189	61.289			2.262	63.362			4.451	124.651

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

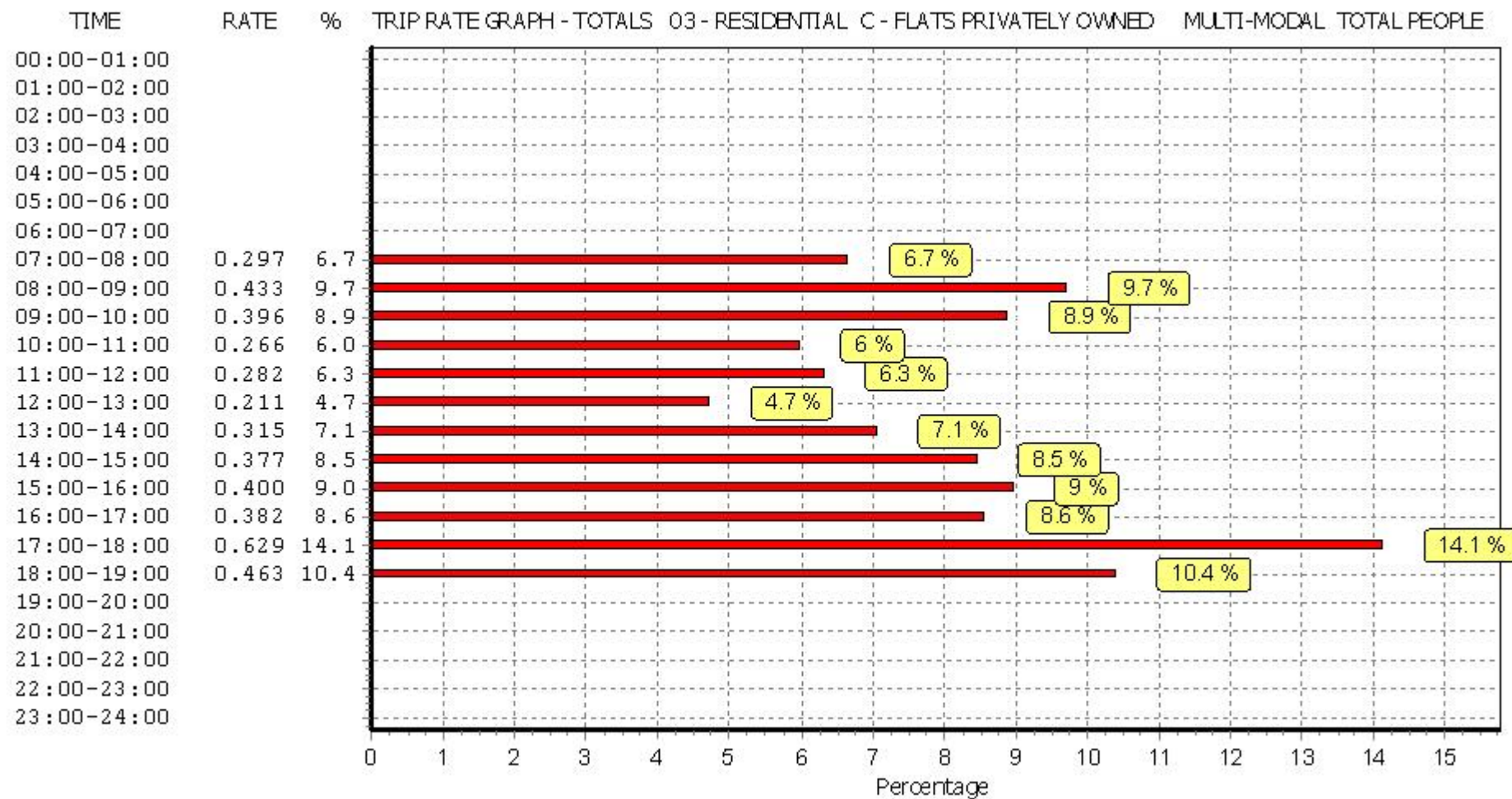
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Appendix 5 – Travel to Work Census Data

Modal Split Derivation

2011 National Census - Quick Statistics

Method of Travel to Work - Resident Population (QS701EW)

	Manchester 019D	Manchester 019	Hulme	Manchester	North West	England
Mode	LSOA	MSOA	Ward	Unitary Authority	Region	National
All residents aged 16 to 74	1,920	9,216	14,749	382,932	5,184,216	38,881,374
Works mainly at or from home	39	131	260	7,288	144,079	1,349,568
Underground, metro, light rail or tram	10	44	217	2,897	20,719	1,027,625
Train	41	151	317	5,938	89,429	1,343,684
Bus, minibus or coach	303	1,027	1,515	47,727	267,140	1,886,539
Taxi	10	24	44	1,914	26,302	131,465
Motorcycle, scooter or moped	1	6	12	855	19,988	206,550
Driving a car or van	421	1,104	2,360	96,210	2,021,199	14,345,882
Passenger in a car or van	26	103	199	10,056	197,661	1,264,553
Bicycle	59	157	387	8,708	70,557	742,675
On foot	325	1,032	2,510	30,714	351,807	2,701,453
Other	16	39	57	1,398	19,863	162,727
Not in employment	669	5,398	6,871	169,227	1,955,472	13,718,653
In employment (not homeworking)	1,212	3,687	7,618	206,417	3,084,665	23,813,153

Modal Split

	Manchester 019D	Manchester 019	Hulme	Manchester	North West	England
Mode	LSOA	MSOA	Ward	Unitary Authority	Region	National
Underground, metro, light rail or tram	0.8%	1.2%	2.8%	1.4%	0.7%	4.3%
Train	3.4%	4.1%	4.2%	2.9%	2.9%	5.6%
Bus, minibus or coach	25.0%	27.9%	19.9%	23.1%	8.7%	7.9%
Taxi	0.8%	0.7%	0.6%	0.9%	0.9%	0.6%
Motorcycle, scooter or moped	0.1%	0.2%	0.2%	0.4%	0.6%	0.9%
Driving a car or van	34.7%	29.9%	31.0%	46.6%	65.5%	60.2%
Passenger in a car or van	2.1%	2.8%	2.6%	4.9%	6.4%	5.3%
Bicycle	4.9%	4.3%	5.1%	4.2%	2.3%	3.1%
On foot	26.8%	28.0%	32.9%	14.9%	11.4%	11.3%
Other	1.3%	1.1%	0.7%	0.7%	0.6%	0.7%

Derived Modal Split (reclassified)

	Manchester 019D	Manchester 019	Hulme	Manchester	North West	England
Mode	LSOA	MSOA	Ward	Unitary Authority	Region	National
Car Driver	34.7%	29.9%	31.0%	46.6%	65.5%	60.2%
Taxi	0.8%	0.7%	0.6%	0.9%	0.9%	0.6%
Powered Two-Wheeler	0.1%	0.2%	0.2%	0.4%	0.6%	0.9%
Public Transport	29.2%	33.1%	26.9%	27.4%	12.2%	17.9%
Car Passenger	2.1%	2.8%	2.6%	4.9%	6.4%	5.3%
Pedestrian	26.8%	28.0%	32.9%	14.9%	11.4%	11.3%
Pedal-cycle	4.9%	4.3%	5.1%	4.2%	2.3%	3.1%
Other	1.3%	1.1%	0.7%	0.7%	0.6%	0.7%
Vehicle Trip Generating	35.6%	30.8%	31.8%	47.9%	67.0%	61.7%
Non-Vehicle Trip Generating	64.3%	69.3%	68.2%	52.1%	32.9%	38.3%