SRG New Malden Ltd

5-29 COOMBE ROAD, NEW MALDEN

Transport Statement

December 2017
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1 INTRODUCTION

1.1 Caneparo Associates have been appointed by SRG New Malden Ltd ('The Applicant') to provide traffic and transport advice in relation to the proposed redevelopment of 5-29 Coombe Road, New Malden ('The Site'), located in the Royal Borough of Kingston upon Thames (RBKuT).

1.2 The site is located within an accessible location, approximately 50m north of New Malden Station. The site benefits from being in close proximity to numerous retail units, residential areas and sustainable transport infrastructure.

1.3 The application site currently consists of a collection of various adjacent buildings providing a range of commercial uses (Class A1/A2/A3/B1/B1c) and circa 16 residential units (Class C3).

1.4 The planning application seeks the demolition of the existing buildings on the site and the development of 2 mixed use buildings providing 83 residential (Class C3) units alongside 756sqm of flexible retail (Class A1/A2/A3) space and 331sqm of office (Class B1) space. The development will be provided with 42 car parking spaces (including 8 disabled car parking spaces) across a basement level car park.

1.5 This Transport Statement examines the effects of the proposed development on the local highway network. It considers practical issues such as the servicing arrangements associated with the development, trip generation, accessibility and parking matters.

1.6 The remainder of this report is structured as follows:

- Section 2 summarises the existing situation;
- Section 3 sets out the site’s accessibility;
- Section 4 describes the development proposals
- Section 5 reviews the relevant transport planning policy;
- Section 6 considers the trip generation of the site;
- Section 7 considers the effects of the development;
- Section 8 details the mitigation measures; and
- Section 9 presents a summary and conclusion.
2 **EXISTING SITUATION**

**Site Location**

2.1 The site is located on the eastern side of Coombe Road, forming the majority (excluding No. 31 Coombe Road) of the existing buildings between New Malden Station and Alric Avenue. New Malden Station is circa 50m south of the centre of the site.

2.2 The application site is situated within New Malden Town Centre which is comprised of a mixture of residential and commercial land uses. The area offers a wide range of facilities and amenities within a short walking distance of the site including New Malden High Street directly to the south, which benefits from a variety of high street retailers. As such the proposed development is considered to be located within an established area that benefits from many services that can cater to the future residents and employees of the development.

2.3 The site location with respect to the local highway network and rail connections is shown at **Figure 1**, below.

![Figure 1: Site Location Plan](image_url) © Crown Copyright and Database Rights 2017 Ordnance Survey
Site Use

2.4 The application site currently provides the following mix of uses:

- 579sqm of Class A1 floorspace (Non-Food Retail);
- 111sqm of Class A2 floorspace (Estate Agents);
- 209sqm of Class A3 floorspace (Café and Restaurant);
- 53sqm of Class B1 floorspace (Office);
- 350sqm of Class B1c floorspace (Light Industry);
- 46sqm of Taxi Office floorspace (Sui Generis);
- 282sqm of Nightclub floorspace (Sui Generis); and
- circa 16 residential units (Class C3).

2.5 The site is currently serviced both from the parking bays along the eastern side of Coombe Road and from the vehicular access available into the site via the crossover from Coombe Road which runs between 19 and 21 Coombe Road.

2.6 There are also 4 parking bays within the site area which are leased out on an annual basis.

Local Highway Network

2.7 The B283 Coombe Road runs in a north to south orientation along the site’s western frontage between the A238 Coombe Lane West to the north and Malden High Street to the south. In the vicinity of the site Coombe Road offers a single lane including advisory cycle lanes in each direction.

2.8 The road is provided with lengths of single yellow line, which prevents stopping between 08:30 and 09:30 Monday to Saturday, short-stay parking between 09:30 and 18:30 Monday to Saturday for a maximum stay of 20 minutes as well as a dedicated taxi rank. Coombe Road and the surrounding roads are not part of RBKuT’s Controlled Parking Zone (CPZ).

2.9 The adopted highway which runs into the site is accessed via an existing crossover onto Coombe Road. The extent of adopted highway is indicated in the title plan at Appendix B. The area is not constructed to adoptable standards at present and is built over at 1st floor level, preventing access by any large vehicles.
2.10 Private rights of way also need to be maintained as part of the development, in particular to parking bays for the development known as 2 Alric Avenue.
3 ACCESSIBILITY

3.1 The site is highly accessible by all modes with and good network of footpaths, cycle facilities and public transport services in the immediate vicinity.

Walking

3.2 It is commonly accepted that for journeys of up to 2km walking is an appropriate mode to replace car trips and this is set out in The Chartered Institution of Highways and Transportation (CIHT) Guidelines ("Guidelines for Providing for Journeys on Foot" 2000) which suggests a maximum 'acceptable' walking distance for pedestrians without mobility impairment of 2km.

3.3 The site is located within a 2km walking distance of a large number of amenities, most noticeably New Malden station whilst restaurants, cafes, a pharmacy, bank, food retailers and clothes retailers can be found on New Malden High Street.

3.4 The surrounding footways are of an acceptable standard offering wide and level paving on both sides of the road. Coombe Road / High Street is provided with a number of crossing opportunities, in particular, the signalised crossing near to New Malden Station which is provided with dropped kerbs and tactile paving.

Cycling

3.5 It is commonly accepted that cycling has the potential to substitute for driving for distances up to 5 miles (8 kilometres). Most of south-west London, including Kingston, Morden, Wimbledon, Stoneleigh and Tolworth are within a 5 mile cycle ride from the site.

3.6 In the vicinity of the site, a section of Coombe Road, Lime Grove, Cambridge Avenue, and Kingston Road are designated as 'roads that have been recommended by other cyclists'. Grafton Road, Dukes Avenue, Howard Street, and the northern section of Coombe Road have been classified as a 'route signed for use by cyclists on a mixture of quiet and busier roads'.

3.7 The Council are also promoting the creation of a new traffic free cycle route between New Malden Station and Raynes Park, running parallel to the railway line.

3.8 Approximately 34 Sheffield stands are located close to New Malden Station on both sides of Coombe Road.
Public Transport

Bus Services

3.9 A summary of bus services available in the locality is provided in Table 3.1. The nearest bus stop (Stop B – New Malden) is located 140m south of the site. The bus route ‘spider map’ prepared by RBKuT is included at Appendix C and shows interchange opportunities available from these routes.

<table>
<thead>
<tr>
<th>Table 3.3 Summary of Bus Service Frequency (every ‘x’ minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No.</strong></td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>213</td>
</tr>
<tr>
<td>K1</td>
</tr>
</tbody>
</table>

Rail Services

3.10 New Malden Station, on Coombe Road, is located circa 50m to the south of the centre of the site (less than a 1 minute walk). New Malden Station receives, on average, 13 services an hour to 4 main destinations, the frequency of which is detailed as follows:

- London Waterloo: 6 services an hour;
- Richmond: 3 services an hour;
- Hampton Court: 2 services an hour; and
- Shepperton: 2 services an hour.

3.11 There is also the potential that in the future the station will benefit from Crossrail 2 services.

Public Transport Accessibility Level (PTAL) Rating

3.12 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability.
3.13 The PTAL is categorised in six levels, 1 to 6 where 6 represents an excellent level of accessibility and 1 a poor level of accessibility. It is then further sub-sectioned into ‘a’ and ‘b’, with ‘a’ being at the lower end of the spectrum and ‘b’ at the higher.

3.14 The assessment methodology reflects:

- Walking time from the point of interest to the public transport access points;
- The reliability of the service modes available;
- The number of services available within the catchment; and
- The level of service at the public transport access points – i.e. average waiting time.

3.15 The PTAL rating of the centre of the site is 3, meaning the site has a moderate level of accessibility to public transport. **Appendix D** contains the TfL PTAL summary.
4 PROPOSED DEVELOPMENT

4.1 The proposed development seeks to provide the following:

- Class C3 - Residential Dwellings – 83 units including 2 x 3-bed houses, 4 x 1-bed studios and 24 x 1-bed, 38 x 2-bed and 15 x 3-bed flats;

- Class B1 - Office Floorspace – 331 square metres in total; and

- Class A1/A2/A3 - Flexible Retail Floorspace – 756 square metres.

4.2 The exact tenants of the ground floor retail units are yet to be confirmed but it is assumed that they will be used as Class A1/A2/A3 units, and as such, the transportation impacts have been considered in this regard. In order to provide an assessment within this document the retail floorspace has been assumed as A1 food & convenience store.

4.3 Table 4.1 highlights the net change in floor area (and residential units) as a result of the proposed development.

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Existing</th>
<th>Proposed</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1/A2/A3</td>
<td>951sqm</td>
<td>756sqm</td>
<td>-195sqm</td>
</tr>
<tr>
<td>B1/B1c</td>
<td>403sqm</td>
<td>331sqm</td>
<td>-72sqm</td>
</tr>
<tr>
<td>B8</td>
<td>94sqm</td>
<td>0sqm</td>
<td>-94sqm</td>
</tr>
<tr>
<td>C3</td>
<td>16 units</td>
<td>83 units</td>
<td>+67 units</td>
</tr>
<tr>
<td>Sui Generis</td>
<td>328sqm</td>
<td>0sqm</td>
<td>-328sqm</td>
</tr>
<tr>
<td>(Taxi Office and Club)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4 A copy of the architect’s layout plans have been included at Appendix A.

4.5 The existing station entrance is less than ideal and there are proposals for a new cycle route running parallel to the railway line and for the station to upgrade if Crossrail 2 proceeds. The scheme is considered to be complementary to these proposals and in particular opens up the area to the north of the station and would assist in providing more activity and surveillance in this area. The ground floor footprint has been amended to create a wider open space for the station and public open space improvements, whilst the reduced basement layout has been amended to accommodate potential Crossrail 2 requirements.
4.6 The majority of the building line is set back well within the site boundary such that a substantial area of new urban realm will be created, allowing for more pedestrian flow capacity in the vicinity of the station and the proposed new cycle route.

4.7 It is also proposed to amend the layout of the parking bays on the site frontage on the eastern side of Coombe Road by applying a shared surface design approach and raising the parking/loading area. A similar approach has already been adopted for the parking bays on the western side of the carriageway. The layout of the shared surface has been included at Appendix E.

4.8 Following previous discussions with RBKuT, 2.5m loading/parking bays are indicated with a minimum 2m footway width maintained within the adopted highway. The footway widens out on the approach to the station and the southern element of the site's building form is also set back from the footway providing a frontage area which can also be utilised by pedestrians.

**Parking**

**Vehicle Parking**

4.9 The proposals include the provision of a basement level car park accessed via a ramp and the adopted highway connecting to Coombe Road. The car park will be provided with 42 car parking spaces, including 8 disabled car parking spaces. There will also be a provision of 6 motorcycle / mobility scooter parking spaces. The size of the basement is limited by requirements from Crossrail, and the Council.

4.10 Charging points will be installed for 20% of the spaces (8), with ducting/passive provision allowing for a further 8 spaces to be easily connected to a charging point.

4.11 The parking aisles are typically in excess of 6.5m and the parking bays are larger than standard at 2.5m x 5m allowing for ready access. The front face of columns are typically set back by 500mm-600mm from the front of parking bays, ensuring that vehicle movements are not constrained. There are 2 circular columns indicated within the parking access aisle area, the swept paths demonstrate that these do not limit access to the adjacent parking bays.

4.12 This provision is in line with the London Plan’s car parking standards and in line with what has been agreed for other developments in the vicinity. It should be noted that the existing
residential units on the site have no formal on-site parking provision and so any related existing
car parking is likely to take place on-street.

4.13 This level of car parking is considered an appropriate response to the level of accessibility that
the site benefits from as well as the location of the site outside of a CPZ. A more detailed
assessment is included within Section 7.

**Cycle Parking**

4.14 Cycle parking will be provided in accordance with the London Plan. A dedicated cycle store will
be provided at basement floor level offering secure, sheltered and accessible cycle parking
facilities for residents (138 spaces). In addition to the standard 13 person lifts (1.6m x 1.4m) a
larger (2m x 1.7m) lift is available adjacent to the cycle store to allow ready access to the cycle
parking.

4.15 Further short-stay cycle parking will be provided at ground floor level to the rear of the retail
units and cycle parking will also be provided adjacent to the offices (totalling 26 spaces).

**Servicing and Refuse Collection**

4.16 The refuse and recycling collection regime will be undertaken from the internal road layout.

4.17 Storage of waste and recyclables will be provided at ground floor level within separate refuse
stores for each block of residential units (Block A to C) as well as the retail units fronting Coombe
Road. All refuse collections will be undertaken from the internal road with bins provided within
an acceptable walking distance for refuse operatives, either directly accessed from the bin stores
or where necessary via temporary collection points.

4.18 Servicing relating to the residential and commercial aspects of the development will be
undertaken either from the internal road layout or via the proposed loading bay on Coombe
Road, both of which are able to accommodate a 10m delivery vehicle.

4.19 In order to safeguard residential amenity, both for existing residents and those that will occupy
the development, it is proposed that commercial servicing will be limited to take place between
07:00 to 20:00 and that a detailed servicing management plan will be secured by planning
condition, which will include a range of measures such that tenants will be obliged to reduce
the amount of noise associated with servicing to the minimum possible. Charging points will be
specified such that the engines of refrigerated vehicles can be turned off on-site when the vehicle is stationary.

4.20 Occupiers will be required to coordinate delivery regimes, to ensure that no more than 2 vehicles are planned to service the site at any one time, with the on-site servicing area able to accommodate one 10m long vehicle and the proposed loading bay also able to accommodate the same.

Access

4.21 The existing crossover into the site from Coombe Road will be retained and widened in order to provide access to the basement level car park and servicing area. The access road will be widened and is not oversailed, such that large vehicles can access the site.

4.22 The primary pedestrian access to all the residential and commercial units, except the 2 proposed houses, will be via the site frontage to Coombe Road or alongside the Station. Access to the rear will be predominantly for refuse collection, fire escape or car park access.

4.23 A one-way car park ramp will be adopted with shuttle working controlled by traffic signals. This allows the width of the ramp to be reduced, so that more area can be given over to landscaping and pedestrian access routes. The detailed specifications of the exact traffic signal system that will be installed will be provided at the detailed design stage, following planning permission but initial details are provided on the plans at Appendix G.

4.24 In principle the use of loops or a similar detection system linked to the signals will be used to ensure safety, with the default position being that the top of the ramp is given priority to reduce the likelihood of queuing vehicles interfering with other activity near the top of the ramp.

4.25 The trip generation analysis in the submitted Transport Statement indicates a peak hour use of the car park ramp by 12-13 vehicles, i.e. a car every 5 minutes on average.

4.26 If we assume it takes of the order of 15 seconds for a car to traverse the ramp, the car ramp would only be used for c3 minutes per hour or 5% of the time and so it is only on limited occasions when a vehicle would have to wait at signals to use the ramp.

4.27 During the weekday peaks much of the movement would also tend to be in one direction, i.e. people leaving the development in the am peak and returning in the pm peak.
A shared surface approach will be utilised within the site, with differences in materials and textures used to denote notional footway and roadway areas in order to minimise the potential for conflict between pedestrian and vehicular movements.

**Highway Works**

4.29 Urban realm improvements will be provided along Coombe Road to provide an improved pedestrian environment, with the building line generally set well back within the site area and a shared surface approach adopted for the existing parking bays. The public urban realm will be improved by setting the southern building line back from the existing and providing additional space around the Station and alongside the cycle highway.

4.30 The applicant intends to remove c18m of parking bays to the south of the crossover in order to provide a wider access and a formal loading bay.

4.31 It is proposed that the works to the highway be secured via a S278 Agreement.
5 POLICY CONTEXT

5.1 This section summarises the relevant transport policies at national, regional and local level.

National Planning Policy Framework

5.2 The National Planning Policy Framework (NPPF) was published on 27th March 2012 and sets out the Government’s planning policies for England and how these are expected to be applied.

5.3 Paragraph 32 of Chapter 4 – ‘Promoting Sustainable Transport’ states:

“All developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- the opportunities for sustainable transport modes have been taken up depending on the nature and location of the Site, to reduce the need for major transport infrastructure;
- safe and suitable access to the Site can be achieved for all people; and
- improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.”

5.4 The site is in a highly accessible location and it is considered that there are no significant residual cumulative impacts due to the proposed development.

London Plan

5.5 The London Plan is a Spatial Development Strategy which sets out the framework for the development of London over the next 20-25 years.

5.6 Policy 6.1 sets out a number of strategic aims, key aims include:

a) encouraging patterns and modes of development that reduce the need to travel, especially by car;

b) seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand;

c) supporting measures that encourage shifts to more sustainable modes and appropriate demand management; and
d) **promoting walking by ensuring an improved urban realm.**

5.7 The good public transport accessibility of the site and the car free nature of the proposed development ensure that the proposals are in line with the aspirations of the London Plan.

5.8 In regards to car parking, Table 5.1 below sets out the car parking standards.

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Car Parking Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 food retail</td>
<td>1 space per 30-20sqm</td>
</tr>
<tr>
<td>B1 office</td>
<td>1 space per 100-600sqm</td>
</tr>
<tr>
<td>C3 residential</td>
<td>1-2 bedrooms: less than 1 per unit</td>
</tr>
<tr>
<td></td>
<td>3 bedrooms: up to 1.5 per unit</td>
</tr>
<tr>
<td></td>
<td>4 or more bedrooms: up to 2 per unit</td>
</tr>
</tbody>
</table>

5.9 In regards to cycle parking, Table 5.2 below sets out the cycle parking minimum standards.

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Long-stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 food retail</td>
<td>From a threshold of 100sqm: 1 space per 175sqm</td>
</tr>
<tr>
<td></td>
<td>From a threshold of 100 sqm: first 750sqm: 1 space per 40sqm thereafter: 1 space per 300sqm</td>
</tr>
<tr>
<td>B1 office</td>
<td>Outer London: 1 space per 150sqm</td>
</tr>
<tr>
<td></td>
<td>First 5,000sqm: 1 space per 500sqm</td>
</tr>
<tr>
<td></td>
<td>Thereafter: 1 space per 5,000sqm</td>
</tr>
<tr>
<td>C3 residential</td>
<td>1 space per studio and 1 bedroom unit</td>
</tr>
<tr>
<td></td>
<td>2 spaces per all other dwellings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Short-stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>From a threshold of 100 sqm: first 750sqm: 1 space per 40sqm thereafter: 1 space per 300sqm</td>
</tr>
</tbody>
</table>

5.10 **Kingston upon Thames Core Strategy (April 2012)**

The Core Strategy was adopted in April 2012 and forms a key element of the Local Development Framework, shaping future development and improvements and setting out the overall planning framework for the Borough.
5.11 Policy CS 5 – Reducing the Need to Travel – states that “to reduce the need to travel, particularly by car the Council will:

- Protect and enhance the availability of employment and key facilities including shops, healthcare and leisure facilities within local communities.
- Located major trip generating development in accessible locations well served by public transport including Surbiton, New Malden, Tolworth and Kingston Town Centres. Sites that have poor levels of accessibility by sustainable modes will not usually be considered suitable for development that could generate high number of trips”

5.12 Policy CS 6 – Sustainable Travel – conditions that “to support and encourage the use of public transport, cycling and walking the council will:

- Promote and enhance the strategic cycling and walking networks…;
- Enhance and promote the Borough’s network of quiet residential roads, traffic free routes and open spaces as attractive, safe and convenient walking and cycle routes…”

5.13 Policy CS 7 – Managing Vehicle Use – states that “to manage car use to ensure sustainability, road safety and reduce congestion the Council will:

- support and promote the use of car share and car club schemes including expanding the network of on-street car club bays;
- support the use of low emission vehicles including the provision of electric vehicle charging points…”

5.14 Development Management Policies provide further detail on specific issues and are based on the Core Strategy Policies. Policy DM 8 – Sustainable Transport for New Development – states, specifically for this development, that “to support and promote the use of sustainable modes of travel to development sites the Council will:

- require new development to provide facilities on-site for cyclists as appropriate, including showers, lockers and secure, convenient cycle parking, in accordance with minimum standards”
5.15 Policy DM 9 – Managing Vehicle Use for New Development – states that “to ensure that new development does not contribute to congestion or compromise highway safety the council will:

- Require all major developments to submit a Transport Assessment based on TfL’s Best Practice Guidance;
- Require new development comply with car parking standards and implement parking management schemes;
- Restrict eligibility for on-street parking permits for residents of new developments located in controlled parking zones; and
- Require new development to provide car club and electric vehicle infrastructure where appropriate in accordance with minimum standards.”

Kingston upon Thames Sustainable Transport SPD (May 2013)

5.16 The objectives of the Sustainable Transport SPD is to ensure that development in the Borough does not adversely impact on, and where possible, enhance the safety, efficiency and sustainability of the transport network.

5.17 Policy Guidance – Loading and Servicing Activities – states that Development proposals should make provision for delivery and servicing activities as follows:

- Demonstrate that delivery and servicing activities for the site can take place without disruption to pedestrians, cyclists and vehicles; both on and off the site.
- Where no designated areas/bays are provided on-site for delivery and servicing activities, the applicant will need to show how loading arrangements and delivery service vehicle activities will be carried out in a Delivery Servicing Plan, or Parking Management Plan.

Policy Summary

5.18 The location of this proposed development with its existing public transport facilities and real opportunities for the use of active modes of transport means that the site is highly suited to the proposed use.
6 TRIP GENERATION

6.1 The following provides an assessment of the predicted level of trips to and from the site by all modes of transport.

Existing Retail/Office Trip Generation

6.2 The existing retail (Class A1/A2/A3) and office (B1/B1c) floorspaces have been discounted from the existing trip generation as both are re-provided within the proposed development and are therefore not expected to result in a change in trip generation compared to the existing situation. This is deemed a robust assessment as the total retail and office floorspace will reduce by 195sqm and 72sqm respectively, as detailed in Table 4.1.

6.3 Therefore it can be argued that both uses will produce a lower level of trip generation as a result of the development.

Existing Sui Generis Trip Generation

6.4 The existing Sui Generis uses on-site (Nightclub and Taxi Office) have also been discounted from the existing trip generation assessment as both uses will receive their majority of trips outside of traditional peak periods during the late evening / early morning period when use of the site at present, and in the future, will be generally lower.

6.5 This is deemed a robust approach which discounts the fact that both uses produce a level of vehicle trips which will be removed as part of the development i.e. vehicle trips associated with the taxi office as well as late night / early morning taxi movements which are generally associated with nightclubs.
**Existing Residential Trip Generation**

6.6 The TRICS database has therefore been interrogated for the existing residential units in order to establish a multi-modal trip generation assessment.

6.7 The trip generation by each mode of transport to and from the site has been estimated throughout a typical weekday. The trip rates have been based upon TRICS data taking into account the site’s characteristics. A total of 7 London sites, with a PTAL range of 2 to 4, surveyed since 2000 were selected for analysis; the TRICS output is included at Appendix F.

6.8 It is pertinent to note that given the limited number of comparable sites within TRICS a number of sites with considerably higher and lower parking ratios per unit were selected. Since the total person trip rates were obtained, and will be split based on Census data, this should not be reflected within the results. A summary of the AM (08:00-09:00) and PM (17:00-18:00) peak period trip rates and trip generation is shown in **Table 6.1** below.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Arrivals</th>
<th>Trip Rates</th>
<th>Two-Way</th>
<th>Arrivals</th>
<th>Person Trips</th>
<th>Departures</th>
<th>Two-Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 – 09:00</td>
<td>0.074</td>
<td>0.337</td>
<td>0.411</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>17:00 – 18:00</td>
<td>0.279</td>
<td>0.164</td>
<td>0.443</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

6.10 The 2011 “Method of Travel to Work” Census data (resident population) mode split has been obtained for the Kingston upon Thames 007 Middle Layer Super Output area. The data is summarised in **Table 6.2**.

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>Census Mode Split</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car Driver</td>
<td>34</td>
</tr>
<tr>
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<tr>
<td>Underground</td>
<td>6</td>
</tr>
<tr>
<td>Rail</td>
<td>32</td>
</tr>
<tr>
<td>Bus</td>
<td>10</td>
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<tr>
<td>Motorcycle</td>
<td>1</td>
</tr>
<tr>
<td>Taxi</td>
<td>0</td>
</tr>
<tr>
<td>Cycle</td>
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<tr>
<td>Walk</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>
6.11 The predicted peak hour multi-modal trip generation for the residential units is set out in Table 6.3 below.

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>AM Peak Hour (08:00 – 09:00)</th>
<th>PM Peak Hour (17:00 – 18:00)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Arrivals</td>
<td>Departures</td>
</tr>
<tr>
<td>Car Driver</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Car Passenger</td>
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<td>Underground</td>
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<td>0</td>
</tr>
<tr>
<td>Rail</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bus</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Taxi</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cycle</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Walk</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

6.13 Table 6.3 illustrates that the existing residential units receive a low level of trips during the peak periods equating to 5 AM peak period and 6 during the PM peak period.

Proposed Residential Trip Generation

6.14 The proposed residential trip generation has been based on identical trip rates and census data used for the existing residential trip generation before being applied to the proposed 83 residential units. The peak hour multi-modal trip generation table is included at Table 6.4.

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>AM Peak Hour (08:00 – 09:00)</th>
<th>PM Peak Hour (17:00 – 18:00)</th>
</tr>
</thead>
<tbody>
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<td>Departures</td>
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<td>1</td>
</tr>
<tr>
<td>Walk</td>
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<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>29</td>
</tr>
</tbody>
</table>
The proposed development would equate to 12 and 13 two-way vehicle movements during the AM and PM peak periods respectively with the majority of trips undertaken by sustainable modes of transport.

**Proposed Retail Trip Generation**

As part of the development the existing 951sqm of retail (Class A1/A2/A3) floorspace will be reduced to 756sqm across 4 retail units (subject to the final occupiers), which has the potential to result in a reduction in associated trips. In any event, the majority of trips to the retail units are expected to comprise pass-by/linked trips i.e. trips forming part of an already existing journey on the local transport network.

**Proposed Office Trip Generation**

As with the retail floorspace, the existing 403sqm of office floorspace will be reduced to 331sqm and will therefore result in a similar, if not lower, level of trip generation to that of the existing office floorspace and is therefore not expected to result in a noticeable impact on the local highway network.

**Summary**

It has been shown that the proposed development will result in an increase of the order of 35 trips during the AM and PM peak periods relating to the uplift in residential units. The development will reduce the overall retail and office floorspace and will therefore arguably produce a lower level of trip generation. The site’s location within a busy high street means that visitors to the retail floorspace will include a large proportion of ‘drop-in’ or ‘pass-by’ trips. It can be argued that the proposed development has the potential to contribute to a reduction in vehicle trips associated with the removal of the late night operations associated with the taxi office and nightclub.
7 EFFECTS OF DEVELOPMENT

7.1 This section considers the potential effects of the planning application proposals in relation to parking, servicing and access.

Parking

Car Parking

7.2 The proposed development will be provided with 42 car parking spaces within a basement level car park. Swept path analysis and indicative traffic signal and sensor location plans are included at Appendix G.

7.3 The provision of car parking falls in line with the London Plan standards and is expected to accommodate all resident parking demand and limit the level of car parking arising on the surrounding streets. It should be noted that the existing residential units on the site do not have any dedicated car parking.

7.4 The retail and office floorspace will not be provided with any off-street car parking with any parking demand accommodated on-street in suitable locations, as per the existing situation for businesses in the locality.

Parking Beat Survey

7.5 Nonetheless, to understand existing levels of on-street parking and, therefore, in order to determine any potential impact the proposed development may have on on-street parking in the vicinity of the Site, a parking beat survey was undertaken on Tuesday 5th & Thursday 7th July 2016, with beats undertaken at 04:30. Appendix H includes a full copy of the results whilst Table 7.1 provides a summary.

<table>
<thead>
<tr>
<th>Time</th>
<th>Parked Vehicles</th>
<th>Observed Spaces</th>
<th>Utilisation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>04:30 Tuesday 5th July</td>
<td>213</td>
<td>100</td>
<td>68%</td>
</tr>
<tr>
<td>04:30 Thursday 7th July</td>
<td>205</td>
<td>108</td>
<td>65%</td>
</tr>
</tbody>
</table>
7.6 The survey illustrates that on Tuesday at 04:30 there were 213 vehicles parked and 100 observed spaces and at 04:30 on Thursday there were 205 vehicles parked and 108 observed spaces. On neither of the survey days did the results indicate that the area surrounding the Site experienced parking stress, represented by utilisation levels of greater than 90%.

7.7 Therefore, the parking beat surveys revealed there is sufficient available capacity on the residential streets surrounding the Site (up to 100 spaces) to accommodate any potential demand for on-street parking generated by the development above the 42 spaces provided on-site.

**Car Ownership**

7.8 In order to determine the potential additional parking demand for the proposed development, car ownership was obtained from the 2011 Census for flats within the Kingston upon Thames 007 area.

7.9 The data shows that car ownership for flats in the area equated to approximately 0.61 vehicles per household. When applied to the 83 residential units, the resultant potential parking demand equates to approximately 51 vehicles. Given that 42 car parking spaces are included as part of the proposal, there is expected to be limited impact on local parking demand.

7.10 Even when assuming a worst case scenario whereby each unit owns a car, applying the 34 additional vehicles (83 cars – 42 on-site spaces = 41 on-street cars) to the highest existing parking demand of 213 parked vehicles and 100 spaces would result in 59 available spaces. Therefore, adequate capacity is available within the vicinity of the Site to accommodate any potential parking overspill.

**Car Parking Summary**

7.11 Whilst it has been proven that there is sufficient capacity on-street to accommodate any parking overspill generated by the residential development, taking into account the local car ownership level, the 42 car parking spaces on-site, the moderate accessibility to public transport and the travel plan to be secured via condition, the development is expected to have minimal impact on on-street parking demand. The proposals are therefore deemed suitable and appropriate in parking terms.
Servicing & Deliveries

Delivery Locations

7.12 Deliveries to the development, including the residential, retail and office uses, will be predominantly undertaken either from the proposed on-street loading bay on Coombe Road, or on-site.

Types of Delivery Vehicles

7.13 Deliveries to the residential units and office floorspace would be undertaken predominantly by light panel vans, no larger than a 3.5t box vans, and are not expected to have a material impact on the operation and environmental condition of the public highway. There may also be the infrequent demand for larger vehicles (10m rigid lorries) generally associated with the delivery of bulky items such as home/office furniture.

7.14 Deliveries to the retail units will vary in size based on the final occupier with a potential demand for 10m vehicles to stop either on-site or on-street within the proposed loading bay.

7.15 Swept path analysis is included at Appendix G and highlights that a 10m vehicle can access and eggress the proposed loading bay. A swept path for a large refuse vehicle is also provided and demonstrates that such vehicles can adequately manoeuvre within the site.

Servicing Movements

7.16 The following servicing movements are expected:

- The proposed 83 residential units are expected to generate in the region of 6-7 deliveries per day.

- It is difficult to predict the level of servicing movements associated with the retail floorspace prior to the confirmation of occupiers, however when assuming non-food retail for the 756sqm floorspace (potential for 4 units) it can be assumed to generate a worst case of 3 per unit equating to 12 movements per day.

- The proposed 331sqm of office floorspace has the potential to receive 1 servicing movement per day when based on an assessment of the TRICS (including TRAVL) database.

7.17 Overall the site is expected to generate 26 servicing movements across the day.
7.18 In order to safeguard residential amenity, both for existing residents and those that will occupy the development, it is proposed that commercial servicing will be limited to take place between 07:00 to 20:00 and that a detailed servicing management plan will be secured by planning condition, which will include a range of measures such that tenants will be obliged to reduce the amount of noise associated with servicing to the minimum possible.

7.19 Charging points will be specified such that the engines of refrigerated vehicles can be turned off on-site when the vehicle is stationary.

7.20 Landscaping has been proposed to mitigate the visual impact of service vehicles on the development’s residents.

**Kerbside Activity Study**

7.21 A kerbside activity study on Coombe Road was undertaken on Thursday 7th July 2016 to understand existing parking and loading activity within the parking bays, taxi bay and single yellow. Observations were carried out between 07:00 and 19:00. A copy of the results are included at Appendix I whilst a summary of the parking bays nearest the site is provided below:

**Parking Bay Area 1: Eastern side of Coombe Road, opposite Acacia Grove**

- During the surveyed period 70 cars, 17 LGVs and 2 OGVs were observed in the area.
- The average duration of stay for vehicles within this location equates to 12 minutes.
- The 16.5m of parking bay on the eastern side of Coombe Road, opposite Acacia Grove has a theoretical capacity of 3 vehicles based on an average vehicle length of 5.5m i.e. 16.5m length of parking bay / 5.5m average length of bay = 3 vehicles.
- The utilisation of the parking bays equates to 49%. This is on the basis that 89 vehicles stopped for an average of 12 minutes, equating to a total of 1,068 minutes out of the 2,160 minutes available (720 minutes x 3 for each space that a vehicle could occupy).

**Parking Bay Area 2: Eastern side of Coombe Road, adjacent to the site**

- During the surveyed period 122 cars, 23 LGVs and 4 OGVs were observed in the area.
- The average duration of stay for vehicles within this location equates to 14 minutes.
- The 33m of parking bay on the eastern side of Coombe Road, south of the crossover to the site has a theoretical capacity of 6 vehicles based on an average vehicle length of 5.5m i.e. 33m / 5.5m = 6 vehicles.

- The utilisation of the parking bays equates to 48% on the basis that 149 vehicles stopped for an average of 14 minutes, equating to a total of 2,086 minutes out of the 4,320 minutes available (720 minutes x 6 for each space that a vehicle could occupy).

7.22 The results of the vehicular activity survey undertaken demonstrate that there is ample spare capacity currently on the eastern side of Coombe Road to undertake the level of servicing activity anticipated to be generated by the proposed development.

**Effect of Proposed Highway Works on Spare Capacity**

7.23 The proposed development will result in the removal of 3 of the parking bays (18m) south of the existing crossover, required in order to widen the site access. This will have the following effect on spare capacity (when both Parking Bay Area 1 and 2 are assessed together with the removal of 3 parking bays):

- The existing 192 cars, 40 LGVs and 6 OGVs observed within the surveyed areas as well as the 26 delivery vehicles associated with the development are expected to stop within the eastern parking bays.

- The average duration of stay for vehicles within the eastern parking bays equates to 13 minutes.

- The 31.5m of parking bay on the eastern side of Coombe Road (16.5m + 33m – 18m for the loading bay) has a theoretical capacity of 6 vehicles based on an average vehicle length of 5.5m i.e. 31.5m / 5.5m = 6 vehicles.

- The utilisation of the parking bays equates to 79% on the basis that 264 vehicles stopped for an average of 13 minutes, equating to a total of 3,432 minutes out of the 4,320 minutes available (720 minutes x 6 for each space that a vehicle could occupy).

7.24 The parking analysis demonstrates that when 3 parking bays (18m) are removed along the eastern side of Coombe Road, the remaining spare capacity can accommodate the existing level of parking and servicing activity. This is deemed a robust assessment as the majority of existing
LGVs and OGVs as well as a proportion of cars which stopped during the kerbside activity study are associated with servicing and will, in the future, be able to make use of the loading bay proposed on-street. Furthermore the delivery vehicles associated with the development will also be able to make use of the proposed loading bay and the on-site loading facility. This will have the effect of increasing the spare capacity on the adjacent parking bays.

7.25 The kerbside activity study has shown that the parking bays on the eastern side of Coombe Road have the spare capacity to not only accommodate existing levels of servicing activity and the proposed servicing movements but also the removal of 3 parking bays for the proposed loading bay. In summary as servicing/loading already takes place within the parking bays, the provision of a formal on-street loading bay is not expected to reduce the overall capacity for parking to take place in the vicinity.

Access

7.26 Access will be maintained to the parking bays for 2 Alric Avenue, indeed will be improved in principle due to the benefit of the new pedestrian and vehicular access facilities that will be provided as part of the development.

7.27 General pedestrian access will be materially improved by the development, as it is proposed to set the buildings well back within the site, offering significantly more space for pedestrians on both the Coombe Road and Station site frontages, ensuring that the scheme responds to the potential future Station and cycle route improvements planned here.
8 MITIGATION MEASURES

Framework Travel Plan

8.1 Residents, Staff and Visitors at the proposed development will be encouraged to travel to the site by sustainable modes through the implementation of a Travel Plan. A draft Framework Travel Plan has been prepared by Caneparo Associates and is included as a separate document as part of the planning application.

8.2 The Travel Plan has been produced in accordance with TfL’s document ‘Travel Planning for New Development in London’.

Aims and Objectives

8.3 The primary objective of the Travel Plan will be to set out a long term strategy to facilitate and encourage modes of travel to the site by means other than the private car, which reflects current central Government policy. It will also seek to promote a shift from travel by public transport to active modes such as walking and cycling.

8.4 The strategy needs to be long term as changing travel habits takes time and will only occur through a combination of incentives, improved facilities, Government initiatives and changes in individual’s attitudes.

Measures and Initiatives

8.5 The initiatives and measures that form part of the Travel Plan will be a mixture of ‘hard’ and ‘soft’ measures.

8.6 The ‘hard’ measures include the provision of facilities such as safe and secure cycle parking, showers and changing rooms.

8.7 The ‘soft’ measures include initiatives such as cycle training courses and providing information on public transport services.

8.8 The Framework Travel Plan will be used by each use on-site in order to produce their own separate travel plan, to be finalised and agreed prior to the occupation of each use within the proposed development.
Delivery and Servicing Management Plan

8.9 As noted previously, in order to ensure that the impact of servicing associated with the site is minimised, the Applicant is willing to provide and agree to the implementation of a Delivery and Servicing Plan (DSP) by way of a planning condition or legal agreement.

8.10 The purpose of the DSP will be to mitigate the potential impacts of servicing activity associated with the development. The key aims and objectives of the DSP are:

- To minimise disruption to the local roads.
- To manage deliveries effectively to avoid peaking of deliveries and departures that may have a detrimental impact on the local highway network.
- To manage the number/volume of service vehicle movements during the AM and PM peak periods.

Construction Traffic Management Plan

8.11 An interim Construction Management Plan has been prepared, a more detailed document can be provided once a contractor has been appointed and can be secured via a condition or a legal agreement, to provide more specific details of the proposed construction arrangement, highlighting proposed vehicle movements, working hours, vehicle type, construction programme and storage requirements.

8.12 The construction process will be carefully managed to ensure safety and minimise disruption to the local road network. To this end the construction will be phased in such a way to allow vehicular access to the adjacent properties car parking on the internal road for as long as possible before seeking alternative options for resident car parking in the vicinity of the site.
SUMMARY AND CONCLUSION

Summary

9.1 Caneparo Associates are retained by SRG New Malden Ltd ('The Applicant') to provide traffic and transport advice in relation to proposed mixed use redevelopment of 5-29 Coombe Road ('The Site'), located in the London Borough of Merton (LBM).

9.2 In summary:

- The proposed development will provide 756sqm of flexible retail floorspace, 331sqm of office floorspace and 83 residential units.

- The site is located within an accessible London location, achieving a PTAL rating of 3 and being within 50m of New Malden Station. As such the majority of trips associated with the proposals can be expected to be made by sustainable modes of travel.

- The proposals will provide a significant improvement to the urban realm, both within and surrounding the site.

- The proposed development will provide 42 car parking spaces within a basement level car park accessed via a ramp which is expected to cater for all parking demand arising from the residential units.

- Cycle parking will be provided at basement floor level for residents and ground floor for staff and visitors in accordance with the London Plan standards. The provision will offer secure, sheltered and accessible cycle parking facilities.

- Deliveries will be undertaken both on-street from the proposed loading bay and from within the site. The existing level of vehicle activity demonstrates that the proposed servicing arrangement can be accommodated without detriment to the operation of the local road network.

- The proposals include a Travel Plan which will encourage trips to be undertaken by sustainable modes of travel.

- A Delivery & Servicing Plan will be implemented at the site to manage and coordinate servicing activity.
• An interim Construction Management Plan has will be prepared to provide an outline of the proposed construction arrangement and how the process will be managed.

• The development would be in accordance with relevant policy guidance and the proposed residential, retail and office uses are appropriate for this site, and can be successfully accommodated by the local transport network.

**Conclusion**

9.3 In light of the above, we conclude that the proposed mixed use development will not result in a material impact in highways and transportation terms. Furthermore, in accordance with NPPF paragraph 32, the residual cumulative impacts of the development are not considered severe, and, as such, should not be prevented or refused on transport grounds.
Buses from New Malden

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Route finder

Day buses including 24-hour services

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© Transport for London TFL 2011.10.11 (T)
Information correct from October 2011
PTAL output for 2011 (Base year)

15 Coombe Rd, New Malden KT3 4PX, UK
Easting: 521351, Northing: 168704
Grid Cell: 27526
Report generated: 08/09/2016

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Total Grid Cell AI: 12.02
**REVERSE MOVEMENTS ARE SHOWN IN BLUE**

- Design speed for all reverse movements: 2.5kph

**FORWARD MOVEMENTS ARE SHOWN IN BLACK**

- Design speed for all forward movements: 5kph

---

**Proposed Shared Surface**

- **Approximately 140 sqm**
- **Approximately 279 sqm**
- **Approximately 151 sqm**
- **Approximately 140 sqm**
- **Approximately 151 sqm**
- **Approximately 18 sqm**
- **Approximately 17 sqm**
- **Approximately 26.5 sqm**

---

**Proposed Loading Bay**

- **Approximately 30 sqm**
- **Approximately 279 sqm**
- **Approximately 17 sqm**

---

**Refuse Storage**

- **Approximately 26.5 sqm**
- **Approximately 17 sqm**

---

**Vent**

- **Approximately 151 sqm**

---

**Provisioned Double & Single Yellow Lines**

- **No. 31**
- **No. 2**
- **No. 2**

---

**Site Boundary**

- **No. 2562**

---

**Provisioned Kerb [25mm Upstand]**

- **New scheme plan.**
- **Service layby at 2.5m, the remainder at 2m.**
- **Lock-to-lock changes.**
- **New scheme base.**

---

**Revision History**

- **06.12.2017**
  - New scheme plan.
- **05.06.2017**
  - Service layby at 2.5m, the remainder at 2m.
- **08.05.2017**
  - Lock-to-lock changes.
- **23.01.2017**
  - New scheme base.

---

**Notes**

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only.

KEY:

- SITE BOUNDARY
- EXISTING SINGLE YELLOW LINES
- EXISTING DOUBLE YELLOW LINES
- MON-SAT, 09:30 TO 18:30, MAX STAY 20MINS, NO RETURN WITHIN 2 HOURS
- TAXI BAY
- PROPOSED LOADING BAY
- PROPOSED SHARED SURFACE
- PROPOSED KERB [25mm UPSTAND]

---

**Client:** SRG New Malden Ltd

**Proposed Shared Surface**

**Coombe Road, New Malden**

**Drawing Title:** Proposed Shared Surface

**Scale:** 1:500

**Date:** 07.11.2016

**Status:** For Approval

**Drawn by:** A5

**Checked by:** NB

---

**Notes:**

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### LIST OF SITES relevant to selection parameters

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Edge of Town Centre  
Built-Up Zone  | 134  | MONDAY 29/03/04  | MANUAL       |
| HG-03-C-02 | BLOCK OF FLATS | HARINGEY | HIGH ROAD  
WOODSIDE PARK  
WOOD GREEN  | Suburban Area (PPS6 Out of Centre)  
Residential Zone  | 30  | WEDNESDAY 01/10/14  | MANUAL       |
| HO-03-C-02 | BLOCK OF FLATS | HOUNSLOW | HIGH STREET | BRENTFORD  
Town Centre  
Built-Up Zone  | 86  | WEDNESDAY 03/09/14  | MANUAL       |
| HV-03-C-01 | BLOCKS OF FLATS | HAVERING | WATERLOO ROAD  | ROMFORD  
Suburban Area (PPS6 Out of Centre)  
Built-Up Zone  | 530  | WEDNESDAY 25/06/14  | MANUAL       |
| NH-03-C-01 | BLOCK OF FLATS | NEWHAM  | ARTHINGWORTH STREET  | STRATFORD  
Neighbourhood Centre (PPS6 Local Centre)  
Residential Zone  | 12  | THURSDAY 14/11/13  | MANUAL       |
| RD-03-C-01 | BLOCKS OF FLATS | RICHMOND | KEW ROAD  | KEW  
Suburban Area (PPS6 Out of Centre)  
Residential Zone  | 144  | TUESDAY 11/06/02  | MANUAL       |
| RD-03-C-02 | BLOCK OF FLATS | RICHMOND | B306 QUEENS RIDE  | BARNES  
Suburban Area (PPS6 Out of Centre)  
Residential Zone  | 28  | MONDAY 29/01/07  | 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**

<table>
<thead>
<tr>
<th>Site Ref</th>
<th>Reason for Deselection</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN-03-C-01</td>
<td>PTAL</td>
</tr>
<tr>
<td>EG-03-C-02</td>
<td>PTAL</td>
</tr>
<tr>
<td>HK-03-C-02</td>
<td>PTAL</td>
</tr>
<tr>
<td>HK-03-C-03</td>
<td>PTAL</td>
</tr>
<tr>
<td>HM-03-C-01</td>
<td>LOCATION</td>
</tr>
<tr>
<td>IS-03-C-01</td>
<td>PTAL</td>
</tr>
<tr>
<td>IS-03-C-03</td>
<td>PTAL</td>
</tr>
<tr>
<td>KI-03-C-02</td>
<td>PTAL</td>
</tr>
<tr>
<td>KN-03-C-02</td>
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<tr>
<td>KN-03-C-03</td>
<td>LOCATION</td>
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<tr>
<td>SK-03-C-01</td>
<td>PTAL</td>
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<tr>
<td>SK-03-C-02</td>
<td>PTAL</td>
</tr>
<tr>
<td>TH-03-C-02</td>
<td>PTAL</td>
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<tr>
<td>TH-03-C-03</td>
<td>PTAL</td>
</tr>
<tr>
<td>WH-03-C-01</td>
<td>PTAL</td>
</tr>
</tbody>
</table>
TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 1 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

<table>
<thead>
<tr>
<th>Time Range</th>
<th>ARRIVALS</th>
<th>DEPARTURES</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Days</td>
<td>Ave. DWELLS</td>
<td>Trip Rate</td>
</tr>
<tr>
<td>00:00 - 01:00</td>
<td>7</td>
<td>138</td>
<td>0.028</td>
</tr>
<tr>
<td>01:00 - 02:00</td>
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<td></td>
<td></td>
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<tr>
<td>02:00 - 03:00</td>
<td></td>
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<td></td>
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<td>03:00 - 04:00</td>
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<td>04:00 - 05:00</td>
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<td>05:00 - 06:00</td>
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<td>06:00 - 07:00</td>
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<td>07:00 - 08:00</td>
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<td>08:00 - 09:00</td>
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<td>09:00 - 10:00</td>
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<td>10:00 - 11:00</td>
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<td>11:00 - 12:00</td>
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<td>13:00 - 14:00</td>
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<td>14:00 - 15:00</td>
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<td>15:00 - 16:00</td>
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<tr>
<td>17:00 - 18:00</td>
<td>7</td>
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<tr>
<td>18:00 - 19:00</td>
<td>7</td>
<td>138</td>
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<tr>
<td>22:00 - 23:00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>23:00 - 24:00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Rates: 0.592 0.000 0.651 0.000 1.243 0.000

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.

Parameter summary

Trip rate parameter range selected: 12 - 530 (units: )
Survey date range: 01/01/00 - 23/04/15
Number of weekdays (Monday-Friday): 7
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 1
Surveys manually removed from selection: 15

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 TOTAL PEOPLE**

**Calculation factor: 1 DWELLS**

Estimated TRIP rate value per 1 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

<table>
<thead>
<tr>
<th>Time Range</th>
<th>ARRIVALS</th>
<th>DEPARTURES</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Days</td>
<td>Ave. Rate</td>
<td>No. Days</td>
</tr>
<tr>
<td>00:00 - 01:00</td>
<td>7</td>
<td>0.074</td>
<td>0.000</td>
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<td>23:00 - 24:00</td>
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<td>0.156</td>
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</tbody>
</table>

Total Rates:

<table>
<thead>
<tr>
<th>Time Range</th>
<th>No. Days</th>
<th>Ave. Rate</th>
<th>Trip Rate</th>
<th>Estimated Trip Rate</th>
<th>No. Days</th>
<th>Ave. Rate</th>
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<td>0.000</td>
<td>3.738</td>
<td>0.000</td>
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</tr>
</tbody>
</table>

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### Parameter summary

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trip rate parameter range selected:</td>
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</tr>
<tr>
<td>Survey date range:</td>
<td>01/01/00 - 23/04/15</td>
</tr>
<tr>
<td>Number of weekdays (Monday-Friday):</td>
<td>7</td>
</tr>
<tr>
<td>Number of Saturdays:</td>
<td>0</td>
</tr>
<tr>
<td>Number of Sundays:</td>
<td>0</td>
</tr>
<tr>
<td>Surveys automatically removed from selection:</td>
<td>1</td>
</tr>
<tr>
<td>Surveys manually removed from selection:</td>
<td>15</td>
</tr>
</tbody>
</table>

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