Proposed Mixed Use Development, 816 Stockport Road, Levenshulme

Highways Technical Note

Prepared for

Mr Raja Asad

July 2024
3780-01-HTN01

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1.0 INTRODUCTION

1.1 Overview

1.1.1 Axis have been appointed by Mr Raja Asad to provide highways and transport advice in relation to a full planning application for a mixed-use development at No. 816 Stockport Road, in Levenshulme, Manchester. The proposed development would comprise 16No. apartments and 4No. ground floor retail units.

1.1.2 This Highways Technical Note (HTN) has been prepared to inform Manchester City Council (MCC), which is the Local Planning Authority (LPA) and Local Highway Authority (LHA), of the anticipated highways and transport-related implications associated with the proposed development.

1.2 Pre-Application Discussions

1.2.1 Prior to the submission of this planning application, a request for pre-application advice was submitted to the LPA at MCC. A response was received from MCC via email, dated 9th February 2024.

1.2.2 With respect to highways, the pre-application response sets out two key areas of concern, which relate to the proposed servicing and parking arrangements. Specifically, the pre-application response sets out the requirement for both of these matters to be reviewed and fully justified as part of any future planning submission.

1.2.3 Furthermore, the pre-application sets out that the proposed development provides an opportunity to improve on-site servicing, including the presentation of bins directly on to Midway Street. It is also suggested that cycle storage could similarly be accessed and egressed via Midway Street.

1.2.4 This HTN has been prepared with due regard to the above highway-related pre-application comments received from the LPA at MCC.

1.2.5 A full copy of the pre-application response is contained in **Appendix A** to the rear of this report.

1.3 Report Structure

1.3.1 The remainder of this HTN is structured as follows:

i) **Chapter 2** describes the existing conditions on and around the site, including reference to the existing site, the local highway network, and an analysis of the safety record on the local highway network;
ii) **Chapter 3** provides a high-level review of the accessibility of the site by non-car modes of transport;
iii) **Chapter 4** describes the proposed development in detail, including the site access, car and cycle parking provision and servicing arrangements;
iv) **Chapter 5** forecasts the level of trips that the proposed development is likely to generate; and
v) **Chapter 6** summarises the report and concludes that there are no transportation or highway-related reasons why the proposals should not be granted planning permission.

2.0 EXISTING CONDITIONS

2.1 Introduction

2.1.1 This section of the HTN describes the existing conditions on and around the application site, focussing on the site location, its existing use, access arrangements and the local highway network, including its accident record.

2.2 Site Location

2.2.1 The site is located on the corner of the A6 Stockport Road and Midway Street, in Levenshulme, approximately 5km (crow-fly) to the south-east of Manchester City Centre.

2.2.2 The location of the site is shown on **Image 2.1** in the context of the local highway network.

Image 2.1 – Site Location



2.3 Existing Use and Access Arrangements

2.3.1 The existing site is currently occupied by a carpet and flooring shop, and a car repair centre. It features two shed structures along the western boundary of the site.

2.3.2 Primary means of access to the site is achieved off the A6 Stockport Road via a circa 3.5m wide kerbed access arrangement. Access is also achieved from Midway Street; however, this access is informal and does not provide a dropped kerb or any formal kerbed access arrangement.

2.4 Local Highway Network

A6 Stockport Road

2.4.1 The A6 Stockport Road abuts the site on its eastern side. It routes in a general north-west / south-east alignment between its roundabout junction with Brunswick Street / A57 Hyde Road and Higher Ardwick (the Apollo Roundabout) to the north-west, after which the A6 continues as Ardwick Green South, and its signalised junction with Crossley Road to the south-east, after which the A6 continues as Wellington Road North.

2.4.2 Immediately to the west of the site, the A6 Stockport Road forms a signalised crossroads junction with Midway Street and Matthews Lane. This junction is equipped with advanced stop lines on the A6 Stockport Road and Matthews Lane approaches, and signalised crossing points across all arms of the junction.

2.4.3 To the south of this junction, the A6 Stockport Road comprises a two-way road with a single carriageway in each direction, albeit the northbound carriageway widens to two lanes upon approach to its junction with Midway Street and Matthews Lane.

2.4.4 For a distance of approximately 60m to the north of the junction, the A6 Stockport Road comprises two lanes in each direction, after which the two lanes in each direction are split between a bus lane (operating Monday – Friday, 7am – 10am) and a normal traffic lane.

2.4.5 Footways are in place along both sides of the carriageway, and it is subject to a 30mph speed limit.

Midway Street

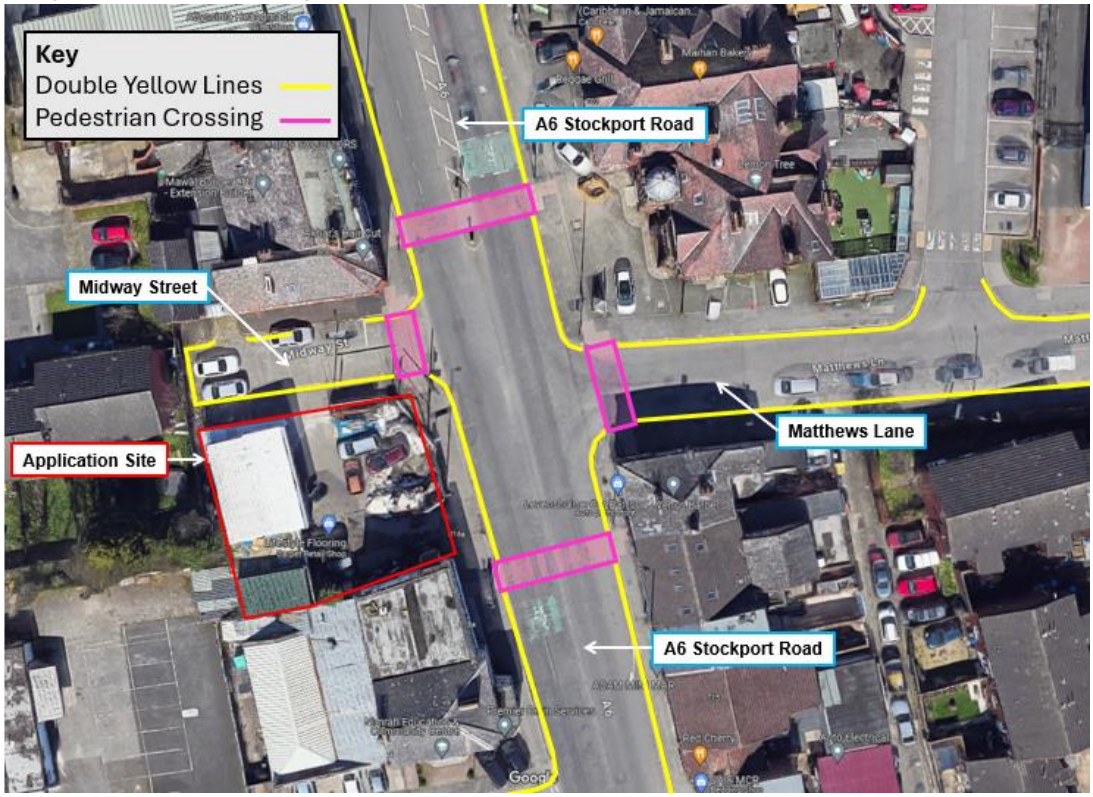
2.4.6 Midway Street is a cul-de-sac which abuts the site on its northern side and extends for a distance of approximately 25m from the A6 Stockport Road. It is also subject to a 30mph speed limit and has footways along both sides of the carriageway.

2.4.7 At the western end of Midway Street there is a public footpath which routes along the western side of the site and ultimately connects to Park Grove to the south-west of the site.

2.5 Local Traffic Regulation Order (TRO) Regime

2.5.1 **Image 2.2** illustrates the local TRO regime that is in place within the vicinity of the site.

Image 2.2 – Local TRO Regime



2.5.2 Review of **Image 2.2** demonstrates that the majority of the local highway network within the immediate vicinity of the site, including along Midway Street, Stockport Road and Matthews Lane, is subject to double yellow line (No Waiting) restrictions.

2.6 Highway Safety

2.6.1 The online CrashMap resource (www.crashmap.co.uk) has been used to obtain personal injury accident (PIA) data on the highway network local to the application site for the most recently available complete 3-year period (2020-2022 inclusive). This is shown on **Image 2.3**.

Image 2.3 – CrashMap Extract (2020-2022 Inclusive)



2.6.2 **Image 2.3** indicates that the following accidents have been recorded within the general vicinity of the site between 2020 and 2022 (inclusive):

i) 5 'slight' severity accidents at the A6 Stockport Road / Matthews Lane / Midway Street signalised junction;
ii) 1 'slight' severity accident along the A6 Stockport Road to the south of the site, at its junction with Park Grove; and
iii) 1 'slight' severity accident along the A6 Stockport Road, approximately 70m to the north of the site; and
iv) 1 'slight' severity accident along Matthews Lane, circa 50m to the east of the A6 Stockport Road.

2.6.3 A total of 8 accidents have been recorded within the general vicinity of the site between 2020 and 2022 (inclusive), all of which were classified as being 'slight' in severity. This equates to less than 3 accidents per year, on average.

2.6.4 This is not considered to present a material concern in the context of the proposed development, particularly in view of the fact that the A6 was estimated to have carried in the region of 30,000 two-way traffic movements per day in 2023 (source, Department for Transport Road Traffic Statistics), and that similar junctions along this corridor have experienced a similar level of accidents.

3.0 ACCESSIBILITY OF THE SITE BY SUSTAINABLE MODES OF TRAVEL

3.1 Introduction

3.1.1 A key element of national and local planning policy is to ensure that new developments are located in areas where alternative modes of travel to the private car are available. It is important to ensure that developments are not isolated but are located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

3.1.2 Paragraph 109 of the National Planning Policy Framework (NPPF) states:

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

3.1.3 Similarly, Policy JP-C8 of the *'Places for Everyone Joint Development Plan'* document (2022-2039) states:

"We will require new development to be located and designed to enable and encourage walking, cycling and public transport use, to reduce the negative effects of car dependency, and help deliver high quality, attractive, liveable and sustainable environments."

3.1.4 Accordingly, and to demonstrate the site's compliance with the above, this section of the report examines the accessibility of the site by non-car modes of transport through consideration of the following:

i) Accessibility on foot;
ii) Accessibility on cycle; and
iii) Accessibility by public transport (bus and rail).

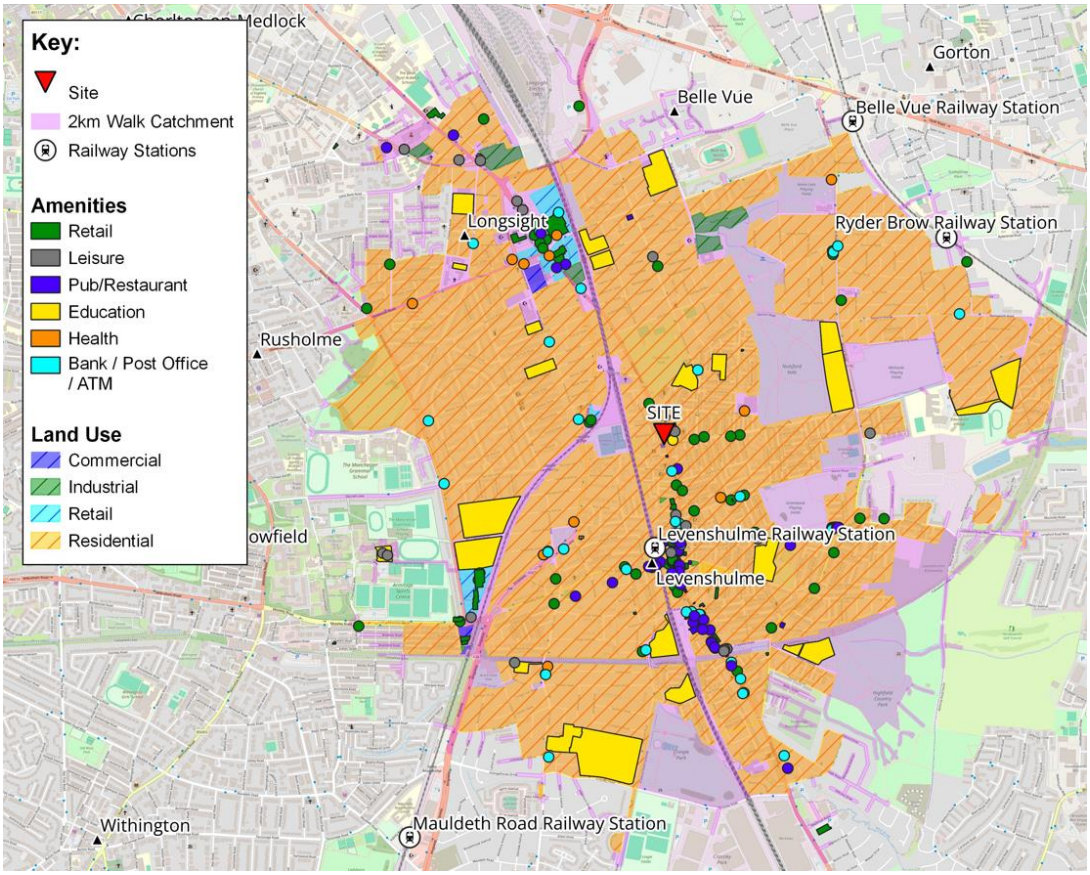
3.2 Accessibility on Foot

3.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the

surrounding area, and other local facilities. It is generally accepted that walking has the greatest potential to reduce short car trips, particularly those under 2km.

3.2.2 To assist in summarising the accessibility of the site on foot, an indicative pedestrian catchment plan has been produced and is illustrated on **Image 3.1**.

Image 3.1 – 2km Walking Catchment



3.2.3 The site is very well located to encourage trips to be made to and from the site on foot. **Image 3.1** illustrates that the 2km catchment incorporates the whole of Levenshulme, and all of the amenities contained within it, relating to education, health, employment and leisure. The 2km catchment also incorporates part of the surrounding areas of Longsight and Belle Vue.

3.2.4 **Table 3.1** sets out some of the key amenities that can be accessed within a 2km walk distance of the application site.

Table 3.1 – Key Amenities within Walking Distance of the Site

Amenity	Approximate Walk Distance
Crowcroft Park Primary School	450m
St Richard's Primary School	500m
Levenshulme High School	1.6km
Levenshulme Health Centre	500m
Parkside Medical Centre	700m
Arcadia Library and Leisure Centre	350m
Asda Levenshulme Supermarket	60m
Rushford Park Community Centre	550m
North Levenshulme Post Office	160m
Levenshulme Railway Station	700m

3.2.5 Moreover, the local highway network provides a safe and realistic opportunity for prospective residents, employees and visitors to reach the areas contained within the 2km walking catchment via the existing high quality pedestrian infrastructure in the form of footways, street lighting, and pedestrian crossing points equipped with dropped kerbs and tactile paving.

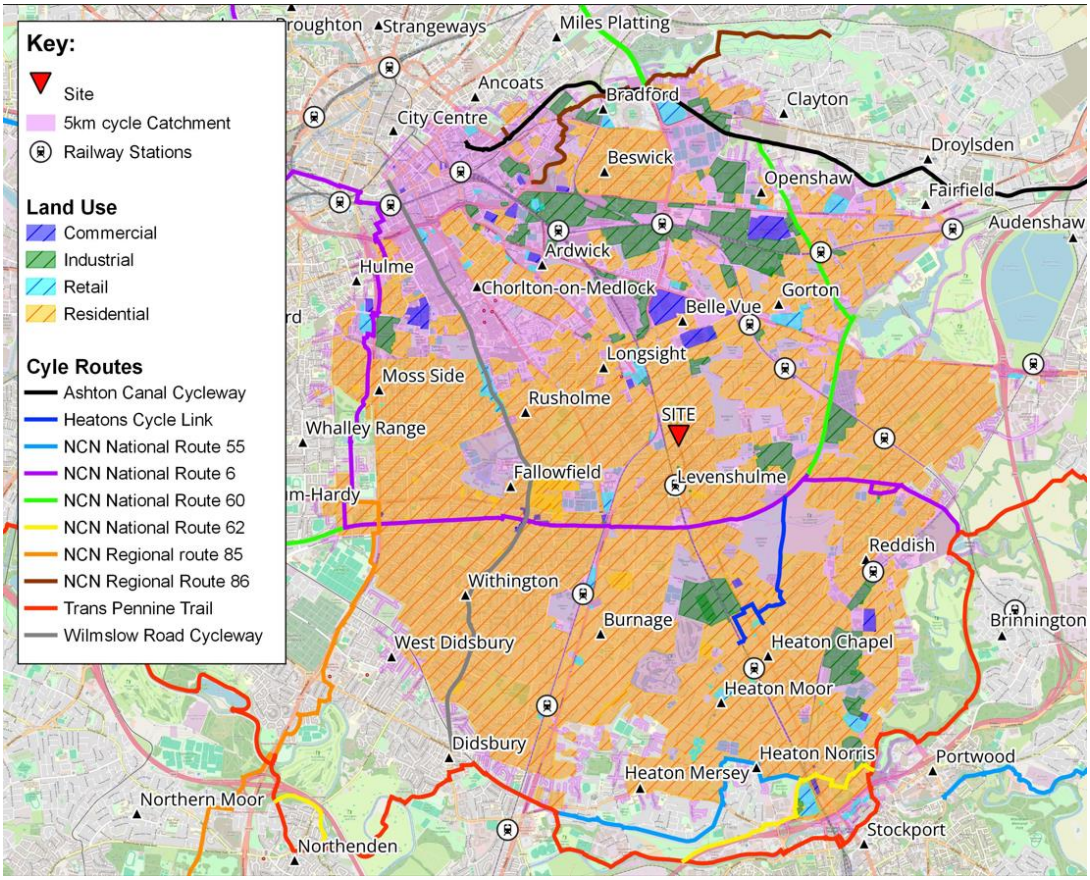
3.2.6 With regards to the above, the site is therefore considered to be highly accessible on foot.

3.3 Accessibility by Cycle

3.3.1 It is generally accepted that cycling provides a realistic and healthy alternative to the private car for journeys up to 5km as a whole, or as part of a longer journey by public transport.

3.3.2 In order to determine the accessibility of the site by cycle, **Image 3.2** shows a 5km cycle catchment from the centre of the site.

Image 3.2 – 5km Cycle Catchment



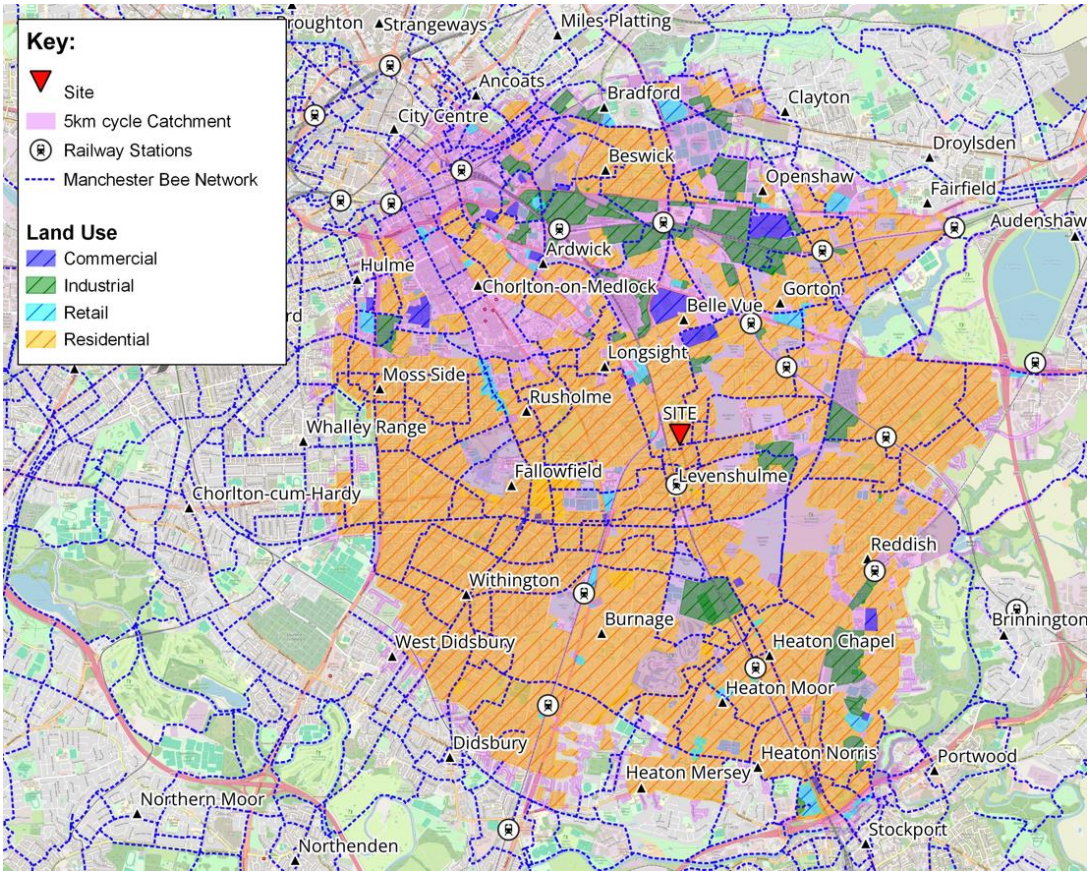
3.3.3 **Image 3.2** shows that the 5km catchment incorporates part of Manchester City Centre, alongside the surrounding areas of Ardwick, Beswick, Gorton, Fallowfield, and Heaton Moor, amongst others.

3.3.4 It should be noted that the local highway network surrounding the application site is well-lit by street lighting and the topography of the area is generally flat, thereby providing conditions which are conducive for cycling.

3.3.5 In addition, **Image 3.2** shows some of the cycle routes which can be accessed within the 5km cycle catchment, including National Cycle Network (NCN) Routes 6 and 60, Wilmslow Road Cycleway, and Heatons Cycle Link, amongst others.

3.3.6 Transport for Greater Manchester (TfGM) provides an interconnected network of cycle infrastructure across Greater Manchester known as the 'Bee Network'. **Image 3.3** illustrates (in blue) the extent of the dedicated 'Bee Network' cycleway connections around the site.

Image 3.3 – Manchester Bee Network



3.3.7 **Image 3.3** shows that there are a wide range of dedicated cycle facilities around the site that provide links across Greater Manchester.

3.3.8 The 5km catchment also includes 14 railway stations within a 5km cycle distance of the site, therefore providing the potential opportunity for multi-modal journeys by cycle and rail.

3.3.9 It should also be noted that the TfGM website (https://beeactive.tfgm.com/cycling/) also provides a range of online resources to encourage people to take up cycling, alongside tools to help users plan their journeys by cycle. This includes information relating to the benefits of cycling, cycling courses, locations of Cycling Hubs, and the Bee Network bike hire scheme, amongst other things.

3.3.10 With regards to the above, the site is therefore considered to be highly accessible by cycle.

3.4 Accessibility by Public Transport

By Bus

3.4.1 Guidance from the CIHT document, *"Guidelines for Planning for Public Transport in Development"*, recommends that the walk distance for a new development should ideally be 300m to a bus stop, or a maximum of 400m.

3.4.2 The nearest bus stops are located along the A6 London Road, to the north of the site. The southbound bus stop can be accessed within a circa 100m walk distance of the site and the northbound bus stop can be accessed within a circa 150m walk distance. The nearest bus stops to the site are therefore located well within CIHT's lower recommended walk distance thresholds.

3.4.3 **Table 3.2** sets out the public bus services that operate from the nearest bus stops to the application site, and their typical frequencies.

Table 3.2 – Local Bus Services and Frequencies

Service No.	Route Description	Typical One-way Frequency		
		Weekdays	Saturdays	Sundays / Bank Holidays
150	Abbey Hey – Stretford – Trafford Park – The Trafford Centre	Every 30 minutes	Every 30 minutes	Every 1 hour
191	Hazel Grove – Heaviley – Stockport – Manchester City Centre	Every 20 minutes	No Service	No Service
192	Hazel Grove – Heaviley – Stockport – Manchester City Centre	Every 3-5 minutes	Every 3-5 minutes	Every 3-5 minutes
197	Stockport – Heaton Moor – Burnage – Manchester City Centre	Every 20-30 minutes	Every 30 minutes	Every 1 hour

3.4.4 **Table 3.2** demonstrates that the bus stops nearest to the site are serviced by 4 public bus services which provide frequent connections on weekdays, Saturdays and Sundays to destinations across Greater Manchester, including Manchester City Centre, Stockport, Stretford, and Trafford Park, amongst others.

3.4.5 With regards to the above, the site is therefore considered to be highly accessible by bus.

By Rail

3.4.6 Levenshulme Railway Station is located within an approximate 700m walk / cycle distance to the south of the site.

3.4.7 Levenshulme Railway Station is operated by Northern and typically provides the following services:

i) 3 trains per hour to Manchester Piccadilly;

ii) 2 trains per hour to Buxton;
iii) 1 train per hour to Crewe; and
iv) 2 trains per hour to Hazel Grove.

3.4.8 The site is therefore considered to be highly accessible by rail.

3.5 Accessibility Summary

3.5.1 In summary, the site is well located to facilitate journeys to be made to / from the site by sustainable travel modes. The site is also well located in the context of surrounding land uses and amenities which can be accessed within reasonable walking and cycling distance. The surrounding area is well equipped with pedestrian infrastructure and provides conditions which are conducive for cyclists.

3.5.2 The site is also accessible by public transport, being located within a circa 150m-walk distance to two bus stops and a 700m walk / cycle distance to Levenshulme Railway Station, all of which provide frequent services to a number of local and national destinations.

3.5.3 Moreover, the Greater Manchester Accessibility Levels (GMAL) provide a detailed and accurate measure of the accessibility of a point to public transport infrastructure, and ranks accessibility from 1 (low) to 8 (high). GMAL identifies the site to be in level 7, and therefore confirms the highly sustainable credentials of the site.

3.5.4 Accordingly, it is evident that the site is accessible by sustainable transport modes and is therefore compliant with national (NPPF) and local policies.

4.0 PROPOSED DEVELOPMENT

4.1 Overview

4.1.1 This planning application seeks planning permission for a mixed-use development to feature 16 apartments (including 8No. 1-bedroom apartments and 8No. 2-bedroom apartments), and 4No. retail units with a total gross floor area (GFA) of 120m².

4.1.2 The proposed site plan is contained in **Appendix B** to the rear of this report.

4.2 Proposed Site Access Arrangements

4.2.1 As set out below in **Section 4.3**, no off-street parking is included as part of the proposed development, and so there will be no vehicular access into the site.

4.2.2 The existing access located to the east of the site will be reinstated to provide a full height footway. This is considered to represent an overall benefit to highway safety, as it removes the potential for vehicles to emerge from the site into the controlled area if the signalised junction, and vice-versa.

4.2.3 Pedestrian access to the proposed apartments will be achieved directly from Midway Street to the north of the site, and access to the proposed retail units will be achieved directly from the A6 Stockport Road.

4.3 Proposed Car Parking Arrangements

4.3.1 Appendix B of the MCC Core Strategy (2012-2027) outlines the appropriate maximum parking standards for new developments. There are two sets of parking standards for District Centres and areas not within the City Centre of District Centre.

4.3.2 On the basis that the site is located within Levenshulme District Centre, the District Centre parking standards therefore apply. For retail developments, these standards are as follows:

i) Food retail – 1 car parking space per 16m²; and
ii) Non-food retail – 1 car parking space per 22m².

4.3.3 The proposed development comprises 4 retail units with a total GFA of 120m², however it is not clear at this stage whether these units will be occupied by food or

non-food retail. Nonetheless, when the above standards are applied to the retail use of the proposed development, this would equate to a maximum parking requirement of between 5-8 spaces.

4.3.4 Appendix B of the MCC Core Strategy does not however provide parking standards for C3 residential land uses.

4.3.5 Nevertheless, the document does state that:

"Standards for car parking are maximums and may be subject to further reduction when consideration is given to the accessibility of the particular site".

4.3.6 This accords with paragraph 111 of the NPPF, which states:

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

a) the accessibility of the development;

b) the type, mix and use of development;

c) the availability of and opportunities for public transport;

d) local car ownership levels; and

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

4.3.7 With regards to the above, parking provision for new development should be considered on a case-by-case basis in relation to the nature and location of the development.

4.3.8 As mentioned earlier, the proposed development does not include any off-street car parking, and so is therefore effectively 'car free'. The following subsections of this report therefore seek to demonstrate that this should be acceptable and should not present a cause for concern with regards to the safety or operation of the local highway network.

Retail Units

4.3.9 As outlined in **Chapter 3** of this report, the site is situated within a highly accessible location with excellent opportunities for the use of sustainable transport, including

walking, cycling and public transport. As such, this provides a realistic opportunity for staff and customers to utilise these sustainable alternatives.

4.3.10 Moreover, it is considered that these units would serve both prospective residents of the proposed development and existing residents surrounding the site, and so will primarily be 'walk to / cycle to' units. The car-free nature of these units also accords with the nature of existing retail units within Levenshulme District Centre, which also have no dedicated off-street parking provision.

4.3.11 Without prejudice to the above, there are a number of short-stay on-street parking bays along the A6 Stockport Road, to the south of the site, which provide the opportunity for customers to park for a period of up to 2 hours (no return within 1 hour, Monday – Saturday 7am – 7pm). There are also a number of other car parking areas where short-stay shoppers can park for a multi-purpose linked trip within the local district, such as at the Asda store just 60m away from the site, or the Arcadia Library and Leisure Centre just 340m away from the site.

Apartments

Accessibility of the Site by Sustainable Travel Modes

4.3.12 As set out above and in **Chapter 3** of this report, the site is very sustainably located, being located within walking and cycling distance to a range of amenities and public transport services.

4.3.13 In these circumstances, the requirement for car ownership is considerably reduced.

4.3.14 When completed, the development will be marketed as car-free, with no dedicated parking provided, to prospective occupiers.

4.3.15 Nonetheless it is recognised that the residential element will inevitably, from time to time, attract some parking demand on the local network (such as from occasional visitors to the occupiers etc).

Availability of Local On-Street Parking

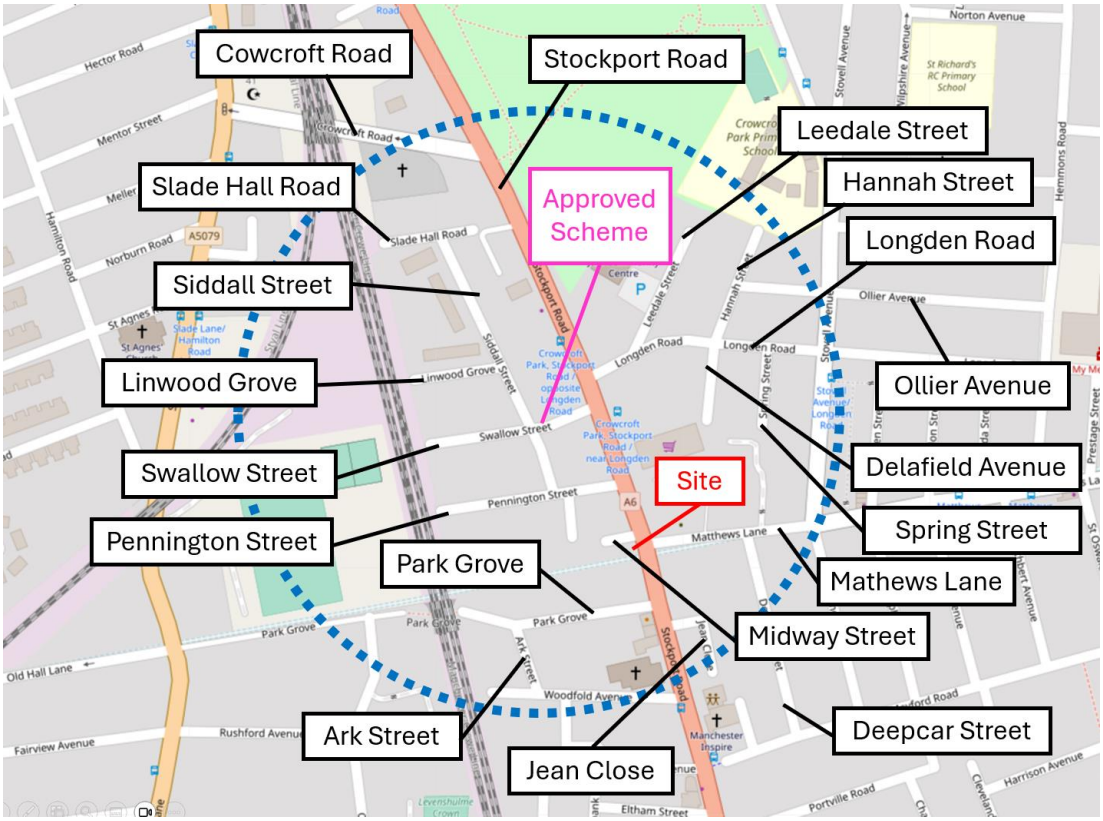
4.3.16 Axis were recently involved in the approved planning application for the residential conversion of no.2 Swallow Street, Levenshulme to 14 no. residential apartments. The Swallow St scheme is situated just 120m to the north of the application site, and was approved under reference 134738/FO/2022 in November 2022.

4.3.17 That approved scheme also featured a 'car' free' redevelopment. As part of the HTN work produced for that approved scheme, Axis commissioned parking beat surveys to be undertaken over a duration of 2no. days on Tuesday 25th January 2022 from 3:00am – 4:00am and Wednesday 26th January 2022 from 4:00am – 5:15am, broadly following the so-called 'Lambeth' parking beat survey methodology. This methodology determines parking capacity / availability at night during the worst-case period for parking demand in residential areas.

4.3.18 In summary, for residential developments the highly robust Lambeth methodology requires that 2no. separate parking beat surveys are carried out within a 200m radius (or 2-minute walk) of a site, in the early hours between 12:30am – 5:30am when most residents are at home, and on a Monday to Thursday. The Lambeth methodology has been adopted as the de-facto standard across numerous local highway authorities.

4.3.19 The study area that was adopted for the parking beat surveys is illustrated on **Image 4.1** below. Note that the application site that is the subject of this application is located well within the study area of the parking beat that was undertaken in relation to the application at Swallow St.

Image 4.1 – On-Street Parking Survey – Study Area



4.3.20 In summary, the results of that Lambeth survey demonstrated that there was spare capacity for between 148 and 149no. cars to park on the local road network overnight.

4.3.21 The proposed redevelopment will be marketed as a car free development and so it is not expected that any material parking demand will be generated on the local network, except perhaps for occasional visitors to the residents.

4.3.22 Nonetheless, the Lambeth style parking beat surveys conducted recently as part of the transport planning work for application ref. 134738/FO/2022 demonstrate that any small parking demand can safety and satisfactorily be accommodated on-street, within only a very short walk distance of the application site. There are ample spaces available in close vicinity to the site each night. On this basis it is considered that there is sufficient on-street parking capacity to cater for the minimal peak parking demand of the redevelopment.

Travel Plan Measures

4.3.23 Without prejudice to the above, it is proposed that a series of initiatives can be implemented as part of the proposed development in order to ensure that car ownership amongst prospective residents is removed, and, in turn, encourage the uptake of more sustainable modes of travel. These measures and initiatives are summarised as follows:

i) All prospective residents considering moving into the proposed apartments would be made aware that there is no on-site car parking available. This would be a self-regulating initiative and will, by definition, mean that the apartments would be very unlikely to be attractive for those people for whom car parking is a necessity.
ii) As set out in **Section 4.4**, the proposed development will provide cycle parking for 16 cycles to park. This provision would therefore serve to encourage cycling as a genuine and sustainable alternative mode of travel to the private car.
iii) Travel information packs would be prepared and distributed to all new residents upon first occupation and would include information such as:
    a. Links to further information on the use of sustainable travel, such as the promotion of travel campaigns, events and literature. Example information includes details on walking initiatives e.g.: “walk your way to health” (www.whi.org.uk), cycling and national cycle week

(www.sustrans.org.uk, www.bikeweek.org.uk) and sustainable transport information provided by TfGM (https://tfgm.com/waystotravel).

b. Walking and cycling maps showing local walking and cycling routes in relation to local facilities and amenities, such as health centres, schools, sports centres, pubs and cinemas;
c. Information on cycle providers and repair shops located within the local area;
d. Site specific public transport information explaining what basis can be taken to specific key destinations and providing information relating to any discounted travel season tickets; and
e. Encourage residents to sign up to the 'WalkBUDi' and 'BikeBUDi' schemes which offer a journey matching service for those who would like a walking / cycling partner to help build confidence / find new routes etc.

4.3.24 It is suggested that these measures could be set out more formally within a Travel Plan which could be secured by means of a suitably worded planning condition attached to the grant of any future planning permission. The development, submission, implementation and monitoring of this document would therefore be submitted to and agreed with MCC at the post-decision stage of the planning application.

4.4 Cycle Parking

4.4.1 The proposed development includes a safe and secure internal bike store situated to the west of the site, which provides enough space for 16 cycles (i.e. 1 cycle parking space per apartment).

4.5 Servicing Arrangements

4.5.1 Details regarding the proposed servicing arrangements are set out in the accompanying Waste Management Strategy (WMS), also prepared by Axis, which is an accompanying document to this planning application.

4.5.2 Specifically, the WMS considers the proposed strategy for the storage, handling and collection of waste from the site, once operational. It sets out the proposal for refuse collection vehicles (RCVs) to service the site directly from Midway Street, by driving into Midway Street in a forward gear and reversing out of Midway Street within the controlled area of its junction with the A6 Stockport Road and Matthews Lane.

4.5.3 It is understood that Midway Street operates its own green phase within the signal control, thereby allowing a RCV to reverse out of Midway Street on a green light, within the controlled area of the junction, and thus without conflicting with other streams of traffic (as they will be stopped at a red signal, as would pedestrians). It should however be noted that, in the event that Midway Street and Matthews Lane do, at any time, operate under the same stage, then the Applicant is committed to changing the signal sequence of the junction to ensure that Midway Street does run independently of all other phases, and in a standalone demand-dependant stage in the signal cycle sequence.

4.5.4 The proposed service vehicle access arrangements are considered to represent an overall betterment to the safety and operation of the local highway network when having regard to servicing arrangements associated with the existing use of the site, whereby carpet delivery lorries and RCVs regularly perform reversing manoeuvres from the A6 Stockport Road into Midway Street when other streams of traffic are passing through the junction on a green light.

5.0 TRIP GENERATION

5.1 Introduction

5.1.1 This Chapter of the report sets out the average weekday peak hour trip generation forecasts associated with the proposed development.

5.1.2 Due to the fact that the proposed development will be car free, it is not anticipated that the proposed development would generate material levels of vehicular traffic movement, other than those associated with refuse collection vehicles (circa once per week) and sporadic delivery and visitor vehicles.

5.1.3 A normal comparison with TRICS based trip rates will not therefore yield representative traffic forecasts, because the TRICS-based comparator sites have a higher level of available parking provision.

5.1.4 The trip generation forecasts have therefore been based on an alternative methodology whereby the total vehicle trip rates derived from TRICS have been redistributed proportionally to the other non-vehicular modes of transport. In turn, this will present movement forecasts that are much more reflective of the likely multi-modal trips that would actually be generated by this particular development.

5.1.5 This alternative methodology is set out in **Section 5.2** for the proposed residential apartments, and **Section 5.3** for the proposed retail use. **Section 5.4** summarises the total forecast multi-modal trip generation associated with the proposed development and draws conclusions on the likely impacts.

5.2 Multi-Modal Trip Generation – Proposed Apartments

5.2.1 Average weekday multi-modal trip rates have been derived for the TRICS land use category “Residential – Flats Privately Owned”. The selection criteria adopted is as follows:

i) Mainland Britain sites only (excluding Greater London);
ii) Selection by number of dwellings;
iii) Weekday surveys only; and
iv) ‘Edge of Town Centre’ sites only.

5.2.2 A copy of the TRICS outputs is contained in **Appendix C**.

5.2.3 The full methodology to forecast the trip generating potential of the site is also contained in **Appendix C** and the resultant average weekday multi-modal trip generation forecasts are summarised in **Table 5.1**.

Table 5.1 – Multi-Modal Trip Generation Forecasts – Proposed Apartments

		Vehicles	Cyclists	Pedestrians	Public Transport
AM Peak Hour (08:00-09:00)	In	0	0	3	0
	Out	0	0	6	0
PM Peak Hour (17:00-18:00)	In	0	0	3	1
	Out	0	1	2	0
Daily	In	0	1	34	7
	Out	0	2	39	5

5.2.4 Review of **Table 5.1** demonstrates that the proposed development is forecast to generate 73 two-way pedestrian trips, 12 two-way public transport trips and 2 two-way cyclist trips per day, on average.

5.3 Multi-Modal Trip Generation – Proposed Retail Units

5.3.1 Average weekday multi-modal trip rates have been derived for the TRICS land use category "Retail – Shopping Centre – Local Shops". The selection criteria adopted is as follows:

i) Mainland Britain sites only (excluding Greater London);
ii) Selection by gross floor area;
iii) Weekday surveys only; and
iv) Sites in suburban areas only.

5.3.2 A copy of the full TRICS outputs is contained in **Appendix D**.

5.3.3 The full methodology to forecast the trip generating potential of the site is also contained in **Appendix D** and the resultant average weekday multi-modal trip generation forecasts are summarised in **Table 5.2**.

Table 5.2 – Multi-Modal Trip Generation Forecasts – Proposed Retail Units

		Vehicles	Cyclists	Pedestrians	Public Transport
AM Peak Hour (08:00-09:00)	In	0	0	11	0
	Out	0	0	10	0
PM Peak Hour (17:00-18:00)	In	0	0	10	0
	Out	0	0	10	0
Daily	In	0	5	150	3
	Out	0	5	150	3

5.3.4 Review of **Table 5.2** demonstrates that the retail element of the proposed development is forecast to generate 300 two-way pedestrian trips, 6 two-way public transport trips and 10 two-way cyclist trips per day, on average.

5.4 Total Trip Generation Forecasts

5.4.1 Based on the information presented above, **Table 5.3** summarises the total forecast multi-modal trip generating potential of the proposed development.

Table 5.3 – Total Multi-Modal Trip Generation

		Vehicles	Cyclists	Pedestrians	Public Transport
AM Peak Hour (08:00-09:00)	In	0	0	14	0
	Out	0	0	16	0
PM Peak Hour (17:00-18:00)	In	0	0	13	1
	Out	0	1	12	0
Daily	In	0	6	184	10
	Out	0	7	189	8

5.4.2 **Table 5.3** demonstrates that most trips forecast to be generated by the proposed development will be pedestrian trips, with 30 two-way trips forecast in the AM peak hour, 25 two-way trips forecast in the PM peak hour, and 373 two-way trips over the course of an average weekday. This is consistent with what might be expected to four similarly-sized retail units within a local district shopping area like Levenshulme.

5.4.3 The proposed development is also forecast to generate a total of 18 two-way public transport trips and 13 two-way cyclist trips per day, on average.

5.4.4 It should also be noted here that no account has been made for the removal of the vehicular and non-vehicular trips associated with the existing use of the site, thereby making the above assessment robust.

6.0 SUMMARY AND CONCLUSIONS

6.1 Summary

6.1.1 Axis have been appointed by Mr Raja Asad to provide highways and transport advice in relation to a full planning application for a mixed-use development at No. 816 Stockport Road, in Levenshulme, Manchester. The proposed development would comprise 16No. apartments and 4No. ground floor retail units.

6.1.2 The site is located on the corner of the A6 Stockport Road and Midway Street, in Levenshulme, approximately 5km (crow-fly) to the south-east of Manchester City Centre.

6.1.3 The existing site is currently occupied by a carpet and flooring shop, and a car repair centre. It features two shed structures along the western boundary of the site.

6.1.4 PIA data has been analysed using CrashMap which indicates that the pattern of accidents within the vicinity of the site is not considered to present a material concern in the context of the proposed development, particularly in view of the fact that the A6 was estimated to have carried in the region of 30,000 two-way traffic movements per day in 2023 (source, Department for Transport Road Traffic Statistics), and that similar junctions along this corridor have experienced a similar level of accidents.

6.1.5 The site is very well located to facilitate journeys to be made to / from the site by sustainable travel modes, being within walking distance of a number of amenities, within cycling distance of various settlements and having good access to bus and train services.

6.1.6 The development will be marketed as car-free, with no dedicated parking provided to prospective occupiers. Nonetheless, it is acknowledged that the proposed development will inevitably, from time to time, attract some parking demand. With respect to the retail units, there are a number of short-stay on-street parking bays along the A6 Stockport Road, alongside other parking areas where short-stay shoppers can park for a multi-purpose linked trip (i.e. the Asda store, or the Arcadia Library and Leisure Centre). This report also sets out the results of a Lambeth style parking beat survey conducted recently as part of the transport planning work for application ref. 134738/FO/2022, which demonstrates that any small parking demand can safety and satisfactorily be accommodated on-street, within only a very short walk distance of the application site.

6.1.7 This HTN also sets out a list of initiatives that could be implemented at the site in order to reduce car ownership amongst residents and encourage the use of sustainable and alternative modes of transport to the private car. It is considered that these initiatives could be formally set out within a Travel Plan which could be secured by means of a suitably worded planning condition attached to the grant of any future planning permission.

6.1.8 Included within the initiatives is the provision of 16 cycle parking spaces. This equates to one cycle parking space per apartment.

6.1.9 Details regarding the servicing of the proposed development are set out in the Waste Management Strategy, which is an accompanying document to this planning application.

6.1.10 This HTN has also considered the trip generation forecasts associated with the proposed development. However, given the car free nature of the proposed development, it is not anticipated that it would generate material levels of vehicular movement, other than those associated with servicing vehicles. Nonetheless, reference has been made to the industry standard TRICS Database in order to forecast the trips that could be generated by other, non-car modes of transport.

6.1.11 This demonstrates that the proposed development is forecast to generate a total of 30 two-way 'total person' trips in the AM peak hour, 27 two-way 'total person' trips in the PM peak hour, and 404 two-way 'total person' trips across the course of an average weekday. It should however be noted that no account has been made for the removal of the vehicular and non-vehicular trips associated with the existing use of the site.

6.2 Conclusions

6.2.1 With regards to the evidence presented within this report, the proposals are considered to pass the test set out in Paragraph 115 of the NPPF which states that developments should only be prevented or refused if the traffic impacts on the road network would be *'severe'*.

6.2.2 Therefore, it is considered that there should be no reason to withhold planning permission from a transport perspective.

Appendix A – MCC Pre-Application Response

From: [redacted]
Sent: Friday, February 9, 2024 5:32 PM
To: [redacted]
Subject: Re: 816 Stockport Road: pre-application request

Hello Julian,

Thank you for your email and supporting documents a relating to the above.

I hope that the following comments are helpful.

1. Highways issues

1.1 It is noted that TROs (double yellow lines) are located on the immediate sections of Stockport Road and Midway Street and the site is in close proximity to a light controlled junction. The existing site appears to benefit from in curtilage servicing with access form Stockport road and egress from Midway Street. The proposed building would be positioned to the back of the respective pavement (which combined with the siting of the building) would prevent the provision of on-site servicing. Notwithstanding the presence of TROs, it is not apparent that there is sufficient space within Midway Street to allow service vehicles to access and egress in forward gear. In these circumstances, it is difficult to envisage how the servicing of Class E units and general waste management would be achieved without disruption to the highway. Please review this aspect of the development.

1.2 The absence of car parking for the development should be appropriately justified, including measures to encourage the adoption of sustainable transportation modes.

2. Siting, scale and massing

2.1 Please clarify the relationship of the proposed building to the first floor window in the northern elevation of 818 Stockport Road. The proposed building position would obscure this window and thereby affect the future use of No 818.

2.2 The variance in the building line to Stockport Road is noted. Notwithstanding any amendments to the siting of the proposed building, it is considered that it would be appropriately related to Stockport Road and Midway Street.

2.3 There is some concern regarding the proximity and height of the development to the western site boundary and its potential impact on gardens to the neighbouring houses on Pennington Street. In response, it is recommended that the projecting element (fronting Midway Street) be drawn away from the western boundary. Such an amendment would also:

i. Provide an opportunity to improve on-site servicing, including the presentation of bins directly on to Midway Street. Cycle storage could be similarly accessed and egressed via Midway Street.

ii. Allow defensible space to be formed behind a defined boundary, which would reduce the potential vulnerability of the exposed elevation to vandalism or the formation of space that may be affected by crime.

2.4 The impact of additional height in relation to 818 Stockport Road would have some impact on the relationship to existing built form. However, it is acknowledged that the height of the building has been informed by the built form located to the north of the site. A potentially appropriate relationship to the streetscene would thereby be formed.

2.5 The elevations would be articulated through the arrangement of recessed window openings to the upper floors. Verticality within the upper floors would be suitably extended in to the ground floor retail units. The roofscape would also be suitably articulated through the incorporation hipped pitched and flat roof additions.

2.6 The materials palette has been appropriately related to new development to be delivered to the north of the site.

3. Layout

3.1 Level access would be formed to the respective Class E units and the residential entrance. The provision of lift access is welcomed. Appropriate circulation spaces appear to be achievable. Please confirm that the apartment would meet the space criteria specified in the Manchester Residential Quality Guidance.

4. Boundary treatment

4.1 Satisfactory details of boundary treatments should be provided in relation to the western boundary to reduce the risk of unauthorised access to the proposed amenity area via the adjacent footpath.

5. Crime Impact Statememnt

5.1 It is recommended that the proposed design is related to a crime impact statement.

6. Bio-diversity net gain

6.1 It is recommended that early consideration is given to the preparation of the required a bio-diversity net gain statement and metric.

The above advice is related to the information available to the City Council at this time. This advice may be subject to alteration as a result of consultation or if further information is brought to the attention of the City Council, which materially affects the consideration of this matter.

I hope that the above is helpful.

Regards,

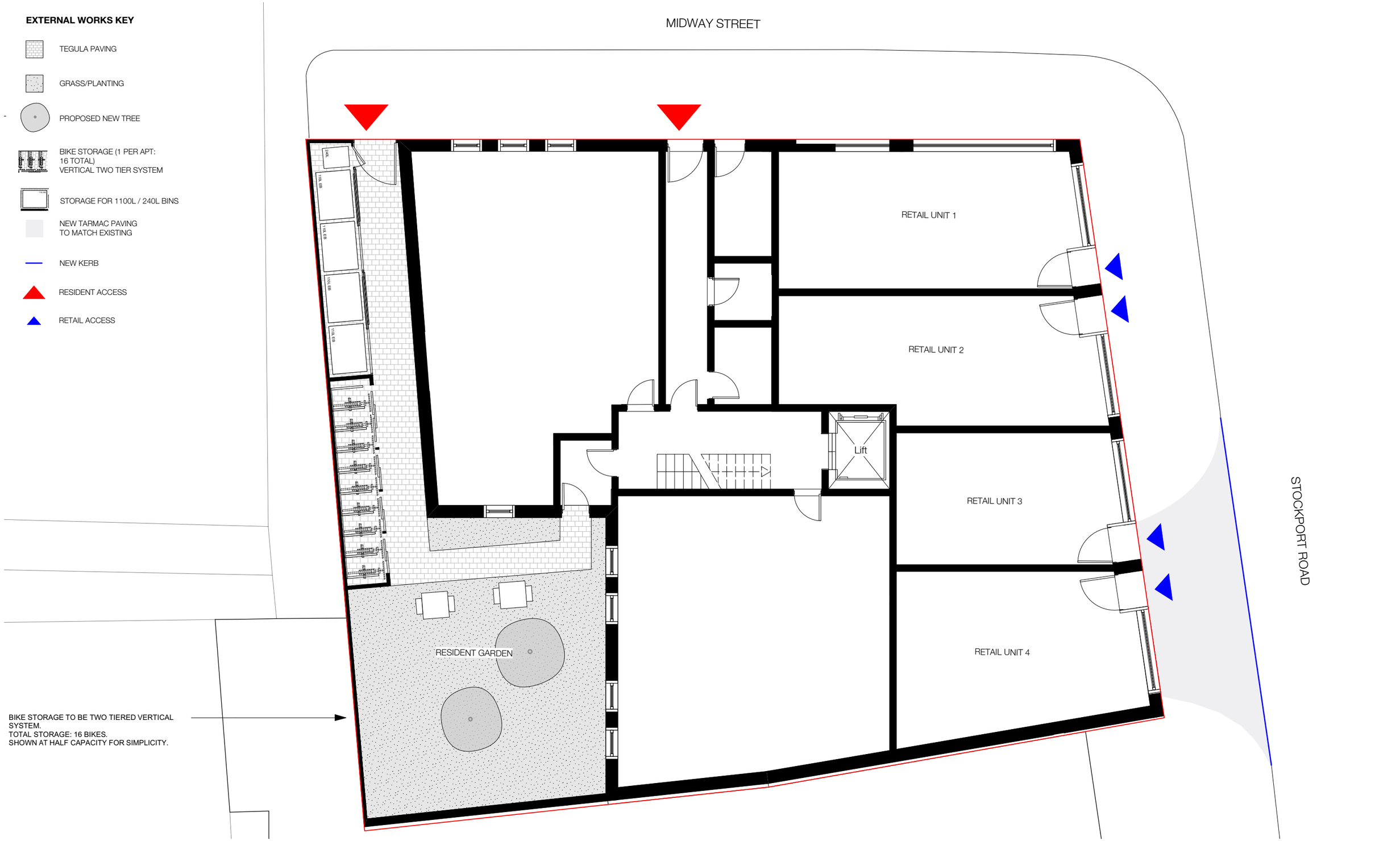
Carl

Carl Glennon
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PO Box 532,
Manchester,
M60 2LA.
Tel: [redacted]
email: [redacted]
Web: http://www.manchester.gov.uk
Mobile: [redacted]

Appendix B – Proposed Site Plan

EXTERNAL WORKS KEY

- TEGULA PAVING
- GRASS/PLANTING
- PROPOSED NEW TREE
- BIKE STORAGE (1 PER APT: 16 TOTAL) VERTICAL TWO TIER SYSTEM
- STORAGE FOR 1100L / 240L BINS
- NEW TARMAC PAVING TO MATCH EXISTING
- NEW KERB
- RESIDENT ACCESS
- RETAIL ACCESS



BIKE STORAGE TO BE TWO TIERED VERTICAL SYSTEM.
TOTAL STORAGE: 16 BIKES.
SHOWN AT HALF CAPACITY FOR SIMPLICITY.

PROPOSED SITE PLAN

1:100 @ A3

PLANNING

N

0 1 2 4 6 METRES

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REVISION	DATE	DESCRIPTION

CLIENT:

PROJECT:

ADDRESS: 816 STOCKPORT ROAD, MANCHESTER, M12 4QN

DRAWING TITLE: PROPOSED SITE PLAN

SCALE: 1:100 @ A3 | DATE: MAY 2024

DRAWING NO: **A831_P_200**

OLLIER SMURTHWAITE ARCHITECTS
40 King Street, Manchester, M2 6BA
T 0161 883 0838
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E mail@olliersmurthwaite.com

Appendix C – TRICS Outputs and Traffic Generation Forecasts (Proposed Apartments)

Calculation Reference: AUDIT-339901-240625-0614

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

03	**SOUTH WEST**		
	DC	DORSET	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	KS	KIRKLEES	1 days
10	**WALES**		
	FS	FLINTSHIRE	1 days
11	**SCOTLAND**		
	HI	HIGHLAND	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 12 to 30 (units:)
Range Selected by User: 8 to 32 (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: 01/01/05 to 16/06/23

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

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	4

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	2
Built-Up Zone	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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	1 days - Selected
Servicing vehicles Excluded	4 days - Selected

Secondary Filtering selection:

Use Class:

C3	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
20,001 to 25,000	2 days

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

Population within 5 miles:

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

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

Car ownership within 5 miles:

1.1 to 1.5	4 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	4 days

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

PTAL Rating:

No PTAL Present	4 days

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

LIST OF SITES relevant to selection parameters

1 **DC-03-C-01** **BLOCKS OF FLATS** **DORSET**
ABBOTSBURY ROAD
WEYMOUTH

Edge of Town Centre
Residential Zone
Total No of Dwellings: 27
Survey date: TUESDAY *08/07/08* *Survey Type: MANUAL*

2 **FS-03-C-01** **BLOCK OF FLATS** **FLINTSHIRE**
WREXHAM STREET
MOLD

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 30
Survey date: MONDAY *06/07/09* *Survey Type: MANUAL*

3 **HI-03-C-02** **BLOCK OF FLATS** **HIGHLAND**
KING STREET
NAIRN

Edge of Town Centre
Residential Zone
Total No of Dwellings: 16
Survey date: WEDNESDAY *19/04/23* *Survey Type: MANUAL*

4 **KS-03-C-01** **BLOCK OF FLATS** **KIRKLEES**
KINGS MILL LANE
HUDDERSFIELD
ASPLEY
Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 12
Survey date: WEDNESDAY *13/09/06* *Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
MS-03-C-04	Surveyed during Covid lockdown restrictions

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): 2.51

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.047	4	21	0.094	4	21	0.141
08:00 - 09:00	4	21	0.082	**4**	**21**	**0.200**	4	21	0.282
09:00 - 10:00	4	21	0.106	4	21	0.118	4	21	0.224
10:00 - 11:00	4	21	0.106	4	21	0.153	4	21	0.259
11:00 - 12:00	4	21	0.106	4	21	0.082	4	21	0.188
12:00 - 13:00	4	21	0.035	4	21	0.082	4	21	0.117
13:00 - 14:00	4	21	0.129	4	21	0.082	4	21	0.211
14:00 - 15:00	4	21	0.094	4	21	0.071	4	21	0.165
15:00 - 16:00	**4**	**21**	**0.153**	4	21	0.141	**4**	**21**	**0.294**
16:00 - 17:00	4	21	0.094	4	21	0.106	4	21	0.200
17:00 - 18:00	4	21	0.141	4	21	0.106	4	21	0.247
18:00 - 19:00	4	21	0.071	4	21	0.071	4	21	0.142
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.164			1.306			2.470

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

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

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Parameter summary

Trip rate parameter range selected:	12 - 30 (units:)
Survey date date range:	01/01/05 - 16/06/23
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

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

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

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	**4**	**21**	**0.012**	**4**	**21**	**0.012**	**4**	**21**	**0.024**
08:00 - 09:00	4	21	0.000	4	21	0.000	4	21	0.000
09:00 - 10:00	4	21	0.000	4	21	0.000	4	21	0.000
10:00 - 11:00	4	21	0.012	4	21	0.012	4	21	0.024
11:00 - 12:00	4	21	0.012	4	21	0.012	4	21	0.024
12:00 - 13:00	4	21	0.000	4	21	0.000	4	21	0.000
13:00 - 14:00	4	21	0.000	4	21	0.000	4	21	0.000
14:00 - 15:00	4	21	0.000	4	21	0.000	4	21	0.000
15:00 - 16:00	4	21	0.012	4	21	0.012	4	21	0.024
16:00 - 17:00	4	21	0.000	4	21	0.000	4	21	0.000
17:00 - 18:00	4	21	0.000	4	21	0.000	4	21	0.000
18:00 - 19:00	4	21	0.012	4	21	0.012	4	21	0.024
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.060			0.060			0.120

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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.000	4	21	0.000	4	21	0.000
08:00 - 09:00	4	21	0.000	4	21	0.000	4	21	0.000
09:00 - 10:00	4	21	0.000	4	21	0.000	4	21	0.000
10:00 - 11:00	**4**	**21**	**0.012**	**4**	**21**	**0.012**	**4**	**21**	**0.024**
11:00 - 12:00	4	21	0.000	4	21	0.000	4	21	0.000
12:00 - 13:00	4	21	0.000	4	21	0.000	4	21	0.000
13:00 - 14:00	4	21	0.000	4	21	0.000	4	21	0.000
14:00 - 15:00	4	21	0.000	4	21	0.000	4	21	0.000
15:00 - 16:00	4	21	0.000	4	21	0.000	4	21	0.000
16:00 - 17:00	4	21	0.000	4	21	0.000	4	21	0.000
17:00 - 18:00	4	21	0.000	4	21	0.000	4	21	0.000
18:00 - 19:00	4	21	0.000	4	21	0.000	4	21	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

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.*

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

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	**4**	**21**	**0.024**	**4**	**21**	**0.035**	**4**	**21**	**0.059**
08:00 - 09:00	4	21	0.000	4	21	0.000	4	21	0.000
09:00 - 10:00	4	21	0.000	4	21	0.000	4	21	0.000
10:00 - 11:00	4	21	0.000	4	21	0.000	4	21	0.000
11:00 - 12:00	4	21	0.000	4	21	0.000	4	21	0.000
12:00 - 13:00	4	21	0.000	4	21	0.000	4	21	0.000
13:00 - 14:00	4	21	0.000	4	21	0.012	4	21	0.012
14:00 - 15:00	4	21	0.000	4	21	0.012	4	21	0.012
15:00 - 16:00	4	21	0.012	4	21	0.000	4	21	0.012
16:00 - 17:00	4	21	0.000	4	21	0.000	4	21	0.000
17:00 - 18:00	4	21	0.012	4	21	0.012	4	21	0.024
18:00 - 19:00	4	21	0.000	4	21	0.000	4	21	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.071			0.119

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.*

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.035	4	21	0.106	4	21	0.141
08:00 - 09:00	4	21	0.106	**4**	**21**	**0.294**	4	21	0.400
09:00 - 10:00	4	21	0.118	4	21	0.129	4	21	0.247
10:00 - 11:00	4	21	0.118	4	21	0.176	4	21	0.294
11:00 - 12:00	4	21	0.129	4	21	0.129	4	21	0.258
12:00 - 13:00	4	21	0.082	4	21	0.106	4	21	0.188
13:00 - 14:00	4	21	0.176	4	21	0.129	4	21	0.305
14:00 - 15:00	4	21	0.129	4	21	0.071	4	21	0.200
15:00 - 16:00	**4**	**21**	**0.247**	4	21	0.212	**4**	**21**	**0.459**
16:00 - 17:00	4	21	0.141	4	21	0.118	4	21	0.259
17:00 - 18:00	4	21	0.165	4	21	0.106	4	21	0.271
18:00 - 19:00	4	21	0.094	4	21	0.059	4	21	0.153
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.540			1.635			3.175

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.*

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

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.047	4	21	0.118	4	21	0.165
08:00 - 09:00	4	21	0.118	**4**	**21**	**0.188**	**4**	**21**	**0.306**
09:00 - 10:00	4	21	0.082	4	21	0.082	4	21	0.164
10:00 - 11:00	**4**	**21**	**0.153**	4	21	0.129	4	21	0.282
11:00 - 12:00	4	21	0.082	4	21	0.141	4	21	0.223
12:00 - 13:00	4	21	0.106	4	21	0.141	4	21	0.247
13:00 - 14:00	4	21	0.094	4	21	0.094	4	21	0.188
14:00 - 15:00	4	21	0.071	4	21	0.071	4	21	0.142
15:00 - 16:00	4	21	0.153	4	21	0.106	4	21	0.259
16:00 - 17:00	4	21	0.129	4	21	0.094	4	21	0.223
17:00 - 18:00	4	21	0.082	4	21	0.047	4	21	0.129
18:00 - 19:00	4	21	0.082	4	21	0.106	4	21	0.188
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.199			1.317			2.516

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.*

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

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.000	4	21	0.012	4	21	0.012
08:00 - 09:00	4	21	0.000	4	21	0.012	4	21	0.012
09:00 - 10:00	4	21	0.000	**4**	**21**	**0.024**	4	21	0.024
10:00 - 11:00	4	21	0.000	4	21	0.024	4	21	0.024
11:00 - 12:00	4	21	0.012	4	21	0.024	4	21	0.036
12:00 - 13:00	4	21	0.024	4	21	0.000	4	21	0.024
13:00 - 14:00	**4**	**21**	**0.047**	4	21	0.012	**4**	**21**	**0.059**
14:00 - 15:00	4	21	0.024	4	21	0.024	4	21	0.048
15:00 - 16:00	4	21	0.024	4	21	0.000	4	21	0.024
16:00 - 17:00	4	21	0.024	4	21	0.012	4	21	0.036
17:00 - 18:00	4	21	0.024	4	21	0.000	4	21	0.024
18:00 - 19:00	4	21	0.035	4	21	0.000	4	21	0.035
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.214			0.144			0.358

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

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

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

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.000	4	21	0.000	4	21	0.000
08:00 - 09:00	4	21	0.000	4	21	0.000	4	21	0.000
09:00 - 10:00	4	21	0.000	4	21	0.000	4	21	0.000
10:00 - 11:00	4	21	0.000	4	21	0.000	4	21	0.000
11:00 - 12:00	4	21	0.000	**4**	**21**	**0.012**	**4**	**21**	**0.012**
12:00 - 13:00	**4**	**21**	**0.012**	4	21	0.000	4	21	0.012
13:00 - 14:00	4	21	0.000	4	21	0.000	4	21	0.000
14:00 - 15:00	4	21	0.000	4	21	0.000	4	21	0.000
15:00 - 16:00	4	21	0.000	4	21	0.012	4	21	0.012
16:00 - 17:00	4	21	0.012	4	21	0.000	4	21	0.012
17:00 - 18:00	4	21	0.000	4	21	0.000	4	21	0.000
18:00 - 19:00	4	21	0.000	4	21	0.000	4	21	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.024			0.048

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.*

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.000	4	21	0.012	4	21	0.012
08:00 - 09:00	4	21	0.000	4	21	0.012	4	21	0.012
09:00 - 10:00	4	21	0.000	4	21	0.024	4	21	0.024
10:00 - 11:00	4	21	0.000	4	21	0.024	4	21	0.024
11:00 - 12:00	4	21	0.012	**4**	**21**	**0.035**	4	21	0.047
12:00 - 13:00	4	21	0.035	4	21	0.000	4	21	0.035
13:00 - 14:00	**4**	**21**	**0.047**	4	21	0.012	**4**	**21**	**0.059**
14:00 - 15:00	4	21	0.024	4	21	0.024	4	21	0.048
15:00 - 16:00	4	21	0.024	4	21	0.012	4	21	0.036
16:00 - 17:00	4	21	0.035	4	21	0.012	4	21	0.047
17:00 - 18:00	4	21	0.024	4	21	0.000	4	21	0.024
18:00 - 19:00	4	21	0.035	4	21	0.000	4	21	0.035
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.236			0.167			0.403

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.*

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): 2.51

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	4	21	0.106	4	21	0.271	4	21	0.377
08:00 - 09:00	4	21	0.224	**4**	**21**	**0.494**	4	21	0.718
09:00 - 10:00	4	21	0.200	4	21	0.235	4	21	0.435
10:00 - 11:00	4	21	0.271	4	21	0.329	4	21	0.600
11:00 - 12:00	4	21	0.224	4	21	0.306	4	21	0.530
12:00 - 13:00	4	21	0.224	4	21	0.247	4	21	0.471
13:00 - 14:00	4	21	0.318	4	21	0.247	4	21	0.565
14:00 - 15:00	4	21	0.224	4	21	0.176	4	21	0.400
15:00 - 16:00	**4**	**21**	**0.435**	4	21	0.329	**4**	**21**	**0.764**
16:00 - 17:00	4	21	0.306	4	21	0.224	4	21	0.530
17:00 - 18:00	4	21	0.282	4	21	0.165	4	21	0.447
18:00 - 19:00	4	21	0.212	4	21	0.165	4	21	0.377
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.026			3.188			6.214

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.*

1. The search criteria used to obtain the trip rates for the proposed residential development is set out as follows:

Land Use:	Residential
Sub-Land Use:	Privately owned flats
Survey type:	Multi-modal sites only
Regions:	All except Greater London and Ireland / Northern Ireland
Selection by:	Number of dwellings
Periods:	Weekdays only
Locations:	'Edge of Town Centre' sites only

2. Application of the above criteria results in the following multi-modal trip rates (per 1 dwelling):

MULTI-MODAL TRIP RATES (PER 1 DWELLING)

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Vehicles	0.082	0.200	0.141	0.106	1.164	1.306
Cyclists	0	0	0.012	0.012	0.048	0.071
Pedestrians	0.118	0.188	0.082	0.047	1.199	1.317
Public Transport Users	0	0.012	0.024	0	0.236	0.167
Total	0.200	0.400	0.259	0.165	2.647	2.861

3. The table below sets out the resultant trip generation forecasts when these trip rates are applied to the proposal for 16 dwellings.

MULTI-MODAL TRIP RATES APPPLIED TO PROPOSAL FOR 16 DWELLS

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Vehicles	1	3	2	2	19	21
Cyclists	0	0	0	0	1	1
Pedestrians	2	3	1	1	19	21
Public Transport Users	0	0	0	0	4	3
Total	3	6	4	3	42	46

4. However, due to the fact that the proposed residential development will effectively be 'car free', the comparison with the TRICS-based trip rates from those sites will not yield representative traffic forecasts because the TRICS-based comparator sites have a higher level of available parking provision.

   Therefore, the total vehicular trip rates derived from TRICS have been redistributed proportionally to the other non-vehicular modes of transport.

5. To do so, the weekday peak hour and daily trip rates for the non-vehicular modes of transport are set out as a proportion of the total non-vehicular trip rates as follows:

PROPORTIONS

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Cyclists	0%	0%	10%	20%	3%	5%
Pedestrians	100%	94%	69%	80%	81%	85%
Public Transport Users	0%	6%	20%	0%	16%	11%
Total	100%	100%	100%	100%	100%	100%

6. When the vehicular trip generation forecasts are redistributed in accordance with the above proportions, the forecast multi-modal trip generation of the proposed development is therefore as follows:

TOTAL FORECAST MULTI-MODAL TRIP GENERATION

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Vehicles	0	0	0	0	0	0
Cyclists	0	0	0	1	1	2
Pedestrians	3	6	3	2	34	39
Public Transport Users	0	0	1	0	7	5
Total	3	14	12	7	42	46

Appendix D – TRICS Outputs and Traffic Generation Forecasts (Proposed Retail Units)

Calculation Reference: AUDIT-339901-240625-0603

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

03	**SOUTH WEST**		
	GS	GLOUCESTERSHIRE	1 days
	SG	SOUTH GLOUCESTERSHIRE	1 days
06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	1 days
11	**SCOTLAND**		
	EB	CITY OF EDINBURGH	1 days

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

Primary Filtering selection:

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

Parameter:	Gross floor area
Actual Range:	240 to 1550 (units: sqm)
Range Selected by User:	240 to 2500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/01 to 17/09/21

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

Selected survey days:

Monday	1 days
Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4

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	4

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	X days - Selected
Servicing vehicles Excluded	4 days - Selected

Secondary Filtering selection:

Use Class:

n/a	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:

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

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

125,001 to 250,000	1 days
250,001 to 500,000	3 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	2 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	4 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	4 days

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

PTAL Rating:

No PTAL Present	4 days

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

LIST OF SITES relevant to selection parameters

1	**EB-01-I-01**	**LOCAL SHOPS**		**CITY OF EDINBURGH**
	COLINTON ROAD			
	EDINBURGH			
	CRAIGLOCKHART			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		825 sqm	
	Survey date: THURSDAY		*28/10/10*	*Survey Type: MANUAL*
2	**GS-01-I-01**	**LOCAL SHOPS**		**GLOUCESTERSHIRE**
	SALISBURY AVENUE			
	CHELTENHAM			
	WARDEN HILL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		525 sqm	
	Survey date: MONDAY		*26/04/10*	*Survey Type: MANUAL*
3	**SG-01-I-01**	**LOCAL SHOPS**		**SOUTH GLOUCESTERSHIRE**
	BURLEY GROVE			
	BRISTOL			
	KINGSWOOD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		240 sqm	
	Survey date: FRIDAY		*06/10/06*	*Survey Type: MANUAL*
4	**WM-01-I-01**	**LOCAL SHOPS**		**WEST MIDLANDS**
	HOLYHEAD ROAD			
	COVENTRY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		1550 sqm	
	Survey date: THURSDAY		*27/09/07*	*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 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.48

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	4.554	4	785	4.363	4	785	8.917
08:00 - 09:00	4	785	4.172	4	785	3.503	4	785	7.675
09:00 - 10:00	4	785	4.522	4	785	4.204	4	785	8.726
10:00 - 11:00	**4**	**785**	**5.032**	4	785	4.490	4	785	9.522
11:00 - 12:00	4	785	3.981	4	785	3.758	4	785	7.739
12:00 - 13:00	4	785	4.904	4	785	4.968	4	785	9.872
13:00 - 14:00	4	785	5.032	**4**	**785**	**5.510**	**4**	**785**	**10.542**
14:00 - 15:00	4	785	4.395	4	785	4.268	4	785	8.663
15:00 - 16:00	4	785	3.822	4	785	4.427	4	785	8.249
16:00 - 17:00	4	785	3.662	4	785	3.854	4	785	7.516
17:00 - 18:00	4	785	4.204	4	785	3.726	4	785	7.930
18:00 - 19:00	4	785	3.312	4	785	3.535	4	785	6.847
19:00 - 20:00	4	785	1.911	4	785	2.548	4	785	4.459
20:00 - 21:00	3	967	1.138	3	967	1.483	3	967	2.621
21:00 - 22:00	1	525	3.810	1	525	3.810	1	525	7.620
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			58.451			58.447			116.898

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

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

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Parameter summary

Trip rate parameter range selected:	240 - 1550 (units: sqm)
Survey date date range:	01/01/01 - 17/09/21
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	0.032	4	785	0.032	4	785	0.064
08:00 - 09:00	4	785	0.032	4	785	0.032	4	785	0.064
09:00 - 10:00	4	785	0.032	4	785	0.032	4	785	0.064
10:00 - 11:00	4	785	0.064	4	785	0.064	4	785	0.128
11:00 - 12:00	4	785	0.032	4	785	0.032	4	785	0.064
12:00 - 13:00	4	785	0.064	4	785	0.064	4	785	0.128
13:00 - 14:00	4	785	0.064	4	785	0.064	4	785	0.128
14:00 - 15:00	4	785	0.000	4	785	0.000	4	785	0.000
15:00 - 16:00	4	785	0.000	4	785	0.000	4	785	0.000
16:00 - 17:00	4	785	0.096	4	785	0.096	**4**	**785**	**0.192**
17:00 - 18:00	4	785	0.000	4	785	0.000	4	785	0.000
18:00 - 19:00	**4**	**785**	**0.127**	4	785	0.000	4	785	0.127
19:00 - 20:00	4	785	0.000	**4**	**785**	**0.127**	4	785	0.127
20:00 - 21:00	3	967	0.000	3	967	0.000	3	967	0.000
21:00 - 22:00	1	525	0.000	1	525	0.000	1	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.543			0.543			1.086

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	0.255	**4**	**785**	**0.255**	4	785	0.510
08:00 - 09:00	4	785	0.032	4	785	0.032	4	785	0.064
09:00 - 10:00	4	785	0.223	4	785	0.255	4	785	0.478
10:00 - 11:00	**4**	**785**	**0.287**	4	785	0.255	**4**	**785**	**0.542**
11:00 - 12:00	4	785	0.127	4	785	0.127	4	785	0.254
12:00 - 13:00	4	785	0.159	4	785	0.159	4	785	0.318
13:00 - 14:00	4	785	0.064	4	785	0.096	4	785	0.160
14:00 - 15:00	4	785	0.000	4	785	0.000	4	785	0.000
15:00 - 16:00	4	785	0.096	4	785	0.064	4	785	0.160
16:00 - 17:00	4	785	0.032	4	785	0.032	4	785	0.064
17:00 - 18:00	4	785	0.000	4	785	0.032	4	785	0.032
18:00 - 19:00	4	785	0.032	4	785	0.032	4	785	0.064
19:00 - 20:00	4	785	0.000	4	785	0.000	4	785	0.000
20:00 - 21:00	3	967	0.000	3	967	0.000	3	967	0.000
21:00 - 22:00	1	525	0.000	1	525	0.000	1	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.307			1.339			2.646

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	0.318	4	785	0.255	4	785	0.573
08:00 - 09:00	4	785	0.191	4	785	0.159	4	785	0.350
09:00 - 10:00	4	785	0.127	4	785	0.159	4	785	0.286
10:00 - 11:00	4	785	0.064	4	785	0.032	4	785	0.096
11:00 - 12:00	4	785	0.287	4	785	0.223	4	785	0.510
12:00 - 13:00	4	785	0.064	4	785	0.096	4	785	0.160
13:00 - 14:00	4	785	0.191	4	785	0.191	4	785	0.382
14:00 - 15:00	4	785	0.127	4	785	0.159	4	785	0.286
15:00 - 16:00	4	785	0.096	4	785	0.159	4	785	0.255
16:00 - 17:00	**4**	**785**	**0.446**	4	785	0.318	**4**	**785**	**0.764**
17:00 - 18:00	4	785	0.096	4	785	0.159	4	785	0.255
18:00 - 19:00	4	785	0.318	**4**	**785**	**0.382**	4	785	0.700
19:00 - 20:00	4	785	0.032	4	785	0.064	4	785	0.096
20:00 - 21:00	3	967	0.000	3	967	0.000	3	967	0.000
21:00 - 22:00	1	525	0.000	1	525	0.000	1	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.357			2.356			4.713

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	5.350	4	785	5.032	4	785	10.382
08:00 - 09:00	4	785	4.618	4	785	3.917	4	785	8.535
09:00 - 10:00	4	785	5.350	4	785	4.809	4	785	10.159
10:00 - 11:00	**4**	**785**	**6.083**	4	785	5.191	4	785	11.274
11:00 - 12:00	4	785	4.618	4	785	4.395	4	785	9.013
12:00 - 13:00	4	785	5.924	4	785	6.306	4	785	12.230
13:00 - 14:00	4	785	5.955	**4**	**785**	**6.624**	**4**	**785**	**12.579**
14:00 - 15:00	4	785	5.478	4	785	5.159	4	785	10.637
15:00 - 16:00	4	785	5.064	4	785	5.828	4	785	10.892
16:00 - 17:00	4	785	4.618	4	785	5.510	4	785	10.128
17:00 - 18:00	4	785	5.573	4	785	4.873	4	785	10.446
18:00 - 19:00	4	785	3.949	4	785	4.299	4	785	8.248
19:00 - 20:00	4	785	2.197	4	785	3.025	4	785	5.222
20:00 - 21:00	3	967	1.345	3	967	1.793	3	967	3.138
21:00 - 22:00	1	525	4.381	1	525	4.190	1	525	8.571
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			70.503			70.951			141.454

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	3.344	4	785	2.898	4	785	6.242
08:00 - 09:00	4	785	5.255	4	785	5.096	4	785	10.351
09:00 - 10:00	**4**	**785**	**7.134**	**4**	**785**	**6.847**	**4**	**785**	**13.981**
10:00 - 11:00	4	785	6.146	4	785	5.764	4	785	11.910
11:00 - 12:00	4	785	5.223	4	785	5.446	4	785	10.669
12:00 - 13:00	4	785	7.102	4	785	5.701	4	785	12.803
13:00 - 14:00	4	785	4.618	4	785	4.745	4	785	9.363
14:00 - 15:00	4	785	3.217	4	785	3.854	4	785	7.071
15:00 - 16:00	4	785	7.134	4	785	6.433	4	785	13.567
16:00 - 17:00	4	785	4.809	4	785	5.000	4	785	9.809
17:00 - 18:00	4	785	4.140	4	785	4.809	4	785	8.949
18:00 - 19:00	4	785	3.344	4	785	3.885	4	785	7.229
19:00 - 20:00	4	785	2.707	4	785	2.675	4	785	5.382
20:00 - 21:00	3	967	1.586	3	967	1.966	3	967	3.552
21:00 - 22:00	1	525	4.000	1	525	4.190	1	525	8.190
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			69.759			69.309			139.068

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	0.127	4	785	0.032	4	785	0.159
08:00 - 09:00	4	785	0.064	4	785	0.096	4	785	0.160
09:00 - 10:00	4	785	0.127	4	785	0.159	4	785	0.286
10:00 - 11:00	4	785	0.159	4	785	0.064	4	785	0.223
11:00 - 12:00	4	785	0.096	4	785	0.159	4	785	0.255
12:00 - 13:00	**4**	**785**	**0.191**	4	785	0.096	4	785	0.287
13:00 - 14:00	4	785	0.159	4	785	0.127	4	785	0.286
14:00 - 15:00	4	785	0.127	**4**	**785**	**0.318**	**4**	**785**	**0.445**
15:00 - 16:00	4	785	0.159	4	785	0.064	4	785	0.223
16:00 - 17:00	4	785	0.032	4	785	0.032	4	785	0.064
17:00 - 18:00	4	785	0.064	4	785	0.064	4	785	0.128
18:00 - 19:00	4	785	0.032	4	785	0.127	4	785	0.159
19:00 - 20:00	4	785	0.000	4	785	0.000	4	785	0.000
20:00 - 21:00	3	967	0.000	3	967	0.000	3	967	0.000
21:00 - 22:00	1	525	0.000	1	525	0.000	1	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.337			1.338			2.675

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	0.127	4	785	0.032	4	785	0.159
08:00 - 09:00	4	785	0.064	4	785	0.096	4	785	0.160
09:00 - 10:00	4	785	0.127	4	785	0.159	4	785	0.286
10:00 - 11:00	4	785	0.159	4	785	0.064	4	785	0.223
11:00 - 12:00	4	785	0.096	4	785	0.159	4	785	0.255
12:00 - 13:00	**4**	**785**	**0.191**	4	785	0.096	4	785	0.287
13:00 - 14:00	4	785	0.159	4	785	0.127	4	785	0.286
14:00 - 15:00	4	785	0.127	**4**	**785**	**0.318**	**4**	**785**	**0.445**
15:00 - 16:00	4	785	0.159	4	785	0.064	4	785	0.223
16:00 - 17:00	4	785	0.032	4	785	0.032	4	785	0.064
17:00 - 18:00	4	785	0.064	4	785	0.064	4	785	0.128
18:00 - 19:00	4	785	0.032	4	785	0.127	4	785	0.159
19:00 - 20:00	4	785	0.000	4	785	0.000	4	785	0.000
20:00 - 21:00	3	967	0.000	3	967	0.000	3	967	0.000
21:00 - 22:00	1	525	0.000	1	525	0.000	1	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.337			1.338			2.675

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.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.48

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	785	9.140	4	785	8.217	4	785	17.357
08:00 - 09:00	4	785	10.127	4	785	9.268	4	785	19.395
09:00 - 10:00	4	785	12.739	4	785	11.975	4	785	24.714
10:00 - 11:00	4	785	12.452	4	785	11.051	4	785	23.503
11:00 - 12:00	4	785	10.223	4	785	10.223	4	785	20.446
12:00 - 13:00	**4**	**785**	**13.280**	4	785	12.197	**4**	**785**	**25.477**
13:00 - 14:00	4	785	10.924	4	785	11.688	4	785	22.612
14:00 - 15:00	4	785	8.949	4	785	9.490	4	785	18.439
15:00 - 16:00	4	785	12.452	**4**	**785**	**12.484**	4	785	24.936
16:00 - 17:00	4	785	9.904	4	785	10.860	4	785	20.764
17:00 - 18:00	4	785	9.873	4	785	9.904	4	785	19.777
18:00 - 19:00	4	785	7.643	4	785	8.694	4	785	16.337
19:00 - 20:00	4	785	4.936	4	785	5.764	4	785	10.700
20:00 - 21:00	3	967	2.931	3	967	3.759	3	967	6.690
21:00 - 22:00	1	525	8.381	1	525	8.381	1	525	16.762
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			143.954			143.955			287.909

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.*

1. The search criteria used to obtain the trip rates for the proposed residential development is set out as follows:

Land Use:	Retail
Sub-Land Use:	Local Shops
Survey type:	Multi-modal sites only
Regions:	All except Greater London and Ireland / Northern Ireland
Selection by:	Gross floor area (GFA)
Periods:	Weekdays only
Locations:	Sites in Suburban Areas only

2. Application of the above criteria results in the following multi-modal trip rates (per 100sqm GFA):

MULTI-MODAL TRIP RATES (PER 1 DWELLING)

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Vehicles	4.172	3.503	4.204	3.726	58.451	58.447
Cyclists	0.191	0.159	0.096	0.159	2.357	2.356
Pedestrians	5.255	5.096	4.14	4.809	69.759	69.309
Public Transport Users	0.064	0.096	0.064	0.064	1.337	1.338
Total	9.682	8.854	8.504	8.758	131.904	131.450

3. The table below sets out the resultant trip generation forecasts when these trip rates are applied to the proposal for 4 retail units with a GFA of 120 sqm.

MULTI-MODAL TRIP RATES APPPLIED TO PROPOSAL FOR 120 sqm

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Vehicles	5	4	5	4	70	70
Cyclists	0	0	0	0	3	3
Pedestrians	6	6	5	6	84	83
Public Transport Users	0	0	0	0	2	2
Total	12	11	10	11	158	158

4. However, due to the fact that the proposed retail units will effectively be 'car free', the comparison with the TRICS-based trip rates from those sites will not yield representative traffic forecasts because the TRICS-based comparator sites have a higher level of available parking provision.

   Therefore, the total vehicular trip rates derived from TRICS have been redistributed proportionally to the other non-vehicular modes of transport.

5. To do so, the weekday peak hour and daily trip rates for the non-vehicular modes of transport are set out as a proportion of the total non-vehicular trip rates as follows:

PROPORTIONS

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Cyclists	3%	3%	2%	3%	3%	3%
Pedestrians	95%	95%	96%	96%	95%	95%
Public Transport Users	1%	2%	1%	1%	2%	2%
Total	100%	100%	100%	100%	100%	100%

6. When the vehicular trip generation forecasts are redistributed in accordance with the above proportions, the forecast multi-modal trip generation of the proposed retail units is therefore as follows:

TOTAL FORECAST MULTI-MODAL TRIP GENERATION

	WEEKDAY AM PEAK 08:00 - 09:00		WEEKDAY PM PEAK 17:00 - 18:00		DAILY 07:00 - 19:00	
Mode	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Vehicles	0	0	0	0	0	0
Cyclists	0	0	0	0	5	5
Pedestrians	11	10	10	10	150	150
Public Transport Users	0	0	0	0	3	3
Total	12	14	12	7	158	158