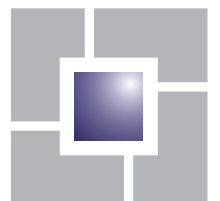


***Proposed Drive Through Restaurant, Elettra  
Avenue, Waterloo***

***Transport Assessment***



david tucker associates  
transport planning consultants

Proposed Drive Through  
Restaurant, Elettra Avenue,  
Waterlooville

***Transport Assessment***

7<sup>th</sup> July 2015

SKP/NES 17144-04 Drive Through Restaurant Transport  
Assessment

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## **1 INTRODUCTION**

- 1.1 David Tucker Associates (DTA) has been commissioned by Hargreaves Properties Limited to assess the traffic and transport implications to support the development of a Drive Through Restaurant (McDonalds) (Block B) (c. 546sqm) at the former BAE Systems Technology Park “The Park” on Elettra Avenue, WaterlooVille. A copy of the site masterplan is attached at **Appendix A**.
- 1.2 The Park currently comprises one structure, known as E Block. The other former buildings were demolished in 2013. The Park as a whole comprises 5.15ha of research and development land use and an ancillary restaurant. The Park comprised an extensive parking area totalling 863 parking spaces.
- 1.3 The Park has been subject to a number of planning permissions including a mixed-use development in 2012 (application number APP/12/00652) for Class B Uses, hotel, restaurant, drive through and car showroom. In 2014 the planning committee resolved to grant planning permission for a mixed-use retail development (application number APP/13/00893). The development proposals comprised of a discount foodstore, bowling alley, gym, cinema, hotel, drive through, restaurants and a public house.
- 1.4 The site is also subject to a separate planning application regarding the construction of a vehicular route through the site from the Elettra Avenue/ Waterberry Drive roundabout to Silverthorne Way.
- 1.5 This Transport Assessment has been prepared in accordance with the National Planning Policy Framework (NPPF) and best practice. The NPPF document states that all developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. The TA will be based on the following headings:

|            |                           |
|------------|---------------------------|
| Chapter 1: | Introduction              |
| Chapter 2: | National and Local Policy |
| Chapter 3: | Existing Conditions       |



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|            |                                     |
|------------|-------------------------------------|
| Chapter 4: | Development Proposals               |
| Chapter 5: | Traffic Generation and Distribution |
| Chapter 6: | Junction Capacity Assessment        |
| Chapter 7: | Summary and Conclusions             |

1.6 A detailed Travel Plan has also been prepared for the site and this is included under a separate cover.

1.7 The Park as a whole comprises 5.15ha. To the east of the Park in addition to Block B, it is currently envisaged that development would comprise the following:

|               |   |                                                                                                                                                                                                    |
|---------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Block A       | - | a discount food retail unit (c. 1,908sqm);                                                                                                                                                         |
| Block C and D | - | a hotel and/or units within Use Class A3 of c.516.9sqm floorspace (C) and c.328.3sqm floorspace (D);                                                                                               |
| Block E       | - | land use to be confirmed, but D2 (Leisure), or A1 (Non Food Retail) with floorspace of c.4,725.3sqm. It is likely that the building would be occupied by a number of occupiers or a range of uses. |

1.8 The development on the western part of the Park is likely to be considered following the eastern park. The eventual land use on this western part is liable to be employment at a similar quantum of floorspace to that permitted under a 2013 planning permission (i.e. approximately 8,593sqm). The indicative layout plan setting out the land uses is attached at **Appendix A**. These land uses will be subject to separate planning applications.

1.9 Given the close proximity of these proposed land uses to the proposed drive through restaurant, this Transport Assessment will also assess the cumulative impacts of The Park proposals.

1.10 Discussions have been held with Hampshire County Council regarding the scope of works. It was agreed with HCC that material used within the PBA Transport Assessment dated 2013 would be utilised for the purposes of assessing the development impacts.



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## **2 PLANNING POLICY**

### **2.1 National Guidance**

#### **National Planning Policy Framework**

2.1.1 In March 2012, the DCLG published the NPPF. The NPPF confirms that the Government will continue to encourage sustainable development and in relation to the transport issues it notes that:

*“Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.”*

Para 29

2.1.2 It confirms that:

*“All developments that generate significant amounts of movement 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”.*

Para 31



- 2.1.3 The policy test in terms of new development in the NPPF relates to the need to ensure that development impacts are minimised and the use of sustainable transport modes are maximised. NPPF confirms that:

*“Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. However this needs to take account of policies set out elsewhere in this Framework, particularly in rural areas”.*

*Para 34*

*“In rural areas, exercising the duty to cooperate with neighbouring authorities, local planning authorities should be responsive to local circumstances and plan housing development to reflect local needs, particularly for affordable housing, including through rural exception sites where appropriate. Local planning authorities should in particular consider whether allowing some market housing would facilitate the provision of significant additional affordable housing to meet local needs”.*

*Para 54*

### **Department for Transport – Guidance on Transport Assessment**

- 2.1.4 The GTA document was issued by the DfT and DCLG in March 2007. In October 2014, the GTA document was archived; however it is still referred to in assisting the preparation of Transport Assessments and Transport Statements.
- 2.1.5 It is intended to assist stakeholders in determining if an Assessment is required for a particular development and provides guidance on the content. The methodology used for this report takes account of best practice guidance set out in the NPPF. As with the NPPF, this document should be reviewed in conjunction with other relevant statements of national planning policy.
- 2.1.6 In preparing this Transport Assessment (TA) the following three key areas have been identified:

#### ***Encouraging environmental sustainability***

- ***Reducing the need to travel, especially by car*** – reducing the need for travel, reducing the length of trips, and promoting multi-purpose or linked trips



*by promoting more sustainable patterns of development and more sustainable communities that reduce the physical separation of key land uses.*

- **Tackling the environmental impact of travel** – by improving sustainable transport choices, and by making it safer and easier for people to access jobs, shopping, leisure facilities and services by public transport, walking, and cycling.
- **The accessibility of the location** – the extent to which a site is, or is capable of becoming, accessible by non car modes, particularly for large developments that involve major generators of travel demand.
- **Other measures which may assist in influencing travel behaviour (ITB)** – achieving reductions in car usage (particularly single occupancy vehicles), by measures such as car sharing/pooling, High Occupancy Vehicle (HOV) lanes and parking control

#### **Managing the existing network**

- **Making best possible use of existing transport infrastructure** – for instance by low-cost improvements to the local public transport network and using advanced signal control systems, public transport priority measures (bus lanes), or other forms of Intelligent Transport Systems (ITS) to improve operations on the highway network. It should be noted that the capacity of the existing public transport infrastructure and footpaths is finite, and in some areas overcrowding already exists.
- **Managing access to the highway network** – taking steps to maximise the extent to which the development can be made to 'fit' within the available capacity by managing access from developments onto the highway network.

#### **Mitigating residual impacts**

- **Through demand management** – using traffic control measures across a wide network to regulate flows.
- **Through improvements to the local public transport network, and walking and cycling facilities** – for example, by extending bus routes and increasing bus frequencies, and designing sites to facilitate walking and cycling.
- **Through minor physical improvements to existing roads** – it may be possible in some circumstances to improve the capacity of existing roads by relatively minor physical adjustments such as improving the geometry of junctions etc. within the existing highway boundary.



- ***Through provision of new or expanded roads*** – *it is considered good transport planning practice to demonstrate that the other opportunities above have been fully explored before considering the provision of additional road space such as new roads or major junction upgrades.*

2.1.7 The methodology used for the TA is in accordance with best practice outlined above.

## **2.2 Local Guidance**

### **Hampshire Local Transport Plan (2011-2031)**

2.2.1 The third Hampshire Local Transport Plan (LTP3) sets out the highway authority's detailed policies and proposals for developing an integrated transport strategy from 2011 to 2031. On 6 May 2014 the Executive Member for Environment and Transport approved a rolled forward three year Implementation Plan as part of a process of annual review and revision which is carried out each spring.

2.2.2 The LTP3 is a step towards realising the County's vision of 'safe, efficient and reliable ways to get around a prospering and sustainable Hampshire'. Hampshire has three main transport priorities over the next 20 years:

- To support economic growth by ensuring the safety, soundness and efficiency of the transport network in Hampshire;
- Provide a safe, well-maintained, and more resilient road network in Hampshire; and
- Manage traffic to maximise the efficiency of existing network capacity.

2.2.3 Relevant to the proposed site are the following targets and indicators:

- Road safety: to reduce the number of people killed or seriously injured in road traffic accidents on Hampshire's roads by 20% from 2004 to 2008



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average by 2020. To reduce the number of children killed or seriously injured in road traffic accidents on Hampshire's roads by 20% from the 2004 to 2008 average by 2020;

- Level of congestion at local priority sites: to address issues within local priority areas with congestion using a programme of practical interventions;
- Reduce carbon emissions;
- Increase public transport usage; and
- Good local accessibility: to reduce the need to travel in terms of trip length and frequency.

### **Havant Core Strategy (March 2011)**

- 2.2.4 The Core Strategy was adopted in March 2011 and is the principal document in Havant Borough Council's Local Development Framework. The Core Strategy outlines the Council's vision for the spatial development of the borough up to 2026 setting out policies and objectives at a strategic level. The Core Strategy states that improved public transport is an important aspiration for the future of the area of Waterlooville which is separated by the rest of the borough by the A3(M).



---

### **3 EXISTING CONDITIONS**

#### **3.1 Site Location**

3.1.1 The site is located within the Brambles Business Park to the north-west of Waterlooville town centre as shown on **Figure 1**. The site is approximately 2km to the west of the A3(M) and 10km north of Portsmouth.

3.1.2 The Park currently comprises one structure, known as E Block. The other former buildings were demolished in 2013. The primary means of access to the Park is via a four arm roundabout to the north onto Elettra Avenue at its junction with Waterberry Drive. The Park also benefits from two additional access locations onto Silverthorne Way, in the south central and south east parts of the Park. These were gated for security purposes given the sensitivity of the BAE systems operation, but are not subject to restrictive operation by planning control.

#### **3.2 Local and Wider Road Network**

3.2.1 Elettra Avenue, between the Elettra Avenue/ Waterberry Drive/ Site Access roundabout and the B2150 Hambledon Road/ Milton Road/ Elettra Avenue roundabout, is a 10m wide carriageway with three lanes. In both the eastbound and westbound direction, a single exit lane is provided from each roundabout which flares to two lanes on the approach to the next roundabout.

3.2.2 Elettra Avenue continues west of the roundabout with Waterberry Drive/ site access as a single lane carriageway approximately 7.3m in width and subject to a 30mph speed limit. The B2150 Hambledon Road runs adjacent to the eastern boundary of the site and provides a key strategic link via connections with the A3(M), to the east of Waterlooville.

3.2.3 The B2150 Hambledon Road to the north of the roundabout with Elettra Avenue/ Milton Road is a single lane carriageway approximately 7.3m in width and subject to a 30mph speed limit. The B2150 Hambledon Road to the south of the roundabout with Milton Road/ Elettra Avenue is a dual carriageway of approximately 7.3m in width and subject to a 40mph speed limit.



3.2.4 Silverthorne Way also routes around the southern and western part of the site connecting into Elettra Avenue to the north. Along the southern part of The Park, Silverthorne Way connects onto the B2150 Hambledon Road via a left in/ left out priority junction.

### **3.3 Traffic Data**

3.3.1 DTA has utilised the observed traffic survey data undertaken in 2012 from the PBA Transport Assessment report for the previously consented mixed-use development. Manual Classified Counts (MCCs) and Queue Length surveys were undertaken for a weekday AM period of 07:00-10:00 and PM period of 16:00-19:00, for the following two junctions:

- Elettra Avenue/ Waterberry Drive/ Site Access roundabout; and
- B2150 Hambledon Road/ Milton Road/ Elettra Avenue roundabout.

### **3.4 Baseline Traffic Generation**

3.4.1 Planning consent was granted at the former BAE site in 1982 for 28,300m<sup>2</sup> of light industrial, and research and development uses with ancillary buildings. The uses on site included:

- Main Building (C Block) – 19,498sqm of B1b land use;
- E Block – 6,726sqm of B1c land use;
- Beam Plot – 927sqm of B1c land use; and
- Restaurant – for employees on site.

3.4.2 The Park currently comprises one structure, known as E Block. The existing E Block site is significantly under-occupied and there is no data available from when it was fully operational. As such the TRICS database has been reviewed to identify appropriate trip rates for B1c. A summary of the vehicular trip rates and traffic

generation is set out in **Table 1** below with the TRICS outputs attached at **Appendix B**.

**Table 1** – Baseline E Block Trip Rates and Vehicular Traffic Generation

|                         | Vehicle Trip Rate |       |       | Vehicular Traffic Generation |     |       |
|-------------------------|-------------------|-------|-------|------------------------------|-----|-------|
|                         | In                | Out   | Total | In                           | Out | Total |
| AM Peak (08:00 – 09:00) | 1.300             | 0.35  | 1.650 | 87                           | 24  | 111   |
| PM Peak (17:00 – 18:00) | 0.200             | 0.983 | 1.183 | 13                           | 66  | 80    |

### 3.5 Personal Injury Collision Data

3.5.1 Personal Injury Collision (PIC) data has been obtained from Hampshire Constabulary for the last five year period from 01/02/2010 to 31/01/2015. A copy of the PIC data is attached at **Appendix C** and summarised in **Table 2** below.

**Table 2** – PIC Data Summary

|                                    | Fatal | Serious | Slight | Total |
|------------------------------------|-------|---------|--------|-------|
| Motor Vehicles<br>(excl. 2-wheels) | 0     | 0       | 11     | 11    |
| 2-wheeled motor<br>vehicles        | 0     | 3       | 4      | 7     |
| Pedal Cycles                       | 0     | 3       | 5      | 8     |
| Horses & Other                     | 0     | 0       | 0      | 0     |
| Total                              | 0     | 6       | 20     | 26    |

3.5.2 A review of the PIC data shows that there were 26 recorded collisions in the last five year period, of which 6 were recorded as “serious” in severity and 20 as “slight” in severity.

3.5.3 There was one recorded collision on Waterberry Drive/ Elettra Avenue roundabout resulting in a “slight” injury. The collision was recorded as vehicle stopped and another vehicle hit rear of vehicle.

3.5.4 There were 11 recorded collisions at the Hambledon Road/ Elettra Avenue/ Milton Road roundabout, one of which was “serious” in severity and the remaining were “slight” in severity. The collisions were recorded as:



- Motorcyclist lost control;
- Vehicle fails to give way and motorcyclist enters junction colliding with vehicle;
- Vehicle enters roundabout failing to judge motorcyclist on roundabout and collisions occurs;
- Vehicle enters roundabout, failed to see motorcyclist and collision occurred;
- Vehicle exited roundabout, failing to see static traffic ahead and collided with rear of another vehicle;
- Vehicle entered roundabout and collided with pedal cycle turning right;
- Vehicle entered roundabout, failed to see another vehicle already on roundabout and collided;
- Vehicle (bus) stopping at the roundabout when the seat on the bus becomes dislodged and collided with passenger;
- Vehicle entering roundabout, failed to give way and collided with pedal cycle;
- Vehicle entering roundabout, fails to give way and collided with another vehicle; and
- Vehicle entering roundabout, failed to give way and collided with pedal cycle.

3.5.5 Of the 11 recorded serious collisions, 7 involved a motorcyclist or pedal cycle. Whilst some of these collisions were attributed to motorcycle/ pedal cycle error, it may be that this roundabout could benefit from some minor improvements by way of signage.

### **3.6 Walking and Cycling**

3.6.1 The Brambles Business Park and adjacent local community is served by an extensive network of footways. Existing off-road pedestrian and cycle routes are

provided on both sides of Elettra Avenue providing good links into/ out of Brambles Business Park.

- 3.6.2 The off-road pedestrian and cycle route adjacent to the southern carriageway of Elettra Avenue continues in a southerly direction adjacent to the south carriageway of Hambledon Road all the way through to the toucan crossing north of the Maurepas Way/ A3 London Road/ Rockville Drive roundabout.
- 3.6.3 The town centre can be accessed more directly via the signalised crossing at the B2150 Hambledon Road/ Aston Road junction which provides a connection to the off-road pedestrian and cycle route that runs through the Wellington Retail Park connecting to Waterlooville town centre via a subway.
- 3.6.4 The pedestrian and cycle route adjacent to the northern carriageway of Elettra Avenue provides a link to the residential areas accessed off Milton Road via the signalised crossing to the north of the B2150 Hambledon Road/ Milton Road/ Elettra Avenue roundabout.

### 3.7 Bus Services

- 3.7.1 Bus stops are located on the B2150 Hambledon Road which serve Brambles Business Park via Waterberry Drive. Bus lay-bys and bus shelters are provided at both of the B2150 Hambledon Road bus stops. A bus stop flag with service and timetable information is provided at the Milton Road stop. A summary of the bus services is detailed in **Table 3** below.

**Table 3 – Summary of Bus Services**

| Service No. | Operator            | Route                | Frequency          |               |
|-------------|---------------------|----------------------|--------------------|---------------|
|             |                     |                      | Mon - Sat          | Sun           |
| 39          | Stagecoach          | Havant – Wecock Farm | 10-20 minutes      | 60 minutes    |
| 7           | First               | Southsea - Wecock    | 10-60 minutes      | 20-60 minutes |
| 8/8X        | First               | Gunwharf - Clanfield | 20-60 minutes      | 20-60 minutes |
| X9          | First               | Gunwharf - Denmead   | 30-60 minutes      | No service    |
| 300         | Emsworth & District | Denmead - Chichester | One Service - Weds | No service    |



- 
- 3.7.2 The site is well connected to major local destinations with 10 buses per hour to Waterlooville town centre, 4 per hour to Portsmouth and Southsea and 4 per hour to Havant.

### **3.8 Committed Development**

- 3.8.1 There are two committed development sites in close proximity to the proposed site; namely Sainsbury's and the West of Waterlooville MDA site. Details of the traffic generation from these two sites are discussed in further detail in Section 6.1.



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## **4 DEVELOPMENT PROPOSALS**

### **4.1 Vehicular Access**

- 4.1.1 The primary means of access to the Park is via a four arm roundabout to the north onto Elettra Avenue at its junction with Waterberry Drive. The Park also benefits from two additional access locations onto Silverthorne Way, in the south central and south east parts of the Park.

### **4.2 Pedestrian and Cycle Access**

- 4.2.1 The main point of access for pedestrians and cyclists will be maintained from the Elettra Avenue/ Waterberry Drive/ Site Access roundabout through the continuation of the existing route into the site. A further pedestrian and cycle access will be provided off Hambledon Road into the site.

### **4.3 Car Parking**

- 4.3.1 Car parking will be provided in accordance with the standards set out in Hampshire's Car Parking Standards. For eating and dining establishments the standards state 1 space per 5sqm dining area/bar area/ dance floor (maximum). Based on a total dining area of 238sqm, the indicative masterplan for B Block envisages 46 car parking spaces of which two spaces will be disabled. The exact number of spaces will however be secured via conditions.

### **4.4 Cycle Parking**

- 4.4.1 Cycle parking will be provided in accordance with the cycle parking standards set out in Hampshire's Car Parking Standards. The standards state 1 stand per 20sqm GEA. The exact number of spaces will however be secured via conditions.

### **4.5 Deliveries and Servicing**

- 4.5.1 The site access will be shared by customers and delivery vehicles within a one-way car park operation. Deliveries will take place from the front of the building and this arrangement has been successfully used at other McDonald sites across the UK. A



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TRACK analysis has been undertaken and is shown on **DTA Drawing 17144-02**. The analysis demonstrates that a delivery vehicle can enter, manoeuvre around the car park to unload and exit the site.

- 4.5.2 Delivery vehicles will access the site via the Elettra Avenue/ Waterberry Drive/ Site Access roundabout.
- 4.5.3 McDonald's drive through restaurants typically receive around three deliveries per week, with goods typically delivered by articulated lorry, up to 16.5m in length. This is usually parked for between 15 minutes to 1 hour within a 2 hour delivery slot and will be scheduled to arrive at quiet trading periods. Deliveries are planned in advance and automatic emails will be sent to the restaurant 30 minutes prior to the vehicle arrival.
- 4.5.4 Refuse collection will be collected by a private contractor approximately 3 times per week.

#### **4.6 Framework Travel Plan**

- 4.6.1 A Framework Travel Plan has been prepared for the whole Park site under a separate cover. The Framework Travel Plan will include objectives and targets, and set out measures to encourage staff to travel to the site by sustainable modes of transport thus reducing travel by single occupancy car driver trips.

## 5 TRAFFIC GENERATION AND DISTRIBUTION

### 5.1 Proposed Traffic Generation – Drive Through Restaurant

5.1.1 The trip rates and traffic generation for the drive through restaurant (McDonalds) (Block B) have been extracted from the previously agreed Transport Assessment (2013) report for the consented mixed-use development. A copy of the TRICS outputs are attached at **Appendix D** with the person and vehicular trip rates and traffic generation summarised in the tables below.

**Table 6 – Trip Rates and Traffic Generation**

|                         | Person Trip Rate          |        |        | Vehicle Trip Rate          |       |       |
|-------------------------|---------------------------|--------|--------|----------------------------|-------|-------|
|                         | In                        | Out    | Total  | In                         | Out   | Total |
| AM Peak (08:00 – 09:00) | 5.94                      | 4.41   | 10.35  | 5.94                       | 4.41  | 10.35 |
| PM Peak (17:00 – 18:00) | 12.008                    | 11.718 | 23.726 | 10.78                      | 10.49 | 21.27 |
|                         | Person Traffic Generation |        |        | Vehicle Traffic Generation |       |       |
|                         | In                        | Out    | Total  | In                         | Out   | Total |
| AM Peak (08:00 – 09:00) | 32                        | 24     | 56     | 32                         | 24    | 56    |
| PM Peak (17:00 – 18:00) | 66                        | 64     | 130    | 59                         | 57    | 116   |

5.1.2 Given the close proximity of the proposed drive through restaurant to other proposed land uses on site, it is considered that a 20% reduction in vehicular trips is appropriate for the site. The resulting 'new' trips are summarised in **Table 7** below.

**Table 7 – Traffic Generation – 'New' Trips**

|                          | AM Peak (08:00-09:00) |     |       | PM Peak (17:00-18:00) |     |       |
|--------------------------|-----------------------|-----|-------|-----------------------|-----|-------|
|                          | In                    | Out | Total | In                    | Out | Total |
| Drive Through Restaurant | 26                    | 19  | 46    | 47                    | 46  | 93    |

### 5.2 Traffic Distribution and Assignment

5.2.1 The traffic generation for the drive through restaurant has been distributed and assigned to the network based on the distribution previously agreed with Hampshire County Council in the Transport Assessment (2013) prepared by PBA for the consented mixed-use retail development.

5.2.2 As set out in the PBA report, the traffic has been distributed based on the population at the ward level within a local distribution study area. It is anticipated that the core catchment area would be Waterlooville and Denmead. The resulting percentage proportion of each ward is set out below:

- Cowplain – 17%;
- Hart Plain – 18%;
- Purbrook – 17%;
- Stakes – 18%;
- Waterloo – 17%; and
- Denmead – 12%.

5.2.3 Based on the above ward proportions, the traffic has been assigned to/ from the site based on the most direct route to each ward. The resulting assignments are summarised in **Table 8** below.

**Table 8 – Traffic Assignment**

| Road                       | Assignment |
|----------------------------|------------|
| Milton Road                | 32.5%      |
| B2150 Hambledon Road North | 18%        |
| B2150 Hambledon Road South | 49.5%      |

5.2.4 In addition to the above it is also assumed that inbound movements coming from Hambledon Road South would route into the site via Silverthorne Way and outbound movements will route via the Site Access/ Elettra Avenue/ Waterberry Drive roundabout.

### **5.3 Other Land Uses Traffic Generation**

5.3.1 The Park as a whole comprises 5.15ha. To the east of the Park, it is currently envisaged that development would comprise the following:



- Block E – either D2 (Leisure) or A1 (Non Food Retail) (4,725.3sqm);
- Block A – a discount foodstore (1,908sqm);
- Block C – a hotel and/ or units within Use Class A3 (516.9sqm); and
- Block D – a drive through facility (Use Class A3/ A5 (328.3sqm).

5.3.2 The development on the western part of the Park will be considered following the eastern park. The eventual land use on this western part is liable to be employment at a similar quantum of floorspace to that permitted under a 2013 planning permission (i.e. approximately 8,593sqm).

5.3.3 To understand the overall impact of the proposals on The Park, it is necessary to assess the traffic generation from the land uses identified above. The trip rates and traffic generation for the discount foodstore (Block A), drive through facilities (Block D), A3 restaurant (Block C) and employment (west block) have been extracted from the previously agreed Transport Assessment (2013) report for the consented mixed-use development. A copy of the TRICS outputs are attached at **Appendix E** with the person and vehicular trip rates and traffic generation summarised in the tables below.

5.3.4 It is understood that E Block will be promoted as either D2 (Leisure) use; gym or a bowling alley or a cinema or A1 (Non Food Retail). A TRICS assessment has been undertaken for these uses and the outputs are attached at **Appendix E**. The TRICS analysis shows that a gym would be the highest trip generator for E Block. For the purposes of assessing the potential traffic impacts of E Block, the higher vehicular flows associated with the gym will therefore be used.



**Table 11 – Vehicular Trip Rates**

| Land Use               | Weekday AM Peak (08:00-09:00) |       |         | Weekday PM Peak (17:00-18:00) |       |         |
|------------------------|-------------------------------|-------|---------|-------------------------------|-------|---------|
|                        | In                            | Out   | Two-way | In                            | Out   | Two-way |
| E Block (assuming gym) | 1.107                         | 0.96  | 2.067   | 2.467                         | 1.707 | 4.174   |
| Discount Foodstore     | 1.06                          | 0.67  | 1.73    | 3.36                          | 4.04  | 7.40    |
| A3 Restaurant          | 0.000                         | 0.000 | 0.000   | 2.919                         | 2.342 | 5.261   |
| Hotel*                 | 0.228                         | 0.645 | 0.873   | 0.407                         | 0.159 | 0.566   |
| Drive Through          | 5.94                          | 4.41  | 10.35   | 10.78                         | 10.49 | 21.27   |
| Employment             | 1.30                          | 0.35  | 1.65    | 0.20                          | 0.983 | 1.183   |

\*Note – Vehicular trip rates provided for both Restaurant and Hotel

**Table 12 – Person Trip Rates**

| Land Use               | Weekday AM Peak (08:00-09:00) |       |         | Weekday PM Peak (17:00-18:00) |        |         |
|------------------------|-------------------------------|-------|---------|-------------------------------|--------|---------|
|                        | In                            | Out   | Two-way | In                            | Out    | Two-way |
| E Block (assuming gym) | 1.400                         | 1.053 | 2.453   | 3.387                         | 2.573  | 5.96    |
| Discount Foodstore     | 1.746                         | 1.197 | 2.943   | 6.374                         | 7.210  | 13.584  |
| A3 Restaurant          | 0.000                         | 0.000 | 0.000   | 6.667                         | 4.360  | 11.027  |
| Hotel*                 | 0.318                         | 1.013 | 1.331   | 0.735                         | 0.338  | 1.073   |
| Drive Through          | 5.94                          | 4.41  | 10.35   | 12.008                        | 11.718 | 23.726  |
| Employment             | 1.534                         | 0.384 | 1.918   | 0.20                          | 1.116  | 1.316   |

\*Note – Person trip rates provided for both Restaurant and Hotel

**Table 13 – Vehicular Traffic Generation**

| Land Use               | Weekday AM Peak (08:00-09:00) |            |            | Weekday PM Peak (17:00-18:00) |            |            |
|------------------------|-------------------------------|------------|------------|-------------------------------|------------|------------|
|                        | In                            | Out        | Two-way    | In                            | Out        | Two-way    |
| E Block (assuming gym) | 52                            | 45         | 98         | 117                           | 81         | 197        |
| Discount Foodstore     | 20                            | 13         | 33         | 64                            | 77         | 140        |
| A3 Restaurant or       | 0                             | 0          | 0          | 15                            | 12         | 27         |
| Hotel                  | 1                             | 3          | 5          | 2                             | 1          | 3          |
| Drive Through          | 19                            | 14         | 34         | 35                            | 34         | 69         |
| Employment             | 112                           | 30         | 142        | 17                            | 84         | 102        |
| <b>Total*</b>          | <b>215</b>                    | <b>113</b> | <b>328</b> | <b>243</b>                    | <b>268</b> | <b>511</b> |

\* Note – Total includes restaurant traffic generation as the highest traffic generator



**Table 14** – Person Generation

| Land Use               | Weekday AM Peak (08:00-09:00) |           |            | Weekday PM Peak (17:00-18:00) |            |            |
|------------------------|-------------------------------|-----------|------------|-------------------------------|------------|------------|
|                        | In                            | Out       | Two-way    | In                            | Out        | Two-way    |
| E Block (assuming gym) | 66                            | 50        | 116        | 160                           | 122        | 282        |
| Discount Foodstore     | 33                            | 23        | 56         | 121                           | 137        | 258        |
| A3 Restaurant or Hotel | 0                             | 0         | 0          | 34                            | 23         | 57         |
|                        | 2                             | 5         | 7          | 4                             | 2          | 6          |
| Drive Through          | 19                            | 14        | 34         | 39                            | 38         | 77         |
| Employment             | 132                           | 33        | 165        | 17                            | 96         | 113        |
| <b>Total*</b>          | <b>198</b>                    | <b>83</b> | <b>281</b> | <b>222</b>                    | <b>254</b> | <b>476</b> |

\* Note – Total includes restaurant person generation as the highest person generator

## 5.4 Other Land Uses Traffic Distribution and Assignment

- 5.4.1 The traffic distribution for the E Block, discount foodstore, drive through restaurant and restaurant or hotel have been based on the methodology adopted in the PBA Transport Assessment report for the previously consented mixed use development.
- 5.4.2 For the purposes of a robust highway network appraisal, it is considered that the gym will generate 100% 'new' trips onto the local road network, and therefore no allowance has been made for pass-by or linked trips. With regards to the discount foodstore it is considered that 50% of trips associated with the discount foodstore are assumed to be a linked or pass-by trips given the proximity of the proposed discount foodstore to nearby supermarkets.
- 5.4.3 For the drive through facilities, restaurant or hotel, it is considered that a 20% reduction in vehicular trips is appropriate given the close proximity of these land uses to one another.
- 5.4.4 The adjusted level of vehicular trip generation predicted to arise from these land uses is summarised in **Table 15** below.



**Table 15** – Adjusted Vehicular Traffic Generation

| Land Use             | Weekday AM Peak (08:00-09:00) |           |           | Weekday PM Peak (17:00-18:00) |           |           |
|----------------------|-------------------------------|-----------|-----------|-------------------------------|-----------|-----------|
|                      | In                            | Out       | Two-way   | In                            | Out       | Two-way   |
| Discount Foodstore   | 10                            | 6         | 16        | 32                            | 38        | 70        |
| <b>Drive Through</b> | <b>26</b>                     | <b>19</b> | <b>46</b> | <b>47</b>                     | <b>46</b> | <b>93</b> |
| A3 Restaurant*       | 0                             | 0         | 0         | 24                            | 10        | 34        |
| Drive Through        | 16                            | 12        | 27        | 28                            | 28        | 56        |
| Gym (E Block)**      | 52                            | 45        | 98        | 117                           | 81        | 197       |
| Employment***        | 112                           | 30        | 142       | 17                            | 84        | 102       |

\* Note – Assumes Restaurant as the highest vehicular generator

\*\* Note – Assumes Gym as the highest vehicular generator and 100% new trips

\*\*\* Note – Assumes 100% new trips

- 5.4.5 The vehicular flows have been distributed onto the local road network using the population at ward level within a local distribution study area, as discussed in **Section 5.3** above.

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## **6 JUNCTION CAPACITY ASSESSMENTS**

### **6.1 Assessment Traffic Flows and Scenarios**

6.1.1 As agreed with HCC, DTA has utilised the observed traffic survey data undertaken in 2012 from the PBA Transport Assessment report for the following junctions, during the AM (08:00-09:00) and PM (16:45-17:45) peaks:

- Elettra Avenue/ Waterberry Drive/ Site Access roundabout; and
- B2150 Hambledon Road/ Milton Road/ Elettra Avenue roundabout.

6.1.2 The 2012 survey flows have been factored to 2015 to take account of background traffic growth. There are a number of committed developments in close proximity to the proposed site, namely Sainsbury's and West of Waterloooville MDA which comprises of Taylor Wimpey 'Wellington Park' and Newlands Common. As such the traffic generation from these developments has been considered as appropriate background growth and are included within the 2015 and 2020 base scenario, and are considered in more detail below.

#### *Sainsbury's*

6.1.3 When the traffic surveys were undertaken in 2012 the Sainsbury's development to the south-east of the site on Hambledon Road had not been built, and therefore the traffic movements associated with Sainsbury's had not been accounted for within the 2012 traffic surveys. The store opened in December 2014 and as such the full development traffic associated with the site has been accounted for in the 2015 Base flows. The traffic generation figures have been taken from Sainsbury's Transport Assessment, dated October 2010.

#### *West of Waterloooville MDA*

6.1.4 The Taylor Wimpey 'Wellington Park' site comprises of around 450 residential dwellings, employment and other mixed use land. The Newlands development comprises of around 2,500 residential dwellings, 19.25 hectares of employment



land, local community centre, healthcare and elderly care facilities, two primary schools and a nursery.

- 6.1.5 It is understood that approximately 144 dwellings of the approved 450 were occupied in 2012 at Wellington Park. Therefore the traffic generated by 144 dwellings was already accounted for in the 2012 traffic survey data. Accordingly, the trips generated by the 144 dwellings have been removed from the total proposed residential traffic generated by the Taylor Wimpey site.
- 6.1.6 In 2012 the construction at the Newlands Common development had not commenced, and therefore it is assumed that the traffic counts did not include any traffic associated with development.
- 6.1.7 At the end of December 2014, there were approximately 370 occupied homes at the West of Waterloooville MDA site. This includes the 144 dwellings included within the traffic survey data. In addition, the Berewood Primary School opened in 2014.
- 6.1.8 In summary the following assessment scenarios include:
- 2015 Base comprising:
    - 2012 Observed flows;
    - Baseline E Block flows (assuming E Block is fully occupied using traffic generation from **Table 1**);
    - Sainsbury's development proposals; and
    - 226 dwellings and Berewood Primary School at West of Waterloooville MDA.
  - 2020 Base comprising:
    - 2012 Observed flows;
    - Baseline E Block flows (assuming E Block is fully occupied using traffic generation from **Table 1**);



- 
- Sainsbury's development proposals; and
  - West of Waterloooville MDA (full development).
  - 2020 Base + Development (B Block Proposals) comprising:
    - 2012 Observed flows;
    - Baseline E Block flows (assuming E Block is fully occupied using traffic generation from **Table 1**);
    - B Block proposals (drive through restaurant);
    - Sainsbury's development proposals; and
    - West of Waterloooville MDA (full development).
  - 2020 Base + Development (B Block Proposals plus East side of "Park" redevelopment) comprising:
    - 2012 Observed flows;
    - B Block proposals (drive through restaurant);
    - Sainsbury's development proposals;
    - West of Waterloooville MDA (full development); and
    - Discount Foodstore, Drive through, Restaurant and Gym (assessed as the highest trip generator).
  - 2020 Base + Development (B Block Proposals plus East and West "Park" redevelopment) comprising:
    - 2012 Observed flows;
    - B Block proposals (drive through restaurant);
    - Sainsbury's development proposals;



- West of Waterloooville MDA (full development);
- Discount Foodstore, Drive through, Restaurant and Gym (assessed as the highest trip generator); and
- West Block Buildings (B1 land use).

## **6.2 Junction Assessments**

6.2.1 The following junctions have been modelled using the ARCADY module within Junctions 8:

- Elettra Avenue/ Waterberry Drive/ Site Access roundabout; and
- B2150 Hambledon Road/ Milton Road/ Elettra Avenue roundabout.

6.2.2 The assessed junctions have been modelled for a weekday AM and PM network peak hours, determined from the 2012 observed traffic flows as 08:00-09:00 and 16:45-17:45.

### **Site Access/ Elettra Avenue/ Waterberry Drive**

6.2.3 This junction is a four-arm roundabout with two lane approaches on all arms. Elettra Avenue forms the east and west arms, Waterberry Drive the north arm and Site Access the south arm. The Waterberry Drive arm provides access to The Brambles Business Park. The Elettra Avenue east arm connects to the Hambledon Road/ Milton Road roundabout while the Elettra Avenue west arm routes around the site connecting to Silverthorne Way.

6.2.4 A summary of the junction capacity results for the drive through restaurant proposals is summarised in **Table 16** below with the modelling outputs attached at **Appendix F**.



**Table 16** – Site Access/ Elettra Avenue/ Waterberry Drive Junction Capacity Assessment Results – B Block Proposals

| Junction                                           | AM Peak |     |                 | PM Peak |     |                 |
|----------------------------------------------------|---------|-----|-----------------|---------|-----|-----------------|
|                                                    | RFC     | MMQ | Max Delay (sec) | RFC     | MMQ | Max Delay (sec) |
| <b>2015 Base</b>                                   |         |     |                 |         |     |                 |
| Elettra Av (east)                                  | 0.30    | 0.4 | 2.58            | 0.10    | 0.1 | 2.03            |
| Site Access                                        | 0.03    | 0.0 | 1.85            | 0.03    | 0.0 | 1.66            |
| Elettra Av (west)                                  | 0.03    | 0.0 | 2.21            | 0.08    | 0.1 | 2.13            |
| Waterberry Drive                                   | 0.11    | 0.1 | 2.21            | 0.26    | 0.4 | 2.78            |
| <b>2020 Base</b>                                   |         |     |                 |         |     |                 |
| Elettra Av (east)                                  | 0.32    | 0.5 | 2.65            | 0.10    | 0.1 | 2.03            |
| Site Access                                        | 0.03    | 0.0 | 1.87            | 0.03    | 0.0 | 1.66            |
| Elettra Av (west)                                  | 0.03    | 0.0 | 2.24            | 0.08    | 0.1 | 2.14            |
| Waterberry Drive                                   | 0.11    | 0.1 | 2.21            | 0.27    | 0.4 | 2.82            |
| <b>2020 Base + Development (B Block Proposals)</b> |         |     |                 |         |     |                 |
| Elettra Av (east)                                  | 0.32    | 0.5 | 2.67            | 0.12    | 0.1 | 2.06            |
| Site Access                                        | 0.04    | 0.0 | 1.89            | 0.05    | 0.1 | 1.69            |
| Elettra Av (west)                                  | 0.03    | 0.0 | 2.26            | 0.09    | 0.1 | 2.18            |
| Waterberry Drive                                   | 0.11    | 0.1 | 2.23            | 0.28    | 0.4 | 2.89            |

- 6.2.5 As can be seen in **Table 16** the junction capacity assessment results for the Site Access/ Elettra Avenue/ Waterberry Drive roundabout shows the roundabout operates within capacity on all arms with minimal queuing and delay in the 2015 and 2020 base scenarios.
- 6.2.6 With the addition of the proposals for the drive through restaurant, the roundabout will continue to operate within capacity on all arms with minimal increases in queuing and delay.
- 6.2.7 An additional assessment has also been undertaken of the vehicular flows associated with the East side of The Park development and vehicular flows associated with the whole Park site.
- 6.2.8 The results of the junction assessments are summarised in **Table 17** below and attached at **Appendix F**.



**Table 17** – Site Access/ Elettra Avenue/ Waterberry Drive Junction Capacity Assessment Results – Other Future Land Uses

| Junction                                                               | AM Peak |     |                 | PM Peak |     |                 |
|------------------------------------------------------------------------|---------|-----|-----------------|---------|-----|-----------------|
|                                                                        | RFC     | MMQ | Max Delay (sec) | RFC     | MMQ | Max Delay (sec) |
| 2020 Base + Development (B Block + East side of “Park” redevelopment)  |         |     |                 |         |     |                 |
| Elettra Av (east)                                                      | 0.30    | 0.4 | 2.59            | 0.17    | 0.2 | 2.18            |
| Site Access                                                            | 0.04    | 0.0 | 1.89            | 0.07    | 0.1 | 1.74            |
| Elettra Av (west)                                                      | 0.03    | 0.0 | 2.26            | 0.09    | 0.1 | 2.23            |
| Waterberry Drive                                                       | 0.11    | 0.1 | 2.23            | 0.28    | 0.4 | 2.98            |
| 2020 Base + Development (B Block + East and West “Park” redevelopment) |         |     |                 |         |     |                 |
| Elettra Av (east)                                                      | 0.36    | 0.6 | 2.82            | 0.18    | 0.2 | 2.21            |
| Site Access                                                            | 0.05    | 0.1 | 1.92            | 0.11    | 0.1 | 1.81            |
| Elettra Av (west)                                                      | 0.03    | 0.0 | 2.29            | 0.09    | 0.1 | 2.32            |
| Waterberry Drive                                                       | 0.11    | 0.1 | 2.26            | 0.29    | 0.4 | 3.13            |

6.2.9 With the addition of the traffic generated by the East side of The Park land uses the roundabout continues to operate within capacity on all arms with minimal queuing and delay.

6.2.10 With the addition of the traffic generated by the employment on the West side of The Park, the roundabout will continue to operate within capacity on all arms with minimal increases in queuing and delay.

### **Hambledon Road/ Milton Road/ Elettra Avenue**

6.2.11 This junction is a four-arm roundabout with two lane approaches on Hambledon Road North and South arms, and Elettra Avenue. The Hambledon Road North arm routes north-west of Waterloooville towards Denmead. The Hambledon Road South arm routes towards Waterloooville town centre connecting to the A3 Maurepas Way.

6.2.12 A summary of the junction capacity results for the drive through restaurant proposals is summarised in **Table 18** below with the modelling outputs attached at **Appendix G**.

**Table 18** – Hambledon Road/ Milton Road/ Elettra Avenue Junction Capacity Assessment Results – B Block Proposals

| Junction                                           | AM Peak |     |                 | PM Peak |     |                 |
|----------------------------------------------------|---------|-----|-----------------|---------|-----|-----------------|
|                                                    | RFC     | MMQ | Max Delay (sec) | RFC     | MMQ | Max Delay (sec) |
| <b>2015 Base</b>                                   |         |     |                 |         |     |                 |
| Milton Road                                        | 0.65    | 1.8 | 10.52           | 0.42    | 0.7 | 5.86            |
| Hambledon Road (South)                             | 0.40    | 0.7 | 2.03            | 0.62    | 1.6 | 3.87            |
| Elettra Avenue                                     | 0.20    | 0.3 | 3.10            | 0.75    | 3.0 | 16.67           |
| Hambledon Road (North)                             | 0.52    | 1.1 | 4.34            | 0.68    | 2.1 | 12.06           |
| <b>2020 Base</b>                                   |         |     |                 |         |     |                 |
| Milton Road                                        | 0.73    | 2.7 | 14.08           | 0.48    | 0.9 | 6.92            |
| Hambledon Road (South)                             | 0.41    | 0.7 | 2.07            | 0.63    | 1.7 | 4.02            |
| Elettra Avenue                                     | 0.21    | 0.3 | 3.16            | 0.77    | 3.3 | 18.30           |
| Hambledon Road (North)                             | 0.55    | 1.2 | 4.64            | 0.77    | 3.4 | 17.10           |
| <b>2020 Base + Development (B Block Proposals)</b> |         |     |                 |         |     |                 |
| Milton Road                                        | 0.75    | 2.9 | 15.20           | 0.51    | 1.0 | 7.44            |
| Hambledon Road (South)                             | 0.41    | 0.7 | 2.09            | 0.64    | 1.8 | 4.12            |
| Elettra Avenue                                     | 0.22    | 0.3 | 3.21            | 0.82    | 4.5 | 23.77           |
| Hambledon Road (North)                             | 0.56    | 1.2 | 4.71            | 0.79    | 3.8 | 19.02           |

6.2.13 As can be seen in **Table 18** the Hambledon Road/ Milton Road/ Elettra Avenue roundabout operates within capacity on all arms in the 2015 base scenario. In the 2020 future year without the development proposals, the junction is predicted to continue to operate without capacity on all arms.

6.2.14 With the addition of the development proposals for the drive through restaurant the queuing and delay will increase slightly during the AM and PM peak periods. Overall the roundabout will continue to operate within capacity.

6.2.15 An additional assessment has also been undertaken of the vehicular flows associated with the East side of The Park development and vehicular flows associated with the whole Park site.



6.2.16 The results of the junction assessments are summarised in **Table 19** below and attached at **Appendix G**.

**Table 19** – Hambledon Road/ Milton Road/ Elettra Avenue Junction Capacity Assessment Results – Other Future Land Uses

| Junction                                                                      | AM Peak |     |                 | PM Peak |      |                 |
|-------------------------------------------------------------------------------|---------|-----|-----------------|---------|------|-----------------|
|                                                                               | RFC     | MMQ | Max Delay (sec) | RFC     | MMQ  | Max Delay (sec) |
| <b>2020 Base + Development (B Block + East side of "Park" redevelopment)</b>  |         |     |                 |         |      |                 |
| Milton Road                                                                   | 0.76    | 3.1 | 15.71           | 0.56    | 1.3  | 8.21            |
| Hambledon Road (South)                                                        | 0.40    | 0.7 | 2.05            | 0.65    | 1.9  | 4.48            |
| Elettra Avenue                                                                | 0.22    | 0.3 | 3.22            | 0.71    | 2.4  | 14.66           |
| Hambledon Road (North)                                                        | 0.56    | 1.3 | 4.72            | 0.81    | 4.0  | 19.43           |
| <b>2020 Base + Development (B Block + East and West "Park" redevelopment)</b> |         |     |                 |         |      |                 |
| Milton Road                                                                   | 0.80    | 3.9 | 18.84           | 0.62    | 1.6  | 10.29           |
| Hambledon Road (South)                                                        | 0.42    | 0.7 | 2.19            | 0.69    | 2.2  | 4.95            |
| Elettra Avenue                                                                | 0.21    | 0.3 | 3.19            | 1.01    | 30.7 | 134.02          |
| Hambledon Road (North)                                                        | 0.57    | 1.3 | 4.78            | 0.87    | 6.3  | 30.90           |

6.2.17 As can be seen in **Table 19**, with the addition of the East side of The Park development proposals the roundabout will operate within capacity on all arms in the AM and PM peak periods.

6.2.18 With the addition of the traffic generated by the employment on the West side of The Park, the roundabout will continue to operate within capacity in the AM peak but will operate over capacity on the Elettra Avenue arm in the PM peak.



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## **7 SUMMARY AND CONCLUSIONS**

- 7.1 This Transport Assessment has assessed the traffic and transport implications of the proposals for a drive through restaurant (Block B) at the former BAE Systems Technology Park on Elettra Avenue, Waterlooville.
- 7.2 The development site is located within the Brambles Business Park to the north-west of Waterlooville town centre. The proposed site benefits from being located in a highly accessible area with excellent pedestrian and cycle connections, high frequency bus services and good road links to Waterlooville town centre.
- 7.3 The trip generation has been undertaken using TRICS and the distribution undertaken in conjunction with Census data.
- 7.4 The site will be accessed off an existing roundabout on Elettra Avenue and a new priority junction arrangement will be created onto Silverthorne Way.
- 7.5 The traffic impact analysis has set out the potential impacts at the Elettra Avenue/ Waterberry Drive roundabout and the Elettra Avenue/ Milton Road/ Hambledon Road roundabout. The junction modelling results confirm that the proposed development will have modest impacts on both roundabouts. The Elettra Avenue/ Waterberry Drive roundabout and the Elettra Avenue/ Milton Road/ Hambledon Road roundabout are predicted to operate within capacity on all arms with the addition of the development proposals.
- 7.6 A Travel Plan has also been prepared under a separate cover which aims to encourage sustainable travel.
- 7.7 This Transport Assessment has demonstrated that the development is fully in accordance with NPPF and the related adopted and emerging Development Plan policies. On this basis it is concluded that there are no grounds for refusal on highway grounds.

## Figures



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Key:

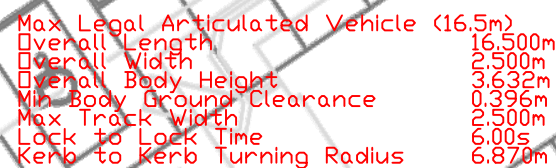
- |  |                  |  |                                |
|--|------------------|--|--------------------------------|
|  | Site Location    |  | Shared Pedestrian/ Cycle Route |
|  | Local Bus Routes |  | Off Road Cycle Route           |
|  | Bus Stops        |  | Footways around Business Park  |

Figure 1  
 Drawing Title  
 Job Title  
 Client

Drawing No : 17144-01  
 Site Location and Accessibility  
 Redevelopment of E Block, Waterlooville  
 Hargreaves

Scale : NTS

## Drawings



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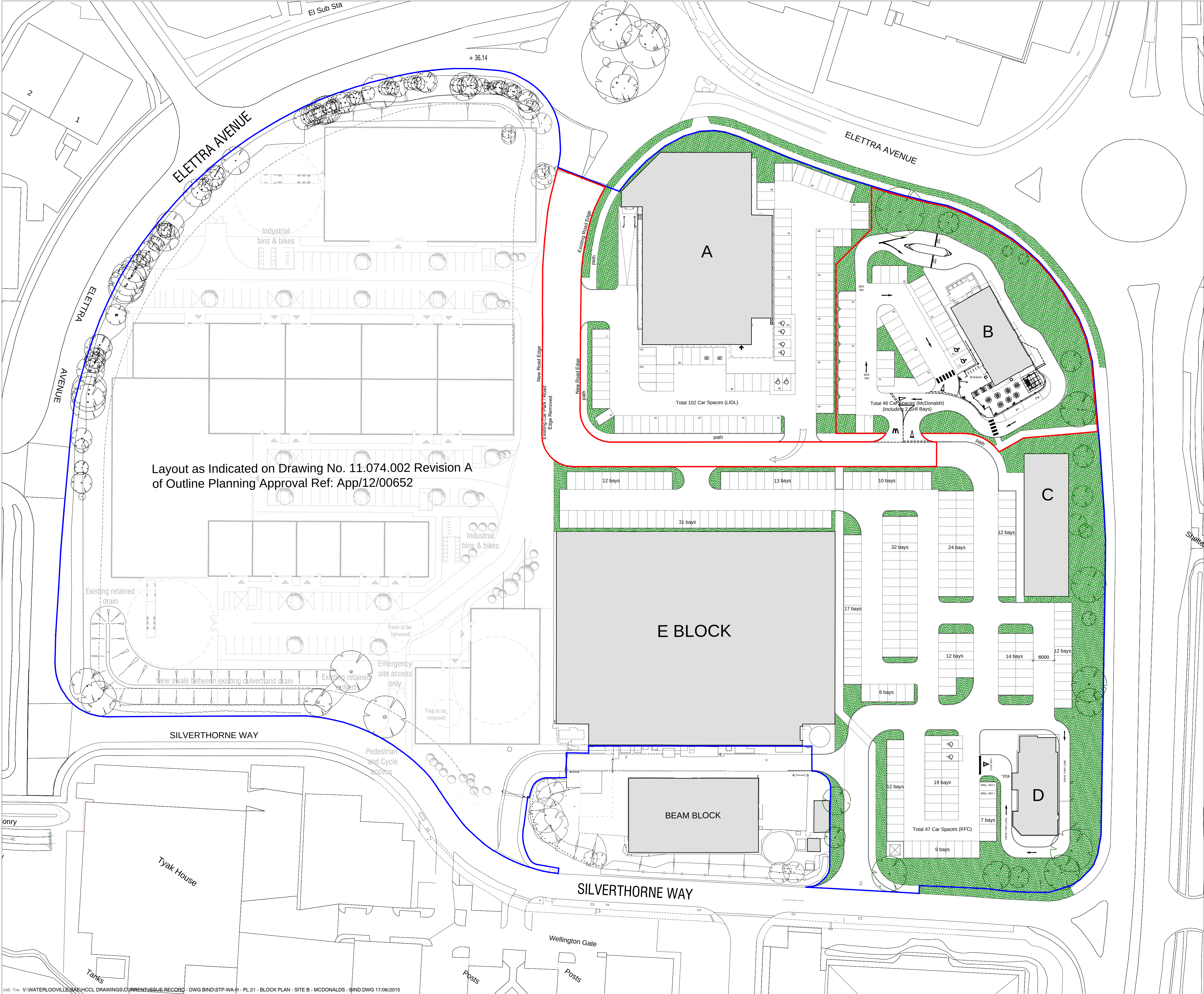
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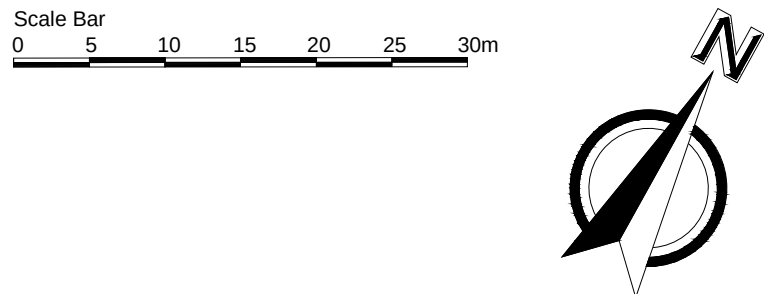
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|                              |  |               |  |        |  |                       |  |
|------------------------------|--|---------------|--|--------|--|-----------------------|--|
| JOB TITLE                    |  | Eletra Avenue |  | CLIENT |  | Hargreaves Properties |  |
| DRAWING TITLE                |  |               |  |        |  |                       |  |
| Max Legal Tracking Movements |  |               |  |        |  |                       |  |
| SCALE                        |  | DRAWN BY      |  | DATE   |  | DRAWING No            |  |
| 1/250@A3                     |  | BP            |  | June15 |  | 17144-02              |  |
|                              |  |               |  |        |  | REVISION              |  |

## **Appendix A**



Do not scale from this drawing, work to figured dimensions only. All dimensions to be confirmed on site. This drawing is to be read in conjunction with other drawings in this series and all relevant consultants drawings and documentation where applicable. Please report any discrepancy on this drawing to Hargreaves Construction Co. Ltd. for clarification. © Copyright Hargreaves Construction Co. Ltd.



| REV      | DESCRIPTION | DATE |
|----------|-------------|------|
| REVISION |             |      |

SYSTEMS TECHNOLOGY PARK  
WATERLOOVILLE  
HAMPSHIRE  
RETAIL SITE DEVELOPMENT PLAN  
Block Plan  
Plot B, (McDonalds)

|                            |                             |                  |
|----------------------------|-----------------------------|------------------|
| Job no.<br><b>STP-WA-H</b> | Drawing no.<br><b>PL 21</b> | rev.<br><b>-</b> |
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|-----------------------|-----------------------------|---------------------------|
| Scale<br><b>1:500</b> | Drawn<br><b>@ A1 A.J.C.</b> | Date<br><b>16.06.2015</b> |
|-----------------------|-----------------------------|---------------------------|



Rustington House, Worthing Road, Rustington, West Sussex, BN16 3PS  
Tel No: (01903) 777777 Fax No: (01903) 777700

## **Appendix B**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT  
Category : D - INDUSTRIAL ESTATE  
MULTI-MODAL VEHICLES

Selected regions and areas:

Filtering Stage 2 selection:

Parameter: Gross floor area  
Actual Range: 6000 to 6000 (units: sqm)  
Range Selected by User: 6000 to 6000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 20/10/09 to 20/10/09

Selected survey days:

Tuesday 1 days

Selected survey types:

Manual count 1 days  
Directional ATC Count 0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1

Selected Location Sub Categories:

Industrial Zone 1

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.083     | 1        | 6000     | 0.266     |
| 07:30 - 08:00 | 1        | 6000     | 0.433     | 1          | 6000     | 0.067     | 1        | 6000     | 0.500     |
| 08:00 - 08:30 | 1        | 6000     | 0.633     | 1          | 6000     | 0.100     | 1        | 6000     | 0.733     |
| 08:30 - 09:00 | 1        | 6000     | 0.667     | 1          | 6000     | 0.250     | 1        | 6000     | 0.917     |
| 09:00 - 09:30 | 1        | 6000     | 0.483     | 1          | 6000     | 0.183     | 1        | 6000     | 0.666     |
| 09:30 - 10:00 | 1        | 6000     | 0.250     | 1          | 6000     | 0.250     | 1        | 6000     | 0.500     |
| 10:00 - 10:30 | 1        | 6000     | 0.400     | 1          | 6000     | 0.250     | 1        | 6000     | 0.650     |
| 10:30 - 11:00 | 1        | 6000     | 0.233     | 1          | 6000     | 0.183     | 1        | 6000     | 0.416     |
| 11:00 - 11:30 | 1        | 6000     | 0.250     | 1          | 6000     | 0.300     | 1        | 6000     | 0.550     |
| 11:30 - 12:00 | 1        | 6000     | 0.183     | 1          | 6000     | 0.233     | 1        | 6000     | 0.416     |
| 12:00 - 12:30 | 1        | 6000     | 0.250     | 1          | 6000     | 0.350     | 1        | 6000     | 0.600     |
| 12:30 - 13:00 | 1        | 6000     | 0.300     | 1          | 6000     | 0.233     | 1        | 6000     | 0.533     |
| 13:00 - 13:30 | 1        | 6000     | 0.283     | 1          | 6000     | 0.317     | 1        | 6000     | 0.600     |
| 13:30 - 14:00 | 1        | 6000     | 0.367     | 1          | 6000     | 0.250     | 1        | 6000     | 0.617     |
| 14:00 - 14:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.417     | 1        | 6000     | 0.600     |
| 14:30 - 15:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.200     | 1        | 6000     | 0.417     |
| 15:00 - 15:30 | 1        | 6000     | 0.117     | 1          | 6000     | 0.250     | 1        | 6000     | 0.367     |
| 15:30 - 16:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.117     | 1        | 6000     | 0.317     |
| 16:00 - 16:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.400     | 1        | 6000     | 0.583     |
| 16:30 - 17:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.417     | 1        | 6000     | 0.550     |
| 17:00 - 17:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.450     | 1        | 6000     | 0.517     |
| 17:30 - 18:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.533     | 1        | 6000     | 0.666     |
| 18:00 - 18:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.183     | 1        | 6000     | 0.200     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 6.165     |            |          | 6.033     |          |          | 12.198    |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 07:30 - 08:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.033     | 1        | 6000     | 0.066     |
| 08:00 - 08:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:30 - 09:00 | 1        | 6000     | 0.050     | 1          | 6000     | 0.000     | 1        | 6000     | 0.050     |
| 09:00 - 09:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.050     | 1        | 6000     | 0.117     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 10:00 - 10:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.050     | 1        | 6000     | 0.083     |
| 10:30 - 11:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 11:00 - 11:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 12:00 - 12:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.017     | 1        | 6000     | 0.034     |
| 12:30 - 13:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.017     | 1        | 6000     | 0.050     |
| 13:00 - 13:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 13:30 - 14:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.017     | 1        | 6000     | 0.034     |
| 14:00 - 14:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.017     | 1        | 6000     | 0.034     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:30 - 16:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:00 - 16:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.017     | 1        | 6000     | 0.050     |
| 16:30 - 17:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.317     |            |          | 0.319     |          |          | 0.636     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 07:30 - 08:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:00 - 08:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 08:30 - 09:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:00 - 09:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:00 - 10:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:30 - 11:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 11:00 - 11:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:00 - 12:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:30 - 13:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 13:00 - 13:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 13:30 - 14:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 14:00 - 14:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:30 - 16:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:00 - 16:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:30 - 17:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.084     |            |          | 0.051     |          |          | 0.135     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.083     | 1        | 6000     | 0.266     |
| 07:30 - 08:00 | 1        | 6000     | 0.433     | 1          | 6000     | 0.067     | 1        | 6000     | 0.500     |
| 08:00 - 08:30 | 1        | 6000     | 0.633     | 1          | 6000     | 0.100     | 1        | 6000     | 0.733     |
| 08:30 - 09:00 | 1        | 6000     | 0.667     | 1          | 6000     | 0.250     | 1        | 6000     | 0.917     |
| 09:00 - 09:30 | 1        | 6000     | 0.533     | 1          | 6000     | 0.183     | 1        | 6000     | 0.716     |
| 09:30 - 10:00 | 1        | 6000     | 0.250     | 1          | 6000     | 0.300     | 1        | 6000     | 0.550     |
| 10:00 - 10:30 | 1        | 6000     | 0.467     | 1          | 6000     | 0.267     | 1        | 6000     | 0.734     |
| 10:30 - 11:00 | 1        | 6000     | 0.283     | 1          | 6000     | 0.217     | 1        | 6000     | 0.500     |
| 11:00 - 11:30 | 1        | 6000     | 0.333     | 1          | 6000     | 0.300     | 1        | 6000     | 0.633     |
| 11:30 - 12:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.283     | 1        | 6000     | 0.483     |
| 12:00 - 12:30 | 1        | 6000     | 0.267     | 1          | 6000     | 0.367     | 1        | 6000     | 0.634     |
| 12:30 - 13:00 | 1        | 6000     | 0.333     | 1          | 6000     | 0.250     | 1        | 6000     | 0.583     |
| 13:00 - 13:30 | 1        | 6000     | 0.317     | 1          | 6000     | 0.350     | 1        | 6000     | 0.667     |
| 13:30 - 14:00 | 1        | 6000     | 0.400     | 1          | 6000     | 0.267     | 1        | 6000     | 0.667     |
| 14:00 - 14:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.433     | 1        | 6000     | 0.616     |
| 14:30 - 15:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.200     | 1        | 6000     | 0.417     |
| 15:00 - 15:30 | 1        | 6000     | 0.117     | 1          | 6000     | 0.250     | 1        | 6000     | 0.367     |
| 15:30 - 16:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.117     | 1        | 6000     | 0.317     |
| 16:00 - 16:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.467     | 1        | 6000     | 0.650     |
| 16:30 - 17:00 | 1        | 6000     | 0.167     | 1          | 6000     | 0.433     | 1        | 6000     | 0.600     |
| 17:00 - 17:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.467     | 1        | 6000     | 0.534     |
| 17:30 - 18:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.567     | 1        | 6000     | 0.700     |
| 18:00 - 18:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.217     | 1        | 6000     | 0.234     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 6.583     |            |          | 6.468     |          |          | 13.051    |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 07:30 - 08:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:00 - 08:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.017     | 1        | 6000     | 0.084     |
| 08:30 - 09:00 | 1        | 6000     | 0.050     | 1          | 6000     | 0.017     | 1        | 6000     | 0.067     |
| 09:00 - 09:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 10:00 - 10:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:30 - 11:00 | 1        | 6000     | 0.067     | 1          | 6000     | 0.050     | 1        | 6000     | 0.117     |
| 11:00 - 11:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:00 - 12:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.050     | 1        | 6000     | 0.050     |
| 12:30 - 13:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 13:00 - 13:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.067     | 1        | 6000     | 0.084     |
| 13:30 - 14:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 14:00 - 14:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:30 - 16:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 16:00 - 16:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:30 - 17:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.368     |            |          | 0.318     |          |          | 0.686     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 07:30 - 08:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:00 - 08:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 08:30 - 09:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 09:00 - 09:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:00 - 10:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:30 - 11:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 11:00 - 11:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:00 - 12:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:30 - 13:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 13:00 - 13:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 13:30 - 14:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 14:00 - 14:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 15:30 - 16:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 16:00 - 16:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:30 - 17:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.151     |            |          | 0.101     |          |          | 0.252     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.217     | 1          | 6000     | 0.083     | 1        | 6000     | 0.300     |
| 07:30 - 08:00 | 1        | 6000     | 0.433     | 1          | 6000     | 0.067     | 1        | 6000     | 0.500     |
| 08:00 - 08:30 | 1        | 6000     | 0.767     | 1          | 6000     | 0.117     | 1        | 6000     | 0.884     |
| 08:30 - 09:00 | 1        | 6000     | 0.767     | 1          | 6000     | 0.267     | 1        | 6000     | 1.034     |
| 09:00 - 09:30 | 1        | 6000     | 0.583     | 1          | 6000     | 0.183     | 1        | 6000     | 0.766     |
| 09:30 - 10:00 | 1        | 6000     | 0.250     | 1          | 6000     | 0.317     | 1        | 6000     | 0.567     |
| 10:00 - 10:30 | 1        | 6000     | 0.467     | 1          | 6000     | 0.267     | 1        | 6000     | 0.734     |
| 10:30 - 11:00 | 1        | 6000     | 0.367     | 1          | 6000     | 0.267     | 1        | 6000     | 0.634     |
| 11:00 - 11:30 | 1        | 6000     | 0.383     | 1          | 6000     | 0.300     | 1        | 6000     | 0.683     |
| 11:30 - 12:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.283     | 1        | 6000     | 0.483     |
| 12:00 - 12:30 | 1        | 6000     | 0.267     | 1          | 6000     | 0.417     | 1        | 6000     | 0.684     |
| 12:30 - 13:00 | 1        | 6000     | 0.367     | 1          | 6000     | 0.250     | 1        | 6000     | 0.617     |
| 13:00 - 13:30 | 1        | 6000     | 0.350     | 1          | 6000     | 0.417     | 1        | 6000     | 0.767     |
| 13:30 - 14:00 | 1        | 6000     | 0.417     | 1          | 6000     | 0.283     | 1        | 6000     | 0.700     |
| 14:00 - 14:30 | 1        | 6000     | 0.217     | 1          | 6000     | 0.433     | 1        | 6000     | 0.650     |
| 14:30 - 15:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.200     | 1        | 6000     | 0.417     |
| 15:00 - 15:30 | 1        | 6000     | 0.117     | 1          | 6000     | 0.267     | 1        | 6000     | 0.384     |
| 15:30 - 16:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.133     | 1        | 6000     | 0.350     |
| 16:00 - 16:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.467     | 1        | 6000     | 0.650     |
| 16:30 - 17:00 | 1        | 6000     | 0.183     | 1          | 6000     | 0.467     | 1        | 6000     | 0.650     |
| 17:00 - 17:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.533     | 1        | 6000     | 0.600     |
| 17:30 - 18:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.583     | 1        | 6000     | 0.716     |
| 18:00 - 18:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.300     | 1        | 6000     | 0.317     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 7.186     |            |          | 6.934     |          |          | 14.120    |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

## **Appendix C**

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

Selected Polygon:MC Hambledon Road, Waterloooville

120123308 28/03/2012 Time 1800 Vehicles 2 Casualties 1 Serious  
E:467865 N: 109435 First Road: A 3 Road Type Dual carriageway B 2150  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to judge other persons path or speed | Vehicle 2    | Possible    |
| 2nd: | Sudden braking                              | Vehicle 2    | Possible    |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 2 (CAR) TRAVELLING NW ALONG A3 MAUREPAS WAY OVERTOOK VEH 1 (M/CYCLE) TRAVELLING IN FRONT THEN BRAKED HARD CAUSING VEH 1 TO TAKE EVASIVE ACTION AND COLLIDE WITH KERB. VEH 2 FAILED TO STOP.

Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, WINCHESTER, HAMPSHIRE

Vehicle Reference 1 Motorcycle 50cc and under Going ahead other  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway Skidded  
Location at impact Jct Approach First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 33 Male  
Not hit and run Breath test Not requested  
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 33 Male Driver/rider Severity: Serious  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Overtaking moving vehicle O/S  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Did not impact Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver Female  
Non-stop, not hit Breath test Driver not contacted  
Left hand drive: No

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

100505669 30/11/2010 Time 1310 Vehicles 3 Casualties 1 Slight  
E:467865 N: 109449 First Road: A 3 Road Type Single carriageway  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 3  
Crossing: Control None Facilities: None within 50m Road surface Snow  
Daylight: no street lighting Snowing without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

Causation

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Following too close                         | Vehicle 3    | Very Likely |
| 2nd: | Failed to judge other persons path or speed | Vehicle 3    | Very Likely |
| 3rd: | Rain, sleet, snow, or fog                   | Vehicle 3    |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (CAR) TRAVELLING N ALONG MAUREPAS WAY APPROACHES RBT WITH MAUREPAS WAY AND SLOWS. VEH 2 (CAR) TRAVELLING BEHIND VEH 1 SLOWS BEHIND. VEH 3 (CAR) TRAVELLING BEHIND VEH 2 FAILS TO SLOW IN TIME AND COLLIDES CAUSING SHUNT COLLISION.

Occurred on A3 MAUREPAS ROAD AT JUNCTION WITH A3 MAUREPAS ROAD, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Car Going ahead but held up  
Vehicle movement from S to N No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Back Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 73 Male  
Not hit and run Breath test Negative  
Left hand drive:

Vehicle Reference 2 Car Going ahead but held up  
Vehicle movement from S to N No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Back Hit vehicle: 3  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 48 Female  
Not hit and run Breath test Negative  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

|                       |              |          |                                          |
|-----------------------|--------------|----------|------------------------------------------|
| Vehicle Reference     | 3            | Car      | Going ahead other                        |
| Vehicle movement from | S            | to N     | No tow / articulation                    |
| On main carriageway   |              |          | Leaving the main road                    |
| Location at impact    | Jct Approach |          | No skidding, jack-knifing or overturning |
| Hit object in road    | None         |          | First impact Front                       |
|                       |              |          | Off road: None                           |
| Did not leave carr    |              |          | Hit vehicle: 2                           |
| Not hit and run       |              |          | Age of Driver 82                         |
|                       | Breath test  | Negative | Female                                   |
|                       |              |          | Left hand drive:                         |

|                     |                |               |   |      |    |        |              |           |        |
|---------------------|----------------|---------------|---|------|----|--------|--------------|-----------|--------|
| Casualty Reference: | 1              | Vehicle:      | 3 | Age: | 82 | Female | Driver/rider | Severity: | Slight |
| Not a pupil         |                |               |   |      |    |        |              |           |        |
| Seatbelt            | Not Applicable |               |   |      |    |        |              |           |        |
|                     |                | Cycle helmet: |   |      |    |        |              |           |        |

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

130476212 20/12/2013 Time 0720 Vehicles 2 Casualties 1 Slight  
E:467861 N: 109457 First Road: A 3 Road Type 1 A 2150  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled  
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp  
Darkness: street lighting unknown Raining without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

Causation

|      | Factor:                 | Participant: | Confidence: |
|------|-------------------------|--------------|-------------|
| 1st: | Failed to look properly | Vehicle 1    | Very Likely |
| 2nd: |                         |              |             |
| 3rd: |                         |              |             |
| 4th: |                         |              |             |
| 5th: |                         |              |             |
| 6th: |                         |              |             |

VEH 1 (CAR) TRAVELLING NW ALONG A3 MAUREPAS WAY, FAILS TO SEE AND ENTERS TO RBT ACROSS  
THE PATH OF VEH 2 (P/CYCLE) TRAVELLING NW AROUND A3 MAUREPAS WAY RBT INTENDING TO EXIT  
ONTO B2150 HAMBLEDON ROAD AND COLLIDES, RIDER FALLS OFF.

Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Starting  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 24 Female  
Not hit and run Breath test Driver not contacted  
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead right bend  
Vehicle movement from E to NW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 23 Female  
Not hit and run Breath test Not applicable  
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 23 Female Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

140098527 20/03/2014 Time 1815 Vehicles 2 Casualties 1 Serious  
E:467861 N: 109459 First Road: A 3 Road Type 1 B 2150  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled  
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp  
Darkness: street lights present and lit Raining without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to look properly                     | Vehicle 2    | Very Likely |
| 2nd: | Failed to judge other persons path or speed | Vehicle 2    | Very Likely |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 2 (CAR) TRAVELLING N ALONG A3 MAUREPAS WAY ENTERED RBT AND COLLIDED WITH VEH 1  
(P/CYCLE) TRAVELLING W AROUND A3 MAUREPAS WAY RBT.

Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, DENMEAD, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Turning right  
Vehicle movement from E to N No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 53 Male  
Not hit and run Breath test Not applicable Left hand drive: No  
Casualty Reference: 1 Vehicle: 1 Age: 53 Male Driver/rider Severity: Serious  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Yes

Vehicle Reference 2 Car Starting  
Vehicle movement from S to N No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 34 Female  
Not hit and run Breath test Negative Left hand drive: No

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

110033859 21/01/2011 Time 1500 Vehicles 2 Casualties 1 Serious  
E:467879 N: 109463 First Road: A 3 Road Type 1  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled B 2150  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

Causation

|      | Factor:                                                 | Participant: | Confidence: |
|------|---------------------------------------------------------|--------------|-------------|
| 1st: | Poor turn or manoeuvre                                  | Vehicle 2    | Possible    |
| 2nd: | Failed to judge other persons path or speed             | Vehicle 1    | Possible    |
| 3rd: | Passing too close to cyclist, horse rider or pedestrian | Vehicle 2    |             |
| 4th: |                                                         |              |             |
| 5th: |                                                         |              |             |
| 6th: |                                                         |              |             |

VEH 2 (CAR) TRAVELLING W ALONG MAUREPAS WAY ENTERED THE RBT INTENDING TO TURN RIGHT INTO HAMBLEDON ROAD AND ATTEMPTED TO OVERTAKE VEH 1 (P/CYCLE). VEH 2 STRUCK VEH 1 IN THE PROCESS CAUSING THE RIDER TO FALL.

Occurred on MAUREPAS WAY AT JUNCTION WITH HAMBLEDON ROAD, DENMEAD, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Turning right  
Vehicle movement from E to N No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 18 Male  
Not hit and run Breath test Not applicable  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 18 Male Driver/rider Severity: Serious  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Car Turning right  
Vehicle movement from E to N No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver Male  
Hit and run Breath test Driver not contacted  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

110080871 24/02/2011 Time 0730 Vehicles 2 Casualties 1 Serious  
E:467895 N: 109471 First Road: A 3 Road Type 1  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled B 2150  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

Causation

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to judge other persons path or speed | Vehicle 1    | Very Likely |
| 2nd: |                                             |              |             |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (CAR) TRAVELLING W ALONG B2150 MAUREPAS WAY ENTERS RBT TO TURN LEFT ONTO A3  
MAUREPAS WAY FAILING TO SEE VEH 2 (P/CYCLE) TRAVELLING S ALONG RBT AND COLLIDES.  
Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, DENMEAD, HAMPSHIRE

Vehicle Reference 1 Car Turning left  
Vehicle movement from E to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 33 Male  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Vehicle Reference 2 Pedal Cycle Going ahead other  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 40 Male  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 40 Male Driver/rider Severity: Serious  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

150022387 21/01/2015 Time 0745 Vehicles 2 Casualties 1 Slight  
E:467898 N: 109478 First Road: A 3 Road Type Single carriageway  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 2150  
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp  
Darkness: street lights present and lit Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

Causation

|      | Factor:                 | Participant: | Confidence: |
|------|-------------------------|--------------|-------------|
| 1st: | Failed to look properly | Vehicle 1    | Very Likely |
| 2nd: |                         |              |             |
| 3rd: |                         |              |             |
| 4th: |                         |              |             |
| 5th: |                         |              |             |
| 6th: |                         |              |             |

VEH 1 (CAR) TRAVELLING W ALONG A3 MAUREPAS WAY ENTERED THE RBT AT B2150 HAMBLEDON ROAD AND COLLIDED WITH THE NEARSIDE OF VEH 2 (P/CYCLE) TRAVELLING S ACROSS THE RBT, CAUSING THE RIDER TO FALL.

Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Car Starting  
Vehicle movement from E to W No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Entering roundabout First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 37 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 63 Male  
Not hit and run Breath test Not applicable  
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 63 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

100257068 22/06/2010 Time 1057 Vehicles 1 Casualties 1 Slight  
E:467908 N: 109481 First Road: A 3 Road Type Single carriageway  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 2150  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

Causation

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Junction overshoot                          | Vehicle 1    | Very Likely |
| 2nd: | Failed to judge other persons path or speed | Vehicle 1    | Very Likely |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (TAXI) TRAVELLING W ALONG MAUREPAS WAY APPROACHES RBT WITH MAUREPAS WAY SOUTH.  
VEH 1 ENTERS JUNCTION WITHOUT GIVING WAY AND BRAKES SUDDENLY TO AVOID COLLISION  
CAUSING PASSENGER TO STRIKE HEAD AGAINST WINDOW.

Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Taxi/Private hire car Turning left  
Vehicle movement from E to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Entering roundabout First impact Did not impact Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 30 Male  
Not hit and run Breath test Not requested  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 51 Female Passenger Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:  
Front seat

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

110398001 18/09/2011 Time 2022 Vehicles 2 Casualties 1 Slight  
E:467870 N: 109521 First Road: A 3 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 2150  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Darkness: street lights present and lit Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

Causation

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to look properly                     | Vehicle 2    | Possible    |
| 2nd: | Disobeyed Give Way or Stop sign or markings | Vehicle 2    | Possible    |
| 3rd: | Careless/Reckless/In a hurry                | Vehicle 2    |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 2 (CAR) TRAVELLING S ALONG B2150 HAMBLEDON ROAD PULLED OUT ONTO A3 MAUREPAS WAY  
RBT INTO PATH OF VEH 1 (M/CYCLE) TRAVELLING E AROUND RBT. VEH 1 SWERVED TO AVOID  
COLLISION CAUSING RIDER TO FALL OFF.

Occurred on A3 MAUREPAS WAY AT JUNCTION WITH B2150 HAMBLEDON ROAD, DENMEAD, HAMPSHIRE

Vehicle Reference 1 Motorcycle 50cc and under Going ahead right bend  
Vehicle movement from W to E No tow / articulation Leaving the main road  
On main carriageway Skidded  
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 17 Male  
Not hit and run Breath test Not requested  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 17 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Car Starting  
Vehicle movement from N to E No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver Not traced  
Non-stop, not hit Breath test Not requested  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, WaterlooVille")

120024866 18/01/2012 Time 0635 Vehicles 2 Casualties 1 Slight  
E:467848 N: 109729 First Road: B 2150 Road Type Dual carriageway  
Speed limit: 40 Junction Detail: T & Stag Jct Automatic traffic signal Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp  
Darkness: street lights present and lit Raining without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                  | Participant: | Confidence: |
|------|------------------------------------------|--------------|-------------|
| 1st: | Disobeyed automatic traffic signal       | Vehicle 1    | Very Likely |
| 2nd: | Careless/Reckless/In a hurry             | Vehicle 1    | Possible    |
| 3rd: | Inadequate/Masked signs or road markings | Vehicle 1    |             |
| 4th: |                                          |              |             |
| 5th: |                                          |              |             |
| 6th: |                                          |              |             |

VEH 1 (VAN) TRAV N ALONG B2150 HAMBLEDON ROAD TURNED RIGHT FOR ASTON ROAD ON A RED TRAFFIC LIGHT AND HAD AN OFFSET HEAD-ON COLLISION WITH VEH 2 (CAR) TRAV S ALONG HAMBLEDON ROAD. VEH 2 CONTINUED ALONG THE ROAD AND LEFT THE CARRIAGEWAY TO THE NEARSIDE

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH ASTON ROAD, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Turning right  
Vehicle movement from S to E No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Leaving main road First impact Front Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 51 Male  
Not hit and run Breath test Negative  
Left hand drive:

Vehicle Reference 2 Car Going ahead other  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway Skidded  
Location at impact Jct Approach First impact Front Hit vehicle: 1  
Hit object in road None Off road: None  
Nearside Age of Driver 22 Male  
Not hit and run Breath test Not applicable  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 22 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

110492162 21/11/2011 Time 0655 Vehicles 2 Casualties 1 Serious  
E:467850 N: 109730 First Road: B 2150 Road Type Dual carriageway  
Speed limit: 40 Junction Detail: T & Stag Jct Automatic traffic signal Unclassified  
Crossing: Control None Facilities: Ped. phase at traffic signal junction Road surface Wet/Damp  
Darkness: street lights present and lit Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

Causation

|      | Factor:                            | Participant: | Confidence: |
|------|------------------------------------|--------------|-------------|
| 1st: | Disobeyed automatic traffic signal | Vehicle 1    | Possible    |
| 2nd: | Failed to look properly            | Vehicle 1    | Possible    |
| 3rd: |                                    |              |             |
| 4th: |                                    |              |             |
| 5th: |                                    |              |             |
| 6th: |                                    |              |             |

VEH 1 (M/CYCLE) TRAVELLING SOUTH ALONG B2150 HAMBLEDON ROAD, FAILS TO STOP AT LIGHTS AND COLLIDES WITH VEH 2 (VAN) TURNING RIGHT INTO ASTON ROAD FROM B2150 HAMBLEDON ROAD.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH ASTON ROAD, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Motorcycle over 500cc Going ahead other  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 46 Male  
Not hit and run Breath test Not applicable  
Left hand drive:  
Casualty Reference: 1 Vehicle: 1 Age: 46 Male Driver/rider Severity: Serious  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Turning right  
Vehicle movement from S to E No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 33 Male  
Not hit and run Breath test Negative  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

140093912 17/03/2014 Time 1230 Vehicles 2 Casualties 1 Slight  
E:467846 N: 109738 First Road: B 2150 Road Type Dual carriageway  
Speed limit: 40 Junction Detail: T & Stag Jct Automatic traffic signal Unclassified  
Crossing: Control None Facilities: Ped. phase at traffic signal junction Road surface Dry  
Daylight Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Following too close                         | Vehicle 2    | Possible    |
| 2nd: | Sudden braking                              | Vehicle 1    | Very Likely |
| 3rd: | Careless/Reckless/In a hurry                | Vehicle 2    | Possible    |
| 4th: | Failed to judge other persons path or speed | Vehicle 2    | Possible    |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 2 (BUS) TRAVELLING S ALONG B2150 HAMBLEDON ROAD IN LANE 2 FAILED TO BRAKE IN TIME AND COLLIDED WITH REAR OF VEH 1 (VAN) TRAVELLING IN FRONT WHICH HAD BRAKED SUDDENLY DUE TO VEH IN FRONT BRAKING SUDDENLY FOR AN AMBER TRAFFIC LIGHT.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH ASTON ROAD, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Stopping  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Back Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 41 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 41 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Bus or coach Changing lane to right  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 54 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

100264159 26/06/2010 Time 1000 Vehicles 2 Casualties 1 Slight  
E:467541 N: 110004 First Road: U Road Type Single carriageway  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                      | Participant: | Confidence: |
|------|------------------------------|--------------|-------------|
| 1st: | Following too close          | Vehicle 1    | Very Likely |
| 2nd: | Failed to look properly      | Vehicle 1    | Very Likely |
| 3rd: | Careless/Reckless/In a hurry | Vehicle 1    |             |
| 4th: |                              |              |             |
| 5th: |                              |              |             |
| 6th: |                              |              |             |

VEH 2 (CAR) TRAVELLING SE ALONG WESTBERRY DRIVE APPROACHES JUNCTION WITH ELETTRA AVENUE SLOWS TO A STOP. VEH 1 (VAN) TRAVELLING BEHIND VEH 2 FAILS TO SLOW IN TIME AND COLLIDES.

Occurred on WATERBERRY DRIVE AT JUNCTION ELETTRA AVENUE, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Front Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 24 Male  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Vehicle Reference 2 Car Going ahead but held up  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Back Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 36 Female  
Not hit and run Breath test Not requested  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 36 Female Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

120391813 06/10/2012 Time 2010 Vehicles 1 Casualties 1 Serious  
E:467665 N: 110022 First Road: B 2150 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Darkness: street lights present and lit Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                               | Participant: | Confidence: |
|------|---------------------------------------|--------------|-------------|
| 1st: | Loss of control                       | Vehicle 1    | Very Likely |
| 2nd: | Inexperienced or learner driver/rider | Vehicle 1    | Very Likely |
| 3rd: |                                       |              |             |
| 4th: |                                       |              |             |
| 5th: |                                       |              |             |
| 6th: |                                       |              |             |

VEH 1 (M/CYCLE) TRAVELLING NW ALONG B2150 HAMBLEDON ROAD AROUND RBT WHEN VEH LOST CONTROL AND RIDER PUT FOOT DOWN BEFORE COMING OFF THE VEH.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH ELETTRA AVENUE, HAVANT, HAMPSHIRE

Vehicle Reference 1 Motorcycle 50cc and under Going ahead other  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway Skidded  
Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 17 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 17 Male Driver/rider Severity: Serious  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

100206750 21/05/2010 Time 1200 Vehicles 2 Casualties 1 Slight  
E:467665 N: 110027 First Road: B 2150 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight: no street lighting Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

Causation

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to look properly                     | Vehicle 1    | Possible    |
| 2nd: | Failed to judge other persons path or speed | Vehicle 1    | Possible    |
| 3rd: | Careless/Reckless/In a hurry                | Vehicle 1    |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (CAR) TRAVELLING E ALONG ELETTRA AVENUE APPROACHES RBT WITH HAMBLEDON ROAD AND ENTERS JUNCTION WITHOUT GIVING WAY. VEH 2 (M/CYCLE) TRAVELLING NW ALONG HAMBLEDON ROAD ENTERS JUNCTION AND INTO PATH OF VEH 1 COLLIDING.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH AVENUE, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Entering roundabout First impact Offside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 88 Male  
Not hit and run Breath test Not requested  
Left hand drive:

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other  
Vehicle movement from SE to SW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 19 Male  
Not hit and run Breath test Not requested  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 19 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

120085139 01/03/2012 Time 1655 Vehicles 2 Casualties 1 Slight  
E:467710 N: 110034 First Road: B 2150 Road Type Single carriageway  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to judge other persons path or speed | Vehicle 1    | Very Likely |
| 2nd: |                                             |              |             |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (M/CYCLE) TRAVELLING SE ALONG HAMBLEDON ROAD ON RBT PASSING MILTON ROAD WHEN  
VEH 2 (CAR) TRAVELLING SW ALONG MILTON ROAD ENTERS RBT FAILING TO JUDGE VEH 1 ON RBT AND  
PULLS ONTO RBT. VEH 1 TAKES AVOIDIVE ACTION BUT COLLIDES INTO VEH 2.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Starting  
Vehicle movement from NE to SW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Entering roundabout First impact Offside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 58 Female  
Not hit and run Breath test Negative  
Left hand drive: No

Vehicle Reference 2 Motorcycle over 500cc Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 33 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 33 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

120170106 03/05/2012 Time 1405 Vehicles 2 Casualties 1 Slight  
E:467691 N: 110048 First Road: B 2150 Road Type 1  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: Ped. phase at traffic signal junction Road surface Wet/Damp  
Daylight Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                        | Participant: | Confidence: |
|------|--------------------------------|--------------|-------------|
| 1st: | Slippery road (due to weather) | Vehicle 1    | Very Likely |
| 2nd: | Failed to look properly        | Vehicle 1    | Possible    |
| 3rd: |                                |              |             |
| 4th: |                                |              |             |
| 5th: |                                |              |             |
| 6th: |                                |              |             |

VEH 1 (VAN) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD ENTERED RBT FAILING TO SEE VEH 2 (M/CYCLE) TRAVELLING NE AROUND RBT. VEH 2 COLLIDED WITH OFFSIDE VEH 1 CAUSING RIDER TO FALL OFF.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH ELECTRA AVENUE, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Starting  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 65 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Vehicle Reference 2 Motor Cycle over 125 cc and up to 500cc Reversing  
Vehicle movement from W to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 43 Male  
Not hit and run Breath test Negative  
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 43 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

100378842 06/09/2010 Time 1310 Vehicles 3 Casualties 1 Slight  
E:467660 N: 110053 First Road: B 2150 Road Type Dual carriageway  
Speed limit: 40 Junction Detail: Roundabout Automatic traffic signal Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

Causation

|      | Factor:                 | Participant: | Confidence: |
|------|-------------------------|--------------|-------------|
| 1st: | Failed to look properly | Vehicle 1    | Very Likely |
| 2nd: |                         |              |             |
| 3rd: |                         |              |             |
| 4th: |                         |              |             |
| 5th: |                         |              |             |
| 6th: |                         |              |             |

VEH 1 (VAN) TRAVELLING NW ALONG HAMBLEDON ROAD HAD JUST EXITED RBT WITH ELETTRA AVENUE FAILING TO SEE STATIC TRAFFIC AHEAD. VEH 1 COLLIDED INTO THE REAR OF VEH 2 (CAR) WHICH THEN COLLIDED INTO THE REAR OF VEH 3 (CAR).

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH ELETTRA AVENUE, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Going ahead other  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Leaving roundabout First impact Front Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 27 Male  
Not hit and run Breath test Negative  
Left hand drive:

Vehicle Reference 2 Car Going ahead but held up  
Vehicle movement from SE to NW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Cleared junction or waiting/parke First impact Back Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 23 Female  
Not hit and run Breath test Not requested  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 23 Female Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

|                       |                                   |                  |                         |
|-----------------------|-----------------------------------|------------------|-------------------------|
| Vehicle Reference     | 3                                 | Car              | Going ahead but held up |
| Vehicle movement from | SE                                | to NW            | No tow / articulation   |
| On main carriageway   |                                   |                  | Leaving the main road   |
| Location at impact    | Cleared junction or waiting/parke | First impact     | Back                    |
| Hit object in road    | None                              | Off road:        | None                    |
| Did not leave carr    |                                   | Age of Driver    | 59                      |
| Not hit and run       | Breath test                       | Negative         | Female                  |
|                       |                                   | Left hand drive: |                         |

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

140318061 03/09/2014 Time 0820 Vehicles 2 Casualties 1 Slight  
E:467686 N: 110053 First Road: B 2150 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

Causation

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Disobeyed Give Way or Stop sign or markings | Vehicle 1    | Very Likely |
| 2nd: | Failed to look properly                     | Vehicle 1    | Very Likely |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (CAR) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD ENTERED RBT AND COLLIDED WITH  
NEARSIDE OF VEH 2 (P/CYCLE) TRAVELLING NE AROUND B2150 HAMBLEDON ROAD RBT TURNING RIGHT  
INTO MILTON ROAD.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 49 Female  
Not hit and run Breath test Negative  
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Turning right  
Vehicle movement from SE to NE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 33 Male  
Not hit and run Breath test Not applicable  
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 33 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

110168684 23/04/2011 Time 1030 Vehicles 2 Casualties 1 Slight  
E:467681 N: 110054 First Road: B 2150 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                 | Participant: | Confidence: |
|------|-------------------------|--------------|-------------|
| 1st: | Failed to look properly | Vehicle 2    | Very Likely |
| 2nd: |                         |              |             |
| 3rd: |                         |              |             |
| 4th: |                         |              |             |
| 5th: |                         |              |             |
| 6th: |                         |              |             |

VEH 2 (CAR) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD ENTERS RBT FAILING TO SEE VEH 1 (CAR)  
ALREADY ON RBT AND PROCEEDS COLLIDING INTO VEH 1.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Going ahead other  
Vehicle movement from SW to NE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 52 Female  
Not hit and run Breath test Negative  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 52 Female Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Car Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 52 Female  
Not hit and run Breath test Negative  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

Selection:

Notes:

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambleton Road, Waterloooville")

110436926 14/10/2011 Time 1200 Vehicles 1 Casualties 1 Slight  
E:467723 N: 110055 First Road: U Road Type Single carriageway  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 2150  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

Causation

|      | Factor:        | Participant: | Confidence: |
|------|----------------|--------------|-------------|
| 1st: | Sudden braking | Vehicle 1    | Possible    |
| 2nd: | Other          | Vehicle 1    | Possible    |
| 3rd: |                |              |             |
| 4th: |                |              |             |
| 5th: |                |              |             |
| 6th: |                |              |             |

VEH 1 (BUS) TRAVELLING SW ALONG MILTON ROAD STOPPING ON APPROACH TO RBT WITH B2150  
HAMBLEDON ROAD. UPON STOPPING A SEAT AT THE REAR OF VEH 1 BECAME DISLODGED AND  
COLLIDED INTO CAS 1 (PASSENGER).

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Bus or coach Stopping  
Vehicle movement from NE to SW No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Jct Approach First impact Did not impact Hit vehicle:  
Hit object in road None Off road: None  
Did not leave carr Age of Driver Not traced  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 52 Male Passenger Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:  
Not car passenger Seated bu

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

100283711 07/07/2010 Time 2005 Vehicles 2 Casualties 1 Slight  
E:467693 N: 110055 First Road: B 2150 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to look properly                     | Vehicle 1    | Very Likely |
| 2nd: | Disobeyed Give Way or Stop sign or markings | Vehicle 1    | Very Likely |
| 3rd: | Failed to judge other persons path or speed | Vehicle 1    |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (CAR) TRAVELLING S ALONG B2150 HAMBLEDON ROAD FAILED TO GIVE WAY AND ENTERED RBT  
COLLIDING WITH VEH 2 (P/CYCLE) TRAVELLING NE AROUND RBT, KNOCKING RIDER FROM VEH.  
Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Starting  
Vehicle movement from N to S No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or i First impact Offside Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 32 Female  
Not hit and run Breath test Negative  
Left hand drive:

Vehicle Reference 2 Pedal Cycle Going ahead other  
Vehicle movement from W to NE No tow / articulation Leaving the main road  
On main carriageway Skidded  
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 32 Male  
Not hit and run Breath test Not applicable  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 32 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

110019664 14/01/2011 Time 2155 Vehicles 2 Casualties 1 Slight  
E:467679 N: 110055 First Road: B 2150 Road Type 1  
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp  
Darkness: street lights present and lit Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Disobeyed Give Way or Stop sign or markings | Vehicle 1    | Very Likely |
| 2nd: | Failed to look properly                     | Vehicle 1    | Very Likely |
| 3rd: | Failed to judge other persons path or speed | Vehicle 1    | Possible    |
| 4th: | Inexperienced or learner driver/rider       | Vehicle 1    | Possible    |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 1 (CAR) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD, ENTERS RBT FAILING TO GIVE WAY TO  
VEH 2 (TAXI) NEGOTIATING RBT FROM ELETTRA AVENUE. FRONT OF VEH 2 HITS OFFSIDE OF VEH 1.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Starting  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Entering roundabout First impact Nearside Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 19 Female  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Vehicle Reference 2 Taxi/Private hire car Going ahead other  
Vehicle movement from SW to NE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 42 Male  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 42 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

110347755 15/08/2011 Time 1814 Vehicles 2 Casualties 1 Slight  
E:467684 N: 110056 First Road: B 2150 Road Type 1  
Speed limit: 40 Junction Detail: Roundabout Give way or controlled Unclassified  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Failed to look properly                     | Vehicle 2    | Possible    |
| 2nd: | Failed to judge other persons path or speed | Vehicle 2    | Possible    |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 2 (CAR) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD, ENTERS RBT INTENDING TO CONTINUE  
AHEAD, ACROSS PATH OF APPROACHING VEH 1 (P/CYCLE) NEGOTIATING RBT AND COLLIDES.

Occurred on B2150 HAMBLEDON ROAD AT JUNCTION WITH MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Going ahead right bend  
Vehicle movement from SW to NE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Cleared junction or waiting/parke First impact Nearside Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 48 Male  
Not hit and run Breath test Not requested  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 48 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Car Starting  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Entering roundabout First impact Offside Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 23 Male  
Not hit and run Breath test Negative  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterloooville")

120045966 02/02/2012 Time 0850 Vehicles 2 Casualties 1 Slight  
E:467665 N: 110078 First Road: B 2150 Road Type Single carriageway  
Speed limit: 30 Junction Detail: Not within 20m of junction  
Crossing: Control None Facilities: None within 50m Road surface Dry  
Daylight:street lights present Fine without high winds  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: At scene DfT Special Projects:

**Causation**

|      | Factor:      | Participant: | Confidence: |
|------|--------------|--------------|-------------|
| 1st: | Dazzling sun | Vehicle 2    | Possible    |
| 2nd: |              |              |             |
| 3rd: |              |              |             |
| 4th: |              |              |             |
| 5th: |              |              |             |
| 6th: |              |              |             |

VEH 2 (VAN) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD INTO LOW SUN, FAILING TO SEE AND  
COLLIDES WITH THE REAR OF VEH 1 (CAR) STATIONARY IN FRONT WAITING IN QUEUE OF TRAFFIC.  
Occurred on B2150 HAMBLEDON ROAD 25 METRES NORTH WEST OF MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Going ahead but held up  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 35 Female  
Not hit and run Breath test Negative  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 35 Female Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway Skidded  
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 46 Male  
Not hit and run Breath test Negative  
Left hand drive:

Accidents between dates 01/02/2010 and 31/01/2015 (60) months

**Selection:**

**Notes:**

Selected using Build Query : ; Refined using Accidents within  
selected Polygons -HC - RPU Statistics Request ("MC  
Hambledon Road, Waterlooville")

100139228 31/03/2010 Time 1245 Vehicles 2 Casualties 1 Slight  
E:467664 N: 110084 First Road: B 2150 Road Type Single carriageway  
Speed limit: 40 Junction Detail: Not within 20m of junction  
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp  
Daylight:street lights present Other  
Special Conditions at Site None Carriageway Hazards: None  
Place accident reported: Elsewhere DfT Special Projects:

**Causation**

|      | Factor:                                     | Participant: | Confidence: |
|------|---------------------------------------------|--------------|-------------|
| 1st: | Swerved                                     | Vehicle 2    | Very Likely |
| 2nd: | Failed to judge other persons path or speed | Vehicle 2    | Possible    |
| 3rd: |                                             |              |             |
| 4th: |                                             |              |             |
| 5th: |                                             |              |             |
| 6th: |                                             |              |             |

VEH 2 (CAR) TRAVELLING SE ALONG B2150 HAMBLEDON ROAD IN LANE 1 SWERVED INTO LANE 2  
COLLIDING WITH NEARSIDE VEH 1 (CAR) TRAVELLING IN FRONT IN LANE 2. VEH 2 SWERVED DUE TO  
TRAFFIC IN FRONT BRAKING HARD.

Occurred on B2150 HAMBLEDON ROAD 30 METRES NORTHWEST OF MILTON ROAD, WATERLOOVILLE,  
HAMPSHIRE

Vehicle Reference 1 Car Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle: 2  
Hit object in road None Off road: None  
Did not leave carr Age of Driver 47 Male  
Not hit and run Breath test Driver not contacted  
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 47 Male Driver/rider Severity: Slight  
Not a pupil  
Seatbelt Not Applicable Cycle helmet:

Vehicle Reference 2 Car Going ahead other  
Vehicle movement from NW to SE No tow / articulation Leaving the main road  
On main carriageway No skidding, jack-knifing or overturning  
Location at impact Not at, or within 20M of Jct First impact Offside Hit vehicle: 1  
Hit object in road None Off road: None  
Did not leave carr Age of Driver Female  
Not hit and run Breath test Driver not contacted  
Left hand drive:

**Accidents between dates**      **01/02/2010 and 31/01/2015**      (60) months

**Selection:**

Selected using Build Query : ; Refined using Accidents within  
 selected Polygons -HC - RPU Statistics Request ("MC  
 Hambledon Road, Waterloooville")

**Notes:**

**Accidents involving:**

|                                          | Fatal | Serious | Slight | Total |
|------------------------------------------|-------|---------|--------|-------|
| Motor vehicles only (excluding 2-wheels) | 0     | 0       | 11     | 11    |
| 2-wheeled motor vehicles                 | 0     | 3       | 4      | 7     |
| Pedal cycles                             | 0     | 3       | 5      | 8     |
| Horses & other                           | 0     | 0       | 0      | 0     |
| Total                                    | 0     | 6       | 20     | 26    |

**Casualties:**

|                  | Fatal | Serious | Slight | Total |
|------------------|-------|---------|--------|-------|
| Vehicle driver   | 0     | 0       | 9      | 9     |
| Passenger        | 0     | 0       | 2      | 2     |
| Motorcycle rider | 0     | 3       | 4      | 7     |
| Cyclist          | 0     | 3       | 5      | 8     |
| Pedestrian       | 0     | 0       | 0      | 0     |
| Other            | 0     | 0       | 0      | 0     |
| Total            | 0     | 6       | 20     | 26    |

## **Appendix D**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK  
Category : D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL VEHICLES

Selected regions and areas:

06 WEST MIDLANDS  
WM WEST MIDLANDS 1 days

Filtering Stage 2 selection:

Parameter: Gross floor area  
Range: 250 to 250 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 25/11/08

Selected survey days:

Tuesday 1 days

Selected survey types:

Manual count 1 days  
Directional ATC Count 0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1

Selected Location Sub Categories:

No Sub Category 1

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL VEHICLES  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |               |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|---------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate     |
| 00:00 - 01:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 01:00 - 02:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 02:00 - 03:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 03:00 - 04:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 04:00 - 05:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 05:00 - 06:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 06:00 - 07:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 07:00 - 08:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 08:00 - 09:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 09:00 - 10:00       | 1        | 250      | 0.400         | 1          | 250      | 0.400         | 1        | 250      | 0.800         |
| 10:00 - 11:00       | 1        | 250      | 2.800         | 1          | 250      | 2.400         | 1        | 250      | 5.200         |
| 11:00 - 12:00       | 1        | 250      | 4.400         | 1          | 250      | 2.000         | 1        | 250      | 6.400         |
| 12:00 - 13:00       | 1        | 250      | 8.800         | 1          | 250      | 11.200        | 1        | 250      | 20.000        |
| 13:00 - 14:00       | 1        | 250      | 11.200        | 1          | 250      | 8.800         | 1        | 250      | 20.000        |
| 14:00 - 15:00       | 1        | 250      | 3.200         | 1          | 250      | 4.800         | 1        | 250      | 8.000         |
| 15:00 - 16:00       | 1        | 250      | 2.800         | 1          | 250      | 3.200         | 1        | 250      | 6.000         |
| 16:00 - 17:00       | 1        | 250      | 2.400         | 1          | 250      | 2.000         | 1        | 250      | 4.400         |
| 17:00 - 18:00       | 1        | 250      | 1.600         | 1          | 250      | 2.000         | 1        | 250      | 3.600         |
| 18:00 - 19:00       | 1        | 250      | 3.600         | 1          | 250      | 2.800         | 1        | 250      | 6.400         |
| 19:00 - 20:00       | 1        | 250      | 5.600         | 1          | 250      | 5.600         | 1        | 250      | 11.200        |
| 20:00 - 21:00       | 1        | 250      | 2.000         | 1          | 250      | 2.800         | 1        | 250      | 4.800         |
| 21:00 - 22:00       | 1        | 250      | 0.000         | 1          | 250      | 1.200         | 1        | 250      | 1.200         |
| 22:00 - 23:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 23:00 - 24:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| <b>Total Rates:</b> |          |          | <b>48.800</b> |            |          | <b>49.200</b> |          |          | <b>98.000</b> |

#### Parameter summary

Trip rate parameter range selected: 250 - 250 (units: sqm)  
Survey date range: 01/01/03 - 25/11/08  
Number of weekdays (Monday-Friday): 1  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL CYCLISTS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 08:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 08:00 - 09:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 09:00 - 10:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 10:00 - 11:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 11:00 - 12:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 12:00 - 13:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 13:00 - 14:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 14:00 - 15:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 15:00 - 16:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 16:00 - 17:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 17:00 - 18:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 18:00 - 19:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 19:00 - 20:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 20:00 - 21:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 21:00 - 22:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 22:00 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.000     |            |          | 0.000     |          |          | 0.000     |

#### Parameter summary

Trip rate parameter range selected: 250 - 250 (units: sqm)  
Survey date range: 01/01/03 - 25/11/08  
Number of weekdays (Monday-Friday): 1  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |                |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|----------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate      |
| 00:00 - 01:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 01:00 - 02:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 02:00 - 03:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 03:00 - 04:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 04:00 - 05:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 05:00 - 06:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 06:00 - 07:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 07:00 - 08:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 08:00 - 09:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 09:00 - 10:00       | 1        | 250      | 0.400         | 1          | 250      | 0.400         | 1        | 250      | 0.800          |
| 10:00 - 11:00       | 1        | 250      | 4.400         | 1          | 250      | 3.600         | 1        | 250      | 8.000          |
| 11:00 - 12:00       | 1        | 250      | 4.800         | 1          | 250      | 2.800         | 1        | 250      | 7.600          |
| 12:00 - 13:00       | 1        | 250      | 11.600        | 1          | 250      | 12.800        | 1        | 250      | 24.400         |
| 13:00 - 14:00       | 1        | 250      | 17.200        | 1          | 250      | 13.200        | 1        | 250      | 30.400         |
| 14:00 - 15:00       | 1        | 250      | 4.000         | 1          | 250      | 7.200         | 1        | 250      | 11.200         |
| 15:00 - 16:00       | 1        | 250      | 4.000         | 1          | 250      | 3.600         | 1        | 250      | 7.600          |
| 16:00 - 17:00       | 1        | 250      | 3.200         | 1          | 250      | 3.200         | 1        | 250      | 6.400          |
| 17:00 - 18:00       | 1        | 250      | 2.800         | 1          | 250      | 3.200         | 1        | 250      | 6.000          |
| 18:00 - 19:00       | 1        | 250      | 5.600         | 1          | 250      | 4.000         | 1        | 250      | 9.600          |
| 19:00 - 20:00       | 1        | 250      | 8.000         | 1          | 250      | 8.000         | 1        | 250      | 16.000         |
| 20:00 - 21:00       | 1        | 250      | 3.200         | 1          | 250      | 4.800         | 1        | 250      | 8.000          |
| 21:00 - 22:00       | 1        | 250      | 0.000         | 1          | 250      | 2.800         | 1        | 250      | 2.800          |
| 22:00 - 23:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 23:00 - 24:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| <b>Total Rates:</b> |          |          | <b>69.200</b> |            |          | <b>69.600</b> |          |          | <b>138.800</b> |

Parameter summary

Trip rate parameter range selected: 250 - 250 (units: sqm)  
Survey date range: 01/01/03 - 25/11/08  
Number of weekdays (Monday-Friday): 1  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL PEDESTRIANS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |              | DEPARTURES |          |              | TOTALS   |          |              |
|---------------------|----------|----------|--------------|------------|----------|--------------|----------|----------|--------------|
|                     | No. Days | Ave. GFA | Trip Rate    | No. Days   | Ave. GFA | Trip Rate    | No. Days | Ave. GFA | Trip Rate    |
| 00:00 - 01:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 01:00 - 02:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 02:00 - 03:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 03:00 - 04:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 04:00 - 05:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 05:00 - 06:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 06:00 - 07:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 07:00 - 08:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 08:00 - 09:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 09:00 - 10:00       | 1        | 250      | 0.400        | 1          | 250      | 0.400        | 1        | 250      | 0.800        |
| 10:00 - 11:00       | 1        | 250      | 0.000        | 1          | 250      | 0.000        | 1        | 250      | 0.000        |
| 11:00 - 12:00       | 1        | 250      | 0.400        | 1          | 250      | 0.000        | 1        | 250      | 0.400        |
| 12:00 - 13:00       | 1        | 250      | 0.000        | 1          | 250      | 0.400        | 1        | 250      | 0.400        |
| 13:00 - 14:00       | 1        | 250      | 1.600        | 1          | 250      | 1.600        | 1        | 250      | 3.200        |
| 14:00 - 15:00       | 1        | 250      | 0.000        | 1          | 250      | 0.000        | 1        | 250      | 0.000        |
| 15:00 - 16:00       | 1        | 250      | 0.800        | 1          | 250      | 0.000        | 1        | 250      | 0.800        |
| 16:00 - 17:00       | 1        | 250      | 0.400        | 1          | 250      | 0.800        | 1        | 250      | 1.200        |
| 17:00 - 18:00       | 1        | 250      | 0.000        | 1          | 250      | 0.400        | 1        | 250      | 0.400        |
| 18:00 - 19:00       | 1        | 250      | 0.400        | 1          | 250      | 0.400        | 1        | 250      | 0.800        |
| 19:00 - 20:00       | 1        | 250      | 0.000        | 1          | 250      | 0.000        | 1        | 250      | 0.000        |
| 20:00 - 21:00       | 1        | 250      | 0.000        | 1          | 250      | 0.000        | 1        | 250      | 0.000        |
| 21:00 - 22:00       | 1        | 250      | 0.000        | 1          | 250      | 0.000        | 1        | 250      | 0.000        |
| 22:00 - 23:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 23:00 - 24:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| <b>Total Rates:</b> |          |          | <b>4.000</b> |            |          | <b>4.000</b> |          |          | <b>8.000</b> |

#### Parameter summary

Trip rate parameter range selected: 250 - 250 (units: sqm)  
Survey date range: 01/01/03 - 25/11/08  
Number of weekdays (Monday-Friday): 1  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL PUBLIC TRANSPORT USERS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 08:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 08:00 - 09:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 09:00 - 10:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 10:00 - 11:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 11:00 - 12:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 12:00 - 13:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 13:00 - 14:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 14:00 - 15:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 15:00 - 16:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 16:00 - 17:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 17:00 - 18:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 18:00 - 19:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 19:00 - 20:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 20:00 - 21:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 21:00 - 22:00 | 1        | 250      | 0.000     | 1          | 250      | 0.000     | 1        | 250      | 0.000     |
| 22:00 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.000     |            |          | 0.000     |          |          | 0.000     |

#### Parameter summary

Trip rate parameter range selected: 250 - 250 (units: sqm)  
Survey date range: 01/01/03 - 25/11/08  
Number of weekdays (Monday-Friday): 1  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH  
MULTI-MODAL TOTAL PEOPLE  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |                |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|----------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate      |
| 00:00 - 01:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 01:00 - 02:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 02:00 - 03:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 03:00 - 04:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 04:00 - 05:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 05:00 - 06:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 06:00 - 07:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 07:00 - 08:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 08:00 - 09:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 09:00 - 10:00       | 1        | 250      | 0.800         | 1          | 250      | 0.800         | 1        | 250      | 1.600          |
| 10:00 - 11:00       | 1        | 250      | 4.400         | 1          | 250      | 3.600         | 1        | 250      | 8.000          |
| 11:00 - 12:00       | 1        | 250      | 5.200         | 1          | 250      | 2.800         | 1        | 250      | 8.000          |
| 12:00 - 13:00       | 1        | 250      | 11.600        | 1          | 250      | 13.200        | 1        | 250      | 24.800         |
| 13:00 - 14:00       | 1        | 250      | 18.800        | 1          | 250      | 14.800        | 1        | 250      | 33.600         |
| 14:00 - 15:00       | 1        | 250      | 4.000         | 1          | 250      | 7.200         | 1        | 250      | 11.200         |
| 15:00 - 16:00       | 1        | 250      | 4.800         | 1          | 250      | 3.600         | 1        | 250      | 8.400          |
| 16:00 - 17:00       | 1        | 250      | 3.600         | 1          | 250      | 4.000         | 1        | 250      | 7.600          |
| 17:00 - 18:00       | 1        | 250      | 2.800         | 1          | 250      | 3.600         | 1        | 250      | 6.400          |
| 18:00 - 19:00       | 1        | 250      | 6.000         | 1          | 250      | 4.400         | 1        | 250      | 10.400         |
| 19:00 - 20:00       | 1        | 250      | 8.000         | 1          | 250      | 8.000         | 1        | 250      | 16.000         |
| 20:00 - 21:00       | 1        | 250      | 3.200         | 1          | 250      | 4.800         | 1        | 250      | 8.000          |
| 21:00 - 22:00       | 1        | 250      | 0.000         | 1          | 250      | 2.800         | 1        | 250      | 2.800          |
| 22:00 - 23:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| 23:00 - 24:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000          |
| <b>Total Rates:</b> |          |          | <b>73.200</b> |            |          | <b>73.600</b> |          |          | <b>146.800</b> |

#### Parameter summary

Trip rate parameter range selected: 250 - 250 (units: sqm)  
Survey date range: 01/01/03 - 25/11/08  
Number of weekdays (Monday-Friday): 1  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

## **Appendix E**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK

Category : B - RESTAURANTS

MULTI-MODAL VEHICLES

Selected regions and areas:

|    |                       |        |
|----|-----------------------|--------|
| 08 | NORTH WEST            |        |
|    | GM GREATER MANCHESTER | 1 days |
|    | MS MERSEYSIDE         | 1 days |
| 09 | NORTH                 |        |
|    | DH DURHAM             | 1 days |
| 11 | SCOTLAND              |        |
|    | EA EAST AYRSHIRE      | 1 days |
|    | FA FALKIRK            | 1 days |

Filtering Stage 2 selection:

Parameter: Gross floor area  
 Range: 350 to 900 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 23/11/09

Selected survey days:

|          |        |
|----------|--------|
| Monday   | 1 days |
| Thursday | 1 days |
| Friday   | 3 days |

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 5 days |
| Directional ATC Count | 0 days |

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Edge of Town Centre                | 4 |
| Suburban Area (PPS6 Out of Centre) | 1 |

Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Development Zone | 2 |
| Retail Zone      | 1 |
| Built-Up Zone    | 1 |
| No Sub Category  | 1 |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |               |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|---------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate     |
| 00:00 - 01:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 01:00 - 02:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 02:00 - 03:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 03:00 - 04:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 04:00 - 05:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 05:00 - 06:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 06:00 - 07:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 07:00 - 08:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 08:00 - 09:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 09:00 - 10:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 10:00 - 11:00       | 3        | 458      | 0.436         | 3          | 458      | 0.145         | 3        | 458      | 0.581         |
| 11:00 - 12:00       | 4        | 569      | 0.571         | 4          | 569      | 0.352         | 4        | 569      | 0.923         |
| 12:00 - 13:00       | 5        | 555      | 1.369         | 5          | 555      | 0.432         | 5        | 555      | 1.801         |
| 13:00 - 14:00       | 5        | 555      | 1.910         | 5          | 555      | 1.333         | 5        | 555      | 3.243         |
| 14:00 - 15:00       | 5        | 555      | 1.946         | 5          | 555      | 2.270         | 5        | 555      | 4.216         |
| 15:00 - 16:00       | 5        | 555      | 2.378         | 5          | 555      | 2.306         | 5        | 555      | 4.684         |
| 16:00 - 17:00       | 5        | 555      | 2.162         | 5          | 555      | 1.946         | 5        | 555      | 4.108         |
| 17:00 - 18:00       | 5        | 555      | 2.919         | 5          | 555      | 2.342         | 5        | 555      | 5.261         |
| 18:00 - 19:00       | 5        | 555      | 3.207         | 5          | 555      | 2.631         | 5        | 555      | 5.838         |
| 19:00 - 20:00       | 5        | 555      | 3.964         | 5          | 555      | 4.108         | 5        | 555      | 8.072         |
| 20:00 - 21:00       | 5        | 555      | 2.919         | 5          | 555      | 3.495         | 5        | 555      | 6.414         |
| 21:00 - 22:00       | 5        | 555      | 1.694         | 5          | 555      | 2.703         | 5        | 555      | 4.397         |
| 22:00 - 23:00       | 5        | 555      | 0.901         | 5          | 555      | 1.910         | 5        | 555      | 2.811         |
| 23:00 - 24:00       | 4        | 469      | 0.000         | 4          | 469      | 0.427         | 4        | 469      | 0.427         |
| <b>Total Rates:</b> |          |          | <b>26.376</b> |            |          | <b>26.400</b> |          |          | <b>52.776</b> |

#### Parameter summary

Trip rate parameter range selected: 350 - 900 (units: sqm)  
 Survey date range: 01/01/03 - 23/11/09  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|                     | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 02:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 03:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 04:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 05:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 06:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 07:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 08:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 08:00 - 09:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 09:00 - 10:00       | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 10:00 - 11:00       | 3        | 458      | 0.000     | 3          | 458      | 0.000     | 3        | 458      | 0.000     |
| 11:00 - 12:00       | 4        | 569      | 0.000     | 4          | 569      | 0.000     | 4        | 569      | 0.000     |
| 12:00 - 13:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 13:00 - 14:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 14:00 - 15:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 15:00 - 16:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 16:00 - 17:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 17:00 - 18:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 18:00 - 19:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 19:00 - 20:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 20:00 - 21:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 21:00 - 22:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 22:00 - 23:00       | 5        | 555      | 0.000     | 5          | 555      | 0.000     | 5        | 555      | 0.000     |
| 23:00 - 24:00       | 4        | 469      | 0.000     | 4          | 469      | 0.000     | 4        | 469      | 0.000     |
| <b>Total Rates:</b> |          |          | 0.000     |            |          | 0.000     |          |          | 0.000     |

#### Parameter summary

Trip rate parameter range selected: 350 - 900 (units: sqm)  
 Survey date range: 01/01/03 - 23/11/09  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |               |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|---------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate     |
| 00:00 - 01:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 01:00 - 02:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 02:00 - 03:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 03:00 - 04:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 04:00 - 05:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 05:00 - 06:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 06:00 - 07:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 07:00 - 08:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 08:00 - 09:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 09:00 - 10:00       | 0        | 0        | 0.000         | 0          | 0        | 0.000         | 0        | 0        | 0.000         |
| 10:00 - 11:00       | 3        | 458      | 0.436         | 3          | 458      | 0.145         | 3        | 458      | 0.581         |
| 11:00 - 12:00       | 4        | 569      | 1.099         | 4          | 569      | 0.484         | 4        | 569      | 1.583         |
| 12:00 - 13:00       | 5        | 555      | 2.306         | 5          | 555      | 0.865         | 5        | 555      | 3.171         |
| 13:00 - 14:00       | 5        | 555      | 3.568         | 5          | 555      | 2.486         | 5        | 555      | 6.054         |
| 14:00 - 15:00       | 5        | 555      | 3.279         | 5          | 555      | 3.964         | 5        | 555      | 7.243         |
| 15:00 - 16:00       | 5        | 555      | 4.036         | 5          | 555      | 3.784         | 5        | 555      | 7.820         |
| 16:00 - 17:00       | 5        | 555      | 4.000         | 5          | 555      | 3.315         | 5        | 555      | 7.315         |
| 17:00 - 18:00       | 5        | 555      | 5.802         | 5          | 555      | 3.964         | 5        | 555      | 9.766         |
| 18:00 - 19:00       | 5        | 555      | 6.450         | 5          | 555      | 5.045         | 5        | 555      | 11.495        |
| 19:00 - 20:00       | 5        | 555      | 6.811         | 5          | 555      | 7.099         | 5        | 555      | 13.910        |
| 20:00 - 21:00       | 5        | 555      | 4.829         | 5          | 555      | 6.270         | 5        | 555      | 11.099        |
| 21:00 - 22:00       | 5        | 555      | 2.595         | 5          | 555      | 4.793         | 5        | 555      | 7.388         |
| 22:00 - 23:00       | 5        | 555      | 1.333         | 5          | 555      | 3.243         | 5        | 555      | 4.576         |
| 23:00 - 24:00       | 4        | 469      | 0.000         | 4          | 469      | 0.800         | 4        | 469      | 0.800         |
| <b>Total Rates:</b> |          |          | <b>46.544</b> |            |          | <b>46.257</b> |          |          | <b>92.801</b> |

#### Parameter summary

Trip rate parameter range selected: 350 - 900 (units: sqm)  
 Survey date range: 01/01/03 - 23/11/09  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS

**MULTI-MODAL PEDESTRIANS**

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |              | DEPARTURES |          |              | TOTALS   |          |              |
|---------------------|----------|----------|--------------|------------|----------|--------------|----------|----------|--------------|
|                     | No. Days | Ave. GFA | Trip Rate    | No. Days   | Ave. GFA | Trip Rate    | No. Days | Ave. GFA | Trip Rate    |
| 00:00 - 01:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 01:00 - 02:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 02:00 - 03:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 03:00 - 04:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 04:00 - 05:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 05:00 - 06:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 06:00 - 07:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 07:00 - 08:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 08:00 - 09:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 09:00 - 10:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 10:00 - 11:00       | 3        | 458      | 0.145        | 3          | 458      | 0.145        | 3        | 458      | 0.290        |
| 11:00 - 12:00       | 4        | 569      | 0.088        | 4          | 569      | 0.000        | 4        | 569      | 0.088        |
| 12:00 - 13:00       | 5        | 555      | 0.541        | 5          | 555      | 0.252        | 5        | 555      | 0.793        |
| 13:00 - 14:00       | 5        | 555      | 0.396        | 5          | 555      | 0.216        | 5        | 555      | 0.612        |
| 14:00 - 15:00       | 5        | 555      | 0.180        | 5          | 555      | 0.396        | 5        | 555      | 0.576        |
| 15:00 - 16:00       | 5        | 555      | 0.216        | 5          | 555      | 0.324        | 5        | 555      | 0.540        |
| 16:00 - 17:00       | 5        | 555      | 0.432        | 5          | 555      | 0.324        | 5        | 555      | 0.756        |
| 17:00 - 18:00       | 5        | 555      | 0.613        | 5          | 555      | 0.180        | 5        | 555      | 0.793        |
| 18:00 - 19:00       | 5        | 555      | 0.505        | 5          | 555      | 0.432        | 5        | 555      | 0.937        |
| 19:00 - 20:00       | 5        | 555      | 0.468        | 5          | 555      | 0.541        | 5        | 555      | 1.009        |
| 20:00 - 21:00       | 5        | 555      | 0.144        | 5          | 555      | 0.180        | 5        | 555      | 0.324        |
| 21:00 - 22:00       | 5        | 555      | 0.000        | 5          | 555      | 0.468        | 5        | 555      | 0.468        |
| 22:00 - 23:00       | 5        | 555      | 0.000        | 5          | 555      | 0.072        | 5        | 555      | 0.072        |
| 23:00 - 24:00       | 4        | 469      | 0.000        | 4          | 469      | 0.320        | 4        | 469      | 0.320        |
| <b>Total Rates:</b> |          |          | <b>3.728</b> |            |          | <b>3.850</b> |          |          | <b>7.578</b> |

#### Parameter summary

Trip rate parameter range selected: 350 - 900 (units: sqm)  
 Survey date range: 01/01/03 - 23/11/09  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS  
 MULTI-MODAL PUBLIC TRANSPORT USERS  
 Calculation factor: 100 sqm  
 BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |              | DEPARTURES |          |              | TOTALS   |          |              |
|---------------------|----------|----------|--------------|------------|----------|--------------|----------|----------|--------------|
|                     | No. Days | Ave. GFA | Trip Rate    | No. Days   | Ave. GFA | Trip Rate    | No. Days | Ave. GFA | Trip Rate    |
| 00:00 - 01:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 01:00 - 02:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 02:00 - 03:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 03:00 - 04:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 04:00 - 05:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 05:00 - 06:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 06:00 - 07:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 07:00 - 08:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 08:00 - 09:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 09:00 - 10:00       | 0        | 0        | 0.000        | 0          | 0        | 0.000        | 0        | 0        | 0.000        |
| 10:00 - 11:00       | 3        | 458      | 0.073        | 3          | 458      | 0.073        | 3        | 458      | 0.146        |
| 11:00 - 12:00       | 4        | 569      | 0.088        | 4          | 569      | 0.044        | 4        | 569      | 0.132        |
| 12:00 - 13:00       | 5        | 555      | 0.072        | 5          | 555      | 0.036        | 5        | 555      | 0.108        |
| 13:00 - 14:00       | 5        | 555      | 0.288        | 5          | 555      | 0.180        | 5        | 555      | 0.468        |
| 14:00 - 15:00       | 5        | 555      | 0.072        | 5          | 555      | 0.072        | 5        | 555      | 0.144        |
| 15:00 - 16:00       | 5        | 555      | 0.072        | 5          | 555      | 0.180        | 5        | 555      | 0.252        |
| 16:00 - 17:00       | 5        | 555      | 0.432        | 5          | 555      | 0.288        | 5        | 555      | 0.720        |
| 17:00 - 18:00       | 5        | 555      | 0.252        | 5          | 555      | 0.216        | 5        | 555      | 0.468        |
| 18:00 - 19:00       | 5        | 555      | 0.216        | 5          | 555      | 0.324        | 5        | 555      | 0.540        |
| 19:00 - 20:00       | 5        | 555      | 0.000        | 5          | 555      | 0.000        | 5        | 555      | 0.000        |
| 20:00 - 21:00       | 5        | 555      | 0.180        | 5          | 555      | 0.180        | 5        | 555      | 0.360        |
| 21:00 - 22:00       | 5        | 555      | 0.000        | 5          | 555      | 0.072        | 5        | 555      | 0.072        |
| 22:00 - 23:00       | 5        | 555      | 0.000        | 5          | 555      | 0.000        | 5        | 555      | 0.000        |
| 23:00 - 24:00       | 4        | 469      | 0.000        | 4          | 469      | 0.000        | 4        | 469      | 0.000        |
| <b>Total Rates:</b> |          |          | <b>1.745</b> |            |          | <b>1.665</b> |          |          | <b>3.410</b> |

#### Parameter summary

Trip rate parameter range selected: 350 - 900 (units: sqm)  
 Survey date range: 01/01/03 - 23/11/09  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/B - RESTAURANTS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 08:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 08:00 - 09:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 09:00 - 10:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 10:00 - 11:00 | 3        | 458      | 0.655     | 3          | 458      | 0.364     | 3        | 458      | 1.019     |
| 11:00 - 12:00 | 4        | 569      | 1.275     | 4          | 569      | 0.527     | 4        | 569      | 1.802     |
| 12:00 - 13:00 | 5        | 555      | 2.919     | 5          | 555      | 1.153     | 5        | 555      | 4.072     |
| 13:00 - 14:00 | 5        | 555      | 4.252     | 5          | 555      | 2.883     | 5        | 555      | 7.135     |
| 14:00 - 15:00 | 5        | 555      | 3.532     | 5          | 555      | 4.432     | 5        | 555      | 7.964     |
| 15:00 - 16:00 | 5        | 555      | 4.324     | 5          | 555      | 4.288     | 5        | 555      | 8.612     |
| 16:00 - 17:00 | 5        | 555      | 4.865     | 5          | 555      | 3.928     | 5        | 555      | 8.793     |
| 17:00 - 18:00 | 5        | 555      | 6.667     | 5          | 555      | 4.360     | 5        | 555      | 11.027    |
| 18:00 - 19:00 | 5        | 555      | 7.171     | 5          | 555      | 5.802     | 5        | 555      | 12.973    |
| 19:00 - 20:00 | 5        | 555      | 7.279     | 5          | 555      | 7.640     | 5        | 555      | 14.919    |
| 20:00 - 21:00 | 5        | 555      | 5.153     | 5          | 555      | 6.631     | 5        | 555      | 11.784    |
| 21:00 - 22:00 | 5        | 555      | 2.595     | 5          | 555      | 5.333     | 5        | 555      | 7.928     |
| 22:00 - 23:00 | 5        | 555      | 1.333     | 5          | 555      | 3.315     | 5        | 555      | 4.648     |
| 23:00 - 24:00 | 4        | 469      | 0.000     | 4          | 469      | 1.120     | 4        | 469      | 1.120     |
| Total Rates:  |          |          | 52.020    |            |          | 51.776    |          |          | 103.796   |

#### Parameter summary

Trip rate parameter range selected: 350 - 900 (units: sqm)  
 Survey date range: 01/01/03 - 23/11/09  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

Calculation Reference: AUDIT-623801-150417-0408

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL  
 Category : G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE  
 MULTI-MODAL VEHICLES

Selected regions and areas:

|    |                                |        |
|----|--------------------------------|--------|
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE |        |
| NY | NORTH YORKSHIRE                | 1 days |
| SY | SOUTH YORKSHIRE                | 1 days |

## Filtering Stage 2 selection:

|                         |                           |
|-------------------------|---------------------------|
| Parameter:              | Gross floor area          |
| Actual Range:           | 3127 to 3500 (units: sqm) |
| Range Selected by User: | 1500 to 5000 (units: sqm) |

Public Transport Provision:

|               |                     |
|---------------|---------------------|
| Selection by: | Include all surveys |
|---------------|---------------------|

|             |                      |
|-------------|----------------------|
| Date Range: | 01/01/07 to 18/06/11 |
|-------------|----------------------|

Selected survey days:

|           |        |
|-----------|--------|
| Monday    | 1 days |
| Wednesday | 1 days |

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 2 days |
| Directional ATC Count | 0 days |

Selected Locations:

|              |   |
|--------------|---|
| Edge of Town | 2 |
|--------------|---|

Selected Location Sub Categories:

|             |   |
|-------------|---|
| Retail Zone | 2 |
|-------------|---|

## Filtering Stage 3 selection:

Use Class:

|    |        |
|----|--------|
| A1 | 2 days |
|----|--------|

Population within 1 mile:

|                  |        |
|------------------|--------|
| 5,001 to 10,000  | 1 days |
| 10,001 to 15,000 | 1 days |

Population within 5 miles:

|                    |        |
|--------------------|--------|
| 125,001 to 250,000 | 2 days |
|--------------------|--------|

Car ownership within 5 miles:

|            |        |
|------------|--------|
| 0.6 to 1.0 | 1 days |
| 1.1 to 1.5 | 1 days |

Petrol filling station:

|                                           |        |
|-------------------------------------------|--------|
| Included in the survey count              | 0 days |
| Excluded from count or no filling station | 2 days |

Travel Plan:

|    |        |
|----|--------|
| No | 2 days |
|----|--------|

LIST OF SITES relevant to selection parameters

|   |                         |             |  |                     |
|---|-------------------------|-------------|--|---------------------|
| 1 | NY-01-G-03              | DUNELM MILL |  | NORTH YORKSHIRE     |
|   | STIRLING ROAD           |             |  |                     |
|   | CLIFTON MOOR            |             |  |                     |
|   | YORK                    |             |  |                     |
|   | Edge of Town            |             |  |                     |
|   | Retail Zone             |             |  |                     |
|   | Total Gross floor area: | 3500 sqm    |  |                     |
|   | Survey date: WEDNESDAY  | 16/09/09    |  | Survey Type: MANUAL |
| 2 | SY-01-G-01              | DUNELM MILL |  | SOUTH YORKSHIRE     |
|   | WOMBWELL LANE           |             |  |                     |
|   | BARNESLEY RETAIL PARK   |             |  |                     |
|   | BARNESLEY               |             |  |                     |
|   | Edge of Town            |             |  |                     |
|   | Retail Zone             |             |  |                     |
|   | Total Gross floor area: | 3127 sqm    |  |                     |
|   | Survey date: MONDAY     | 21/06/10    |  | Survey Type: MANUAL |

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 | 2        | 3314     | 0.226     | 2          | 3314     | 0.045     | 2        | 3314     | 0.271     |
| 09:00 - 10:00 | 2        | 3314     | 1.584     | 2          | 3314     | 0.770     | 2        | 3314     | 2.354     |
| 10:00 - 11:00 | 2        | 3314     | 2.384     | 2          | 3314     | 1.871     | 2        | 3314     | 4.255     |
| 11:00 - 12:00 | 2        | 3314     | 2.761     | 2          | 3314     | 2.475     | 2        | 3314     | 5.236     |
| 12:00 - 13:00 | 2        | 3314     | 2.203     | 2          | 3314     | 2.429     | 2        | 3314     | 4.632     |
| 13:00 - 14:00 | 2        | 3314     | 2.837     | 2          | 3314     | 2.565     | 2        | 3314     | 5.402     |
| 14:00 - 15:00 | 2        | 3314     | 2.414     | 2          | 3314     | 2.656     | 2        | 3314     | 5.070     |
| 15:00 - 16:00 | 2        | 3314     | 1.766     | 2          | 3314     | 2.218     | 2        | 3314     | 3.984     |
| 16:00 - 17:00 | 2        | 3314     | 1.071     | 2          | 3314     | 1.434     | 2        | 3314     | 2.505     |
| 17:00 - 18:00 | 2        | 3314     | 1.313     | 2          | 3314     | 1.252     | 2        | 3314     | 2.565     |
| 18:00 - 19:00 | 2        | 3314     | 0.362     | 2          | 3314     | 0.649     | 2        | 3314     | 1.011     |
| 19:00 - 20:00 | 2        | 3314     | 0.136     | 2          | 3314     | 0.362     | 2        | 3314     | 0.498     |
| 20:00 - 21:00 | 1        | 3127     | 0.000     | 1          | 3127     | 0.000     | 1        | 3127     | 0.000     |
| 21:00 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 19.057    |            |          | 18.726    |          |          | 37.783    |

## Parameter summary

Trip rate parameter range selected: 3127 - 3500 (units: sqm)  
 Survey date range: 01/01/07 - 18/06/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 09:00 - 10:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.015     | 2        | 3314     | 0.030     |
| 10:00 - 11:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 11:00 - 12:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 12:00 - 13:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 13:00 - 14:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.015     | 2        | 3314     | 0.030     |
| 14:00 - 15:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 15:00 - 16:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 16:00 - 17:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 17:00 - 18:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 18:00 - 19:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 19:00 - 20:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 20:00 - 21:00 | 1        | 3127     | 0.000     | 1          | 3127     | 0.000     | 1        | 3127     | 0.000     |
| 21:00 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 0.030     |            |          | 0.030     |          |          | 0.060     |

## Parameter summary

Trip rate parameter range selected: 3127 - 3500 (units: sqm)  
 Survey date range: 01/01/07 - 18/06/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.000     | 2        | 3314     | 0.015     |
| 09:00 - 10:00 | 2        | 3314     | 0.030     | 2          | 3314     | 0.015     | 2        | 3314     | 0.045     |
| 10:00 - 11:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.000     | 2        | 3314     | 0.015     |
| 11:00 - 12:00 | 2        | 3314     | 0.030     | 2          | 3314     | 0.000     | 2        | 3314     | 0.030     |
| 12:00 - 13:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 13:00 - 14:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 14:00 - 15:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.030     | 2        | 3314     | 0.045     |
| 15:00 - 16:00 | 2        | 3314     | 0.030     | 2          | 3314     | 0.015     | 2        | 3314     | 0.045     |
| 16:00 - 17:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 17:00 - 18:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 18:00 - 19:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 19:00 - 20:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.000     | 2        | 3314     | 0.000     |
| 20:00 - 21:00 | 1        | 3127     | 0.000     | 1          | 3127     | 0.000     | 1        | 3127     | 0.000     |
| 21:00 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 0.135     |            |          | 0.060     |          |          | 0.195     |

## Parameter summary

Trip rate parameter range selected: 3127 - 3500 (units: sqm)  
 Survey date range: 01/01/07 - 18/06/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.000     | 2        | 3314     | 0.015     |
| 09:00 - 10:00 | 2        | 3314     | 0.030     | 2          | 3314     | 0.045     | 2        | 3314     | 0.075     |
| 10:00 - 11:00 | 2        | 3314     | 0.060     | 2          | 3314     | 0.106     | 2        | 3314     | 0.166     |
| 11:00 - 12:00 | 2        | 3314     | 0.060     | 2          | 3314     | 0.030     | 2        | 3314     | 0.090     |
| 12:00 - 13:00 | 2        | 3314     | 0.091     | 2          | 3314     | 0.045     | 2        | 3314     | 0.136     |
| 13:00 - 14:00 | 2        | 3314     | 0.091     | 2          | 3314     | 0.045     | 2        | 3314     | 0.136     |
| 14:00 - 15:00 | 2        | 3314     | 0.181     | 2          | 3314     | 0.075     | 2        | 3314     | 0.256     |
| 15:00 - 16:00 | 2        | 3314     | 0.091     | 2          | 3314     | 0.091     | 2        | 3314     | 0.182     |
| 16:00 - 17:00 | 2        | 3314     | 0.060     | 2          | 3314     | 0.136     | 2        | 3314     | 0.196     |
| 17:00 - 18:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.075     | 2        | 3314     | 0.075     |
| 18:00 - 19:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.030     | 2        | 3314     | 0.030     |
| 19:00 - 20:00 | 2        | 3314     | 0.000     | 2          | 3314     | 0.045     | 2        | 3314     | 0.045     |
| 20:00 - 21:00 | 1        | 3127     | 0.000     | 1          | 3127     | 0.000     | 1        | 3127     | 0.000     |
| 21:00 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 0.679     |            |          | 0.723     |          |          | 1.402     |

## Parameter summary

Trip rate parameter range selected: 3127 - 3500 (units: sqm)  
 Survey date range: 01/01/07 - 18/06/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE  
 MULTI-MODAL PUBLIC TRANSPORT USERS  
 Calculation factor: 100 sqm  
 BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.000     | 2        | 3314     | 0.015     |
| 09:00 - 10:00 | 2        | 3314     | 0.060     | 2          | 3314     | 0.015     | 2        | 3314     | 0.075     |
| 10:00 - 11:00 | 2        | 3314     | 0.151     | 2          | 3314     | 0.151     | 2        | 3314     | 0.302     |
| 11:00 - 12:00 | 2        | 3314     | 0.151     | 2          | 3314     | 0.075     | 2        | 3314     | 0.226     |
| 12:00 - 13:00 | 2        | 3314     | 0.121     | 2          | 3314     | 0.091     | 2        | 3314     | 0.212     |
| 13:00 - 14:00 | 2        | 3314     | 0.060     | 2          | 3314     | 0.060     | 2        | 3314     | 0.120     |
| 14:00 - 15:00 | 2        | 3314     | 0.075     | 2          | 3314     | 0.136     | 2        | 3314     | 0.211     |
| 15:00 - 16:00 | 2        | 3314     | 0.030     | 2          | 3314     | 0.015     | 2        | 3314     | 0.045     |
| 16:00 - 17:00 | 2        | 3314     | 0.045     | 2          | 3314     | 0.060     | 2        | 3314     | 0.105     |
| 17:00 - 18:00 | 2        | 3314     | 0.045     | 2          | 3314     | 0.060     | 2        | 3314     | 0.105     |
| 18:00 - 19:00 | 2        | 3314     | 0.045     | 2          | 3314     | 0.030     | 2        | 3314     | 0.075     |
| 19:00 - 20:00 | 2        | 3314     | 0.015     | 2          | 3314     | 0.045     | 2        | 3314     | 0.060     |
| 20:00 - 21:00 | 1        | 3127     | 0.000     | 1          | 3127     | 0.000     | 1        | 3127     | 0.000     |
| 21:00 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 0.813     |            |          | 0.738     |          |          | 1.551     |

#### Parameter summary

Trip rate parameter range selected: 3127 - 3500 (units: sqm)  
 Survey date range: 01/01/07 - 18/06/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 01 - RETAIL/G - OTHER INDIVIDUAL NON-FOOD SUPERSTORE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 | 2        | 3314     | 0.317     | 2          | 3314     | 0.045     | 2        | 3314     | 0.362     |
| 09:00 - 10:00 | 2        | 3314     | 2.490     | 2          | 3314     | 1.177     | 2        | 3314     | 3.667     |
| 10:00 - 11:00 | 2        | 3314     | 4.255     | 2          | 3314     | 3.169     | 2        | 3314     | 7.424     |
| 11:00 - 12:00 | 2        | 3314     | 4.557     | 2          | 3314     | 4.738     | 2        | 3314     | 9.295     |
| 12:00 - 13:00 | 2        | 3314     | 3.848     | 2          | 3314     | 4.180     | 2        | 3314     | 8.028     |
| 13:00 - 14:00 | 2        | 3314     | 4.965     | 2          | 3314     | 4.406     | 2        | 3314     | 9.371     |
| 14:00 - 15:00 | 2        | 3314     | 4.301     | 2          | 3314     | 4.648     | 2        | 3314     | 8.949     |
| 15:00 - 16:00 | 2        | 3314     | 2.897     | 2          | 3314     | 3.833     | 2        | 3314     | 6.730     |
| 16:00 - 17:00 | 2        | 3314     | 1.871     | 2          | 3314     | 2.490     | 2        | 3314     | 4.361     |
| 17:00 - 18:00 | 2        | 3314     | 2.203     | 2          | 3314     | 2.203     | 2        | 3314     | 4.406     |
| 18:00 - 19:00 | 2        | 3314     | 0.754     | 2          | 3314     | 1.177     | 2        | 3314     | 1.931     |
| 19:00 - 20:00 | 2        | 3314     | 0.302     | 2          | 3314     | 0.770     | 2        | 3314     | 1.072     |
| 20:00 - 21:00 | 1        | 3127     | 0.000     | 1          | 3127     | 0.000     | 1        | 3127     | 0.000     |
| 21:00 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 32.760    |            |          | 32.836    |          |          | 65.596    |

## Parameter summary

Trip rate parameter range selected: 3127 - 3500 (units: sqm)  
 Survey date range: 01/01/07 - 18/06/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

Calculation Reference: AUDIT-623801-150430-0438

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD &amp; DRINK

Category : A - HOTELS

## MULTI-MODAL VEHICLES

Selected regions and areas:

|    |                                |        |
|----|--------------------------------|--------|
| 02 | SOUTH EAST                     |        |
|    | WS WEST SUSSEX                 | 1 days |
| 03 | SOUTH WEST                     |        |
|    | GS GLOUCESTERSHIRE             | 1 days |
| 06 | WEST MIDLANDS                  |        |
|    | WM WEST MIDLANDS               | 1 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE |        |
|    | WY WEST YORKSHIRE              | 1 days |
| 09 | NORTH                          |        |
|    | TV TEES VALLEY                 | 1 days |

## Filtering Stage 2 selection:

Parameter: Gross floor area  
 Actual Range: 1080 to 2550 (units: sqm)  
 Range Selected by User: 1080 to 3000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 28/11/13

Selected survey days:

|          |        |
|----------|--------|
| Monday   | 1 days |
| Thursday | 2 days |
| Friday   | 2 days |

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 5 days |
| Directional ATC Count | 0 days |

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Suburban Area (PPS6 Out of Centre) | 5 |
|------------------------------------|---|

Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Residential Zone | 3 |
| No Sub Category  | 2 |

## Filtering Stage 3 selection:

Use Class:

|    |        |
|----|--------|
| C1 | 5 days |
|----|--------|

Population within 1 mile:

|                  |        |
|------------------|--------|
| 5,001 to 10,000  | 2 days |
| 20,001 to 25,000 | 3 days |

Population within 5 miles:

|                    |        |
|--------------------|--------|
| 25,001 to 50,000   | 1 days |
| 125,001 to 250,000 | 2 days |
| 250,001 to 500,000 | 1 days |
| 500,001 or More    | 1 days |

## Filtering Stage 3 selection (Cont.):

Car ownership within 5 miles:

|            |        |
|------------|--------|
| 0.6 to 1.0 | 2 days |
| 1.1 to 1.5 | 3 days |

Travel Plan:

|    |        |
|----|--------|
| No | 5 days |
|----|--------|

LIST OF SITES relevant to selection parameters

|   |                                    |                     |  |                     |
|---|------------------------------------|---------------------|--|---------------------|
| 1 | GS-06-A-02                         | PREMIER INN         |  | GLOUCESTERSHIRE     |
|   | GLOUCESTER ROAD                    |                     |  |                     |
|   | SAINT MARKS                        |                     |  |                     |
|   | CHELTENHAM SPA                     |                     |  |                     |
|   | Suburban Area (PPS6 Out of Centre) |                     |  |                     |
|   | Residential Zone                   |                     |  |                     |
|   | Total Gross floor area:            | 2393 sqm            |  |                     |
|   | Survey date: THURSDAY              | 28/11/13            |  | Survey Type: MANUAL |
| 2 | TV-06-A-02                         | HOTEL               |  | TEES VALLEY         |
|   | MARTON ROAD                        |                     |  |                     |
|   | MIDDLESBROUGH                      |                     |  |                     |
|   | Suburban Area (PPS6 Out of Centre) |                     |  |                     |
|   | No Sub Category                    |                     |  |                     |
|   | Total Gross floor area:            | 2550 sqm            |  |                     |
|   | Survey date: FRIDAY                | 18/12/09            |  | Survey Type: MANUAL |
| 3 | WM-06-A-03                         | HOTEL               |  | WEST MIDLANDS       |
|   | HOLYHEAD ROAD                      |                     |  |                     |
|   | COVENTRY                           |                     |  |                     |
|   | Suburban Area (PPS6 Out of Centre) |                     |  |                     |
|   | Residential Zone                   |                     |  |                     |
|   | Total Gross floor area:            | 1700 sqm            |  |                     |
|   | Survey date: THURSDAY              | 27/09/07            |  | Survey Type: MANUAL |
| 4 | WS-06-A-03                         | EXPRESS BY HOL. INN |  | WEST SUSSEX         |
|   | HASLETT AVENUE EAST                |                     |  |                     |
|   | CRAWLEY                            |                     |  |                     |
|   | Suburban Area (PPS6 Out of Centre) |                     |  |                     |
|   | No Sub Category                    |                     |  |                     |
|   | Total Gross floor area:            | 2350 sqm            |  |                     |
|   | Survey date: MONDAY                | 07/12/09            |  | Survey Type: MANUAL |
| 5 | WY-06-A-02                         | HOTEL               |  | WEST YORKSHIRE      |
|   | CLIFF ROAD                         |                     |  |                     |
|   | HEADINGLEY                         |                     |  |                     |
|   | LEEDS                              |                     |  |                     |
|   | Suburban Area (PPS6 Out of Centre) |                     |  |                     |
|   | Residential Zone                   |                     |  |                     |
|   | Total Gross floor area:            | 1080 sqm            |  |                     |
|   | Survey date: FRIDAY                | 11/06/10            |  | Survey Type: MANUAL |

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 5        | 2015     | 0.149     | 5          | 2015     | 0.347     | 5        | 2015     | 0.496     |
| 08:00 - 09:00 | 5        | 2015     | 0.228     | 5          | 2015     | 0.645     | 5        | 2015     | 0.873     |
| 09:00 - 10:00 | 5        | 2015     | 0.159     | 5          | 2015     | 0.427     | 5        | 2015     | 0.586     |
| 10:00 - 11:00 | 5        | 2015     | 0.208     | 5          | 2015     | 0.238     | 5        | 2015     | 0.446     |
| 11:00 - 12:00 | 5        | 2015     | 0.189     | 5          | 2015     | 0.159     | 5        | 2015     | 0.348     |
| 12:00 - 13:00 | 5        | 2015     | 0.199     | 5          | 2015     | 0.139     | 5        | 2015     | 0.338     |
| 13:00 - 14:00 | 5        | 2015     | 0.159     | 5          | 2015     | 0.199     | 5        | 2015     | 0.358     |
| 14:00 - 15:00 | 5        | 2015     | 0.139     | 5          | 2015     | 0.109     | 5        | 2015     | 0.248     |
| 15:00 - 16:00 | 5        | 2015     | 0.248     | 5          | 2015     | 0.129     | 5        | 2015     | 0.377     |
| 16:00 - 17:00 | 5        | 2015     | 0.328     | 5          | 2015     | 0.179     | 5        | 2015     | 0.507     |
| 17:00 - 18:00 | 5        | 2015     | 0.407     | 5          | 2015     | 0.159     | 5        | 2015     | 0.566     |
| 18:00 - 19:00 | 5        | 2015     | 0.486     | 5          | 2015     | 0.238     | 5        | 2015     | 0.724     |
| 19:00 - 20:00 | 5        | 2015     | 0.218     | 5          | 2015     | 0.109     | 5        | 2015     | 0.327     |
| 20:00 - 21:00 | 5        | 2015     | 0.199     | 5          | 2015     | 0.079     | 5        | 2015     | 0.278     |
| 21:00 - 22:00 | 5        | 2015     | 0.129     | 5          | 2015     | 0.060     | 5        | 2015     | 0.189     |
| 22:00 - 23:00 | 1        | 2550     | 0.235     | 1          | 2550     | 0.196     | 1        | 2550     | 0.431     |
| 23:00 - 24:00 | 1        | 2550     | 0.039     | 1          | 2550     | 0.000     | 1        | 2550     | 0.039     |
| Total Rates:  |          |          | 3.719     |            |          | 3.412     |          |          | 7.131     |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 5        | 2015     | 0.050     | 5          | 2015     | 0.050     | 5        | 2015     | 0.100     |
| 08:00 - 09:00 | 5        | 2015     | 0.050     | 5          | 2015     | 0.060     | 5        | 2015     | 0.110     |
| 09:00 - 10:00 | 5        | 2015     | 0.040     | 5          | 2015     | 0.040     | 5        | 2015     | 0.080     |
| 10:00 - 11:00 | 5        | 2015     | 0.040     | 5          | 2015     | 0.040     | 5        | 2015     | 0.080     |
| 11:00 - 12:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.020     | 5        | 2015     | 0.040     |
| 12:00 - 13:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.010     | 5        | 2015     | 0.020     |
| 13:00 - 14:00 | 5        | 2015     | 0.040     | 5          | 2015     | 0.040     | 5        | 2015     | 0.080     |
| 14:00 - 15:00 | 5        | 2015     | 0.040     | 5          | 2015     | 0.030     | 5        | 2015     | 0.070     |
| 15:00 - 16:00 | 5        | 2015     | 0.030     | 5          | 2015     | 0.030     | 5        | 2015     | 0.060     |
| 16:00 - 17:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.010     | 5        | 2015     | 0.020     |
| 17:00 - 18:00 | 5        | 2015     | 0.060     | 5          | 2015     | 0.050     | 5        | 2015     | 0.110     |
| 18:00 - 19:00 | 5        | 2015     | 0.069     | 5          | 2015     | 0.079     | 5        | 2015     | 0.148     |
| 19:00 - 20:00 | 5        | 2015     | 0.040     | 5          | 2015     | 0.040     | 5        | 2015     | 0.080     |
| 20:00 - 21:00 | 5        | 2015     | 0.030     | 5          | 2015     | 0.030     | 5        | 2015     | 0.060     |
| 21:00 - 22:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 22:00 - 23:00 | 1        | 2550     | 0.118     | 1          | 2550     | 0.118     | 1        | 2550     | 0.236     |
| 23:00 - 24:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |
| Total Rates:  |          |          | 0.647     |            |          |           |          |          | 1.294     |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 5        | 2015     | 0.010     | 5          | 2015     | 0.010     | 5        | 2015     | 0.020     |
| 08:00 - 09:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.010     | 5        | 2015     | 0.030     |
| 09:00 - 10:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.010     | 5        | 2015     | 0.010     |
| 10:00 - 11:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.010     | 5        | 2015     | 0.020     |
| 11:00 - 12:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.010     | 5        | 2015     | 0.030     |
| 12:00 - 13:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.010     | 5        | 2015     | 0.030     |
| 13:00 - 14:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.020     | 5        | 2015     | 0.020     |
| 14:00 - 15:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 15:00 - 16:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 16:00 - 17:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 17:00 - 18:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 18:00 - 19:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 19:00 - 20:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 20:00 - 21:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 21:00 - 22:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 22:00 - 23:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |
| 23:00 - 24:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |
| Total Rates:  |          |          | 0.080     | 0.080      |          |           | 0.160    |          |           |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |       |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|-------|
|               | 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 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 08:00 - 09:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.000     | 5        | 2015     | 0.020     |       |
| 09:00 - 10:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.000     | 5        | 2015     | 0.010     |       |
| 10:00 - 11:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.010     | 5        | 2015     | 0.010     |       |
| 11:00 - 12:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 12:00 - 13:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 13:00 - 14:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.010     | 5        | 2015     | 0.010     |       |
| 14:00 - 15:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.030     | 5        | 2015     | 0.030     |       |
| 15:00 - 16:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.000     | 5        | 2015     | 0.010     |       |
| 16:00 - 17:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 17:00 - 18:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 18:00 - 19:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 19:00 - 20:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 20:00 - 21:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 21:00 - 22:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |       |
| 22:00 - 23:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |       |
| 23:00 - 24:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |       |
| Total Rates:  |          |          | 0.040     |            |          |           | 0.050    |          |           | 0.090 |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

**MULTI-MODAL VEHICLE OCCUPANTS**

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 5        | 2015     | 0.189     | 5          | 2015     | 0.496     | 5        | 2015     | 0.685     |
| 08:00 - 09:00 | 5        | 2015     | 0.218     | 5          | 2015     | 0.834     | 5        | 2015     | 1.052     |
| 09:00 - 10:00 | 5        | 2015     | 0.199     | 5          | 2015     | 0.576     | 5        | 2015     | 0.775     |
| 10:00 - 11:00 | 5        | 2015     | 0.208     | 5          | 2015     | 0.318     | 5        | 2015     | 0.526     |
| 11:00 - 12:00 | 5        | 2015     | 0.248     | 5          | 2015     | 0.199     | 5        | 2015     | 0.447     |
| 12:00 - 13:00 | 5        | 2015     | 0.288     | 5          | 2015     | 0.179     | 5        | 2015     | 0.467     |
| 13:00 - 14:00 | 5        | 2015     | 0.218     | 5          | 2015     | 0.218     | 5        | 2015     | 0.436     |
| 14:00 - 15:00 | 5        | 2015     | 0.169     | 5          | 2015     | 0.139     | 5        | 2015     | 0.308     |
| 15:00 - 16:00 | 5        | 2015     | 0.387     | 5          | 2015     | 0.139     | 5        | 2015     | 0.526     |
| 16:00 - 17:00 | 5        | 2015     | 0.437     | 5          | 2015     | 0.169     | 5        | 2015     | 0.606     |
| 17:00 - 18:00 | 5        | 2015     | 0.586     | 5          | 2015     | 0.199     | 5        | 2015     | 0.785     |
| 18:00 - 19:00 | 5        | 2015     | 0.526     | 5          | 2015     | 0.357     | 5        | 2015     | 0.883     |
| 19:00 - 20:00 | 5        | 2015     | 0.347     | 5          | 2015     | 0.079     | 5        | 2015     | 0.426     |
| 20:00 - 21:00 | 5        | 2015     | 0.278     | 5          | 2015     | 0.089     | 5        | 2015     | 0.367     |
| 21:00 - 22:00 | 5        | 2015     | 0.189     | 5          | 2015     | 0.050     | 5        | 2015     | 0.239     |
| 22:00 - 23:00 | 1        | 2550     | 0.392     | 1          | 2550     | 0.196     | 1        | 2550     | 0.588     |
| 23:00 - 24:00 | 1        | 2550     | 0.039     | 1          | 2550     | 0.000     | 1        | 2550     | 0.039     |
| Total Rates:  |          |          | 4.918     |            |          | 4.237     |          |          | 9.155     |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |       |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|-------|
|               | 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 | 5        | 2015     | 0.030     | 5          | 2015     | 0.079     | 5        | 2015     | 0.109     |       |
| 08:00 - 09:00 | 5        | 2015     | 0.060     | 5          | 2015     | 0.139     | 5        | 2015     | 0.199     |       |
| 09:00 - 10:00 | 5        | 2015     | 0.099     | 5          | 2015     | 0.109     | 5        | 2015     | 0.208     |       |
| 10:00 - 11:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.099     | 5        | 2015     | 0.109     |       |
| 11:00 - 12:00 | 5        | 2015     | 0.060     | 5          | 2015     | 0.050     | 5        | 2015     | 0.110     |       |
| 12:00 - 13:00 | 5        | 2015     | 0.050     | 5          | 2015     | 0.040     | 5        | 2015     | 0.090     |       |
| 13:00 - 14:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.020     | 5        | 2015     | 0.040     |       |
| 14:00 - 15:00 | 5        | 2015     | 0.149     | 5          | 2015     | 0.139     | 5        | 2015     | 0.288     |       |
| 15:00 - 16:00 | 5        | 2015     | 0.089     | 5          | 2015     | 0.050     | 5        | 2015     | 0.139     |       |
| 16:00 - 17:00 | 5        | 2015     | 0.069     | 5          | 2015     | 0.050     | 5        | 2015     | 0.119     |       |
| 17:00 - 18:00 | 5        | 2015     | 0.119     | 5          | 2015     | 0.139     | 5        | 2015     | 0.258     |       |
| 18:00 - 19:00 | 5        | 2015     | 0.169     | 5          | 2015     | 0.189     | 5        | 2015     | 0.358     |       |
| 19:00 - 20:00 | 5        | 2015     | 0.208     | 5          | 2015     | 0.258     | 5        | 2015     | 0.466     |       |
| 20:00 - 21:00 | 5        | 2015     | 0.208     | 5          | 2015     | 0.099     | 5        | 2015     | 0.307     |       |
| 21:00 - 22:00 | 5        | 2015     | 0.238     | 5          | 2015     | 0.040     | 5        | 2015     | 0.278     |       |
| 22:00 - 23:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |       |
| 23:00 - 24:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |       |
| Total Rates:  |          |          | 1.578     |            |          |           | 1.500    |          |           | 3.078 |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 08:00 - 09:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.040     | 5        | 2015     | 0.060     |
| 09:00 - 10:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.040     | 5        | 2015     | 0.060     |
| 10:00 - 11:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.069     | 5        | 2015     | 0.079     |
| 11:00 - 12:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.020     | 5        | 2015     | 0.020     |
| 12:00 - 13:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.010     | 5        | 2015     | 0.010     |
| 13:00 - 14:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.020     | 5        | 2015     | 0.030     |
| 14:00 - 15:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.000     | 5        | 2015     | 0.010     |
| 15:00 - 16:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.000     | 5        | 2015     | 0.010     |
| 16:00 - 17:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.010     | 5        | 2015     | 0.010     |
| 17:00 - 18:00 | 5        | 2015     | 0.030     | 5          | 2015     | 0.000     | 5        | 2015     | 0.030     |
| 18:00 - 19:00 | 5        | 2015     | 0.010     | 5          | 2015     | 0.000     | 5        | 2015     | 0.010     |
| 19:00 - 20:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 20:00 - 21:00 | 5        | 2015     | 0.020     | 5          | 2015     | 0.000     | 5        | 2015     | 0.020     |
| 21:00 - 22:00 | 5        | 2015     | 0.000     | 5          | 2015     | 0.000     | 5        | 2015     | 0.000     |
| 22:00 - 23:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |
| 23:00 - 24:00 | 1        | 2550     | 0.000     | 1          | 2550     | 0.000     | 1        | 2550     | 0.000     |
| Total Rates:  |          |          | 0.140     |            |          |           |          |          | 0.349     |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

TRIP RATE for Land Use 06 - HOTEL, FOOD &amp; DRINK/A - HOTELS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 5        | 2015     | 0.218     | 5          | 2015     | 0.576     | 5        | 2015     | 0.794     |
| 08:00 - 09:00 | 5        | 2015     | 0.318     | 5          | 2015     | 1.013     | 5        | 2015     | 1.331     |
| 09:00 - 10:00 | 5        | 2015     | 0.328     | 5          | 2015     | 0.725     | 5        | 2015     | 1.053     |
| 10:00 - 11:00 | 5        | 2015     | 0.228     | 5          | 2015     | 0.496     | 5        | 2015     | 0.724     |
| 11:00 - 12:00 | 5        | 2015     | 0.308     | 5          | 2015     | 0.268     | 5        | 2015     | 0.576     |
| 12:00 - 13:00 | 5        | 2015     | 0.338     | 5          | 2015     | 0.228     | 5        | 2015     | 0.566     |
| 13:00 - 14:00 | 5        | 2015     | 0.248     | 5          | 2015     | 0.268     | 5        | 2015     | 0.516     |
| 14:00 - 15:00 | 5        | 2015     | 0.328     | 5          | 2015     | 0.308     | 5        | 2015     | 0.636     |
| 15:00 - 16:00 | 5        | 2015     | 0.496     | 5          | 2015     | 0.189     | 5        | 2015     | 0.685     |
| 16:00 - 17:00 | 5        | 2015     | 0.506     | 5          | 2015     | 0.228     | 5        | 2015     | 0.734     |
| 17:00 - 18:00 | 5        | 2015     | 0.735     | 5          | 2015     | 0.338     | 5        | 2015     | 1.073     |
| 18:00 - 19:00 | 5        | 2015     | 0.705     | 5          | 2015     | 0.546     | 5        | 2015     | 1.251     |
| 19:00 - 20:00 | 5        | 2015     | 0.556     | 5          | 2015     | 0.338     | 5        | 2015     | 0.894     |
| 20:00 - 21:00 | 5        | 2015     | 0.506     | 5          | 2015     | 0.189     | 5        | 2015     | 0.695     |
| 21:00 - 22:00 | 5        | 2015     | 0.427     | 5          | 2015     | 0.089     | 5        | 2015     | 0.516     |
| 22:00 - 23:00 | 1        | 2550     | 0.392     | 1          | 2550     | 0.196     | 1        | 2550     | 0.588     |
| 23:00 - 24:00 | 1        | 2550     | 0.039     | 1          | 2550     | 0.000     | 1        | 2550     | 0.039     |
| Total Rates:  |          |          | 6.676     |            |          | 5.995     |          |          | 12.671    |

## Parameter summary

Trip rate parameter range selected: 1080 - 2550 (units: sqm)  
 Survey date range: 01/01/07 - 28/11/13  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 3

Calculation Reference: AUDIT-623801-150417-0431

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE  
 Category : K - FITNESS CLUB (PRIVATE)  
 MULTI-MODAL VEHICLES

Selected regions and areas:

|    |               |        |
|----|---------------|--------|
| 06 | WEST MIDLANDS |        |
|    | SH SHROPSHIRE | 1 days |
| 08 | NORTH WEST    |        |
|    | MS MERSEYSIDE | 1 days |

## Filtering Stage 2 selection:

Parameter: Gross floor area  
 Actual Range: 3000 to 4500 (units: sqm)  
 Range Selected by User: 3000 to 13856 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 21/05/14

Selected survey days:

|           |        |
|-----------|--------|
| Wednesday | 1 days |
| Thursday  | 1 days |

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 2 days |
| Directional ATC Count | 0 days |

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Suburban Area (PPS6 Out of Centre) | 1 |
| Edge of Town                       | 1 |

Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Residential Zone | 1 |
| Retail Zone      | 1 |

## Filtering Stage 3 selection:

Use Class:

|    |        |
|----|--------|
| D2 | 2 days |
|----|--------|

Population within 1 mile:

|                  |        |
|------------------|--------|
| 10,001 to 15,000 | 1 days |
| 25,001 to 50,000 | 1 days |

Population within 5 miles:

|                   |        |
|-------------------|--------|
| 75,001 to 100,000 | 1 days |
| 500,001 or More   | 1 days |

Car ownership within 5 miles:

|            |        |
|------------|--------|
| 0.6 to 1.0 | 1 days |
| 1.1 to 1.5 | 1 days |

Travel Plan:

|    |        |
|----|--------|
| No | 2 days |
|----|--------|

LIST OF SITES relevant to selection parameters

- |   |                                    |                           |                     |
|---|------------------------------------|---------------------------|---------------------|
| 1 | MS-07-K-01                         | TOTAL FITNESS             | MERSEYSIDE          |
|   | MONTROSE WAY                       |                           |                     |
|   | EDGE LANE                          |                           |                     |
|   | LIVERPOOL                          |                           |                     |
|   | Suburban Area (PPS6 Out of Centre) |                           |                     |
|   | Retail Zone                        |                           |                     |
|   | Total Gross floor area:            | 3000 sqm                  |                     |
|   | Survey date: THURSDAY              | 28/06/07                  | Survey Type: MANUAL |
| 2 | SH-07-K-01                         | FITNESS, TENNIS & LEISURE | SHROPSHIRE          |
|   | SUNDORNE ROAD                      |                           |                     |
|   | SHREWSBURY                         |                           |                     |
|   | Edge of Town                       |                           |                     |
|   | Residential Zone                   |                           |                     |
|   | Total Gross floor area:            | 4500 sqm                  |                     |
|   | Survey date: WEDNESDAY             | 21/05/14                  | Survey Type: MANUAL |

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 2        | 3750     | 0.960     | 2          | 3750     | 0.027     | 2        | 3750     | 0.987     |
| 07:00 - 08:00 | 2        | 3750     | 0.653     | 2          | 3750     | 0.947     | 2        | 3750     | 1.600     |
| 08:00 - 09:00 | 2        | 3750     | 1.107     | 2          | 3750     | 0.960     | 2        | 3750     | 2.067     |
| 09:00 - 10:00 | 2        | 3750     | 1.813     | 2          | 3750     | 0.600     | 2        | 3750     | 2.413     |
| 10:00 - 11:00 | 2        | 3750     | 1.133     | 2          | 3750     | 1.173     | 2        | 3750     | 2.306     |
| 11:00 - 12:00 | 2        | 3750     | 0.653     | 2          | 3750     | 1.387     | 2        | 3750     | 2.040     |
| 12:00 - 13:00 | 2        | 3750     | 0.787     | 2          | 3750     | 0.947     | 2        | 3750     | 1.734     |
| 13:00 - 14:00 | 2        | 3750     | 0.680     | 2          | 3750     | 0.787     | 2        | 3750     | 1.467     |
| 14:00 - 15:00 | 2        | 3750     | 0.973     | 2          | 3750     | 0.893     | 2        | 3750     | 1.866     |
| 15:00 - 16:00 | 2        | 3750     | 1.400     | 2          | 3750     | 1.107     | 2        | 3750     | 2.507     |
| 16:00 - 17:00 | 2        | 3750     | 1.853     | 2          | 3750     | 1.293     | 2        | 3750     | 3.146     |
| 17:00 - 18:00 | 2        | 3750     | 2.467     | 2          | 3750     | 1.707     | 2        | 3750     | 4.174     |
| 18:00 - 19:00 | 2        | 3750     | 1.933     | 2          | 3750     | 1.880     | 2        | 3750     | 3.813     |
| 19:00 - 20:00 | 2        | 3750     | 1.000     | 2          | 3750     | 1.987     | 2        | 3750     | 2.987     |
| 20:00 - 21:00 | 2        | 3750     | 0.867     | 2          | 3750     | 1.227     | 2        | 3750     | 2.094     |
| 21:00 - 22:00 | 2        | 3750     | 0.093     | 2          | 3750     | 1.293     | 2        | 3750     | 1.386     |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 18.372    |            |          | 18.215    |          |          | 36.587    |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 2        | 3750     | 0.013     | 2          | 3750     | 0.000     | 2        | 3750     | 0.013     |
| 07:00 - 08:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 08:00 - 09:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.013     | 2        | 3750     | 0.013     |
| 09:00 - 10:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.000     | 2        | 3750     | 0.013     |
| 10:00 - 11:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 11:00 - 12:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 12:00 - 13:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 13:00 - 14:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.000     | 2        | 3750     | 0.013     |
| 14:00 - 15:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.013     | 2        | 3750     | 0.013     |
| 15:00 - 16:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.013     | 2        | 3750     | 0.013     |
| 16:00 - 17:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 17:00 - 18:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 18:00 - 19:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 19:00 - 20:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 20:00 - 21:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 21:00 - 22:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 0.039     |            |          | 0.039     |          |          | 0.078     |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 2        | 3750     | 0.053     | 2          | 3750     | 0.013     | 2        | 3750     | 0.066     |
| 07:00 - 08:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.027     | 2        | 3750     | 0.027     |
| 08:00 - 09:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.013     | 2        | 3750     | 0.026     |
| 09:00 - 10:00 | 2        | 3750     | 0.027     | 2          | 3750     | 0.013     | 2        | 3750     | 0.040     |
| 10:00 - 11:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.000     | 2        | 3750     | 0.013     |
| 11:00 - 12:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.013     | 2        | 3750     | 0.026     |
| 12:00 - 13:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 13:00 - 14:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.000     | 2        | 3750     | 0.013     |
| 14:00 - 15:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.000     | 2        | 3750     | 0.013     |
| 15:00 - 16:00 | 2        | 3750     | 0.027     | 2          | 3750     | 0.013     | 2        | 3750     | 0.040     |
| 16:00 - 17:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.013     | 2        | 3750     | 0.026     |
| 17:00 - 18:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.067     | 2        | 3750     | 0.080     |
| 18:00 - 19:00 | 2        | 3750     | 0.067     | 2          | 3750     | 0.027     | 2        | 3750     | 0.094     |
| 19:00 - 20:00 | 2        | 3750     | 0.027     | 2          | 3750     | 0.053     | 2        | 3750     | 0.080     |
| 20:00 - 21:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.027     | 2        | 3750     | 0.027     |
| 21:00 - 22:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.000     | 2        | 3750     | 0.000     |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 0.292     |            |          | 0.279     |          |          | 0.571     |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 2        | 3750     | 0.973     | 2          | 3750     | 0.027     | 2        | 3750     | 1.000     |
| 07:00 - 08:00 | 2        | 3750     | 0.720     | 2          | 3750     | 0.987     | 2        | 3750     | 1.707     |
| 08:00 - 09:00 | 2        | 3750     | 1.267     | 2          | 3750     | 1.013     | 2        | 3750     | 2.280     |
| 09:00 - 10:00 | 2        | 3750     | 2.147     | 2          | 3750     | 0.640     | 2        | 3750     | 2.787     |
| 10:00 - 11:00 | 2        | 3750     | 1.293     | 2          | 3750     | 1.307     | 2        | 3750     | 2.600     |
| 11:00 - 12:00 | 2        | 3750     | 0.693     | 2          | 3750     | 1.693     | 2        | 3750     | 2.386     |
| 12:00 - 13:00 | 2        | 3750     | 0.867     | 2          | 3750     | 1.040     | 2        | 3750     | 1.907     |
| 13:00 - 14:00 | 2        | 3750     | 0.880     | 2          | 3750     | 0.880     | 2        | 3750     | 1.760     |
| 14:00 - 15:00 | 2        | 3750     | 1.173     | 2          | 3750     | 1.027     | 2        | 3750     | 2.200     |
| 15:00 - 16:00 | 2        | 3750     | 2.080     | 2          | 3750     | 1.400     | 2        | 3750     | 3.480     |
| 16:00 - 17:00 | 2        | 3750     | 2.667     | 2          | 3750     | 1.800     | 2        | 3750     | 4.467     |
| 17:00 - 18:00 | 2        | 3750     | 3.200     | 2          | 3750     | 2.413     | 2        | 3750     | 5.613     |
| 18:00 - 19:00 | 2        | 3750     | 2.427     | 2          | 3750     | 2.427     | 2        | 3750     | 4.854     |
| 19:00 - 20:00 | 2        | 3750     | 1.293     | 2          | 3750     | 2.627     | 2        | 3750     | 3.920     |
| 20:00 - 21:00 | 2        | 3750     | 0.960     | 2          | 3750     | 1.493     | 2        | 3750     | 2.453     |
| 21:00 - 22:00 | 2        | 3750     | 0.093     | 2          | 3750     | 1.440     | 2        | 3750     | 1.533     |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 22.733    |            |          | 22.214    |          |          | 44.947    |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 2        | 3750     | 0.040     | 2          | 3750     | 0.027     | 2        | 3750     | 0.067     |
| 07:00 - 08:00 | 2        | 3750     | 0.067     | 2          | 3750     | 0.080     | 2        | 3750     | 0.147     |
| 08:00 - 09:00 | 2        | 3750     | 0.107     | 2          | 3750     | 0.027     | 2        | 3750     | 0.134     |
| 09:00 - 10:00 | 2        | 3750     | 0.147     | 2          | 3750     | 0.053     | 2        | 3750     | 0.200     |
| 10:00 - 11:00 | 2        | 3750     | 0.293     | 2          | 3750     | 0.080     | 2        | 3750     | 0.373     |
| 11:00 - 12:00 | 2        | 3750     | 0.107     | 2          | 3750     | 0.133     | 2        | 3750     | 0.240     |
| 12:00 - 13:00 | 2        | 3750     | 0.240     | 2          | 3750     | 0.093     | 2        | 3750     | 0.333     |
| 13:00 - 14:00 | 2        | 3750     | 0.173     | 2          | 3750     | 0.267     | 2        | 3750     | 0.440     |
| 14:00 - 15:00 | 2        | 3750     | 0.067     | 2          | 3750     | 0.120     | 2        | 3750     | 0.187     |
| 15:00 - 16:00 | 2        | 3750     | 0.173     | 2          | 3750     | 0.093     | 2        | 3750     | 0.266     |
| 16:00 - 17:00 | 2        | 3750     | 0.187     | 2          | 3750     | 0.147     | 2        | 3750     | 0.334     |
| 17:00 - 18:00 | 2        | 3750     | 0.173     | 2          | 3750     | 0.093     | 2        | 3750     | 0.266     |
| 18:00 - 19:00 | 2        | 3750     | 0.173     | 2          | 3750     | 0.187     | 2        | 3750     | 0.360     |
| 19:00 - 20:00 | 2        | 3750     | 0.067     | 2          | 3750     | 0.173     | 2        | 3750     | 0.240     |
| 20:00 - 21:00 | 2        | 3750     | 0.013     | 2          | 3750     | 0.080     | 2        | 3750     | 0.093     |
| 21:00 - 22:00 | 2        | 3750     | 0.000     | 2          | 3750     | 0.040     | 2        | 3750     | 0.040     |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 2.027     |            |          | 1.693     |          |          | 3.720     |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |              | DEPARTURES |          |              | TOTALS   |          |              |
|---------------------|----------|----------|--------------|------------|----------|--------------|----------|----------|--------------|
|                     | 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       | 2        | 3750     | 0.000        | 2          | 3750     | 0.000        | 2        | 3750     | 0.000        |
| 07:00 - 08:00       | 2        | 3750     | 0.027        | 2          | 3750     | 0.000        | 2        | 3750     | 0.027        |
| 08:00 - 09:00       | 2        | 3750     | 0.013        | 2          | 3750     | 0.000        | 2        | 3750     | 0.013        |
| 09:00 - 10:00       | 2        | 3750     | 0.027        | 2          | 3750     | 0.027        | 2        | 3750     | 0.054        |
| 10:00 - 11:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.027        | 2        | 3750     | 0.027        |
| 11:00 - 12:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.013        | 2        | 3750     | 0.013        |
| 12:00 - 13:00       | 2        | 3750     | 0.040        | 2          | 3750     | 0.000        | 2        | 3750     | 0.040        |
| 13:00 - 14:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.013        | 2        | 3750     | 0.013        |
| 14:00 - 15:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.040        | 2        | 3750     | 0.040        |
| 15:00 - 16:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.013        | 2        | 3750     | 0.013        |
| 16:00 - 17:00       | 2        | 3750     | 0.013        | 2          | 3750     | 0.000        | 2        | 3750     | 0.013        |
| 17:00 - 18:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.000        | 2        | 3750     | 0.000        |
| 18:00 - 19:00       | 2        | 3750     | 0.013        | 2          | 3750     | 0.027        | 2        | 3750     | 0.040        |
| 19:00 - 20:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.000        | 2        | 3750     | 0.000        |
| 20:00 - 21:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.000        | 2        | 3750     | 0.000        |
| 21:00 - 22:00       | 2        | 3750     | 0.000        | 2          | 3750     | 0.027        | 2        | 3750     | 0.027        |
| 22:00 - 23:00       |          |          |              |            |          |              |          |          |              |
| 23:00 - 24:00       |          |          |              |            |          |              |          |          |              |
| <b>Total Rates:</b> |          |          | <b>0.133</b> |            |          | <b>0.187</b> |          |          | <b>0.320</b> |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 | 2        | 3750     | 1.067     | 2          | 3750     | 0.067     | 2        | 3750     | 1.134     |
| 07:00 - 08:00 | 2        | 3750     | 0.813     | 2          | 3750     | 1.093     | 2        | 3750     | 1.906     |
| 08:00 - 09:00 | 2        | 3750     | 1.400     | 2          | 3750     | 1.053     | 2        | 3750     | 2.453     |
| 09:00 - 10:00 | 2        | 3750     | 2.347     | 2          | 3750     | 0.733     | 2        | 3750     | 3.080     |
| 10:00 - 11:00 | 2        | 3750     | 1.600     | 2          | 3750     | 1.413     | 2        | 3750     | 3.013     |
| 11:00 - 12:00 | 2        | 3750     | 0.813     | 2          | 3750     | 1.853     | 2        | 3750     | 2.666     |
| 12:00 - 13:00 | 2        | 3750     | 1.147     | 2          | 3750     | 1.133     | 2        | 3750     | 2.280     |
| 13:00 - 14:00 | 2        | 3750     | 1.067     | 2          | 3750     | 1.160     | 2        | 3750     | 2.227     |
| 14:00 - 15:00 | 2        | 3750     | 1.253     | 2          | 3750     | 1.187     | 2        | 3750     | 2.440     |
| 15:00 - 16:00 | 2        | 3750     | 2.280     | 2          | 3750     | 1.520     | 2        | 3750     | 3.800     |
| 16:00 - 17:00 | 2        | 3750     | 2.880     | 2          | 3750     | 1.960     | 2        | 3750     | 4.840     |
| 17:00 - 18:00 | 2        | 3750     | 3.387     | 2          | 3750     | 2.573     | 2        | 3750     | 5.960     |
| 18:00 - 19:00 | 2        | 3750     | 2.680     | 2          | 3750     | 2.667     | 2        | 3750     | 5.347     |
| 19:00 - 20:00 | 2        | 3750     | 1.387     | 2          | 3750     | 2.853     | 2        | 3750     | 4.240     |
| 20:00 - 21:00 | 2        | 3750     | 0.973     | 2          | 3750     | 1.600     | 2        | 3750     | 2.573     |
| 21:00 - 22:00 | 2        | 3750     | 0.093     | 2          | 3750     | 1.507     | 2        | 3750     | 1.600     |
| 22:00 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 25.187    |            |          | 24.372    |          |          | 49.559    |

## Parameter summary

Trip rate parameter range selected: 3000 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 21/05/14  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT  
Category : D - INDUSTRIAL ESTATE  
MULTI-MODAL VEHICLES

Selected regions and areas:

Filtering Stage 2 selection:

Parameter: Gross floor area  
Actual Range: 6000 to 6000 (units: sqm)  
Range Selected by User: 6000 to 6000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 20/10/09 to 20/10/09

Selected survey days:

Tuesday 1 days

Selected survey types:

Manual count 1 days  
Directional ATC Count 0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1

Selected Location Sub Categories:

Industrial Zone 1

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.083     | 1        | 6000     | 0.266     |
| 07:30 - 08:00 | 1        | 6000     | 0.433     | 1          | 6000     | 0.067     | 1        | 6000     | 0.500     |
| 08:00 - 08:30 | 1        | 6000     | 0.633     | 1          | 6000     | 0.100     | 1        | 6000     | 0.733     |
| 08:30 - 09:00 | 1        | 6000     | 0.667     | 1          | 6000     | 0.250     | 1        | 6000     | 0.917     |
| 09:00 - 09:30 | 1        | 6000     | 0.483     | 1          | 6000     | 0.183     | 1        | 6000     | 0.666     |
| 09:30 - 10:00 | 1        | 6000     | 0.250     | 1          | 6000     | 0.250     | 1        | 6000     | 0.500     |
| 10:00 - 10:30 | 1        | 6000     | 0.400     | 1          | 6000     | 0.250     | 1        | 6000     | 0.650     |
| 10:30 - 11:00 | 1        | 6000     | 0.233     | 1          | 6000     | 0.183     | 1        | 6000     | 0.416     |
| 11:00 - 11:30 | 1        | 6000     | 0.250     | 1          | 6000     | 0.300     | 1        | 6000     | 0.550     |
| 11:30 - 12:00 | 1        | 6000     | 0.183     | 1          | 6000     | 0.233     | 1        | 6000     | 0.416     |
| 12:00 - 12:30 | 1        | 6000     | 0.250     | 1          | 6000     | 0.350     | 1        | 6000     | 0.600     |
| 12:30 - 13:00 | 1        | 6000     | 0.300     | 1          | 6000     | 0.233     | 1        | 6000     | 0.533     |
| 13:00 - 13:30 | 1        | 6000     | 0.283     | 1          | 6000     | 0.317     | 1        | 6000     | 0.600     |
| 13:30 - 14:00 | 1        | 6000     | 0.367     | 1          | 6000     | 0.250     | 1        | 6000     | 0.617     |
| 14:00 - 14:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.417     | 1        | 6000     | 0.600     |
| 14:30 - 15:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.200     | 1        | 6000     | 0.417     |
| 15:00 - 15:30 | 1        | 6000     | 0.117     | 1          | 6000     | 0.250     | 1        | 6000     | 0.367     |
| 15:30 - 16:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.117     | 1        | 6000     | 0.317     |
| 16:00 - 16:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.400     | 1        | 6000     | 0.583     |
| 16:30 - 17:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.417     | 1        | 6000     | 0.550     |
| 17:00 - 17:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.450     | 1        | 6000     | 0.517     |
| 17:30 - 18:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.533     | 1        | 6000     | 0.666     |
| 18:00 - 18:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.183     | 1        | 6000     | 0.200     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 6.165     |            |          | 6.033     |          |          | 12.198    |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 07:30 - 08:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.033     | 1        | 6000     | 0.066     |
| 08:00 - 08:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:30 - 09:00 | 1        | 6000     | 0.050     | 1          | 6000     | 0.000     | 1        | 6000     | 0.050     |
| 09:00 - 09:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.050     | 1        | 6000     | 0.117     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 10:00 - 10:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.050     | 1        | 6000     | 0.083     |
| 10:30 - 11:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 11:00 - 11:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 12:00 - 12:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.017     | 1        | 6000     | 0.034     |
| 12:30 - 13:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.017     | 1        | 6000     | 0.050     |
| 13:00 - 13:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 13:30 - 14:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.017     | 1        | 6000     | 0.034     |
| 14:00 - 14:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.017     | 1        | 6000     | 0.034     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:30 - 16:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:00 - 16:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.017     | 1        | 6000     | 0.050     |
| 16:30 - 17:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.317     |            |          | 0.319     |          |          | 0.636     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 07:30 - 08:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:00 - 08:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 08:30 - 09:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:00 - 09:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:00 - 10:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:30 - 11:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 11:00 - 11:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:00 - 12:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:30 - 13:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 13:00 - 13:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 13:30 - 14:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 14:00 - 14:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:30 - 16:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:00 - 16:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:30 - 17:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.084     | 0.051      |          |           | 0.135    |          |           |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.083     | 1        | 6000     | 0.266     |
| 07:30 - 08:00 | 1        | 6000     | 0.433     | 1          | 6000     | 0.067     | 1        | 6000     | 0.500     |
| 08:00 - 08:30 | 1        | 6000     | 0.633     | 1          | 6000     | 0.100     | 1        | 6000     | 0.733     |
| 08:30 - 09:00 | 1        | 6000     | 0.667     | 1          | 6000     | 0.250     | 1        | 6000     | 0.917     |
| 09:00 - 09:30 | 1        | 6000     | 0.533     | 1          | 6000     | 0.183     | 1        | 6000     | 0.716     |
| 09:30 - 10:00 | 1        | 6000     | 0.250     | 1          | 6000     | 0.300     | 1        | 6000     | 0.550     |
| 10:00 - 10:30 | 1        | 6000     | 0.467     | 1          | 6000     | 0.267     | 1        | 6000     | 0.734     |
| 10:30 - 11:00 | 1        | 6000     | 0.283     | 1          | 6000     | 0.217     | 1        | 6000     | 0.500     |
| 11:00 - 11:30 | 1        | 6000     | 0.333     | 1          | 6000     | 0.300     | 1        | 6000     | 0.633     |
| 11:30 - 12:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.283     | 1        | 6000     | 0.483     |
| 12:00 - 12:30 | 1        | 6000     | 0.267     | 1          | 6000     | 0.367     | 1        | 6000     | 0.634     |
| 12:30 - 13:00 | 1        | 6000     | 0.333     | 1          | 6000     | 0.250     | 1        | 6000     | 0.583     |
| 13:00 - 13:30 | 1        | 6000     | 0.317     | 1          | 6000     | 0.350     | 1        | 6000     | 0.667     |
| 13:30 - 14:00 | 1        | 6000     | 0.400     | 1          | 6000     | 0.267     | 1        | 6000     | 0.667     |
| 14:00 - 14:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.433     | 1        | 6000     | 0.616     |
| 14:30 - 15:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.200     | 1        | 6000     | 0.417     |
| 15:00 - 15:30 | 1        | 6000     | 0.117     | 1          | 6000     | 0.250     | 1        | 6000     | 0.367     |
| 15:30 - 16:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.117     | 1        | 6000     | 0.317     |
| 16:00 - 16:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.467     | 1        | 6000     | 0.650     |
| 16:30 - 17:00 | 1        | 6000     | 0.167     | 1          | 6000     | 0.433     | 1        | 6000     | 0.600     |
| 17:00 - 17:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.467     | 1        | 6000     | 0.534     |
| 17:30 - 18:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.567     | 1        | 6000     | 0.700     |
| 18:00 - 18:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.217     | 1        | 6000     | 0.234     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 6.583     |            |          | 6.468     |          |          | 13.051    |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 07:30 - 08:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:00 - 08:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.017     | 1        | 6000     | 0.084     |
| 08:30 - 09:00 | 1        | 6000     | 0.050     | 1          | 6000     | 0.017     | 1        | 6000     | 0.067     |
| 09:00 - 09:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 10:00 - 10:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:30 - 11:00 | 1        | 6000     | 0.067     | 1          | 6000     | 0.050     | 1        | 6000     | 0.117     |
| 11:00 - 11:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:00 - 12:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.050     | 1        | 6000     | 0.050     |
| 12:30 - 13:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 13:00 - 13:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.067     | 1        | 6000     | 0.084     |
| 13:30 - 14:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 14:00 - 14:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:30 - 16:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 16:00 - 16:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:30 - 17:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.368     |            |          | 0.318     |          |          | 0.686     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 07:30 - 08:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 08:00 - 08:30 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 08:30 - 09:00 | 1        | 6000     | 0.033     | 1          | 6000     | 0.000     | 1        | 6000     | 0.033     |
| 09:00 - 09:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 09:30 - 10:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:00 - 10:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 10:30 - 11:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 11:00 - 11:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 11:30 - 12:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:00 - 12:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 12:30 - 13:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 13:00 - 13:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 13:30 - 14:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 14:00 - 14:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 14:30 - 15:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 15:00 - 15:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 15:30 - 16:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 16:00 - 16:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 16:30 - 17:00 | 1        | 6000     | 0.017     | 1          | 6000     | 0.000     | 1        | 6000     | 0.017     |
| 17:00 - 17:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.017     | 1        | 6000     | 0.017     |
| 17:30 - 18:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 18:00 - 18:30 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.000     | 1        | 6000     | 0.000     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 0.151     |            |          | 0.101     |          |          | 0.252     |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 00:30 - 01:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:00 - 01:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 01:30 - 02:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:00 - 02:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 02:30 - 03:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:00 - 03:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 03:30 - 04:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:00 - 04:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 04:30 - 05:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:00 - 05:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 05:30 - 06:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:00 - 06:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 06:30 - 07:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 07:00 - 07:30 | 1        | 6000     | 0.217     | 1          | 6000     | 0.083     | 1        | 6000     | 0.300     |
| 07:30 - 08:00 | 1        | 6000     | 0.433     | 1          | 6000     | 0.067     | 1        | 6000     | 0.500     |
| 08:00 - 08:30 | 1        | 6000     | 0.767     | 1          | 6000     | 0.117     | 1        | 6000     | 0.884     |
| 08:30 - 09:00 | 1        | 6000     | 0.767     | 1          | 6000     | 0.267     | 1        | 6000     | 1.034     |
| 09:00 - 09:30 | 1        | 6000     | 0.583     | 1          | 6000     | 0.183     | 1        | 6000     | 0.766     |
| 09:30 - 10:00 | 1        | 6000     | 0.250     | 1          | 6000     | 0.317     | 1        | 6000     | 0.567     |
| 10:00 - 10:30 | 1        | 6000     | 0.467     | 1          | 6000     | 0.267     | 1        | 6000     | 0.734     |
| 10:30 - 11:00 | 1        | 6000     | 0.367     | 1          | 6000     | 0.267     | 1        | 6000     | 0.634     |
| 11:00 - 11:30 | 1        | 6000     | 0.383     | 1          | 6000     | 0.300     | 1        | 6000     | 0.683     |
| 11:30 - 12:00 | 1        | 6000     | 0.200     | 1          | 6000     | 0.283     | 1        | 6000     | 0.483     |
| 12:00 - 12:30 | 1        | 6000     | 0.267     | 1          | 6000     | 0.417     | 1        | 6000     | 0.684     |
| 12:30 - 13:00 | 1        | 6000     | 0.367     | 1          | 6000     | 0.250     | 1        | 6000     | 0.617     |
| 13:00 - 13:30 | 1        | 6000     | 0.350     | 1          | 6000     | 0.417     | 1        | 6000     | 0.767     |
| 13:30 - 14:00 | 1        | 6000     | 0.417     | 1          | 6000     | 0.283     | 1        | 6000     | 0.700     |
| 14:00 - 14:30 | 1        | 6000     | 0.217     | 1          | 6000     | 0.433     | 1        | 6000     | 0.650     |
| 14:30 - 15:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.200     | 1        | 6000     | 0.417     |
| 15:00 - 15:30 | 1        | 6000     | 0.117     | 1          | 6000     | 0.267     | 1        | 6000     | 0.384     |
| 15:30 - 16:00 | 1        | 6000     | 0.217     | 1          | 6000     | 0.133     | 1        | 6000     | 0.350     |
| 16:00 - 16:30 | 1        | 6000     | 0.183     | 1          | 6000     | 0.467     | 1        | 6000     | 0.650     |
| 16:30 - 17:00 | 1        | 6000     | 0.183     | 1          | 6000     | 0.467     | 1        | 6000     | 0.650     |
| 17:00 - 17:30 | 1        | 6000     | 0.067     | 1          | 6000     | 0.533     | 1        | 6000     | 0.600     |
| 17:30 - 18:00 | 1        | 6000     | 0.133     | 1          | 6000     | 0.583     | 1        | 6000     | 0.716     |
| 18:00 - 18:30 | 1        | 6000     | 0.017     | 1          | 6000     | 0.300     | 1        | 6000     | 0.317     |
| 18:30 - 19:00 | 1        | 6000     | 0.000     | 1          | 6000     | 0.033     | 1        | 6000     | 0.033     |
| 19:00 - 19:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 19:30 - 20:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:00 - 20:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 20:30 - 21:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:00 - 21:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 21:30 - 22:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:00 - 22:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 22:30 - 23:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:00 - 23:30 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| 23:30 - 24:00 | 0        | 0        | 0.000     | 0          | 0        | 0.000     | 0        | 0        | 0.000     |
| Total Rates:  |          |          | 7.186     |            |          | 6.934     |          |          | 14.120    |

#### Parameter summary

|                                          |                          |
|------------------------------------------|--------------------------|
| Trip rate parameter range selected:      | 6000 - 6000 (units: sqm) |
| Survey date date range:                  | 20/10/09 - 20/10/09      |
| Number of weekdays (Monday-Friday):      | 1                        |
| Number of Saturdays:                     | 0                        |
| Number of Sundays:                       | 0                        |
| Surveys manually removed from selection: | 0                        |

Calculation Reference: AUDIT-623801-150612-0607

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE  
 Category : A - MULTIPLEX CINEMAS  
 MULTI-MODAL VEHICLES

Selected regions and areas:

|    |                                |        |
|----|--------------------------------|--------|
| 06 | WEST MIDLANDS                  |        |
|    | SH SHROPSHIRE                  | 1 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE |        |
|    | NY NORTH YORKSHIRE             | 1 days |

## Filtering Stage 2 selection:

Parameter: Gross floor area  
 Actual Range: 2400 to 4500 (units: sqm)  
 Range Selected by User: 2323 to 4500 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 18/09/09

Selected survey days:

Friday 2 days

Selected survey types:

Manual count 2 days  
 Directional ATC Count 0 days

Selected Locations:

Edge of Town Centre 1  
 Edge of Town 1

Selected Location Sub Categories:

Retail Zone 1  
 Built-Up Zone 1

## Filtering Stage 3 selection:

Use Class:

D2 2 days

Population within 1 mile:

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

Population within 5 miles:

75,001 to 100,000 1 days  
 125,001 to 250,000 1 days

Car ownership within 5 miles:

1.1 to 1.5 1 days  
 1.6 to 2.0 1 days

Travel Plan:

No 2 days

LIST OF SITES relevant to selection parameters

|   |                         |           |  |                     |
|---|-------------------------|-----------|--|---------------------|
| 1 | NY-07-A-02              | VUE       |  | NORTH YORKSHIRE     |
|   | STIRLING ROAD           |           |  |                     |
|   | CLIFTON MOOR            |           |  |                     |
|   | YORK                    |           |  |                     |
|   | Edge of Town            |           |  |                     |
|   | Retail Zone             |           |  |                     |
|   | Total Gross floor area: | 4500 sqm  |  |                     |
|   | Survey date: FRIDAY     | 18/09/09  |  | Survey Type: MANUAL |
| 2 | SH-07-A-02              | CINEWORLD |  | SHROPSHIRE          |
|   | OLD POTTS WAY           |           |  |                     |
|   | SHREWSBURY              |           |  |                     |
|   | Edge of Town Centre     |           |  |                     |
|   | Built-Up Zone           |           |  |                     |
|   | Total Gross floor area: | 2400 sqm  |  |                     |
|   | Survey date: FRIDAY     | 19/06/09  |  | Survey Type: MANUAL |

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 2        | 3450     | 0.116     | 2          | 3450     | 0.652     | 2        | 3450     | 0.768     |
| 01:00 - 02:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.493     | 2        | 3450     | 0.493     |
| 02:00 - 03:00 |          |          |           |            |          |           |          |          |           |
| 03:00 - 04:00 |          |          |           |            |          |           |          |          |           |
| 04:00 - 05:00 |          |          |           |            |          |           |          |          |           |
| 05:00 - 06:00 |          |          |           |            |          |           |          |          |           |
| 06:00 - 07:00 |          |          |           |            |          |           |          |          |           |
| 07:00 - 08:00 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 |          |          |           |            |          |           |          |          |           |
| 10:00 - 11:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 11:00 - 12:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 12:00 - 13:00 | 2        | 3450     | 0.580     | 2          | 3450     | 0.188     | 2        | 3450     | 0.768     |
| 13:00 - 14:00 | 2        | 3450     | 1.029     | 2          | 3450     | 0.464     | 2        | 3450     | 1.493     |
| 14:00 - 15:00 | 2        | 3450     | 0.971     | 2          | 3450     | 0.377     | 2        | 3450     | 1.348     |
| 15:00 - 16:00 | 2        | 3450     | 0.928     | 2          | 3450     | 1.101     | 2        | 3450     | 2.029     |
| 16:00 - 17:00 | 2        | 3450     | 1.420     | 2          | 3450     | 1.174     | 2        | 3450     | 2.594     |
| 17:00 - 18:00 | 2        | 3450     | 1.754     | 2          | 3450     | 1.159     | 2        | 3450     | 2.913     |
| 18:00 - 19:00 | 2        | 3450     | 2.348     | 2          | 3450     | 1.681     | 2        | 3450     | 4.029     |
| 19:00 - 20:00 | 2        | 3450     | 4.536     | 2          | 3450     | 2.623     | 2        | 3450     | 7.159     |
| 20:00 - 21:00 | 2        | 3450     | 3.565     | 2          | 3450     | 2.507     | 2        | 3450     | 6.072     |
| 21:00 - 22:00 | 2        | 3450     | 2.478     | 2          | 3450     | 2.913     | 2        | 3450     | 5.391     |
| 22:00 - 23:00 | 2        | 3450     | 1.333     | 2          | 3450     | 3.971     | 2        | 3450     | 5.304     |
| 23:00 - 24:00 | 2        | 3450     | 0.145     | 2          | 3450     | 1.768     | 2        | 3450     | 1.913     |
| Total Rates:  |          |          | 21.203    |            |          | 21.071    |          |          | 42.274    |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 01:00 - 02:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 02:00 - 03:00 |          |          |           |            |          |           |          |          |           |
| 03:00 - 04:00 |          |          |           |            |          |           |          |          |           |
| 04:00 - 05:00 |          |          |           |            |          |           |          |          |           |
| 05:00 - 06:00 |          |          |           |            |          |           |          |          |           |
| 06:00 - 07:00 |          |          |           |            |          |           |          |          |           |
| 07:00 - 08:00 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 |          |          |           |            |          |           |          |          |           |
| 10:00 - 11:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 11:00 - 12:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 12:00 - 13:00 | 2        | 3450     | 0.014     | 2          | 3450     | 0.000     | 2        | 3450     | 0.014     |
| 13:00 - 14:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 14:00 - 15:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.014     | 2        | 3450     | 0.014     |
| 15:00 - 16:00 | 2        | 3450     | 0.029     | 2          | 3450     | 0.014     | 2        | 3450     | 0.043     |
| 16:00 - 17:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 17:00 - 18:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 18:00 - 19:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.014     | 2        | 3450     | 0.014     |
| 19:00 - 20:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 20:00 - 21:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 21:00 - 22:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 22:00 - 23:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 23:00 - 24:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| Total Rates:  |          |          | 0.043     |            |          |           |          |          | 0.085     |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.014     | 2        | 3450     | 0.014     |
| 01:00 - 02:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 02:00 - 03:00 |          |          |           |            |          |           |          |          |           |
| 03:00 - 04:00 |          |          |           |            |          |           |          |          |           |
| 04:00 - 05:00 |          |          |           |            |          |           |          |          |           |
| 05:00 - 06:00 |          |          |           |            |          |           |          |          |           |
| 06:00 - 07:00 |          |          |           |            |          |           |          |          |           |
| 07:00 - 08:00 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 |          |          |           |            |          |           |          |          |           |
| 10:00 - 11:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 11:00 - 12:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 12:00 - 13:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 13:00 - 14:00 | 2        | 3450     | 0.014     | 2          | 3450     | 0.014     | 2        | 3450     | 0.028     |
| 14:00 - 15:00 | 2        | 3450     | 0.014     | 2          | 3450     | 0.000     | 2        | 3450     | 0.014     |
| 15:00 - 16:00 | 2        | 3450     | 0.014     | 2          | 3450     | 0.014     | 2        | 3450     | 0.028     |
| 16:00 - 17:00 | 2        | 3450     | 0.043     | 2          | 3450     | 0.029     | 2        | 3450     | 0.072     |
| 17:00 - 18:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 18:00 - 19:00 | 2        | 3450     | 0.072     | 2          | 3450     | 0.014     | 2        | 3450     | 0.086     |
| 19:00 - 20:00 | 2        | 3450     | 0.101     | 2          | 3450     | 0.043     | 2        | 3450     | 0.144     |
| 20:00 - 21:00 | 2        | 3450     | 0.029     | 2          | 3450     | 0.043     | 2        | 3450     | 0.072     |
| 21:00 - 22:00 | 2        | 3450     | 0.029     | 2          | 3450     | 0.029     | 2        | 3450     | 0.058     |
| 22:00 - 23:00 | 2        | 3450     | 0.014     | 2          | 3450     | 0.029     | 2        | 3450     | 0.043     |
| 23:00 - 24:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.029     | 2        | 3450     | 0.029     |
| Total Rates:  |          |          | 0.330     |            |          |           | 0.258    |          |           |
|               |          |          |           |            |          |           | 0.588    |          |           |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

**MULTI-MODAL VEHICLE OCCUPANTS**

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |               |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|---------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate     |
| 00:00 - 01:00       | 2        | 3450     | 0.116         | 2          | 3450     | 1.333         | 2        | 3450     | 1.449         |
| 01:00 - 02:00       | 2        | 3450     | 0.000         | 2          | 3450     | 1.217         | 2        | 3450     | 1.217         |
| 02:00 - 03:00       |          |          |               |            |          |               |          |          |               |
| 03:00 - 04:00       |          |          |               |            |          |               |          |          |               |
| 04:00 - 05:00       |          |          |               |            |          |               |          |          |               |
| 05:00 - 06:00       |          |          |               |            |          |               |          |          |               |
| 06:00 - 07:00       |          |          |               |            |          |               |          |          |               |
| 07:00 - 08:00       |          |          |               |            |          |               |          |          |               |
| 08:00 - 09:00       |          |          |               |            |          |               |          |          |               |
| 09:00 - 10:00       |          |          |               |            |          |               |          |          |               |
| 10:00 - 11:00       | 1        | 2400     | 0.000         | 1          | 2400     | 0.000         | 1        | 2400     | 0.000         |
| 11:00 - 12:00       | 1        | 2400     | 0.000         | 1          | 2400     | 0.000         | 1        | 2400     | 0.000         |
| 12:00 - 13:00       | 2        | 3450     | 1.014         | 2          | 3450     | 0.275         | 2        | 3450     | 1.289         |
| 13:00 - 14:00       | 2        | 3450     | 1.710         | 2          | 3450     | 0.870         | 2        | 3450     | 2.580         |
| 14:00 - 15:00       | 2        | 3450     | 1.696         | 2          | 3450     | 0.609         | 2        | 3450     | 2.305         |
| 15:00 - 16:00       | 2        | 3450     | 1.710         | 2          | 3450     | 1.855         | 2        | 3450     | 3.565         |
| 16:00 - 17:00       | 2        | 3450     | 2.884         | 2          | 3450     | 2.275         | 2        | 3450     | 5.159         |
| 17:00 - 18:00       | 2        | 3450     | 3.594         | 2          | 3450     | 2.101         | 2        | 3450     | 5.695         |
| 18:00 - 19:00       | 2        | 3450     | 5.232         | 2          | 3450     | 3.058         | 2        | 3450     | 8.290         |
| 19:00 - 20:00       | 2        | 3450     | 10.087        | 2          | 3450     | 5.507         | 2        | 3450     | 15.594        |
| 20:00 - 21:00       | 2        | 3450     | 7.899         | 2          | 3450     | 5.812         | 2        | 3450     | 13.711        |
| 21:00 - 22:00       | 2        | 3450     | 5.406         | 2          | 3450     | 6.087         | 2        | 3450     | 11.493        |
| 22:00 - 23:00       | 2        | 3450     | 2.710         | 2          | 3450     | 9.101         | 2        | 3450     | 11.811        |
| 23:00 - 24:00       | 2        | 3450     | 0.319         | 2          | 3450     | 4.014         | 2        | 3450     | 4.333         |
| <b>Total Rates:</b> |          |          | <b>44.377</b> |            |          | <b>44.114</b> |          |          | <b>88.491</b> |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.232     | 2        | 3450     | 0.232     |
| 01:00 - 02:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.116     | 2        | 3450     | 0.116     |
| 02:00 - 03:00 |          |          |           |            |          |           |          |          |           |
| 03:00 - 04:00 |          |          |           |            |          |           |          |          |           |
| 04:00 - 05:00 |          |          |           |            |          |           |          |          |           |
| 05:00 - 06:00 |          |          |           |            |          |           |          |          |           |
| 06:00 - 07:00 |          |          |           |            |          |           |          |          |           |
| 07:00 - 08:00 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 |          |          |           |            |          |           |          |          |           |
| 10:00 - 11:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 11:00 - 12:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 12:00 - 13:00 | 2        | 3450     | 0.290     | 2          | 3450     | 0.087     | 2        | 3450     | 0.377     |
| 13:00 - 14:00 | 2        | 3450     | 0.594     | 2          | 3450     | 0.145     | 2        | 3450     | 0.739     |
| 14:00 - 15:00 | 2        | 3450     | 0.232     | 2          | 3450     | 0.087     | 2        | 3450     | 0.319     |
| 15:00 - 16:00 | 2        | 3450     | 0.304     | 2          | 3450     | 0.391     | 2        | 3450     | 0.695     |
| 16:00 - 17:00 | 2        | 3450     | 0.406     | 2          | 3450     | 0.232     | 2        | 3450     | 0.638     |
| 17:00 - 18:00 | 2        | 3450     | 0.507     | 2          | 3450     | 0.406     | 2        | 3450     | 0.913     |
| 18:00 - 19:00 | 2        | 3450     | 0.435     | 2          | 3450     | 0.348     | 2        | 3450     | 0.783     |
| 19:00 - 20:00 | 2        | 3450     | 0.855     | 2          | 3450     | 0.667     | 2        | 3450     | 1.522     |
| 20:00 - 21:00 | 2        | 3450     | 0.826     | 2          | 3450     | 0.739     | 2        | 3450     | 1.565     |
| 21:00 - 22:00 | 2        | 3450     | 0.884     | 2          | 3450     | 0.899     | 2        | 3450     | 1.783     |
| 22:00 - 23:00 | 2        | 3450     | 0.377     | 2          | 3450     | 1.203     | 2        | 3450     | 1.580     |
| 23:00 - 24:00 | 2        | 3450     | 0.116     | 2          | 3450     | 0.232     | 2        | 3450     | 0.348     |
| Total Rates:  |          |          | 5.826     |            |          | 5.784     |          |          | 11.610    |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 01:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 01:00 - 02:00 | 2        | 3450     | 0.000     | 2          | 3450     | 0.000     | 2        | 3450     | 0.000     |
| 02:00 - 03:00 |          |          |           |            |          |           |          |          |           |
| 03:00 - 04:00 |          |          |           |            |          |           |          |          |           |
| 04:00 - 05:00 |          |          |           |            |          |           |          |          |           |
| 05:00 - 06:00 |          |          |           |            |          |           |          |          |           |
| 06:00 - 07:00 |          |          |           |            |          |           |          |          |           |
| 07:00 - 08:00 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 |          |          |           |            |          |           |          |          |           |
| 10:00 - 11:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 11:00 - 12:00 | 1        | 2400     | 0.000     | 1          | 2400     | 0.000     | 1        | 2400     | 0.000     |
| 12:00 - 13:00 | 2        | 3450     | 0.029     | 2          | 3450     | 0.014     | 2        | 3450     | 0.043     |
| 13:00 - 14:00 | 2        | 3450     | 0.116     | 2          | 3450     | 0.029     | 2        | 3450     | 0.145     |
| 14:00 - 15:00 | 2        | 3450     | 0.130     | 2          | 3450     | 0.029     | 2        | 3450     | 0.159     |
| 15:00 - 16:00 | 2        | 3450     | 0.101     | 2          | 3450     | 0.159     | 2        | 3450     | 0.260     |
| 16:00 - 17:00 | 2        | 3450     | 0.116     | 2          | 3450     | 0.116     | 2        | 3450     | 0.232     |
| 17:00 - 18:00 | 2        | 3450     | 0.232     | 2          | 3450     | 0.130     | 2        | 3450     | 0.362     |
| 18:00 - 19:00 | 2        | 3450     | 0.377     | 2          | 3450     | 0.116     | 2        | 3450     | 0.493     |
| 19:00 - 20:00 | 2        | 3450     | 1.348     | 2          | 3450     | 0.304     | 2        | 3450     | 1.652     |
| 20:00 - 21:00 | 2        | 3450     | 0.319     | 2          | 3450     | 0.493     | 2        | 3450     | 0.812     |
| 21:00 - 22:00 | 2        | 3450     | 0.174     | 2          | 3450     | 0.435     | 2        | 3450     | 0.609     |
| 22:00 - 23:00 | 2        | 3450     | 0.101     | 2          | 3450     | 1.087     | 2        | 3450     | 1.188     |
| 23:00 - 24:00 | 2        | 3450     | 0.029     | 2          | 3450     | 0.159     | 2        | 3450     | 0.188     |
| Total Rates:  |          |          | 3.072     |            |          |           |          |          | 6.143     |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |          |               | DEPARTURES |          |               | TOTALS   |          |                |
|---------------------|----------|----------|---------------|------------|----------|---------------|----------|----------|----------------|
|                     | No. Days | Ave. GFA | Trip Rate     | No. Days   | Ave. GFA | Trip Rate     | No. Days | Ave. GFA | Trip Rate      |
| 00:00 - 01:00       | 2        | 3450     | 0.116         | 2          | 3450     | 1.580         | 2        | 3450     | 1.696          |
| 01:00 - 02:00       | 2        | 3450     | 0.000         | 2          | 3450     | 1.333         | 2        | 3450     | 1.333          |
| 02:00 - 03:00       |          |          |               |            |          |               |          |          |                |
| 03:00 - 04:00       |          |          |               |            |          |               |          |          |                |
| 04:00 - 05:00       |          |          |               |            |          |               |          |          |                |
| 05:00 - 06:00       |          |          |               |            |          |               |          |          |                |
| 06:00 - 07:00       |          |          |               |            |          |               |          |          |                |
| 07:00 - 08:00       |          |          |               |            |          |               |          |          |                |
| 08:00 - 09:00       |          |          |               |            |          |               |          |          |                |
| 09:00 - 10:00       |          |          |               |            |          |               |          |          |                |
| 10:00 - 11:00       | 1        | 2400     | 0.000         | 1          | 2400     | 0.000         | 1        | 2400     | 0.000          |
| 11:00 - 12:00       | 1        | 2400     | 0.000         | 1          | 2400     | 0.000         | 1        | 2400     | 0.000          |
| 12:00 - 13:00       | 2        | 3450     | 1.333         | 2          | 3450     | 0.377         | 2        | 3450     | 1.710          |
| 13:00 - 14:00       | 2        | 3450     | 2.435         | 2          | 3450     | 1.058         | 2        | 3450     | 3.493          |
| 14:00 - 15:00       | 2        | 3450     | 2.072         | 2          | 3450     | 0.725         | 2        | 3450     | 2.797          |
| 15:00 - 16:00       | 2        | 3450     | 2.130         | 2          | 3450     | 2.420         | 2        | 3450     | 4.550          |
| 16:00 - 17:00       | 2        | 3450     | 3.449         | 2          | 3450     | 2.652         | 2        | 3450     | 6.101          |
| 17:00 - 18:00       | 2        | 3450     | 4.333         | 2          | 3450     | 2.638         | 2        | 3450     | 6.971          |
| 18:00 - 19:00       | 2        | 3450     | 6.116         | 2          | 3450     | 3.536         | 2        | 3450     | 9.652          |
| 19:00 - 20:00       | 2        | 3450     | 12.391        | 2          | 3450     | 6.522         | 2        | 3450     | 18.913         |
| 20:00 - 21:00       | 2        | 3450     | 9.072         | 2          | 3450     | 7.087         | 2        | 3450     | 16.159         |
| 21:00 - 22:00       | 2        | 3450     | 6.493         | 2          | 3450     | 7.449         | 2        | 3450     | 13.942         |
| 22:00 - 23:00       | 2        | 3450     | 3.203         | 2          | 3450     | 11.420        | 2        | 3450     | 14.623         |
| 23:00 - 24:00       | 2        | 3450     | 0.464         | 2          | 3450     | 4.435         | 2        | 3450     | 4.899          |
| <b>Total Rates:</b> |          |          | <b>53.607</b> |            |          | <b>53.232</b> |          |          | <b>106.839</b> |

## Parameter summary

Trip rate parameter range selected: 2400 - 4500 (units: sqm)  
 Survey date range: 01/01/07 - 18/09/09  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE  
Category : B - BOWLING ALLEYS  
MULTI-MODAL VEHICLES

Selected regions and areas:

|    |            |        |
|----|------------|--------|
| 03 | SOUTH WEST |        |
|    | DC DORSET  | 1 days |
| 09 | NORTH      |        |
|    | DH DURHAM  | 1 days |

Filtering Stage 2 selection:

|                         |                           |
|-------------------------|---------------------------|
| Parameter:              | Gross floor area          |
| Actual Range:           | 1700 to 1809 (units: sqm) |
| Range Selected by User: | 913 to 5060 (units: sqm)  |

Public Transport Provision:

|               |                     |
|---------------|---------------------|
| Selection by: | Include all surveys |
|---------------|---------------------|

Date Range: 01/01/05 to 15/10/11

Selected survey days:

|        |        |
|--------|--------|
| Friday | 2 days |
|--------|--------|

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 2 days |
| Directional ATC Count | 0 days |

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Edge of Town Centre                | 1 |
| Suburban Area (PPS6 Out of Centre) | 1 |

Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Development Zone | 1 |
| Built-Up Zone    | 1 |

LIST OF SITES relevant to selection parameters

|   |                                    |          |  |                     |
|---|------------------------------------|----------|--|---------------------|
| 1 | DC-07-B-01                         | BOWLPLEX |  | DORSET              |
|   | POOLE ROAD                         |          |  |                     |
|   | POOLE                              |          |  |                     |
|   | Suburban Area (PPS6 Out of Centre) |          |  |                     |
|   | Built-Up Zone                      |          |  |                     |
|   | Total Gross floor area:            | 1700 sqm |  |                     |
|   | Survey date: FRIDAY                | 18/07/08 |  | Survey Type: MANUAL |
| 2 | DH-07-B-01                         | BOWLING  |  | DURHAM              |
|   | FREEMANS PLACE                     |          |  |                     |
|   | DURHAM                             |          |  |                     |
|   | Edge of Town Centre                |          |  |                     |
|   | Development Zone                   |          |  |                     |
|   | Total Gross floor area:            | 1809 sqm |  |                     |
|   | Survey date: FRIDAY                | 05/12/08 |  | Survey Type: MANUAL |

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL VEHICLES  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.055     | 1          | 1809     | 0.000     | 1        | 1809     | 0.055     |
| 10:00 - 11:00 | 2        | 1755     | 0.456     | 2          | 1755     | 0.114     | 2        | 1755     | 0.570     |
| 11:00 - 12:00 | 2        | 1755     | 0.541     | 2          | 1755     | 0.513     | 2        | 1755     | 1.054     |
| 12:00 - 13:00 | 2        | 1755     | 0.541     | 2          | 1755     | 0.541     | 2        | 1755     | 1.082     |
| 13:00 - 14:00 | 2        | 1755     | 0.598     | 2          | 1755     | 0.741     | 2        | 1755     | 1.339     |
| 14:00 - 15:00 | 2        | 1755     | 0.570     | 2          | 1755     | 0.427     | 2        | 1755     | 0.997     |
| 15:00 - 16:00 | 2        | 1755     | 0.427     | 2          | 1755     | 0.684     | 2        | 1755     | 1.111     |
| 16:00 - 17:00 | 2        | 1755     | 0.627     | 2          | 1755     | 0.541     | 2        | 1755     | 1.168     |
| 17:00 - 18:00 | 2        | 1755     | 0.997     | 2          | 1755     | 1.026     | 2        | 1755     | 2.023     |
| 18:00 - 19:00 | 2        | 1755     | 0.969     | 2          | 1755     | 1.111     | 2        | 1755     | 2.080     |
| 19:00 - 20:00 | 2        | 1755     | 1.596     | 2          | 1755     | 1.567     | 2        | 1755     | 3.163     |
| 20:00 - 21:00 | 2        | 1755     | 0.997     | 2          | 1755     | 1.510     | 2        | 1755     | 2.507     |
| 21:00 - 22:00 | 2        | 1755     | 0.541     | 2          | 1755     | 0.627     | 2        | 1755     | 1.168     |
| 22:00 - 23:00 | 1        | 1700     | 0.118     | 1          | 1700     | 0.824     | 1        | 1700     | 0.942     |
| 23:00 - 24:00 | 1        | 1700     | 0.235     | 1          | 1700     | 0.471     | 1        | 1700     | 0.706     |
| Total Rates:  |          |          | 9.268     |            |          | 10.697    |          |          | 19.965    |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 11:00 - 12:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.000     | 2        | 1755     | 0.028     |
| 12:00 - 13:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.028     | 2        | 1755     | 0.028     |
| 13:00 - 14:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.028     | 2        | 1755     | 0.056     |
| 14:00 - 15:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.028     | 2        | 1755     | 0.056     |
| 15:00 - 16:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.000     | 2        | 1755     | 0.028     |
| 16:00 - 17:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.142     | 2        | 1755     | 0.256     |
| 17:00 - 18:00 | 2        | 1755     | 0.171     | 2          | 1755     | 0.171     | 2        | 1755     | 0.342     |
| 18:00 - 19:00 | 2        | 1755     | 0.256     | 2          | 1755     | 0.171     | 2        | 1755     | 0.427     |
| 19:00 - 20:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.171     | 2        | 1755     | 0.285     |
| 20:00 - 21:00 | 2        | 1755     | 0.142     | 2          | 1755     | 0.114     | 2        | 1755     | 0.256     |
| 21:00 - 22:00 | 2        | 1755     | 0.057     | 2          | 1755     | 0.114     | 2        | 1755     | 0.171     |
| 22:00 - 23:00 | 1        | 1700     | 0.059     | 1          | 1700     | 0.059     | 1        | 1700     | 0.118     |
| 23:00 - 24:00 | 1        | 1700     | 0.118     | 1          | 1700     | 0.118     | 1        | 1700     | 0.236     |
| Total Rates:  |          |          | 1.143     |            |          | 1.144     |          |          | 2.287     |

## Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
 Survey date range: 01/01/05 - 15/10/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL OGVS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 11:00 - 12:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.028     | 2        | 1755     | 0.056     |
| 12:00 - 13:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 13:00 - 14:00 | 2        | 1755     | 0.057     | 2          | 1755     | 0.057     | 2        | 1755     | 0.114     |
| 14:00 - 15:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 15:00 - 16:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 16:00 - 17:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 17:00 - 18:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 18:00 - 19:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 19:00 - 20:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 20:00 - 21:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 21:00 - 22:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 22:00 - 23:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 0.085     | 0.085      |          |           | 0.170    |          |           |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL PSVS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.000     | 2        | 1755     | 0.114     |
| 11:00 - 12:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.028     | 2        | 1755     | 0.028     |
| 12:00 - 13:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.114     | 2        | 1755     | 0.114     |
| 13:00 - 14:00 | 2        | 1755     | 0.085     | 2          | 1755     | 0.028     | 2        | 1755     | 0.113     |
| 14:00 - 15:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 15:00 - 16:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.085     | 2        | 1755     | 0.085     |
| 16:00 - 17:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.028     | 2        | 1755     | 0.028     |
| 17:00 - 18:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 18:00 - 19:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.028     | 2        | 1755     | 0.028     |
| 19:00 - 20:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 20:00 - 21:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 21:00 - 22:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 22:00 - 23:00 | 1        | 1700     | 0.059     | 1          | 1700     | 0.000     | 1        | 1700     | 0.059     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 0.258     |            |          |           | 0.311    |          |           |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL CYCLISTS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 11:00 - 12:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 12:00 - 13:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 13:00 - 14:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 14:00 - 15:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.000     | 2        | 1755     | 0.028     |
| 15:00 - 16:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 16:00 - 17:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.000     | 2        | 1755     | 0.028     |
| 17:00 - 18:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 18:00 - 19:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 19:00 - 20:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.000     | 2        | 1755     | 0.114     |
| 20:00 - 21:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.057     | 2        | 1755     | 0.057     |
| 21:00 - 22:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 22:00 - 23:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.059     | 1        | 1700     | 0.059     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 0.170     | 0.116      |          |           | 0.286    |          |           |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.111     | 1          | 1809     | 0.000     | 1        | 1809     | 0.111     |
| 10:00 - 11:00 | 2        | 1755     | 0.627     | 2          | 1755     | 0.256     | 2        | 1755     | 0.883     |
| 11:00 - 12:00 | 2        | 1755     | 0.969     | 2          | 1755     | 0.655     | 2        | 1755     | 1.624     |
| 12:00 - 13:00 | 2        | 1755     | 1.197     | 2          | 1755     | 0.798     | 2        | 1755     | 1.995     |
| 13:00 - 14:00 | 2        | 1755     | 1.225     | 2          | 1755     | 1.140     | 2        | 1755     | 2.365     |
| 14:00 - 15:00 | 2        | 1755     | 0.826     | 2          | 1755     | 0.769     | 2        | 1755     | 1.595     |
| 15:00 - 16:00 | 2        | 1755     | 1.111     | 2          | 1755     | 0.969     | 2        | 1755     | 2.080     |
| 16:00 - 17:00 | 2        | 1755     | 1.054     | 2          | 1755     | 0.969     | 2        | 1755     | 2.023     |
| 17:00 - 18:00 | 2        | 1755     | 2.080     | 2          | 1755     | 1.425     | 2        | 1755     | 3.505     |
| 18:00 - 19:00 | 2        | 1755     | 1.567     | 2          | 1755     | 2.080     | 2        | 1755     | 3.647     |
| 19:00 - 20:00 | 2        | 1755     | 3.163     | 2          | 1755     | 2.166     | 2        | 1755     | 5.329     |
| 20:00 - 21:00 | 2        | 1755     | 1.824     | 2          | 1755     | 3.078     | 2        | 1755     | 4.902     |
| 21:00 - 22:00 | 2        | 1755     | 1.197     | 2          | 1755     | 1.254     | 2        | 1755     | 2.451     |
| 22:00 - 23:00 | 1        | 1700     | 0.118     | 1          | 1700     | 2.235     | 1        | 1700     | 2.353     |
| 23:00 - 24:00 | 1        | 1700     | 1.059     | 1          | 1700     | 1.529     | 1        | 1700     | 2.588     |
| Total Rates:  |          |          | 18.128    |            |          | 19.323    |          |          | 37.451    |

## Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
 Survey date range: 01/01/05 - 15/10/11  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL PEDESTRIANS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.057     | 2          | 1755     | 0.028     | 2        | 1755     | 0.085     |
| 11:00 - 12:00 | 2        | 1755     | 0.171     | 2          | 1755     | 0.085     | 2        | 1755     | 0.256     |
| 12:00 - 13:00 | 2        | 1755     | 1.225     | 2          | 1755     | 0.057     | 2        | 1755     | 1.282     |
| 13:00 - 14:00 | 2        | 1755     | 2.679     | 2          | 1755     | 0.313     | 2        | 1755     | 2.992     |
| 14:00 - 15:00 | 2        | 1755     | 0.655     | 2          | 1755     | 1.197     | 2        | 1755     | 1.852     |
| 15:00 - 16:00 | 2        | 1755     | 0.171     | 2          | 1755     | 0.798     | 2        | 1755     | 0.969     |
| 16:00 - 17:00 | 2        | 1755     | 0.142     | 2          | 1755     | 0.057     | 2        | 1755     | 0.199     |
| 17:00 - 18:00 | 2        | 1755     | 2.137     | 2          | 1755     | 1.738     | 2        | 1755     | 3.875     |
| 18:00 - 19:00 | 2        | 1755     | 0.342     | 2          | 1755     | 0.399     | 2        | 1755     | 0.741     |
| 19:00 - 20:00 | 2        | 1755     | 0.057     | 2          | 1755     | 0.427     | 2        | 1755     | 0.484     |
| 20:00 - 21:00 | 2        | 1755     | 0.399     | 2          | 1755     | 0.228     | 2        | 1755     | 0.627     |
| 21:00 - 22:00 | 2        | 1755     | 0.228     | 2          | 1755     | 0.000     | 2        | 1755     | 0.228     |
| 22:00 - 23:00 | 1        | 1700     | 0.176     | 1          | 1700     | 0.353     | 1        | 1700     | 0.529     |
| 23:00 - 24:00 | 1        | 1700     | 0.059     | 1          | 1700     | 0.118     | 1        | 1700     | 0.177     |
| Total Rates:  |          |          | 8.498     |            |          | 5.798     |          |          | 14.296    |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL BUS/TRAM PASSENGERS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 11:00 - 12:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.285     | 2        | 1755     | 0.285     |
| 12:00 - 13:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.000     | 2        | 1755     | 0.028     |
| 13:00 - 14:00 | 2        | 1755     | 0.484     | 2          | 1755     | 1.111     | 2        | 1755     | 1.595     |
| 14:00 - 15:00 | 2        | 1755     | 0.598     | 2          | 1755     | 0.228     | 2        | 1755     | 0.826     |
| 15:00 - 16:00 | 2        | 1755     | 0.057     | 2          | 1755     | 0.940     | 2        | 1755     | 0.997     |
| 16:00 - 17:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.513     | 2        | 1755     | 0.513     |
| 17:00 - 18:00 | 2        | 1755     | 0.085     | 2          | 1755     | 0.598     | 2        | 1755     | 0.683     |
| 18:00 - 19:00 | 2        | 1755     | 0.085     | 2          | 1755     | 0.484     | 2        | 1755     | 0.569     |
| 19:00 - 20:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.285     | 2        | 1755     | 0.399     |
| 20:00 - 21:00 | 2        | 1755     | 0.228     | 2          | 1755     | 0.399     | 2        | 1755     | 0.627     |
| 21:00 - 22:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.171     | 2        | 1755     | 0.285     |
| 22:00 - 23:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.471     | 1        | 1700     | 0.471     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 1.793     |            |          | 5.485     |          |          | 7.278     |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL TRAIN PASSENGERS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 11:00 - 12:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 12:00 - 13:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 13:00 - 14:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 14:00 - 15:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 15:00 - 16:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 16:00 - 17:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 17:00 - 18:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 18:00 - 19:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 19:00 - 20:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 20:00 - 21:00 | 2        | 1755     | 0.028     | 2          | 1755     | 0.057     | 2        | 1755     | 0.085     |
| 21:00 - 22:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 22:00 - 23:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 0.028     |            |          |           | 0.057    |          |           |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL COACH PASSENGERS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 5.700     | 2          | 1755     | 0.000     | 2        | 1755     | 5.700     |
| 11:00 - 12:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 12:00 - 13:00 | 2        | 1755     | 0.000     | 2          | 1755     | 5.700     | 2        | 1755     | 5.700     |
| 13:00 - 14:00 | 2        | 1755     | 0.912     | 2          | 1755     | 0.000     | 2        | 1755     | 0.912     |
| 14:00 - 15:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 15:00 - 16:00 | 2        | 1755     | 0.000     | 2          | 1755     | 1.539     | 2        | 1755     | 1.539     |
| 16:00 - 17:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 17:00 - 18:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 18:00 - 19:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.684     | 2        | 1755     | 0.684     |
| 19:00 - 20:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 20:00 - 21:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 21:00 - 22:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.000     | 2        | 1755     | 0.000     |
| 22:00 - 23:00 | 1        | 1700     | 1.235     | 1          | 1700     | 0.000     | 1        | 1700     | 1.235     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 7.847     |            |          |           | 7.923    | 15.770   |           |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

Peter Brett Associates Queen Square Bristol

Licence No: 706710

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL PUBLIC TRANSPORT USERS  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.000     | 1          | 1809     | 0.000     | 1        | 1809     | 0.000     |
| 10:00 - 11:00 | 2        | 1755     | 5.700     | 2          | 1755     | 0.000     | 2        | 1755     | 5.700     |
| 11:00 - 12:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.285     | 2        | 1755     | 0.285     |
| 12:00 - 13:00 | 2        | 1755     | 0.028     | 2          | 1755     | 5.700     | 2        | 1755     | 5.728     |
| 13:00 - 14:00 | 2        | 1755     | 1.396     | 2          | 1755     | 1.111     | 2        | 1755     | 2.507     |
| 14:00 - 15:00 | 2        | 1755     | 0.598     | 2          | 1755     | 0.228     | 2        | 1755     | 0.826     |
| 15:00 - 16:00 | 2        | 1755     | 0.057     | 2          | 1755     | 2.479     | 2        | 1755     | 2.536     |
| 16:00 - 17:00 | 2        | 1755     | 0.000     | 2          | 1755     | 0.513     | 2        | 1755     | 0.513     |
| 17:00 - 18:00 | 2        | 1755     | 0.085     | 2          | 1755     | 0.598     | 2        | 1755     | 0.683     |
| 18:00 - 19:00 | 2        | 1755     | 0.085     | 2          | 1755     | 1.168     | 2        | 1755     | 1.253     |
| 19:00 - 20:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.285     | 2        | 1755     | 0.399     |
| 20:00 - 21:00 | 2        | 1755     | 0.256     | 2          | 1755     | 0.456     | 2        | 1755     | 0.712     |
| 21:00 - 22:00 | 2        | 1755     | 0.114     | 2          | 1755     | 0.171     | 2        | 1755     | 0.285     |
| 22:00 - 23:00 | 1        | 1700     | 1.235     | 1          | 1700     | 0.471     | 1        | 1700     | 1.706     |
| 23:00 - 24:00 | 1        | 1700     | 0.000     | 1          | 1700     | 0.000     | 1        | 1700     | 0.000     |
| Total Rates:  |          |          | 9.668     |            |          | 13.465    |          |          | 23.133    |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

TRIP RATE for Land Use 07 - LEISURE/B - BOWLING ALLEYS  
MULTI-MODAL TOTAL PEOPLE  
Calculation factor: 100 sqm  
BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | 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 |          |          |           |            |          |           |          |          |           |
| 08:00 - 09:00 |          |          |           |            |          |           |          |          |           |
| 09:00 - 10:00 | 1        | 1809     | 0.111     | 1          | 1809     | 0.000     | 1        | 1809     | 0.111     |
| 10:00 - 11:00 | 2        | 1755     | 6.384     | 2          | 1755     | 0.285     | 2        | 1755     | 6.669     |
| 11:00 - 12:00 | 2        | 1755     | 1.140     | 2          | 1755     | 1.026     | 2        | 1755     | 2.166     |
| 12:00 - 13:00 | 2        | 1755     | 2.451     | 2          | 1755     | 6.555     | 2        | 1755     | 9.006     |
| 13:00 - 14:00 | 2        | 1755     | 5.301     | 2          | 1755     | 2.565     | 2        | 1755     | 7.866     |
| 14:00 - 15:00 | 2        | 1755     | 2.109     | 2          | 1755     | 2.194     | 2        | 1755     | 4.303     |
| 15:00 - 16:00 | 2        | 1755     | 1.339     | 2          | 1755     | 4.246     | 2        | 1755     | 5.585     |
| 16:00 - 17:00 | 2        | 1755     | 1.225     | 2          | 1755     | 1.539     | 2        | 1755     | 2.764     |
| 17:00 - 18:00 | 2        | 1755     | 4.303     | 2          | 1755     | 3.762     | 2        | 1755     | 8.065     |
| 18:00 - 19:00 | 2        | 1755     | 1.995     | 2          | 1755     | 3.648     | 2        | 1755     | 5.643     |
| 19:00 - 20:00 | 2        | 1755     | 3.448     | 2          | 1755     | 2.878     | 2        | 1755     | 6.326     |
| 20:00 - 21:00 | 2        | 1755     | 2.479     | 2          | 1755     | 3.819     | 2        | 1755     | 6.298     |
| 21:00 - 22:00 | 2        | 1755     | 1.539     | 2          | 1755     | 1.425     | 2        | 1755     | 2.964     |
| 22:00 - 23:00 | 1        | 1700     | 1.529     | 1          | 1700     | 3.118     | 1        | 1700     | 4.647     |
| 23:00 - 24:00 | 1        | 1700     | 1.118     | 1          | 1700     | 1.647     | 1        | 1700     | 2.765     |
| Total Rates:  |          |          | 36.471    |            |          | 38.707    |          |          | 75.178    |

#### Parameter summary

Trip rate parameter range selected: 1700 - 1809 (units: sqm)  
Survey date range: 01/01/05 - 15/10/11  
Number of weekdays (Monday-Friday): 2  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys manually removed from selection: 0

## Appendix F

| Junctions 9                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARCADY 9 - Roundabout Module                                                                                                                                                |
| Version: 9.0.0.4211 []<br>© Copyright TRL Limited, 2015                                                                                                                     |
| For sales and distribution information, program advice and maintenance, contact TRL:<br>Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk |
| The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution            |

**Filename:** Site Access\_Elettra Avenue Roundabout.j9  
**Path:** P:\17000's\17144\Technical\Junction Modelling\B Block  
**Report generation date:** 17/06/2015 11:17:39

---

»(Default Analysis Set) - 2015 Base, AM  
»(Default Analysis Set) - 2015 Base, PM  
»(Default Analysis Set) - 2020 Base, AM  
»(Default Analysis Set) - 2020 Base, PM  
»(Default Analysis Set) - 2020 Base + Dev (B Block Proposals), AM  
»(Default Analysis Set) - 2020 Base + Dev (B Block Proposals), PM  
»(Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), AM  
»(Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), PM  
»(Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), AM  
»(Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), PM

## Summary of junction performance

|                                                  | AM      |           |      |     | PM      |           |      |     |
|--------------------------------------------------|---------|-----------|------|-----|---------|-----------|------|-----|
|                                                  | Q (PCU) | Delay (s) | RFC  | LOS | Q (PCU) | Delay (s) | RFC  | LOS |
| A1 - 2015 Base                                   |         |           |      |     |         |           |      |     |
| 1 - Elettra Av (east)                            | 0.4     | 2.58      | 0.30 | A   | 0.1     | 2.03      | 0.10 | A   |
| 2 - Site Access                                  | 0.0     | 1.85      | 0.03 | A   | 0.0     | 1.66      | 0.03 | A   |
| 3 - Elettra Av (west)                            | 0.0     | 2.21      | 0.03 | A   | 0.1     | 2.13      | 0.08 | A   |
| 4 - Waterberry Drive                             | 0.1     | 2.21      | 0.11 | A   | 0.4     | 2.78      | 0.26 | A   |
| A1 - 2020 Base                                   |         |           |      |     |         |           |      |     |
| 1 - Elettra Av (east)                            | 0.5     | 2.65      | 0.32 | A   | 0.1     | 2.03      | 0.10 | A   |
| 2 - Site Access                                  | 0.0     | 1.87      | 0.03 | A   | 0.0     | 1.66      | 0.03 | A   |
| 3 - Elettra Av (west)                            | 0.0     | 2.24      | 0.03 | A   | 0.1     | 2.14      | 0.08 | A   |
| 4 - Waterberry Drive                             | 0.1     | 2.21      | 0.11 | A   | 0.4     | 2.82      | 0.27 | A   |
| A1 - 2020 Base + Dev (B Block Proposals)         |         |           |      |     |         |           |      |     |
| 1 - Elettra Av (east)                            | 0.5     | 2.67      | 0.32 | A   | 0.1     | 2.06      | 0.12 | A   |
| 2 - Site Access                                  | 0.0     | 1.89      | 0.04 | A   | 0.1     | 1.69      | 0.05 | A   |
| 3 - Elettra Av (west)                            | 0.0     | 2.26      | 0.03 | A   | 0.1     | 2.18      | 0.09 | A   |
| 4 - Waterberry Drive                             | 0.1     | 2.23      | 0.11 | A   | 0.4     | 2.89      | 0.28 | A   |
| A1 - 2020 Base + Dev (B Block + East Dev)        |         |           |      |     |         |           |      |     |
| 1 - Elettra Av (east)                            | 0.4     | 2.59      | 0.30 | A   | 0.2     | 2.18      | 0.17 | A   |
| 2 - Site Access                                  | 0.0     | 1.89      | 0.04 | A   | 0.1     | 1.74      | 0.07 | A   |
| 3 - Elettra Av (west)                            | 0.0     | 2.26      | 0.03 | A   | 0.1     | 2.23      | 0.09 | A   |
| 4 - Waterberry Drive                             | 0.1     | 2.23      | 0.11 | A   | 0.4     | 2.98      | 0.28 | A   |
| A1 - 2020 Base + Dev (B Block + East + West Dev) |         |           |      |     |         |           |      |     |
| 1 - Elettra Av (east)                            | 0.6     | 2.82      | 0.36 | A   | 0.2     | 2.21      | 0.18 | A   |
| 2 - Site Access                                  | 0.1     | 1.92      | 0.05 | A   | 0.1     | 1.81      | 0.11 | A   |
| 3 - Elettra Av (west)                            | 0.0     | 2.29      | 0.03 | A   | 0.1     | 2.32      | 0.09 | A   |
| 4 - Waterberry Drive                             | 0.1     | 2.26      | 0.11 | A   | 0.4     | 3.13      | 0.29 | A   |

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle.

## File summary

### File Description

|             |                                             |
|-------------|---------------------------------------------|
| Title       | Site Access_Elettra Avenue_Waterberry Drive |
| Location    | waterlooville                               |
| Site number |                                             |
| Date        | 06/05/2015                                  |
| Version     |                                             |
| Status      | (new file)                                  |
| Identifier  |                                             |
| Client      |                                             |
| Jobnumber   | 17144                                       |
| Enumerator  | DTA"arcady                                  |
| Description |                                             |

## Units

| Distance units | Speed units | Traffic units input | Traffic units results | Flow units | Av. delay units | Total delay units | Rate of delay units |
|----------------|-------------|---------------------|-----------------------|------------|-----------------|-------------------|---------------------|
| m              | kph         | PCU                 | PCU                   | perHour    | s               | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Q Percentiles | Calculate detailed queueing delay | Calculate residual capacity | RFC Threshold | Av. Delay threshold (s) | Q threshold (PCU) |
|--------------------|-------------------------|-----------------------------------|-----------------------------|---------------|-------------------------|-------------------|
| 5.75               |                         |                                   |                             | 0.85          | 36.00                   | 20.00             |

## Demand Set Summary

| Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| 2015 Base                                   | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |
| 2015 Base                                   | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |
| 2020 Base                                   | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |
| 2020 Base                                   | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block Proposals)         | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block Proposals)         | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East Dev)        | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East Dev)        | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East + West Dev) | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East + West Dev) | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |

## (Default Analysis Set) - 2015 Base, AM

### Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.43               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Arms

### Arms

| Arm | Name              | Description |
|-----|-------------------|-------------|
| 1   | Elettra Av (east) |             |
| 2   | Site Access       |             |
| 3   | Elettra Av (west) |             |
| 4   | Waterberry Drive  |             |

### Capacity Options

| Arm                   | Min Cap (PCU/hr) | Max Cap (PCU/hr) | Assume flat start profile | Initial queue (PCU) |
|-----------------------|------------------|------------------|---------------------------|---------------------|
| 1 - Elettra Av (east) | 0.00             | 99999.00         |                           | 0.00                |
| 2 - Site Access       | 0.00             | 99999.00         |                           | 0.00                |
| 3 - Elettra Av (west) | 0.00             | 99999.00         |                           | 0.00                |
| 4 - Waterberry Drive  | 0.00             | 99999.00         |                           | 0.00                |

### Roundabout Geometry

| Arm                   | V (m) | E (m) | I' (m) | R (m) | D (m) | PHI (deg) | Exit only |
|-----------------------|-------|-------|--------|-------|-------|-----------|-----------|
| 1 - Elettra Av (east) | 3.00  | 7.40  | 41.5   | 25.7  | 44.0  | 19.5      |           |
| 2 - Site Access       | 6.20  | 9.10  | 11.1   | 19.5  | 44.0  | 24.0      |           |
| 3 - Elettra Av (west) | 3.60  | 7.30  | 27.9   | 28.5  | 44.0  | 15.5      |           |
| 4 - Waterberry Drive  | 3.76  | 7.50  | 13.4   | 55.4  | 44.0  | 11.5      |           |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm                   | Final slope | Final intercept (PCU/hr) |
|-----------------------|-------------|--------------------------|
| 1 - Elettra Av (east) | 0.703       | 1994.478                 |
| 2 - Site Access       | 0.775       | 2402.663                 |
| 3 - Elettra Av (west) | 0.709       | 1999.711                 |
| 4 - Waterberry Drive  | 0.699       | 1902.815                 |

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D1 | 2015 Base     | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

### Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 593.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 54.00               | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 52.00               | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 206.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 87.000          | 112.000               | 394.000              |
|      | 2 - Site Access       | 54.000                | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 48.000                | 0.000           | 0.000                 | 4.000                |
|      | 4 - Waterberry Drive  | 196.000               | 1.000           | 9.000                 | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.15            | 0.19                  | 0.66                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.92                  | 0.00            | 0.00                  | 0.08                 |
|      | 4 - Waterberry Drive  | 0.95                  | 0.00            | 0.04                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

| From | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
|      | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

| From | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
|      | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

## Results

### Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.30    | 2.58          | 0.4         | A       | 593.00              | 889.50                        |
| 2 - Site Access       | 0.03    | 1.85          | 0.0         | A       | 54.00               | 81.00                         |
| 3 - Elettra Av (west) | 0.03    | 2.21          | 0.0         | A       | 52.00               | 78.00                         |
| 4 - Waterberry Drive  | 0.11    | 2.21          | 0.1         | A       | 206.00              | 309.00                        |

### Main Results for each time segment

#### Main results: (08:00-08:15)

| Am                    | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 593.00                | 148.25                  | 9.98                      | 1987.47           | 0.298 | 591.31              | 297.29                     | 0.0               | 0.4             | 2.575     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 513.53                    | 2004.81           | 0.027 | 53.89               | 87.75                      | 0.0               | 0.0             | 1.844     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 446.76                    | 1682.89           | 0.031 | 51.87               | 120.66                     | 0.0               | 0.0             | 2.207     | A   |
| 4 - Waterberry Drive  | 206.00                | 51.50                   | 101.77                    | 1831.65           | 0.112 | 205.49              | 396.86                     | 0.0               | 0.1             | 2.214     | A   |

### Main results: (08:15-08:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 593.00                | 148.25                  | 10.00                     | 1987.45           | 0.298 | 593.00              | 298.00                     | 0.4               | 0.4             | 2.581     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 515.00                    | 2003.67           | 0.027 | 54.00               | 88.00                      | 0.0               | 0.0             | 1.845     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 448.00                    | 1682.01           | 0.031 | 52.00               | 121.00                     | 0.0               | 0.0             | 2.208     | A   |
| 4 - Waterberry Drive  | 206.00                | 51.50                   | 102.00                    | 1831.50           | 0.112 | 206.00              | 398.00                     | 0.1               | 0.1             | 2.214     | A   |

### Main results: (08:30-08:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 593.00                | 148.25                  | 10.00                     | 1987.45           | 0.298 | 593.00              | 298.00                     | 0.4               | 0.4             | 2.581     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 515.00                    | 2003.67           | 0.027 | 54.00               | 88.00                      | 0.0               | 0.0             | 1.845     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 448.00                    | 1682.01           | 0.031 | 52.00               | 121.00                     | 0.0               | 0.0             | 2.208     | A   |
| 4 - Waterberry Drive  | 206.00                | 51.50                   | 102.00                    | 1831.49           | 0.112 | 206.00              | 398.00                     | 0.1               | 0.1             | 2.214     | A   |

### Main results: (08:45-09:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 593.00                | 148.25                  | 10.00                     | 1987.45           | 0.298 | 593.00              | 298.00                     | 0.4               | 0.4             | 2.581     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 515.00                    | 2003.67           | 0.027 | 54.00               | 88.00                      | 0.0               | 0.0             | 1.845     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 448.00                    | 1682.01           | 0.031 | 52.00               | 121.00                     | 0.0               | 0.0             | 2.208     | A   |
| 4 - Waterberry Drive  | 206.00                | 51.50                   | 102.00                    | 1831.49           | 0.112 | 206.00              | 398.00                     | 0.1               | 0.1             | 2.214     | A   |

### Main results: (09:00-09:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 593.00                | 148.25                  | 10.00                     | 1987.45           | 0.298 | 593.00              | 298.00                     | 0.4               | 0.4             | 2.581     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 515.00                    | 2003.67           | 0.027 | 54.00               | 88.00                      | 0.0               | 0.0             | 1.845     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 448.00                    | 1682.01           | 0.031 | 52.00               | 121.00                     | 0.0               | 0.0             | 2.208     | A   |
| 4 - Waterberry Drive  | 206.00                | 51.50                   | 102.00                    | 1831.49           | 0.112 | 206.00              | 398.00                     | 0.1               | 0.1             | 2.214     | A   |

### Main results: (09:15-09:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 593.00                | 148.25                  | 10.00                     | 1987.45           | 0.298 | 593.00              | 298.00                     | 0.4               | 0.4             | 2.581     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 515.00                    | 2003.67           | 0.027 | 54.00               | 88.00                      | 0.0               | 0.0             | 1.845     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 448.00                    | 1682.01           | 0.031 | 52.00               | 121.00                     | 0.0               | 0.0             | 2.208     | A   |
| 4 - Waterberry Drive  | 206.00                | 51.50                   | 102.00                    | 1831.49           | 0.112 | 206.00              | 398.00                     | 0.1               | 0.1             | 2.214     | A   |

## (Default Analysis Set) - 2015 Base, PM

### Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.41               | A            |

### Junction Network Options

[same as above]

## Arms

### Arms

[same as above]

### Capacity Options

[same as above]

### Roundabout Geometry

[same as above]

### Slope / Intercept / Capacity

[same as above]

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D2 | 2015 Base     | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 205.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 66.00               | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 151.00              | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 461.00              | 100.000            |

# Origin-Destination Data

## Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 13.000          | 29.000                | 163.000              |
|      | 2 - Site Access       | 66.000                | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 147.000               | 0.000           | 0.000                 | 4.000                |
|      | 4 - Waterberry Drive  | 439.000               | 0.000           | 22.000                | 0.000                |

## Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.06            | 0.14                  | 0.80                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.97                  | 0.00            | 0.00                  | 0.03                 |
|      | 4 - Waterberry Drive  | 0.95                  | 0.00            | 0.05                  | 0.00                 |

# Vehicle Mix

## Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

## Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.10    | 2.03          | 0.1         | A       | 205.00              | 307.50                        |
| 2 - Site Access       | 0.03    | 1.66          | 0.0         | A       | 66.00               | 99.00                         |
| 3 - Elettra Av (west) | 0.08    | 2.13          | 0.1         | A       | 151.00              | 226.50                        |
| 4 - Waterberry Drive  | 0.26    | 2.78          | 0.4         | A       | 461.00              | 691.50                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 205.00                | 51.25                   | 21.93                     | 1979.06           | 0.104 | 204.54              | 650.18                     | 0.0               | 0.1             | 2.028     | A   |
| 2 - Site Access       | 66.00                 | 16.50                   | 213.50                    | 2237.26           | 0.030 | 65.88               | 12.97                      | 0.0               | 0.0             | 1.657     | A   |
| 3 - Elettra Av (west) | 151.00                | 37.75                   | 228.51                    | 1837.66           | 0.082 | 150.64              | 50.87                      | 0.0               | 0.1             | 2.134     | A   |
| 4 - Waterberry Drive  | 461.00                | 115.25                  | 212.53                    | 1754.21           | 0.263 | 459.58              | 166.62                     | 0.0               | 0.4             | 2.778     | A   |

### Main results: (17:00-17:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 205.00                | 51.25                   | 22.00                     | 1979.01           | 0.104 | 205.00              | 652.00                     | 0.1               | 0.1             | 2.029     | A   |
| 2 - Site Access       | 66.00                 | 16.50                   | 214.00                    | 2236.87           | 0.030 | 66.00               | 13.00                      | 0.0               | 0.0             | 1.657     | A   |
| 3 - Elettra Av (west) | 151.00                | 37.75                   | 229.00                    | 1837.32           | 0.082 | 151.00              | 51.00                      | 0.1               | 0.1             | 2.134     | A   |
| 4 - Waterberry Drive  | 461.00                | 115.25                  | 213.00                    | 1753.88           | 0.263 | 461.00              | 167.00                     | 0.4               | 0.4             | 2.783     | A   |

### Main results: (17:15-17:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 205.00                | 51.25                   | 22.00                     | 1979.01           | 0.104 | 205.00              | 652.00                     | 0.1               | 0.1             | 2.029     | A   |
| 2 - Site Access       | 66.00                 | 16.50                   | 214.00                    | 2236.87           | 0.030 | 66.00               | 13.00                      | 0.0               | 0.0             | 1.657     | A   |
| 3 - Elettra Av (west) | 151.00                | 37.75                   | 229.00                    | 1837.32           | 0.082 | 151.00              | 51.00                      | 0.1               | 0.1             | 2.134     | A   |
| 4 - Waterberry Drive  | 461.00                | 115.25                  | 213.00                    | 1753.88           | 0.263 | 461.00              | 167.00                     | 0.4               | 0.4             | 2.783     | A   |

### Main results: (17:30-17:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 205.00                | 51.25                   | 22.00                     | 1979.01           | 0.104 | 205.00              | 652.00                     | 0.1               | 0.1             | 2.029     | A   |
| 2 - Site Access       | 66.00                 | 16.50                   | 214.00                    | 2236.87           | 0.030 | 66.00               | 13.00                      | 0.0               | 0.0             | 1.657     | A   |
| 3 - Elettra Av (west) | 151.00                | 37.75                   | 229.00                    | 1837.32           | 0.082 | 151.00              | 51.00                      | 0.1               | 0.1             | 2.134     | A   |
| 4 - Waterberry Drive  | 461.00                | 115.25                  | 213.00                    | 1753.88           | 0.263 | 461.00              | 167.00                     | 0.4               | 0.4             | 2.783     | A   |

### Main results: (17:45-18:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 205.00                | 51.25                   | 22.00                     | 1979.01           | 0.104 | 205.00              | 652.00                     | 0.1               | 0.1             | 2.029     | A   |
| 2 - Site Access       | 66.00                 | 16.50                   | 214.00                    | 2236.87           | 0.030 | 66.00               | 13.00                      | 0.0               | 0.0             | 1.657     | A   |
| 3 - Elettra Av (west) | 151.00                | 37.75                   | 229.00                    | 1837.32           | 0.082 | 151.00              | 51.00                      | 0.1               | 0.1             | 2.134     | A   |
| 4 - Waterberry Drive  | 461.00                | 115.25                  | 213.00                    | 1753.88           | 0.263 | 461.00              | 167.00                     | 0.4               | 0.4             | 2.783     | A   |

### Main results: (18:00-18:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 205.00                | 51.25                   | 22.00                     | 1979.01           | 0.104 | 205.00              | 652.00                     | 0.1               | 0.1             | 2.029     | A   |
| 2 - Site Access       | 66.00                 | 16.50                   | 214.00                    | 2236.87           | 0.030 | 66.00               | 13.00                      | 0.0               | 0.0             | 1.657     | A   |
| 3 - Elettra Av (west) | 151.00                | 37.75                   | 229.00                    | 1837.32           | 0.082 | 151.00              | 51.00                      | 0.1               | 0.1             | 2.134     | A   |
| 4 - Waterberry Drive  | 461.00                | 115.25                  | 213.00                    | 1753.88           | 0.263 | 461.00              | 167.00                     | 0.4               | 0.4             | 2.783     | A   |

## (Default Analysis Set) - 2020 Base, AM

### Data Errors and Warnings

| Severity | Area     | Item                                              | Description                                                                                                      |
|----------|----------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout<br>Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.48               | A            |

### Junction Network Options

[same as above]

## Arms

### Arms

[same as above]

### Capacity Options

[same as above]

### Roundabout Geometry

[same as above]

### Slope / Intercept / Capacity

[same as above]

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D3 | 2020 Base     | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 628.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 54.00               | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 52.00               | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 205.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 87.000          | 115.000               | 426.000              |
|      | 2 - Site Access       | 54.000                | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 48.000                | 0.000           | 0.000                 | 4.000                |
|      | 4 - Waterberry Drive  | 196.000               | 0.000           | 9.000                 | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.14            | 0.18                  | 0.68                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.92                  | 0.00            | 0.00                  | 0.08                 |
|      | 4 - Waterberry Drive  | 0.96                  | 0.00            | 0.04                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.32    | 2.65          | 0.5         | A       | 628.00              | 942.00                        |
| 2 - Site Access       | 0.03    | 1.87          | 0.0         | A       | 54.00               | 81.00                         |
| 3 - Elettra Av (west) | 0.03    | 2.24          | 0.0         | A       | 52.00               | 78.00                         |
| 4 - Waterberry Drive  | 0.11    | 2.21          | 0.1         | A       | 205.00              | 307.50                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 628.00                | 157.00                  | 8.98                      | 1988.17           | 0.316 | 626.16              | 297.29                     | 0.0               | 0.5             | 2.640     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 548.39                    | 1977.80           | 0.027 | 53.89               | 86.75                      | 0.0               | 0.0             | 1.870     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 478.64                    | 1660.28           | 0.031 | 51.87               | 123.64                     | 0.0               | 0.0             | 2.238     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 101.77                    | 1831.66           | 0.112 | 204.50              | 428.74                     | 0.0               | 0.1             | 2.212     | A   |

### Main results: (08:15-08:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 628.00                | 157.00                  | 9.00                      | 1988.15           | 0.316 | 628.00              | 298.00                     | 0.5               | 0.5             | 2.646     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 550.00                    | 1976.56           | 0.027 | 54.00               | 87.00                      | 0.0               | 0.0             | 1.871     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 480.00                    | 1659.32           | 0.031 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.239     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 102.00                    | 1831.50           | 0.112 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.212     | A   |

### Main results: (08:30-08:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 628.00                | 157.00                  | 9.00                      | 1988.15           | 0.316 | 628.00              | 298.00                     | 0.5               | 0.5             | 2.646     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 550.00                    | 1976.56           | 0.027 | 54.00               | 87.00                      | 0.0               | 0.0             | 1.871     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 480.00                    | 1659.32           | 0.031 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.239     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 102.00                    | 1831.49           | 0.112 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.212     | A   |

### Main results: (08:45-09:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 628.00                | 157.00                  | 9.00                      | 1988.15           | 0.316 | 628.00              | 298.00                     | 0.5               | 0.5             | 2.646     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 550.00                    | 1976.56           | 0.027 | 54.00               | 87.00                      | 0.0               | 0.0             | 1.871     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 480.00                    | 1659.32           | 0.031 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.239     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 102.00                    | 1831.49           | 0.112 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.212     | A   |

### Main results: (09:00-09:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 628.00                | 157.00                  | 9.00                      | 1988.15           | 0.316 | 628.00              | 298.00                     | 0.5               | 0.5             | 2.646     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 550.00                    | 1976.56           | 0.027 | 54.00               | 87.00                      | 0.0               | 0.0             | 1.871     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 480.00                    | 1659.32           | 0.031 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.239     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 102.00                    | 1831.49           | 0.112 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.212     | A   |

### Main results: (09:15-09:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 628.00                | 157.00                  | 9.00                      | 1988.15           | 0.316 | 628.00              | 298.00                     | 0.5               | 0.5             | 2.646     | A   |
| 2 - Site Access       | 54.00                 | 13.50                   | 550.00                    | 1976.56           | 0.027 | 54.00               | 87.00                      | 0.0               | 0.0             | 1.871     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 480.00                    | 1659.32           | 0.031 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.239     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 102.00                    | 1831.49           | 0.112 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.212     | A   |

## (Default Analysis Set) - 2020 Base, PM

### Data Errors and Warnings

| Severity | Area     | Item                                              | Description                                                                                                      |
|----------|----------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout<br>Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.43               | A            |

### Junction Network Options

[same as above]

## Arms

### Arms

[same as above]

### Capacity Options

[same as above]

### Roundabout Geometry

[same as above]

### Slope / Intercept / Capacity

[same as above]

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D4 | 2020 Base     | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 204.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 69.00               | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 154.00              | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 474.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 13.000          | 29.000                | 162.000              |
|      | 2 - Site Access       | 66.000                | 0.000           | 3.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 151.000               | 0.000           | 0.000                 | 3.000                |
|      | 4 - Waterberry Drive  | 452.000               | 0.000           | 22.000                | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.06            | 0.14                  | 0.79                 |
|      | 2 - Site Access       | 0.96                  | 0.00            | 0.04                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.98                  | 0.00            | 0.00                  | 0.02                 |
|      | 4 - Waterberry Drive  | 0.95                  | 0.00            | 0.05                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.10    | 2.03          | 0.1         | A       | 204.00              | 306.00                        |
| 2 - Site Access       | 0.03    | 1.66          | 0.0         | A       | 69.00               | 103.50                        |
| 3 - Elettra Av (west) | 0.08    | 2.14          | 0.1         | A       | 154.00              | 231.00                        |
| 4 - Waterberry Drive  | 0.27    | 2.82          | 0.4         | A       | 474.00              | 711.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 204.00                | 51.00                   | 21.93                     | 1979.06           | 0.103 | 203.54              | 667.11                     | 0.0               | 0.1             | 2.027     | A   |
| 2 - Site Access       | 69.00                 | 17.25                   | 212.50                    | 2238.03           | 0.031 | 68.87               | 12.97                      | 0.0               | 0.0             | 1.658     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 227.51                    | 1838.37           | 0.084 | 153.64              | 53.86                      | 0.0               | 0.1             | 2.136     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 216.52                    | 1751.42           | 0.271 | 472.52              | 164.63                     | 0.0               | 0.4             | 2.813     | A   |

### Main results: (17:00-17:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 204.00                | 51.00                   | 22.00                     | 1979.01           | 0.103 | 204.00              | 669.00                     | 0.1               | 0.1             | 2.027     | A   |
| 2 - Site Access       | 69.00                 | 17.25                   | 213.00                    | 2237.64           | 0.031 | 69.00               | 13.00                      | 0.0               | 0.0             | 1.659     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 228.00                    | 1838.03           | 0.084 | 154.00              | 54.00                      | 0.1               | 0.1             | 2.137     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 217.00                    | 1751.08           | 0.271 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.818     | A   |

### Main results: (17:15-17:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 204.00                | 51.00                   | 22.00                     | 1979.01           | 0.103 | 204.00              | 669.00                     | 0.1               | 0.1             | 2.027     | A   |
| 2 - Site Access       | 69.00                 | 17.25                   | 213.00                    | 2237.64           | 0.031 | 69.00               | 13.00                      | 0.0               | 0.0             | 1.659     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 228.00                    | 1838.03           | 0.084 | 154.00              | 54.00                      | 0.1               | 0.1             | 2.137     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 217.00                    | 1751.08           | 0.271 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.818     | A   |

### Main results: (17:30-17:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 204.00                | 51.00                   | 22.00                     | 1979.01           | 0.103 | 204.00              | 669.00                     | 0.1               | 0.1             | 2.027     | A   |
| 2 - Site Access       | 69.00                 | 17.25                   | 213.00                    | 2237.64           | 0.031 | 69.00               | 13.00                      | 0.0               | 0.0             | 1.659     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 228.00                    | 1838.03           | 0.084 | 154.00              | 54.00                      | 0.1               | 0.1             | 2.137     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 217.00                    | 1751.08           | 0.271 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.818     | A   |

### Main results: (17:45-18:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 204.00                | 51.00                   | 22.00                     | 1979.01           | 0.103 | 204.00              | 669.00                     | 0.1               | 0.1             | 2.027     | A   |
| 2 - Site Access       | 69.00                 | 17.25                   | 213.00                    | 2237.64           | 0.031 | 69.00               | 13.00                      | 0.0               | 0.0             | 1.659     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 228.00                    | 1838.02           | 0.084 | 154.00              | 54.00                      | 0.1               | 0.1             | 2.137     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 217.00                    | 1751.08           | 0.271 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.818     | A   |

### Main results: (18:00-18:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 204.00                | 51.00                   | 22.00                     | 1979.01           | 0.103 | 204.00              | 669.00                     | 0.1               | 0.1             | 2.027     | A   |
| 2 - Site Access       | 69.00                 | 17.25                   | 213.00                    | 2237.64           | 0.031 | 69.00               | 13.00                      | 0.0               | 0.0             | 1.659     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 228.00                    | 1838.02           | 0.084 | 154.00              | 54.00                      | 0.1               | 0.1             | 2.137     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 217.00                    | 1751.08           | 0.271 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.818     | A   |

# (Default Analysis Set) - 2020 Base + Dev (B Block Proposals), AM

## Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

## Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

# Junction Network

## Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.50               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D5 | 2020 Base + Dev (B Block Proposals) | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 641.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 73.00               | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 52.00               | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 205.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 100.000         | 115.000               | 426.000              |
|      | 2 - Site Access       | 73.000                | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 48.000                | 0.000           | 0.000                 | 4.000                |
|      | 4 - Waterberry Drive  | 196.000               | 0.000           | 9.000                 | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.16            | 0.18                  | 0.66                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.92                  | 0.00            | 0.00                  | 0.08                 |
|      | 4 - Waterberry Drive  | 0.96                  | 0.00            | 0.04                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.32    | 2.67          | 0.5         | A       | 641.00              | 961.50                        |
| 2 - Site Access       | 0.04    | 1.89          | 0.0         | A       | 73.00               | 109.50                        |
| 3 - Elettra Av (west) | 0.03    | 2.26          | 0.0         | A       | 52.00               | 78.00                         |
| 4 - Waterberry Drive  | 0.11    | 2.23          | 0.1         | A       | 205.00              | 307.50                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 641.00                | 160.25                  | 8.98                      | 1988.17           | 0.322 | 639.11              | 316.24                     | 0.0               | 0.5             | 2.665     | A   |
| 2 - Site Access       | 73.00                 | 18.25                   | 548.38                    | 1977.81           | 0.037 | 72.85               | 99.70                      | 0.0               | 0.0             | 1.888     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 497.59                    | 1646.85           | 0.032 | 51.87               | 123.64                     | 0.0               | 0.0             | 2.256     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 120.73                    | 1818.40           | 0.113 | 204.49              | 428.73                     | 0.0               | 0.1             | 2.230     | A   |

### Main results: (08:15-08:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 641.00                | 160.25                  | 9.00                      | 1988.15           | 0.322 | 641.00              | 317.00                     | 0.5               | 0.5             | 2.671     | A   |
| 2 - Site Access       | 73.00                 | 18.25                   | 550.00                    | 1976.56           | 0.037 | 73.00               | 100.00                     | 0.0               | 0.0             | 1.890     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 499.00                    | 1645.85           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.258     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 121.00                    | 1818.21           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.231     | A   |

### Main results: (08:30-08:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 641.00                | 160.25                  | 9.00                      | 1988.15           | 0.322 | 641.00              | 317.00                     | 0.5               | 0.5             | 2.671     | A   |
| 2 - Site Access       | 73.00                 | 18.25                   | 550.00                    | 1976.56           | 0.037 | 73.00               | 100.00                     | 0.0               | 0.0             | 1.890     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 499.00                    | 1645.85           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.258     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 121.00                    | 1818.21           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.231     | A   |

### Main results: (08:45-09:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 641.00                | 160.25                  | 9.00                      | 1988.15           | 0.322 | 641.00              | 317.00                     | 0.5               | 0.5             | 2.671     | A   |
| 2 - Site Access       | 73.00                 | 18.25                   | 550.00                    | 1976.56           | 0.037 | 73.00               | 100.00                     | 0.0               | 0.0             | 1.890     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 499.00                    | 1645.85           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.258     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 121.00                    | 1818.21           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.231     | A   |

### Main results: (09:00-09:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 641.00                | 160.25                  | 9.00                      | 1988.15           | 0.322 | 641.00              | 317.00                     | 0.5               | 0.5             | 2.671     | A   |
| 2 - Site Access       | 73.00                 | 18.25                   | 550.00                    | 1976.56           | 0.037 | 73.00               | 100.00                     | 0.0               | 0.0             | 1.890     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 499.00                    | 1645.85           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.258     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 121.00                    | 1818.21           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.231     | A   |

### Main results: (09:15-09:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 641.00                | 160.25                  | 9.00                      | 1988.15           | 0.322 | 641.00              | 317.00                     | 0.5               | 0.5             | 2.671     | A   |
| 2 - Site Access       | 73.00                 | 18.25                   | 550.00                    | 1976.56           | 0.037 | 73.00               | 100.00                     | 0.0               | 0.0             | 1.890     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 499.00                    | 1645.85           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.258     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 121.00                    | 1818.21           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.231     | A   |

# (Default Analysis Set) - 2020 Base + Dev (B Block Proposals), PM

## Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

## Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

# Junction Network

## Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.44               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D6 | 2020 Base + Dev (B Block Proposals) | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 228.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 112.00              | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 154.00              | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 474.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 37.000          | 29.000                | 162.000              |
|      | 2 - Site Access       | 112.000               | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 151.000               | 0.000           | 0.000                 | 3.000                |
|      | 4 - Waterberry Drive  | 452.000               | 0.000           | 22.000                | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.16            | 0.13                  | 0.71                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.98                  | 0.00            | 0.00                  | 0.02                 |
|      | 4 - Waterberry Drive  | 0.95                  | 0.00            | 0.05                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.12    | 2.06          | 0.1         | A       | 228.00              | 342.00                        |
| 2 - Site Access       | 0.05    | 1.69          | 0.1         | A       | 112.00              | 168.00                        |
| 3 - Elettra Av (west) | 0.09    | 2.18          | 0.1         | A       | 154.00              | 231.00                        |
| 4 - Waterberry Drive  | 0.28    | 2.89          | 0.4         | A       | 474.00              | 711.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 228.00                | 57.00                   | 21.93                     | 1979.06           | 0.115 | 227.48              | 712.98                     | 0.0               | 0.1             | 2.055     | A   |
| 2 - Site Access       | 112.00                | 28.00                   | 212.49                    | 2238.03           | 0.050 | 111.79              | 36.92                      | 0.0               | 0.1             | 1.692     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 273.42                    | 1805.81           | 0.085 | 153.63              | 50.86                      | 0.0               | 0.1             | 2.179     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 262.43                    | 1719.32           | 0.276 | 472.48              | 164.62                     | 0.0               | 0.4             | 2.883     | A   |

### Main results: (17:00-17:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 228.00                | 57.00                   | 22.00                     | 1979.01           | 0.115 | 228.00              | 715.00                     | 0.1               | 0.1             | 2.055     | A   |
| 2 - Site Access       | 112.00                | 28.00                   | 213.00                    | 2237.64           | 0.050 | 112.00              | 37.00                      | 0.1               | 0.1             | 1.692     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 274.00                    | 1805.40           | 0.085 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.179     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 263.00                    | 1718.92           | 0.276 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.891     | A   |

### Main results: (17:15-17:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 228.00                | 57.00                   | 22.00                     | 1979.01           | 0.115 | 228.00              | 715.00                     | 0.1               | 0.1             | 2.055     | A   |
| 2 - Site Access       | 112.00                | 28.00                   | 213.00                    | 2237.64           | 0.050 | 112.00              | 37.00                      | 0.1               | 0.1             | 1.692     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 274.00                    | 1805.40           | 0.085 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.179     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 263.00                    | 1718.92           | 0.276 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.891     | A   |

### Main results: (17:30-17:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 228.00                | 57.00                   | 22.00                     | 1979.01           | 0.115 | 228.00              | 715.00                     | 0.1               | 0.1             | 2.055     | A   |
| 2 - Site Access       | 112.00                | 28.00                   | 213.00                    | 2237.64           | 0.050 | 112.00              | 37.00                      | 0.1               | 0.1             | 1.692     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 274.00                    | 1805.40           | 0.085 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.179     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 263.00                    | 1718.92           | 0.276 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.891     | A   |

### Main results: (17:45-18:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 228.00                | 57.00                   | 22.00                     | 1979.01           | 0.115 | 228.00              | 715.00                     | 0.1               | 0.1             | 2.055     | A   |
| 2 - Site Access       | 112.00                | 28.00                   | 213.00                    | 2237.64           | 0.050 | 112.00              | 37.00                      | 0.1               | 0.1             | 1.692     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 274.00                    | 1805.40           | 0.085 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.181     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 263.00                    | 1718.92           | 0.276 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.891     | A   |

### Main results: (18:00-18:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 228.00                | 57.00                   | 22.00                     | 1979.01           | 0.115 | 228.00              | 715.00                     | 0.1               | 0.1             | 2.055     | A   |
| 2 - Site Access       | 112.00                | 28.00                   | 213.00                    | 2237.64           | 0.050 | 112.00              | 37.00                      | 0.1               | 0.1             | 1.692     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 274.00                    | 1805.40           | 0.085 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.179     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 263.00                    | 1718.92           | 0.276 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.891     | A   |

## (Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), AM

### Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.44               | A            |

### Junction Network Options

[same as above]

## Arms

### Arms

[same as above]

### Capacity Options

[same as above]

### Roundabout Geometry

[same as above]

### Slope / Intercept / Capacity

[same as above]

## Traffic Demand

### Demand Set Details

| ID | Scenario name                        | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|--------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D7 | 2020 Base + Dev (B Block + East Dev) | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 598.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 71.00               | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 52.00               | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 205.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 57.000          | 115.000               | 426.000              |
|      | 2 - Site Access       | 71.000                | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 48.000                | 0.000           | 0.000                 | 4.000                |
|      | 4 - Waterberry Drive  | 196.000               | 0.000           | 9.000                 | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.10            | 0.19                  | 0.71                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.92                  | 0.00            | 0.00                  | 0.08                 |
|      | 4 - Waterberry Drive  | 0.96                  | 0.00            | 0.04                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.30    | 2.59          | 0.4         | A       | 598.00              | 897.00                        |
| 2 - Site Access       | 0.04    | 1.89          | 0.0         | A       | 71.00               | 106.50                        |
| 3 - Elettra Av (west) | 0.03    | 2.26          | 0.0         | A       | 52.00               | 78.00                         |
| 4 - Waterberry Drive  | 0.11    | 2.23          | 0.1         | A       | 205.00              | 307.50                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 598.00                | 149.50                  | 8.98                      | 1988.17           | 0.301 | 596.29              | 314.25                     | 0.0               | 0.4             | 2.583     | A   |
| 2 - Site Access       | 71.00                 | 17.75                   | 548.43                    | 1977.77           | 0.036 | 70.85               | 56.84                      | 0.0               | 0.0             | 1.887     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 495.63                    | 1648.23           | 0.032 | 51.87               | 123.65                     | 0.0               | 0.0             | 2.254     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 118.73                    | 1819.80           | 0.113 | 204.49              | 428.77                     | 0.0               | 0.1             | 2.229     | A   |

### Main results: (08:15-08:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 598.00                | 149.50                  | 9.00                      | 1988.15           | 0.301 | 598.00              | 315.00                     | 0.4               | 0.4             | 2.589     | A   |
| 2 - Site Access       | 71.00                 | 17.75                   | 550.00                    | 1976.56           | 0.036 | 71.00               | 57.00                      | 0.0               | 0.0             | 1.888     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 497.00                    | 1647.27           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.256     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 119.00                    | 1819.61           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.229     | A   |

### Main results: (08:30-08:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 598.00                | 149.50                  | 9.00                      | 1988.15           | 0.301 | 598.00              | 315.00                     | 0.4               | 0.4             | 2.589     | A   |
| 2 - Site Access       | 71.00                 | 17.75                   | 550.00                    | 1976.56           | 0.036 | 71.00               | 57.00                      | 0.0               | 0.0             | 1.888     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 497.00                    | 1647.26           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.256     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 119.00                    | 1819.61           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.229     | A   |

### Main results: (08:45-09:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 598.00                | 149.50                  | 9.00                      | 1988.15           | 0.301 | 598.00              | 315.00                     | 0.4               | 0.4             | 2.589     | A   |
| 2 - Site Access       | 71.00                 | 17.75                   | 550.00                    | 1976.56           | 0.036 | 71.00               | 57.00                      | 0.0               | 0.0             | 1.888     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 497.00                    | 1647.26           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.256     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 119.00                    | 1819.61           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.229     | A   |

### Main results: (09:00-09:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 598.00                | 149.50                  | 9.00                      | 1988.15           | 0.301 | 598.00              | 315.00                     | 0.4               | 0.4             | 2.589     | A   |
| 2 - Site Access       | 71.00                 | 17.75                   | 550.00                    | 1976.56           | 0.036 | 71.00               | 57.00                      | 0.0               | 0.0             | 1.888     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 497.00                    | 1647.26           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.256     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 119.00                    | 1819.61           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.229     | A   |

### Main results: (09:15-09:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 598.00                | 149.50                  | 9.00                      | 1988.15           | 0.301 | 598.00              | 315.00                     | 0.4               | 0.4             | 2.589     | A   |
| 2 - Site Access       | 71.00                 | 17.75                   | 550.00                    | 1976.56           | 0.036 | 71.00               | 57.00                      | 0.0               | 0.0             | 1.888     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 497.00                    | 1647.26           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.256     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 119.00                    | 1819.61           | 0.113 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.229     | A   |

# (Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), PM

## Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

## Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

# Junction Network

## Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.46               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                        | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|--------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D8 | 2020 Base + Dev (B Block + East Dev) | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 331.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 165.00              | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 154.00              | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 474.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 140.000         | 29.000                | 162.000              |
|      | 2 - Site Access       | 165.000               | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 151.000               | 0.000           | 0.000                 | 3.000                |
|      | 4 - Waterberry Drive  | 452.000               | 0.000           | 22.000                | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.42            | 0.09                  | 0.49                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.98                  | 0.00            | 0.00                  | 0.02                 |
|      | 4 - Waterberry Drive  | 0.95                  | 0.00            | 0.05                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.17    | 2.18          | 0.2         | A       | 331.00              | 496.50                        |
| 2 - Site Access       | 0.07    | 1.74          | 0.1         | A       | 165.00              | 247.50                        |
| 3 - Elettra Av (west) | 0.09    | 2.23          | 0.1         | A       | 154.00              | 231.00                        |
| 4 - Waterberry Drive  | 0.28    | 2.98          | 0.4         | A       | 474.00              | 711.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 331.00                | 82.75                   | 21.93                     | 1979.07           | 0.167 | 330.20              | 765.82                     | 0.0               | 0.2             | 2.182     | A   |
| 2 - Site Access       | 165.00                | 41.25                   | 212.47                    | 2238.06           | 0.074 | 164.68              | 139.66                     | 0.0               | 0.1             | 1.735     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 326.29                    | 1768.32           | 0.087 | 153.62              | 50.86                      | 0.0               | 0.1             | 2.229     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 315.31                    | 1682.34           | 0.282 | 472.44              | 164.60                     | 0.0               | 0.4             | 2.971     | A   |

### Main results: (17:00-17:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 331.00                | 82.75                   | 22.00                     | 1979.01           | 0.167 | 331.00              | 768.00                     | 0.2               | 0.2             | 2.184     | A   |
| 2 - Site Access       | 165.00                | 41.25                   | 213.00                    | 2237.64           | 0.074 | 165.00              | 140.00                     | 0.1               | 0.1             | 1.736     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 327.00                    | 1767.82           | 0.087 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.230     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 316.00                    | 1681.86           | 0.282 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.979     | A   |

### Main results: (17:15-17:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 331.00                | 82.75                   | 22.00                     | 1979.01           | 0.167 | 331.00              | 768.00                     | 0.2               | 0.2             | 2.184     | A   |
| 2 - Site Access       | 165.00                | 41.25                   | 213.00                    | 2237.64           | 0.074 | 165.00              | 140.00                     | 0.1               | 0.1             | 1.736     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 327.00                    | 1767.82           | 0.087 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.230     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 316.00                    | 1681.86           | 0.282 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.979     | A   |

### Main results: (17:30-17:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 331.00                | 82.75                   | 22.00                     | 1979.01           | 0.167 | 331.00              | 768.00                     | 0.2               | 0.2             | 2.184     | A   |
| 2 - Site Access       | 165.00                | 41.25                   | 213.00                    | 2237.64           | 0.074 | 165.00              | 140.00                     | 0.1               | 0.1             | 1.736     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 327.00                    | 1767.82           | 0.087 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.230     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 316.00                    | 1681.86           | 0.282 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.979     | A   |

### Main results: (17:45-18:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 331.00                | 82.75                   | 22.00                     | 1979.01           | 0.167 | 331.00              | 768.00                     | 0.2               | 0.2             | 2.184     | A   |
| 2 - Site Access       | 165.00                | 41.25                   | 213.00                    | 2237.64           | 0.074 | 165.00              | 140.00                     | 0.1               | 0.1             | 1.736     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 327.00                    | 1767.82           | 0.087 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.230     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 316.00                    | 1681.86           | 0.282 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.979     | A   |

### Main results: (18:00-18:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 331.00                | 82.75                   | 22.00                     | 1979.01           | 0.167 | 331.00              | 768.00                     | 0.2               | 0.2             | 2.184     | A   |
| 2 - Site Access       | 165.00                | 41.25                   | 213.00                    | 2237.64           | 0.074 | 165.00              | 140.00                     | 0.1               | 0.1             | 1.736     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 327.00                    | 1767.82           | 0.087 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.230     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 316.00                    | 1681.86           | 0.282 | 474.00              | 165.00                     | 0.4               | 0.4             | 2.979     | A   |

# (Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), AM

## Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

## Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

# Junction Network

## Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.60               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D9 | 2020 Base + Dev (B Block + East + West Dev) | AM               | FLAT                 | 08:00                    | 09:30                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 710.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 101.00              | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 52.00               | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 205.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 169.000         | 115.000               | 426.000              |
|      | 2 - Site Access       | 101.000               | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 48.000                | 0.000           | 0.000                 | 4.000                |
|      | 4 - Waterberry Drive  | 196.000               | 0.000           | 9.000                 | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.24            | 0.16                  | 0.60                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.92                  | 0.00            | 0.00                  | 0.08                 |
|      | 4 - Waterberry Drive  | 0.96                  | 0.00            | 0.04                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.36    | 2.82          | 0.6         | A       | 710.00              | 1065.00                       |
| 2 - Site Access       | 0.05    | 1.92          | 0.1         | A       | 101.00              | 151.50                        |
| 3 - Elettra Av (west) | 0.03    | 2.29          | 0.0         | A       | 52.00               | 78.00                         |
| 4 - Waterberry Drive  | 0.11    | 2.26          | 0.1         | A       | 205.00              | 307.50                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 710.00                | 177.50                  | 8.98                      | 1988.17           | 0.357 | 707.79              | 344.17                     | 0.0               | 0.6             | 2.807     | A   |
| 2 - Site Access       | 101.00                | 25.25                   | 548.29                    | 1977.88           | 0.051 | 100.79              | 168.47                     | 0.0               | 0.1             | 1.917     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 525.46                    | 1627.08           | 0.032 | 51.87               | 123.62                     | 0.0               | 0.0             | 2.285     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 148.66                    | 1798.87           | 0.114 | 204.49              | 428.66                     | 0.0               | 0.1             | 2.258     | A   |

### Main results: (08:15-08:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 710.00                | 177.50                  | 9.00                      | 1988.15           | 0.357 | 709.99              | 345.00                     | 0.6               | 0.6             | 2.815     | A   |
| 2 - Site Access       | 101.00                | 25.25                   | 550.00                    | 1976.56           | 0.051 | 101.00              | 169.00                     | 0.1               | 0.1             | 1.918     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 527.00                    | 1625.99           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.286     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 149.00                    | 1798.63           | 0.114 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.258     | A   |

### Main results: (08:30-08:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 710.00                | 177.50                  | 9.00                      | 1988.15           | 0.357 | 710.00              | 345.00                     | 0.6               | 0.6             | 2.815     | A   |
| 2 - Site Access       | 101.00                | 25.25                   | 550.00                    | 1976.56           | 0.051 | 101.00              | 169.00                     | 0.1               | 0.1             | 1.918     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 527.00                    | 1625.99           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.286     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 149.00                    | 1798.63           | 0.114 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.258     | A   |

### Main results: (08:45-09:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 710.00                | 177.50                  | 9.00                      | 1988.15           | 0.357 | 710.00              | 345.00                     | 0.6               | 0.6             | 2.815     | A   |
| 2 - Site Access       | 101.00                | 25.25                   | 550.00                    | 1976.56           | 0.051 | 101.00              | 169.00                     | 0.1               | 0.1             | 1.918     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 527.00                    | 1625.99           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.286     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 149.00                    | 1798.63           | 0.114 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.258     | A   |

### Main results: (09:00-09:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 710.00                | 177.50                  | 9.00                      | 1988.15           | 0.357 | 710.00              | 345.00                     | 0.6               | 0.6             | 2.815     | A   |
| 2 - Site Access       | 101.00                | 25.25                   | 550.00                    | 1976.56           | 0.051 | 101.00              | 169.00                     | 0.1               | 0.1             | 1.918     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 527.00                    | 1625.99           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.286     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 149.00                    | 1798.63           | 0.114 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.258     | A   |

### Main results: (09:15-09:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 710.00                | 177.50                  | 9.00                      | 1988.15           | 0.357 | 710.00              | 345.00                     | 0.6               | 0.6             | 2.815     | A   |
| 2 - Site Access       | 101.00                | 25.25                   | 550.00                    | 1976.56           | 0.051 | 101.00              | 169.00                     | 0.1               | 0.1             | 1.918     | A   |
| 3 - Elettra Av (west) | 52.00                 | 13.00                   | 527.00                    | 1625.99           | 0.032 | 52.00               | 124.00                     | 0.0               | 0.0             | 2.286     | A   |
| 4 - Waterberry Drive  | 205.00                | 51.25                   | 149.00                    | 1798.63           | 0.114 | 205.00              | 430.00                     | 0.1               | 0.1             | 2.258     | A   |

# (Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), PM

## Data Errors and Warnings

| Severity | Area     | Item                                           | Description                                                                                                      |
|----------|----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 1 - Elettra Av (east)<br>- Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

## Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

# Junction Network

## Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 2.50               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID  | Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|-----|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D10 | 2020 Base + Dev (B Block + East + West Dev) | PM               | FLAT                 | 16:45                    | 18:15                     | 90                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                   | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|-----------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Elettra Av (east) |            | FLAT         | ✓            | 348.00              | 100.000            |
| 2 - Site Access       |            | FLAT         | ✓            | 250.00              | 100.000            |
| 3 - Elettra Av (west) |            | FLAT         | ✓            | 154.00              | 100.000            |
| 4 - Waterberry Drive  |            | FLAT         | ✓            | 474.00              | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.000                 | 157.000         | 29.000                | 162.000              |
|      | 2 - Site Access       | 250.000               | 0.000           | 0.000                 | 0.000                |
|      | 3 - Elettra Av (west) | 151.000               | 0.000           | 0.000                 | 3.000                |
|      | 4 - Waterberry Drive  | 452.000               | 0.000           | 22.000                | 0.000                |

### Proportions

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0.00                  | 0.45            | 0.08                  | 0.47                 |
|      | 2 - Site Access       | 1.00                  | 0.00            | 0.00                  | 0.00                 |
|      | 3 - Elettra Av (west) | 0.98                  | 0.00            | 0.00                  | 0.02                 |
|      | 4 - Waterberry Drive  | 0.95                  | 0.00            | 0.05                  | 0.00                 |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 0                     | 0               | 0                     | 0                    |
|      | 2 - Site Access       | 0                     | 0               | 0                     | 0                    |
|      | 3 - Elettra Av (west) | 0                     | 0               | 0                     | 0                    |
|      | 4 - Waterberry Drive  | 0                     | 0               | 0                     | 0                    |

### Av. PCU Per Veh

|      | To                    |                       |                 |                       |                      |
|------|-----------------------|-----------------------|-----------------|-----------------------|----------------------|
|      |                       | 1 - Elettra Av (east) | 2 - Site Access | 3 - Elettra Av (west) | 4 - Waterberry Drive |
| From | 1 - Elettra Av (east) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 2 - Site Access       | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 3 - Elettra Av (west) | 1.000                 | 1.000           | 1.000                 | 1.000                |
|      | 4 - Waterberry Drive  | 1.000                 | 1.000           | 1.000                 | 1.000                |

# Results

## Results Summary for whole modelled period

| Arm                   | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Elettra Av (east) | 0.18    | 2.21          | 0.2         | A       | 348.00              | 522.00                        |
| 2 - Site Access       | 0.11    | 1.81          | 0.1         | A       | 250.00              | 375.00                        |
| 3 - Elettra Av (west) | 0.09    | 2.32          | 0.1         | A       | 154.00              | 231.00                        |
| 4 - Waterberry Drive  | 0.29    | 3.13          | 0.4         | A       | 474.00              | 711.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 348.00                | 87.00                   | 21.92                     | 1979.07           | 0.176 | 347.15              | 850.54                     | 0.0               | 0.2             | 2.205     | A   |
| 2 - Site Access       | 250.00                | 62.50                   | 212.46                    | 2238.06           | 0.112 | 249.50              | 156.62                     | 0.0               | 0.1             | 1.809     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 411.10                    | 1708.18           | 0.090 | 153.60              | 50.85                      | 0.0               | 0.1             | 2.315     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 400.11                    | 1623.05           | 0.292 | 472.36              | 164.60                     | 0.0               | 0.4             | 3.124     | A   |

### Main results: (17:00-17:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 348.00                | 87.00                   | 22.00                     | 1979.01           | 0.176 | 348.00              | 852.99                     | 0.2               | 0.2             | 2.206     | A   |
| 2 - Site Access       | 250.00                | 62.50                   | 213.00                    | 2237.64           | 0.112 | 250.00              | 157.00                     | 0.1               | 0.1             | 1.810     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 412.00                    | 1707.54           | 0.090 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.316     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 401.00                    | 1622.43           | 0.292 | 474.00              | 165.00                     | 0.4               | 0.4             | 3.133     | A   |

### Main results: (17:15-17:30)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 348.00                | 87.00                   | 22.00                     | 1979.01           | 0.176 | 348.00              | 853.00                     | 0.2               | 0.2             | 2.206     | A   |
| 2 - Site Access       | 250.00                | 62.50                   | 213.00                    | 2237.64           | 0.112 | 250.00              | 157.00                     | 0.1               | 0.1             | 1.810     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 412.00                    | 1707.54           | 0.090 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.316     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 401.00                    | 1622.43           | 0.292 | 474.00              | 165.00                     | 0.4               | 0.4             | 3.133     | A   |

### Main results: (17:30-17:45)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 348.00                | 87.00                   | 22.00                     | 1979.01           | 0.176 | 348.00              | 853.00                     | 0.2               | 0.2             | 2.206     | A   |
| 2 - Site Access       | 250.00                | 62.50                   | 213.00                    | 2237.64           | 0.112 | 250.00              | 157.00                     | 0.1               | 0.1             | 1.810     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 412.00                    | 1707.54           | 0.090 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.316     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 401.00                    | 1622.43           | 0.292 | 474.00              | 165.00                     | 0.4               | 0.4             | 3.133     | A   |

### Main results: (17:45-18:00)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 348.00                | 87.00                   | 22.00                     | 1979.01           | 0.176 | 348.00              | 853.00                     | 0.2               | 0.2             | 2.206     | A   |
| 2 - Site Access       | 250.00                | 62.50                   | 213.00                    | 2237.64           | 0.112 | 250.00              | 157.00                     | 0.1               | 0.1             | 1.810     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 412.00                    | 1707.54           | 0.090 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.316     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 401.00                    | 1622.43           | 0.292 | 474.00              | 165.00                     | 0.4               | 0.4             | 3.134     | A   |

### Main results: (18:00-18:15)

| Arm                   | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Elettra Av (east) | 348.00                | 87.00                   | 22.00                     | 1979.01           | 0.176 | 348.00              | 853.00                     | 0.2               | 0.2             | 2.206     | A   |
| 2 - Site Access       | 250.00                | 62.50                   | 213.00                    | 2237.64           | 0.112 | 250.00              | 157.00                     | 0.1               | 0.1             | 1.810     | A   |
| 3 - Elettra Av (west) | 154.00                | 38.50                   | 412.00                    | 1707.54           | 0.090 | 154.00              | 51.00                      | 0.1               | 0.1             | 2.316     | A   |
| 4 - Waterberry Drive  | 474.00                | 118.50                  | 401.00                    | 1622.43           | 0.292 | 474.00              | 165.00                     | 0.4               | 0.4             | 3.134     | A   |

## **Appendix G**

| Junctions 9                                                                                                                                                                 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| ARCADY 9 - Roundabout Module                                                                                                                                                |  |  |  |  |
| Version: 9.0.0.4211 []                                                                                                                                                      |  |  |  |  |
| © Copyright TRL Limited, 2015                                                                                                                                               |  |  |  |  |
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Filename: Hambledon Road\_Milton Road\_Elettra Av\_AM Peak.j9

Path: P:\17000's\17144\Technical\Junction Modelling\B Block

Report generation date: 17/06/2015 11:19:44

- »(Default Analysis Set) - 2015 Base, AM
- »(Default Analysis Set) - 2020 Base, AM
- »(Default Analysis Set) - 2020 Base + Dev (B Block Proposals), AM
- »(Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), AM
- »(Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), AM

## Summary of junction performance

|                                                  | AM      |           |      |     |
|--------------------------------------------------|---------|-----------|------|-----|
|                                                  | Q (PCU) | Delay (s) | RFC  | LOS |
| A1 - 2015 Base                                   |         |           |      |     |
| 1 - Milton road                                  | 1.8     | 10.52     | 0.65 | B   |
| 2 - Hambledon Road (south)                       | 0.7     | 2.03      | 0.40 | A   |
| 3 - Elettra Avenue                               | 0.3     | 3.10      | 0.20 | A   |
| 4 - Hambledon Road (north)                       | 1.1     | 4.34      | 0.52 | A   |
| A1 - 2020 Base                                   |         |           |      |     |
| 1 - Milton road                                  | 2.7     | 14.08     | 0.73 | B   |
| 2 - Hambledon Road (south)                       | 0.7     | 2.07      | 0.41 | A   |
| 3 - Elettra Avenue                               | 0.3     | 3.16      | 0.21 | A   |
| 4 - Hambledon Road (north)                       | 1.2     | 4.64      | 0.55 | A   |
| A1 - 2020 Base + Dev (B Block Proposals)         |         |           |      |     |
| 1 - Milton road                                  | 2.9     | 15.20     | 0.75 | C   |
| 2 - Hambledon Road (south)                       | 0.7     | 2.09      | 0.41 | A   |
| 3 - Elettra Avenue                               | 0.3     | 3.21      | 0.22 | A   |
| 4 - Hambledon Road (north)                       | 1.2     | 4.71      | 0.56 | A   |
| A1 - 2020 Base + Dev (B Block + East Dev)        |         |           |      |     |
| 1 - Milton road                                  | 3.1     | 15.71     | 0.76 | C   |
| 2 - Hambledon Road (south)                       | 0.7     | 2.05      | 0.40 | A   |
| 3 - Elettra Avenue                               | 0.3     | 3.22      | 0.22 | A   |
| 4 - Hambledon Road (north)                       | 1.3     | 4.72      | 0.56 | A   |
| A1 - 2020 Base + Dev (B Block + East + West Dev) |         |           |      |     |
| 1 - Milton road                                  | 3.9     | 18.84     | 0.80 | C   |
| 2 - Hambledon Road (south)                       | 0.7     | 2.19      | 0.42 | A   |
| 3 - Elettra Avenue                               | 0.3     | 3.19      | 0.21 | A   |
| 4 - Hambledon Road (north)                       | 1.3     | 4.78      | 0.57 | A   |

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle.

## File summary

### File Description

|                    |                                             |
|--------------------|---------------------------------------------|
| <b>Title</b>       | Hambledon Road/ Milton Road/ Elettra Avenue |
| <b>Location</b>    | Waterlooville                               |
| <b>Site number</b> |                                             |
| <b>Date</b>        | 07/05/2015                                  |
| <b>Version</b>     |                                             |
| <b>Status</b>      | (new file)                                  |
| <b>Identifier</b>  |                                             |
| <b>Client</b>      |                                             |
| <b>Jobnumber</b>   | 17144                                       |
| <b>Enumerator</b>  | DTA"arcady                                  |
| <b>Description</b> |                                             |

## Units

| Distance units | Speed units | Traffic units input | Traffic units results | Flow units | Av. delay units | Total delay units | Rate of delay units |
|----------------|-------------|---------------------|-----------------------|------------|-----------------|-------------------|---------------------|
| m              | kph         | PCU                 | PCU                   | perHour    | s               | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Q Percentiles | Calculate detailed queueing delay | Calculate residual capacity | RFC Threshold | Av. Delay threshold (s) | Q threshold (PCU) |
|--------------------|-------------------------|-----------------------------------|-----------------------------|---------------|-------------------------|-------------------|
| 5.75               |                         |                                   |                             | 0.85          | 36.00                   | 20.00             |

## Demand Set Summary

| Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| 2015 Base                                   | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |
| 2020 Base                                   | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block Proposals)         | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East Dev)        | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East + West Dev) | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |

## (Default Analysis Set) - 2015 Base, AM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 4.62               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Arms

### Arms

| Arm | Name                   | Description |
|-----|------------------------|-------------|
| 1   | Milton road            |             |
| 2   | Hambledon Road (south) |             |
| 3   | Elettra Avenue         |             |
| 4   | Hambledon Road (north) |             |

### Capacity Options

| Arm                        | Min Cap (PCU/hr) | Max Cap (PCU/hr) | Assume flat start profile | Initial queue (PCU) |
|----------------------------|------------------|------------------|---------------------------|---------------------|
| 1 - Milton road            | 0.00             | 99999.00         |                           | 0.00                |
| 2 - Hambledon Road (south) | 0.00             | 99999.00         |                           | 0.00                |
| 3 - Elettra Avenue         | 0.00             | 99999.00         |                           | 0.00                |
| 4 - Hambledon Road (north) | 0.00             | 99999.00         |                           | 0.00                |

## Roundabout Geometry

| Arm                        | V (m) | E (m) | I' (m) | R (m) | D (m) | PHI (deg) | Exit only |
|----------------------------|-------|-------|--------|-------|-------|-----------|-----------|
| 1 - Milton road            | 3.40  | 4.20  | 24.9   | 21.0  | 54.0  | 22.5      |           |
| 2 - Hambledon Road (south) | 7.20  | 8.20  | 55.8   | 54.6  | 54.0  | 25.0      |           |
| 3 - Elettra Avenue         | 3.30  | 7.70  | 127.6  | 6.0   | 54.0  | 22.0      |           |
| 4 - Hambledon Road (north) | 3.60  | 7.70  | 127.6  | 6.0   | 54.0  | 22.0      |           |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm                        | Final slope | Final intercept (PCU/hr) |
|----------------------------|-------------|--------------------------|
| 1 - Milton road            | 0.521       | 1285.444                 |
| 2 - Hambledon Road (south) | 0.766       | 2587.472                 |
| 3 - Elettra Avenue         | 0.622       | 2010.608                 |
| 4 - Hambledon Road (north) | 0.625       | 2025.835                 |

The slope and intercept shown above include any corrections and adjustments.

### Arm Capacity Adjustments

| Arm                        | Type       | Reason | Percentage capacity adjustment (%) |
|----------------------------|------------|--------|------------------------------------|
| 1 - Milton road            | Percentage |        | 135.00                             |
| 2 - Hambledon Road (south) | Percentage |        | 125.00                             |

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D1 | 2015 Base     | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 636.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1182.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 299.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 906.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 447.000                    | 103.000            | 86.000                     |
|      | 2 - Hambledon Road (south) | 214.000         | 27.000                     | 386.000            | 555.000                    |
|      | 3 - Elettra Avenue         | 49.000          | 175.000                    | 0.000              | 75.000                     |
|      | 4 - Hambledon Road (north) | 32.000          | 768.000                    | 106.000            | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.70                       | 0.16               | 0.14                       |
|      | 2 - Hambledon Road (south) | 0.18            | 0.02                       | 0.33               | 0.47                       |
|      | 3 - Elettra Avenue         | 0.16            | 0.59                       | 0.00               | 0.25                       |
|      | 4 - Hambledon Road (north) | 0.04            | 0.85                       | 0.12               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.65    | 10.52         | 1.8         | B       | 636.00              | 636.00                        |
| 2 - Hambledon Road (south) | 0.40    | 2.03          | 0.7         | A       | 1182.00             | 1182.00                       |
| 3 - Elettra Avenue         | 0.20    | 3.10          | 0.3         | A       | 299.00              | 299.00                        |
| 4 - Hambledon Road (north) | 0.52    | 4.34          | 1.1         | A       | 906.00              | 906.00                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 636.00                | 159.00                  | 1071.17                   | 981.41            | 0.648 | 628.86              | 294.20                     | 0.0               | 1.8             | 10.020    | B   |
| 2 - Hambledon Road (south) | 1182.00               | 295.50                  | 292.37                    | 2954.51           | 0.400 | 1179.34             | 1407.66                    | 0.0               | 0.7             | 2.025     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 879.25                    | 1463.29           | 0.204 | 297.98              | 592.47                     | 0.0               | 0.3             | 3.086     | A   |
| 4 - Hambledon Road (north) | 906.00                | 226.50                  | 463.69                    | 1735.90           | 0.522 | 901.68              | 713.53                     | 0.0               | 1.1             | 4.293     | A   |

### Main results: (08:15-08:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 636.00                | 159.00                  | 1075.97                   | 978.03            | 0.650 | 635.83              | 295.00                     | 1.8               | 1.8             | 10.508    | B   |
| 2 - Hambledon Road (south) | 1182.00               | 295.50                  | 294.95                    | 2952.05           | 0.400 | 1181.99             | 1416.86                    | 0.7               | 0.7             | 2.033     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 881.97                    | 1461.60           | 0.205 | 299.00              | 594.97                     | 0.3               | 0.3             | 3.095     | A   |
| 4 - Hambledon Road (north) | 906.00                | 226.50                  | 465.00                    | 1735.09           | 0.522 | 905.98              | 715.97                     | 1.1               | 1.1             | 4.341     | A   |

### Main results: (08:30-08:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 636.00                | 159.00                  | 1075.99                   | 978.01            | 0.650 | 635.95              | 295.00                     | 1.8               | 1.8             | 10.519    | B   |
| 2 - Hambledon Road (south) | 1182.00               | 295.50                  | 294.98                    | 2952.01           | 0.400 | 1182.00             | 1416.96                    | 0.7               | 0.7             | 2.033     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 881.99                    | 1461.59           | 0.205 | 299.00              | 594.99                     | 0.3               | 0.3             | 3.095     | A   |
| 4 - Hambledon Road (north) | 906.00                | 226.50                  | 465.00                    | 1735.09           | 0.522 | 905.99              | 715.99                     | 1.1               | 1.1             | 4.341     | A   |

### Main results: (08:45-09:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 636.00                | 159.00                  | 1076.00                   | 978.01            | 0.650 | 635.98              | 295.00                     | 1.8               | 1.8             | 10.521    | B   |
| 2 - Hambledon Road (south) | 1182.00               | 295.50                  | 294.99                    | 2952.01           | 0.400 | 1182.00             | 1416.98                    | 0.7               | 0.7             | 2.033     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 882.00                    | 1461.58           | 0.205 | 299.00              | 595.00                     | 0.3               | 0.3             | 3.095     | A   |
| 4 - Hambledon Road (north) | 906.00                | 226.50                  | 465.00                    | 1735.08           | 0.522 | 906.00              | 716.00                     | 1.1               | 1.1             | 4.341     | A   |

## (Default Analysis Set) - 2020 Base, AM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 5.60               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D3 | 2020 Base     | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 696.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1206.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 299.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 952.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 495.000                    | 103.000            | 98.000                     |
|      | 2 - Hambledon Road (south) | 225.000         | 27.000                     | 386.000            | 568.000                    |
|      | 3 - Elettra Avenue         | 49.000          | 175.000                    | 0.000              | 75.000                     |
|      | 4 - Hambledon Road (north) | 40.000          | 806.000                    | 106.000            | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.71                       | 0.15               | 0.14                       |
|      | 2 - Hambledon Road (south) | 0.19            | 0.02                       | 0.32               | 0.47                       |
|      | 3 - Elettra Avenue         | 0.16            | 0.59                       | 0.00               | 0.25                       |
|      | 4 - Hambledon Road (north) | 0.04            | 0.85                       | 0.11               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.73    | 14.08         | 2.7         | B       | 696.00              | 696.00                        |
| 2 - Hambledon Road (south) | 0.41    | 2.07          | 0.7         | A       | 1206.00             | 1206.00                       |
| 3 - Elettra Avenue         | 0.21    | 3.16          | 0.3         | A       | 299.00              | 299.00                        |
| 4 - Hambledon Road (north) | 0.55    | 4.64          | 1.2         | A       | 952.00              | 952.00                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 696.00                | 174.00                  | 1108.69                   | 955.00            | 0.729 | 685.81              | 313.11                     | 0.0               | 2.5             | 12.929    | B   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 303.52                    | 2943.85           | 0.410 | 1203.23             | 1490.98                    | 0.0               | 0.7             | 2.064     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 914.69                    | 1441.23           | 0.207 | 297.96              | 592.07                     | 0.0               | 0.3             | 3.146     | A   |
| 4 - Hambledon Road (north) | 952.00                | 238.00                  | 474.64                    | 1729.06           | 0.551 | 947.15              | 738.00                     | 0.0               | 1.2             | 4.576     | A   |

### Main results: (08:15-08:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 696.00                | 174.00                  | 1113.97                   | 951.28            | 0.732 | 695.62              | 314.00                     | 2.5               | 2.6             | 14.032    | B   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 306.89                    | 2940.62           | 0.410 | 1205.99             | 1502.70                    | 0.7               | 0.7             | 2.075     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 917.94                    | 1439.21           | 0.208 | 299.00              | 594.94                     | 0.3               | 0.3             | 3.156     | A   |
| 4 - Hambledon Road (north) | 952.00                | 238.00                  | 476.00                    | 1728.21           | 0.551 | 951.97              | 740.94                     | 1.2               | 1.2             | 4.637     | A   |

### Main results: (08:30-08:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 696.00                | 174.00                  | 1113.99                   | 951.27            | 0.732 | 695.88              | 314.00                     | 2.6               | 2.7             | 14.068    | B   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 306.97                    | 2940.55           | 0.410 | 1206.00             | 1502.91                    | 0.7               | 0.7             | 2.075     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 917.98                    | 1439.18           | 0.208 | 299.00              | 594.98                     | 0.3               | 0.3             | 3.156     | A   |
| 4 - Hambledon Road (north) | 952.00                | 238.00                  | 476.00                    | 1728.21           | 0.551 | 951.99              | 740.98                     | 1.2               | 1.2             | 4.637     | A   |

### Main results: (08:45-09:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 696.00                | 174.00                  | 1114.00                   | 951.26            | 0.732 | 695.94              | 314.00                     | 2.7               | 2.7             | 14.082    | B   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 306.98                    | 2940.53           | 0.410 | 1206.00             | 1502.96                    | 0.7               | 0.7             | 2.075     | A   |
| 3 - Elettra Avenue         | 299.00                | 74.75                   | 917.99                    | 1439.18           | 0.208 | 299.00              | 594.99                     | 0.3               | 0.3             | 3.156     | A   |
| 4 - Hambledon Road (north) | 952.00                | 238.00                  | 476.00                    | 1728.21           | 0.551 | 952.00              | 740.99                     | 1.2               | 1.2             | 4.637     | A   |

## (Default Analysis Set) - 2020 Base + Dev (B Block Proposals), AM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 5.89               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D5 | 2020 Base + Dev (B Block Proposals) | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 705.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1206.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 317.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 957.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 495.000                    | 112.000            | 98.000                     |
|      | 2 - Hambledon Road (south) | 225.000         | 27.000                     | 386.000            | 568.000                    |
|      | 3 - Elettra Avenue         | 52.000          | 184.000                    | 0.000              | 81.000                     |
|      | 4 - Hambledon Road (north) | 40.000          | 806.000                    | 111.000            | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.70                       | 0.16               | 0.14                       |
|      | 2 - Hambledon Road (south) | 0.19            | 0.02                       | 0.32               | 0.47                       |
|      | 3 - Elettra Avenue         | 0.16            | 0.58                       | 0.00               | 0.26                       |
|      | 4 - Hambledon Road (north) | 0.04            | 0.84                       | 0.12               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.75    | 15.20         | 2.9         | C       | 705.00              | 705.00                        |
| 2 - Hambledon Road (south) | 0.41    | 2.09          | 0.7         | A       | 1206.00             | 1206.00                       |
| 3 - Elettra Avenue         | 0.22    | 3.21          | 0.3         | A       | 317.00              | 317.00                        |
| 4 - Hambledon Road (north) | 0.56    | 4.71          | 1.2         | A       | 957.00              | 957.00                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 705.00                | 176.25                  | 1122.54                   | 945.25            | 0.746 | 693.95              | 316.09                     | 0.0               | 2.8             | 13.783    | B   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 317.14                    | 2930.81           | 0.411 | 1203.21             | 1499.36                    | 0.0               | 0.7             | 2.080     | A   |
| 3 - Elettra Avenue         | 317.00                | 79.25                   | 914.57                    | 1441.31           | 0.220 | 315.88              | 605.78                     | 0.0               | 0.3             | 3.196     | A   |
| 4 - Hambledon Road (north) | 957.00                | 239.25                  | 486.58                    | 1721.59           | 0.556 | 952.05              | 743.87                     | 0.0               | 1.2             | 4.649     | A   |

### Main results: (08:15-08:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 705.00                | 176.25                  | 1127.97                   | 941.43            | 0.749 | 704.54              | 317.00                     | 2.8               | 2.9             | 15.127    | C   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 320.86                    | 2927.25           | 0.412 | 1205.99             | 1511.65                    | 0.7               | 0.7             | 2.091     | A   |
| 3 - Elettra Avenue         | 317.00                | 79.25                   | 917.93                    | 1439.22           | 0.220 | 317.00              | 608.92                     | 0.3               | 0.3             | 3.207     | A   |
| 4 - Hambledon Road (north) | 957.00                | 239.25                  | 487.99                    | 1720.71           | 0.556 | 956.97              | 746.93                     | 1.2               | 1.2             | 4.713     | A   |

### Main results: (08:30-08:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 705.00                | 176.25                  | 1127.99                   | 941.41            | 0.749 | 704.86              | 317.00                     | 2.9               | 2.9             | 15.156    | C   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 320.96                    | 2927.16           | 0.412 | 1206.00             | 1511.89                    | 0.7               | 0.7             | 2.091     | A   |
| 3 - Elettra Avenue         | 317.00                | 79.25                   | 917.98                    | 1439.18           | 0.220 | 317.00              | 608.97                     | 0.3               | 0.3             | 3.207     | A   |
| 4 - Hambledon Road (north) | 957.00                | 239.25                  | 488.00                    | 1720.70           | 0.556 | 956.99              | 746.98                     | 1.2               | 1.2             | 4.713     | A   |

### Main results: (08:45-09:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 705.00                | 176.25                  | 1127.99                   | 941.41            | 0.749 | 704.93              | 317.00                     | 2.9               | 2.9             | 15.197    | C   |
| 2 - Hambledon Road (south) | 1206.00               | 301.50                  | 320.98                    | 2927.14           | 0.412 | 1206.00             | 1511.95                    | 0.7               | 0.7             | 2.091     | A   |
| 3 - Elettra Avenue         | 317.00                | 79.25                   | 917.99                    | 1439.18           | 0.220 | 317.00              | 608.99                     | 0.3               | 0.3             | 3.207     | A   |
| 4 - Hambledon Road (north) | 957.00                | 239.25                  | 488.00                    | 1720.70           | 0.556 | 956.99              | 746.99                     | 1.2               | 1.2             | 4.713     | A   |

## (Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), AM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 6.10               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                        | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|--------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D7 | 2020 Base + Dev (B Block + East Dev) | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 717.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1152.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 314.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 965.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 495.000                    | 124.000            | 98.000                     |
|      | 2 - Hambledon Road (south) | 227.000         | 32.000                     | 322.000            | 571.000                    |
|      | 3 - Elettra Avenue         | 54.000          | 165.000                    | 0.000              | 95.000                     |
|      | 4 - Hambledon Road (north) | 40.000          | 806.000                    | 119.000            | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.69                       | 0.17               | 0.14                       |
|      | 2 - Hambledon Road (south) | 0.20            | 0.03                       | 0.28               | 0.50                       |
|      | 3 - Elettra Avenue         | 0.17            | 0.53                       | 0.00               | 0.30                       |
|      | 4 - Hambledon Road (north) | 0.04            | 0.84                       | 0.12               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.76    | 15.71         | 3.1         | C       | 717.00              | 717.00                        |
| 2 - Hambledon Road (south) | 0.40    | 2.05          | 0.7         | A       | 1152.00             | 1152.00                       |
| 3 - Elettra Avenue         | 0.22    | 3.22          | 0.3         | A       | 314.00              | 314.00                        |
| 4 - Hambledon Road (north) | 0.56    | 4.72          | 1.3         | A       | 965.00              | 965.00                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 717.00                | 179.25                  | 1116.55                   | 949.47            | 0.755 | 705.44              | 320.09                     | 0.0               | 2.9             | 14.154    | B   |
| 2 - Hambledon Road (south) | 1152.00               | 288.00                  | 336.80                    | 2911.99           | 0.396 | 1149.39             | 1485.18                    | 0.0               | 0.7             | 2.040     | A   |
| 3 - Elettra Avenue         | 314.00                | 78.50                   | 924.54                    | 1435.10           | 0.219 | 312.88              | 561.65                     | 0.0               | 0.3             | 3.205     | A   |
| 4 - Hambledon Road (north) | 965.00                | 241.25                  | 476.64                    | 1727.81           | 0.559 | 960.00              | 760.79                     | 0.0               | 1.3             | 4.659     | A   |

### Main results: (08:15-08:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 717.00                | 179.25                  | 1121.97                   | 945.65            | 0.758 | 716.49              | 321.00                     | 2.9               | 3.0             | 15.627    | C   |
| 2 - Hambledon Road (south) | 1152.00               | 288.00                  | 340.84                    | 2908.13           | 0.396 | 1151.99             | 1497.62                    | 0.7               | 0.7             | 2.049     | A   |
| 3 - Elettra Avenue         | 314.00                | 78.50                   | 927.92                    | 1432.99           | 0.219 | 314.00              | 564.91                     | 0.3               | 0.3             | 3.216     | A   |
| 4 - Hambledon Road (north) | 965.00                | 241.25                  | 477.99                    | 1726.96           | 0.559 | 964.97              | 763.92                     | 1.3               | 1.3             | 4.724     | A   |

### Main results: (08:30-08:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 717.00                | 179.25                  | 1121.99                   | 945.64            | 0.758 | 716.84              | 321.00                     | 3.0               | 3.1             | 15.689    | C   |
| 2 - Hambledon Road (south) | 1152.00               | 288.00                  | 340.95                    | 2908.02           | 0.396 | 1152.00             | 1497.88                    | 0.7               | 0.7             | 2.049     | A   |
| 3 - Elettra Avenue         | 314.00                | 78.50                   | 927.98                    | 1432.96           | 0.219 | 314.00              | 564.97                     | 0.3               | 0.3             | 3.216     | A   |
| 4 - Hambledon Road (north) | 965.00                | 241.25                  | 478.00                    | 1726.96           | 0.559 | 964.99              | 763.98                     | 1.3               | 1.3             | 4.724     | A   |

### Main results: (08:45-09:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 717.00                | 179.25                  | 1121.99                   | 945.63            | 0.758 | 716.92              | 321.00                     | 3.1               | 3.1             | 15.708    | C   |
| 2 - Hambledon Road (south) | 1152.00               | 288.00                  | 340.97                    | 2908.00           | 0.396 | 1152.00             | 1497.94                    | 0.7               | 0.7             | 2.049     | A   |
| 3 - Elettra Avenue         | 314.00                | 78.50                   | 927.99                    | 1432.95           | 0.219 | 314.00              | 564.99                     | 0.3               | 0.3             | 3.216     | A   |
| 4 - Hambledon Road (north) | 965.00                | 241.25                  | 478.00                    | 1726.96           | 0.559 | 964.99              | 763.99                     | 1.3               | 1.3             | 4.724     | A   |

## (Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), AM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 6.93               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D9 | 2020 Base + Dev (B Block + East + West Dev) | AM               | FLAT                 | 08:00                    | 09:00                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 754.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1207.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 306.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 985.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 495.000                    | 161.000            | 98.000                     |
|      | 2 - Hambledon Road (south) | 227.000         | 32.000                     | 377.000            | 571.000                    |
|      | 3 - Elettra Avenue         | 54.000          | 147.000                    | 0.000              | 105.000                    |
|      | 4 - Hambledon Road (north) | 40.000          | 806.000                    | 139.000            | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.66                       | 0.21               | 0.13                       |
|      | 2 - Hambledon Road (south) | 0.19            | 0.03                       | 0.31               | 0.47                       |
|      | 3 - Elettra Avenue         | 0.18            | 0.48                       | 0.00               | 0.34                       |
|      | 4 - Hambledon Road (north) | 0.04            | 0.82                       | 0.14               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.80    | 18.84         | 3.9         | C       | 754.00              | 754.00                        |
| 2 - Hambledon Road (south) | 0.42    | 2.19          | 0.7         | A       | 1207.00             | 1207.00                       |
| 3 - Elettra Avenue         | 0.21    | 3.19          | 0.3         | A       | 306.00              | 306.00                        |
| 4 - Hambledon Road (north) | 0.57    | 4.78          | 1.3         | A       | 985.00              | 985.00                        |

## Main Results for each time segment

### Main results: (08:00-08:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 754.00                | 188.50                  | 1118.45                   | 948.13            | 0.795 | 739.80              | 320.05                     | 0.0               | 3.6             | 16.325    | C   |
| 2 - Hambledon Road (south) | 1207.00               | 301.75                  | 392.39                    | 2858.79           | 0.422 | 1204.09             | 1465.86                    | 0.0               | 0.7             | 2.172     | A   |
| 3 - Elettra Avenue         | 306.00                | 76.50                   | 924.15                    | 1435.34           | 0.213 | 304.92              | 672.33                     | 0.0               | 0.3             | 3.181     | A   |
| 4 - Hambledon Road (north) | 985.00                | 246.25                  | 458.67                    | 1739.04           | 0.566 | 979.84              | 770.41                     | 0.0               | 1.3             | 4.710     | A   |

### Main results: (08:15-08:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 754.00                | 188.50                  | 1123.96                   | 944.25            | 0.799 | 753.18              | 321.00                     | 3.6               | 3.8             | 18.654    | C   |
| 2 - Hambledon Road (south) | 1207.00               | 301.75                  | 397.71                    | 2853.70           | 0.423 | 1206.99             | 1479.43                    | 0.7               | 0.7             | 2.185     | A   |
| 3 - Elettra Avenue         | 306.00                | 76.50                   | 927.88                    | 1433.02           | 0.214 | 306.00              | 676.81                     | 0.3               | 0.3             | 3.193     | A   |
| 4 - Hambledon Road (north) | 985.00                | 246.25                  | 459.99                    | 1738.21           | 0.567 | 984.96              | 773.89                     | 1.3               | 1.3             | 4.779     | A   |

### Main results: (08:30-08:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 754.00                | 188.50                  | 1123.99                   | 944.23            | 0.799 | 753.73              | 321.00                     | 3.8               | 3.8             | 18.789    | C   |
| 2 - Hambledon Road (south) | 1207.00               | 301.75                  | 397.90                    | 2853.51           | 0.423 | 1207.00             | 1479.81                    | 0.7               | 0.7             | 2.186     | A   |
| 3 - Elettra Avenue         | 306.00                | 76.50                   | 927.96                    | 1432.97           | 0.214 | 306.00              | 676.94                     | 0.3               | 0.3             | 3.193     | A   |
| 4 - Hambledon Road (north) | 985.00                | 246.25                  | 460.00                    | 1738.21           | 0.567 | 984.99              | 773.96                     | 1.3               | 1.3             | 4.779     | A   |

### Main results: (08:45-09:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 754.00                | 188.50                  | 1123.99                   | 944.23            | 0.799 | 753.86              | 321.00                     | 3.8               | 3.9             | 18.835    | C   |
| 2 - Hambledon Road (south) | 1207.00               | 301.75                  | 397.95                    | 2853.47           | 0.423 | 1207.00             | 1479.90                    | 0.7               | 0.7             | 2.186     | A   |
| 3 - Elettra Avenue         | 306.00                | 76.50                   | 927.98                    | 1432.96           | 0.214 | 306.00              | 676.97                     | 0.3               | 0.3             | 3.193     | A   |
| 4 - Hambledon Road (north) | 985.00                | 246.25                  | 460.00                    | 1738.21           | 0.567 | 984.99              | 773.98                     | 1.3               | 1.3             | 4.779     | A   |

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.0.4211 []  
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Filename: Hambledon Road\_Milton Road\_Elettra Av\_PM Peak.j9

Path: P:\17000's\17144\Technical\Junction Modelling\B Block

Report generation date: 17/06/2015 11:20:59

- »(Default Analysis Set) - 2015 Base, PM
- »(Default Analysis Set) - 2020 Base, PM
- »(Default Analysis Set) - 2020 Base + Dev (B Block Proposals), PM
- »(Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), PM
- »(Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), PM

## Summary of junction performance

|                                                  | PM      |           |      |     |
|--------------------------------------------------|---------|-----------|------|-----|
|                                                  | Q (PCU) | Delay (s) | RFC  | LOS |
| A1 - 2015 Base                                   |         |           |      |     |
| 1 - Milton road                                  | 0.7     | 5.86      | 0.42 | A   |
| 2 - Hambledon Road (south)                       | 1.6     | 3.87      | 0.62 | A   |
| 3 - Elettra Avenue                               | 3.0     | 16.67     | 0.75 | C   |
| 4 - Hambledon Road (north)                       | 2.1     | 12.06     | 0.68 | B   |
| A1 - 2020 Base                                   |         |           |      |     |
| 1 - Milton road                                  | 0.9     | 6.92      | 0.48 | A   |
| 2 - Hambledon Road (south)                       | 1.7     | 4.02      | 0.63 | A   |
| 3 - Elettra Avenue                               | 3.3     | 18.30     | 0.77 | C   |
| 4 - Hambledon Road (north)                       | 3.4     | 17.10     | 0.77 | C   |
| A1 - 2020 Base + Dev (B Block Proposals)         |         |           |      |     |
| 1 - Milton road                                  | 1.0     | 7.44      | 0.51 | A   |
| 2 - Hambledon Road (south)                       | 1.8     | 4.12      | 0.64 | A   |
| 3 - Elettra Avenue                               | 4.5     | 23.77     | 0.82 | C   |
| 4 - Hambledon Road (north)                       | 3.8     | 19.02     | 0.79 | C   |
| A1 - 2020 Base + Dev (B Block + East Dev)        |         |           |      |     |
| 1 - Milton road                                  | 1.3     | 8.21      | 0.56 | A   |
| 2 - Hambledon Road (south)                       | 1.9     | 4.48      | 0.65 | A   |
| 3 - Elettra Avenue                               | 2.4     | 14.66     | 0.71 | B   |
| 4 - Hambledon Road (north)                       | 4.0     | 19.43     | 0.81 | C   |
| A1 - 2020 Base + Dev (B Block + East + West Dev) |         |           |      |     |
| 1 - Milton road                                  | 1.6     | 10.29     | 0.62 | B   |
| 2 - Hambledon Road (south)                       | 2.2     | 4.95      | 0.69 | A   |
| 3 - Elettra Avenue                               | 30.7    | 134.02    | 1.01 | F   |
| 4 - Hambledon Road (north)                       | 6.3     | 30.90     | 0.87 | D   |

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle.

## File summary

### File Description

|                    |                                             |
|--------------------|---------------------------------------------|
| <b>Title</b>       | Hambledon Road/ Milton Road/ Elettra Avenue |
| <b>Location</b>    | Waterlooville                               |
| <b>Site number</b> |                                             |
| <b>Date</b>        | 07/05/2015                                  |
| <b>Version</b>     |                                             |
| <b>Status</b>      | (new file)                                  |
| <b>Identifier</b>  |                                             |
| <b>Client</b>      |                                             |
| <b>Jobnumber</b>   | 17144                                       |
| <b>Enumerator</b>  | DTA"arcady                                  |
| <b>Description</b> |                                             |

## Units

| Distance units | Speed units | Traffic units input | Traffic units results | Flow units | Av. delay units | Total delay units | Rate of delay units |
|----------------|-------------|---------------------|-----------------------|------------|-----------------|-------------------|---------------------|
| m              | kph         | PCU                 | PCU                   | perHour    | s               | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Q Percentiles | Calculate detailed queueing delay | Calculate residual capacity | RFC Threshold | Av. Delay threshold (s) | Q threshold (PCU) |
|--------------------|-------------------------|-----------------------------------|-----------------------------|---------------|-------------------------|-------------------|
| 5.75               |                         |                                   |                             | 0.85          | 36.00                   | 20.00             |

## Demand Set Summary

| Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| 2015 Base                                   | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |
| 2020 Base                                   | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block Proposals)         | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East Dev)        | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |
| 2020 Base + Dev (B Block + East + West Dev) | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |

## (Default Analysis Set) - 2015 Base, PM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 8.29               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Arms

### Arms

| Arm | Name                   | Description |
|-----|------------------------|-------------|
| 1   | Milton road            |             |
| 2   | Hambledon Road (south) |             |
| 3   | Elettra Avenue         |             |
| 4   | Hambledon Road (north) |             |

### Capacity Options

| Arm                        | Min Cap (PCU/hr) | Max Cap (PCU/hr) | Assume flat start profile | Initial queue (PCU) |
|----------------------------|------------------|------------------|---------------------------|---------------------|
| 1 - Milton road            | 0.00             | 99999.00         |                           | 0.00                |
| 2 - Hambledon Road (south) | 0.00             | 99999.00         |                           | 0.00                |
| 3 - Elettra Avenue         | 0.00             | 99999.00         |                           | 0.00                |
| 4 - Hambledon Road (north) | 0.00             | 99999.00         |                           | 0.00                |

## Roundabout Geometry

| Arm                        | V (m) | E (m) | I' (m) | R (m) | D (m) | PHI (deg) | Exit only |
|----------------------------|-------|-------|--------|-------|-------|-----------|-----------|
| 1 - Milton road            | 3.40  | 4.20  | 24.9   | 21.0  | 54.0  | 22.5      |           |
| 2 - Hambledon Road (south) | 7.20  | 8.20  | 55.8   | 54.6  | 54.0  | 25.0      |           |
| 3 - Elettra Avenue         | 3.30  | 7.70  | 127.6  | 6.0   | 54.0  | 22.0      |           |
| 4 - Hambledon Road (north) | 3.60  | 7.70  | 127.6  | 6.0   | 54.0  | 22.0      |           |

## Slope / Intercept / Capacity

### Arm Intercept Adjustments

| Arm                        | Type   | Reason | Direct intercept adjustment (PCU/hr) |
|----------------------------|--------|--------|--------------------------------------|
| 1 - Milton road            | None   |        |                                      |
| 2 - Hambledon Road (south) | Direct |        | -416.00                              |
| 3 - Elettra Avenue         | None   |        |                                      |
| 4 - Hambledon Road (north) | None   |        |                                      |

### Roundabout Slope and Intercept used in model

| Arm                        | Final slope | Final intercept (PCU/hr) |
|----------------------------|-------------|--------------------------|
| 1 - Milton road            | 0.521       | 1285.444                 |
| 2 - Hambledon Road (south) | 0.766       | 2171.472                 |
| 3 - Elettra Avenue         | 0.622       | 2010.608                 |
| 4 - Hambledon Road (north) | 0.625       | 2025.835                 |

The slope and intercept shown above include any corrections and adjustments.

### Arm Capacity Adjustments

| Arm                        | Type       | Reason | Percentage capacity adjustment (%) |
|----------------------------|------------|--------|------------------------------------|
| 1 - Milton road            | Percentage |        | 135.00                             |
| 2 - Hambledon Road (south) | Percentage |        | 120.00                             |
| 3 - Elettra Avenue         | Percentage |        | 80.00                              |
| 4 - Hambledon Road (north) | Percentage |        | 70.00                              |

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D2 | 2015 Base     | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 452.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1528.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 656.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 630.00              | 100.000            |

# Origin-Destination Data

## Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 337.000                    | 63.000             | 52.000                     |
|      | 2 - Hambledon Road (south) | 585.000         | 39.000                     | 100.000            | 804.000                    |
|      | 3 - Elettra Avenue         | 154.000         | 341.000                    | 0.000              | 161.000                    |
|      | 4 - Hambledon Road (north) | 59.000          | 526.000                    | 45.000             | 0.000                      |

## Proportions

|      | To                         |                 |                            |                    |                           |
|------|----------------------------|-----------------|----------------------------|--------------------|---------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledo Road (north) |
| From | 1 - Milton road            | 0.00            | 0.75                       | 0.14               | 0.12                      |
|      | 2 - Hambledon Road (south) | 0.38            | 0.03                       | 0.07               | 0.53                      |
|      | 3 - Elettra Avenue         | 0.23            | 0.52                       | 0.00               | 0.25                      |
|      | 4 - Hambledon Road (north) | 0.09            | 0.83                       | 0.07               | 0.00                      |

# Vehicle Mix

## Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

## Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

# Results

## Results Summary for whole modelled period

| Am                         | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.42    | 5.86          | 0.7         | A       | 452.00              | 452.00                        |
| 2 - Hambledon Road (south) | 0.62    | 3.87          | 1.6         | A       | 1528.00             | 1528.00                       |
| 3 - Elettra Avenue         | 0.75    | 16.67         | 3.0         | C       | 656.00              | 656.00                        |
| 4 - Hambledon Road (north) | 0.68    | 12.06         | 2.1         | B       | 630.00              | 630.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 452.00                | 113.00                  | 937.76                    | 1075.31           | 0.420 | 449.13              | 792.13                     | 0.0               | 0.7             | 5.723     | A   |
| 2 - Hambledon Road (south) | 1528.00               | 382.00                  | 158.70                    | 2459.95           | 0.621 | 1521.51             | 1228.19                    | 0.0               | 1.6             | 3.811     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1473.61                   | 874.65            | 0.750 | 644.78              | 206.60                     | 0.0               | 2.8             | 15.010    | C   |
| 4 - Hambledon Road (north) | 630.00                | 157.50                  | 1107.89                   | 933.18            | 0.675 | 622.00              | 1010.50                    | 0.0               | 2.0             | 11.308    | B   |

### Main results: (17:00-17:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 452.00                | 113.00                  | 950.52                    | 1066.33           | 0.424 | 451.95              | 797.85                     | 0.7               | 0.7             | 5.859     | A   |
| 2 - Hambledon Road (south) | 1528.00               | 382.00                  | 159.97                    | 2458.79           | 0.621 | 1527.96             | 1242.50                    | 1.6               | 1.6             | 3.867     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1479.95                   | 871.49            | 0.753 | 655.51              | 207.97                     | 2.8               | 2.9             | 16.578    | C   |
| 4 - Hambledon Road (north) | 630.00                | 157.50                  | 1118.61                   | 928.48            | 0.679 | 629.75              | 1016.85                    | 2.0               | 2.1             | 12.027    | B   |

### Main results: (17:15-17:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 452.00                | 113.00                  | 950.85                    | 1066.09           | 0.424 | 451.99              | 797.95                     | 0.7               | 0.7             | 5.861     | A   |
| 2 - Hambledon Road (south) | 1528.00               | 382.00                  | 159.99                    | 2458.77           | 0.621 | 1527.99             | 1242.85                    | 1.6               | 1.6             | 3.867     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1479.99                   | 871.48            | 0.753 | 655.84              | 207.99                     | 2.9               | 3.0             | 16.644    | C   |
| 4 - Hambledon Road (north) | 630.00                | 157.50                  | 1118.87                   | 928.37            | 0.679 | 629.93              | 1016.95                    | 2.1               | 2.1             | 12.050    | B   |

### Main results: (17:30-17:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 452.00                | 113.00                  | 950.93                    | 1066.04           | 0.424 | 452.00              | 797.98                     | 0.7               | 0.7             | 5.862     | A   |
| 2 - Hambledon Road (south) | 1528.00               | 382.00                  | 160.00                    | 2458.76           | 0.621 | 1527.99             | 1242.93                    | 1.6               | 1.6             | 3.867     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1479.99                   | 871.47            | 0.753 | 655.92              | 208.00                     | 3.0               | 3.0             | 16.666    | C   |
| 4 - Hambledon Road (north) | 630.00                | 157.50                  | 1118.94                   | 928.34            | 0.679 | 629.97              | 1016.98                    | 2.1               | 2.1             | 12.056    | B   |

## (Default Analysis Set) - 2020 Base, PM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 9.97               | A            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D4 | 2020 Base     | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 490.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1535.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 656.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 722.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 343.000                    | 63.000             | 84.000                     |
|      | 2 - Hambledon Road (south) | 577.000         | 39.000                     | 100.000            | 819.000                    |
|      | 3 - Elettra Avenue         | 154.000         | 341.000                    | 0.000              | 161.000                    |
|      | 4 - Hambledon Road (north) | 72.000          | 605.000                    | 45.000             | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.70                       | 0.13               | 0.17                       |
|      | 2 - Hambledon Road (south) | 0.38            | 0.03                       | 0.07               | 0.53                       |
|      | 3 - Elettra Avenue         | 0.23            | 0.52                       | 0.00               | 0.25                       |
|      | 4 - Hambledon Road (north) | 0.10            | 0.84                       | 0.06               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.48    | 6.92          | 0.9         | A       | 490.00              | 490.00                        |
| 2 - Hambledon Road (south) | 0.63    | 4.02          | 1.7         | A       | 1535.00             | 1535.00                       |
| 3 - Elettra Avenue         | 0.77    | 18.30         | 3.3         | C       | 656.00              | 656.00                        |
| 4 - Hambledon Road (north) | 0.77    | 17.10         | 3.4         | C       | 722.00              | 722.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 490.00                | 122.50                  | 1012.27                   | 1022.86           | 0.479 | 486.37              | 796.35                     | 0.0               | 0.9             | 6.668     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 190.13                    | 2431.07           | 0.631 | 1528.23             | 1308.51                    | 0.0               | 1.7             | 3.959     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1512.05                   | 855.51            | 0.767 | 643.83              | 206.32                     | 0.0               | 3.0             | 16.195    | C   |
| 4 - Hambledon Road (north) | 722.00                | 180.50                  | 1099.10                   | 937.02            | 0.771 | 709.52              | 1056.78                    | 0.0               | 3.1             | 15.097    | C   |

### Main results: (17:00-17:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 490.00                | 122.50                  | 1029.08                   | 1011.03           | 0.485 | 489.90              | 802.77                     | 0.9               | 0.9             | 6.905     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 191.93                    | 2429.42           | 0.632 | 1534.95             | 1327.05                    | 1.7               | 1.7             | 4.024     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1518.94                   | 852.08            | 0.770 | 655.38              | 207.94                     | 3.0               | 3.2             | 18.169    | C   |
| 4 - Hambledon Road (north) | 722.00                | 180.50                  | 1110.51                   | 932.02            | 0.775 | 721.33              | 1063.81                    | 3.1               | 3.3             | 16.964    | C   |

### Main results: (17:15-17:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 490.00                | 122.50                  | 1029.70                   | 1010.59           | 0.485 | 489.98              | 802.93                     | 0.9               | 0.9             | 6.914     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 191.98                    | 2429.37           | 0.632 | 1534.98             | 1327.70                    | 1.7               | 1.7             | 4.024     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1518.98                   | 852.06            | 0.770 | 655.80              | 207.98                     | 3.2               | 3.2             | 18.266    | C   |
| 4 - Hambledon Road (north) | 722.00                | 180.50                  | 1110.84                   | 931.88            | 0.775 | 721.79              | 1063.94                    | 3.3               | 3.3             | 17.066    | C   |

### Main results: (17:30-17:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 490.00                | 122.50                  | 1029.85                   | 1010.49           | 0.485 | 489.99              | 802.96                     | 0.9               | 0.9             | 6.915     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 191.99                    | 2429.36           | 0.632 | 1534.99             | 1327.85                    | 1.7               | 1.7             | 4.024     | A   |
| 3 - Elettra Avenue         | 656.00                | 164.00                  | 1518.99                   | 852.05            | 0.770 | 655.90              | 207.99                     | 3.2               | 3.3             | 18.299    | C   |
| 4 - Hambledon Road (north) | 722.00                | 180.50                  | 1110.92                   | 931.85            | 0.775 | 721.90              | 1063.97                    | 3.3               | 3.4             | 17.099    | C   |

## (Default Analysis Set) - 2020 Base + Dev (B Block Proposals), PM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 11.71              | B            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D6 | 2020 Base + Dev (B Block Proposals) | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 505.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1535.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 702.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 730.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 343.000                    | 78.000             | 84.000                     |
|      | 2 - Hambledon Road (south) | 577.000         | 39.000                     | 100.000            | 819.000                    |
|      | 3 - Elettra Avenue         | 162.000         | 364.000                    | 0.000              | 176.000                    |
|      | 4 - Hambledon Road (north) | 72.000          | 605.000                    | 53.000             | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.68                       | 0.15               | 0.17                       |
|      | 2 - Hambledon Road (south) | 0.38            | 0.03                       | 0.07               | 0.53                       |
|      | 3 - Elettra Avenue         | 0.23            | 0.52                       | 0.00               | 0.25                       |
|      | 4 - Hambledon Road (north) | 0.10            | 0.83                       | 0.07               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.51    | 7.44          | 1.0         | A       | 505.00              | 505.00                        |
| 2 - Hambledon Road (south) | 0.64    | 4.12          | 1.8         | A       | 1535.00             | 1535.00                       |
| 3 - Elettra Avenue         | 0.82    | 23.77         | 4.5         | C       | 702.00              | 702.00                        |
| 4 - Hambledon Road (north) | 0.79    | 19.02         | 3.8         | C       | 730.00              | 730.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 505.00                | 126.25                  | 1040.06                   | 1003.30           | 0.503 | 501.01              | 803.31                     | 0.0               | 1.0             | 7.113     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 212.72                    | 2410.32           | 0.637 | 1528.07             | 1328.35                    | 0.0               | 1.7             | 4.049     | A   |
| 3 - Elettra Avenue         | 702.00                | 175.50                  | 1511.86                   | 855.60            | 0.820 | 685.84              | 228.93                     | 0.0               | 4.0             | 19.671    | C   |
| 4 - Hambledon Road (north) | 730.00                | 182.50                  | 1127.11                   | 924.76            | 0.789 | 716.26              | 1070.59                    | 0.0               | 3.4             | 16.339    | C   |

### Main results: (17:00-17:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 505.00                | 126.25                  | 1059.55                   | 989.58            | 0.510 | 504.87              | 810.61                     | 1.0               | 1.0             | 7.425     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 214.89                    | 2408.32           | 0.637 | 1534.95             | 1349.53                    | 1.7               | 1.7             | 4.121     | A   |
| 3 - Elettra Avenue         | 702.00                | 175.50                  | 1518.93                   | 852.08            | 0.824 | 700.79              | 230.91                     | 4.0               | 4.3             | 23.374    | C   |
| 4 - Hambledon Road (north) | 730.00                | 182.50                  | 1141.07                   | 918.65            | 0.795 | 729.09              | 1078.65                    | 3.4               | 3.7             | 18.795    | C   |

### Main results: (17:15-17:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 505.00                | 126.25                  | 1060.51                   | 988.91            | 0.511 | 504.98              | 810.87                     | 1.0               | 1.0             | 7.438     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 214.97                    | 2408.25           | 0.637 | 1534.98             | 1350.51                    | 1.7               | 1.7             | 4.122     | A   |
| 3 - Elettra Avenue         | 702.00                | 175.50                  | 1518.98                   | 852.06            | 0.824 | 701.57              | 230.97                     | 4.3               | 4.5             | 23.666    | C   |
| 4 - Hambledon Road (north) | 730.00                | 182.50                  | 1141.67                   | 918.39            | 0.795 | 729.70              | 1078.88                    | 3.7               | 3.7             | 18.967    | C   |

### Main results: (17:30-17:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 505.00                | 126.25                  | 1060.75                   | 988.74            | 0.511 | 504.99              | 810.93                     | 1.0               | 1.0             | 7.441     | A   |
| 2 - Hambledon Road (south) | 1535.00               | 383.75                  | 214.99                    | 2408.24           | 0.637 | 1534.99             | 1350.76                    | 1.7               | 1.8             | 4.122     | A   |
| 3 - Elettra Avenue         | 702.00                | 175.50                  | 1518.99                   | 852.05            | 0.824 | 701.78              | 230.99                     | 4.5               | 4.5             | 23.770    | C   |
| 4 - Hambledon Road (north) | 730.00                | 182.50                  | 1141.83                   | 918.32            | 0.795 | 729.85              | 1078.94                    | 3.7               | 3.8             | 19.022    | C   |

## (Default Analysis Set) - 2020 Base + Dev (B Block + East Dev), PM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 10.17              | B            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID | Scenario name                        | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|----|--------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D8 | 2020 Base + Dev (B Block + East Dev) | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 568.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1515.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 590.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 765.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 343.000                    | 141.000            | 84.000                     |
|      | 2 - Hambledon Road (south) | 583.000         | 56.000                     | 46.000             | 830.000                    |
|      | 3 - Elettra Avenue         | 145.000         | 287.000                    | 0.000              | 158.000                    |
|      | 4 - Hambledon Road (north) | 72.000          | 605.000                    | 88.000             | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.00            | 0.60                       | 0.25               | 0.15                       |
|      | 2 - Hambledon Road (south) | 0.38            | 0.04                       | 0.03               | 0.55                       |
|      | 3 - Elettra Avenue         | 0.25            | 0.49                       | 0.00               | 0.27                       |
|      | 4 - Hambledon Road (north) | 0.09            | 0.79                       | 0.12               | 0.00                       |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.56    | 8.21          | 1.3         | A       | 568.00              | 568.00                        |
| 2 - Hambledon Road (south) | 0.65    | 4.48          | 1.9         | A       | 1515.00             | 1515.00                       |
| 3 - Elettra Avenue         | 0.71    | 14.66         | 2.4         | B       | 590.00              | 590.00                        |
| 4 - Hambledon Road (north) | 0.81    | 19.43         | 4.0         | C       | 765.00              | 765.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 568.00                | 142.00                  | 1017.98                   | 1018.85           | 0.557 | 563.06              | 793.55                     | 0.0               | 1.2             | 7.817     | A   |
| 2 - Hambledon Road (south) | 1515.00               | 378.75                  | 309.34                    | 2321.54           | 0.653 | 1507.59             | 1271.69                    | 0.0               | 1.9             | 4.384     | A   |
| 3 - Elettra Avenue         | 590.00                | 147.50                  | 1545.09                   | 839.06            | 0.703 | 580.99              | 271.85                     | 0.0               | 2.3             | 13.521    | B   |
| 4 - Hambledon Road (north) | 765.00                | 191.25                  | 1061.28                   | 953.57            | 0.802 | 750.24              | 1064.80                    | 0.0               | 3.7             | 16.674    | C   |

### Main results: (17:00-17:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 568.00                | 142.00                  | 1035.01                   | 1006.86           | 0.564 | 567.84              | 799.80                     | 1.2               | 1.3             | 8.194     | A   |
| 2 - Hambledon Road (south) | 1515.00               | 378.75                  | 312.83                    | 2318.34           | 0.653 | 1514.93             | 1290.02                    | 1.9               | 1.9             | 4.480     | A   |
| 3 - Elettra Avenue         | 590.00                | 147.50                  | 1552.90                   | 835.16            | 0.706 | 589.67              | 274.85                     | 2.3               | 2.3             | 14.617    | B   |
| 4 - Hambledon Road (north) | 765.00                | 191.25                  | 1070.72                   | 949.44            | 0.806 | 764.09              | 1071.85                    | 3.7               | 3.9             | 19.205    | C   |

### Main results: (17:15-17:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 568.00                | 142.00                  | 1035.67                   | 1006.39           | 0.564 | 567.97              | 799.94                     | 1.3               | 1.3             | 8.209     | A   |
| 2 - Hambledon Road (south) | 1515.00               | 378.75                  | 312.95                    | 2318.23           | 0.654 | 1514.98             | 1290.69                    | 1.9               | 1.9             | 4.481     | A   |
| 3 - Elettra Avenue         | 590.00                | 147.50                  | 1552.97                   | 835.13            | 0.706 | 589.90              | 274.96                     | 2.3               | 2.4             | 14.656    | B   |
| 4 - Hambledon Road (north) | 765.00                | 191.25                  | 1070.92                   | 949.36            | 0.806 | 764.69              | 1071.96                    | 3.9               | 4.0             | 19.368    | C   |

### Main results: (17:30-17:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 568.00                | 142.00                  | 1035.84                   | 1006.28           | 0.564 | 567.99              | 799.97                     | 1.3               | 1.3             | 8.212     | A   |
| 2 - Hambledon Road (south) | 1515.00               | 378.75                  | 312.98                    | 2318.20           | 0.654 | 1514.99             | 1290.84                    | 1.9               | 1.9             | 4.481     | A   |
| 3 - Elettra Avenue         | 590.00                | 147.50                  | 1552.99                   | 835.12            | 0.706 | 589.95              | 274.98                     | 2.4               | 2.4             | 14.665    | B   |
| 4 - Hambledon Road (north) | 765.00                | 191.25                  | 1070.96                   | 949.34            | 0.806 | 764.84              | 1071.98                    | 4.0               | 4.0             | 19.430    | C   |

## (Default Analysis Set) - 2020 Base + Dev (B Block + East + West Dev), PM

### Data Errors and Warnings

| Severity | Area     | Item                                             | Description                                                                                                      |
|----------|----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry | 2 - Hambledon Road (south) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 3 - Elettra Avenue - Roundabout Geometry         | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Geometry | 4 - Hambledon Road (north) - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |

### Analysis Set Details

| ID | Name                   | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|------------------------|-------------------|---------------------------------|-------------------------------------|
| A1 | (Default Analysis Set) | ✓                 | 100.000                         | 100.000                             |

## Junction Network

### Junctions

| Junction       | Name       | Junction Type       | Arm order | Junction Delay (s) | Junction LOS |
|----------------|------------|---------------------|-----------|--------------------|--------------|
| 1 - (untitled) | (untitled) | Standard Roundabout | 1,2,3,4   | 39.85              | E            |

## Junction Network Options

[same as above]

# Arms

## Arms

[same as above]

## Capacity Options

[same as above]

## Roundabout Geometry

[same as above]

## Slope / Intercept / Capacity

[same as above]

# Traffic Demand

## Demand Set Details

| ID  | Scenario name                               | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Model time period length (min) | Time segment length (min) | Run automatically |
|-----|---------------------------------------------|------------------|----------------------|--------------------------|---------------------------|--------------------------------|---------------------------|-------------------|
| D10 | 2020 Base + Dev (B Block + East + West Dev) | PM               | FLAT                 | 16:45                    | 17:45                     | 60                             | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

## Demand overview (Traffic)

| Arm                        | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|----------------------------|------------|--------------|--------------|---------------------|--------------------|
| 1 - Milton road            |            | FLAT         | ✓            | 574.00              | 100.000            |
| 2 - Hambledon Road (south) |            | FLAT         | ✓            | 1583.00             | 100.000            |
| 3 - Elettra Avenue         |            | FLAT         | ✓            | 840.00              | 100.000            |
| 4 - Hambledon Road (north) |            | FLAT         | ✓            | 768.00              | 100.000            |

# Origin-Destination Data

### Demand (PCU/hr)

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0.000           | 343.000                    | 147.000            | 84.000                     |
|      | 2 - Hambledon Road (south) | 583.000         | 56.000                     | 114.000            | 830.000                    |
|      | 3 - Elettra Avenue         | 190.000         | 411.000                    | 0.000              | 239.000                    |
|      | 4 - Hambledon Road (north) | 72.000          | 605.000                    | 91.000             | 0.000                      |

### Proportions

|      | To                         |                 |                            |                    |                           |
|------|----------------------------|-----------------|----------------------------|--------------------|---------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledo Road (north) |
| From | 1 - Milton road            | 0.00            | 0.60                       | 0.26               | 0.15                      |
|      | 2 - Hambledon Road (south) | 0.37            | 0.04                       | 0.07               | 0.52                      |
|      | 3 - Elettra Avenue         | 0.23            | 0.49                       | 0.00               | 0.28                      |
|      | 4 - Hambledon Road (north) | 0.09            | 0.79                       | 0.12               | 0.00                      |

## Vehicle Mix

### Heavy Vehicle proportion

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 0               | 0                          | 0                  | 0                          |
|      | 2 - Hambledon Road (south) | 0               | 0                          | 0                  | 0                          |
|      | 3 - Elettra Avenue         | 0               | 0                          | 0                  | 0                          |
|      | 4 - Hambledon Road (north) | 0               | 0                          | 0                  | 0                          |

### Av. PCU Per Veh

|      | To                         |                 |                            |                    |                            |
|------|----------------------------|-----------------|----------------------------|--------------------|----------------------------|
|      |                            | 1 - Milton road | 2 - Hambledon Road (south) | 3 - Elettra Avenue | 4 - Hambledon Road (north) |
| From | 1 - Milton road            | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 2 - Hambledon Road (south) | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 3 - Elettra Avenue         | 1.000           | 1.000                      | 1.000              | 1.000                      |
|      | 4 - Hambledon Road (north) | 1.000           | 1.000                      | 1.000              | 1.000                      |

## Results

### Results Summary for whole modelled period

| Arm                        | Max RFC | Max delay (s) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|----------------------------|---------|---------------|-------------|---------|---------------------|-------------------------------|
| 1 - Milton road            | 0.62    | 10.29         | 1.6         | B       | 574.00              | 574.00                        |
| 2 - Hambledon Road (south) | 0.69    | 4.95          | 2.2         | A       | 1583.00             | 1583.00                       |
| 3 - Elettra Avenue         | 1.01    | 134.02        | 30.7        | F       | 840.00              | 840.00                        |
| 4 - Hambledon Road (north) | 0.87    | 30.90         | 6.3         | D       | 768.00              | 768.00                        |

## Main Results for each time segment

### Main results: (16:45-17:00)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 574.00                | 143.50                  | 1116.72                   | 949.35            | 0.605 | 568.04              | 827.23                     | 0.0               | 1.5             | 9.304     | A   |
| 2 - Hambledon Road (south) | 1583.00               | 395.75                  | 317.19                    | 2314.33           | 0.684 | 1574.49             | 1367.57                    | 0.0               | 2.1             | 4.812     | A   |
| 3 - Elettra Avenue         | 840.00                | 210.00                  | 1544.23                   | 839.48            | 1.001 | 783.75              | 347.45                     | 0.0               | 14.1            | 46.281    | E   |
| 4 - Hambledon Road (north) | 768.00                | 192.00                  | 1196.32                   | 894.47            | 0.859 | 747.63              | 1131.66                    | 0.0               | 5.1             | 22.154    | C   |

### Main results: (17:00-17:15)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 574.00                | 143.50                  | 1147.12                   | 927.95            | 0.619 | 573.61              | 838.57                     | 1.5               | 1.6             | 10.142    | B   |
| 2 - Hambledon Road (south) | 1583.00               | 395.75                  | 321.50                    | 2310.37           | 0.685 | 1582.89             | 1399.23                    | 2.1               | 2.2             | 4.946     | A   |
| 3 - Elettra Avenue         | 840.00                | 210.00                  | 1552.84                   | 835.19            | 1.006 | 812.96              | 351.55                     | 14.1              | 20.8            | 89.248    | F   |
| 4 - Hambledon Road (north) | 768.00                | 192.00                  | 1220.61                   | 883.84            | 0.869 | 765.08              | 1145.19                    | 5.1               | 5.8             | 29.012    | D   |

### Main results: (17:15-17:30)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 574.00                | 143.50                  | 1151.51                   | 924.86            | 0.621 | 573.90              | 840.08                     | 1.6               | 1.6             | 10.249    | B   |
| 2 - Hambledon Road (south) | 1583.00               | 395.75                  | 321.81                    | 2310.08           | 0.685 | 1582.97             | 1403.59                    | 2.2               | 2.2             | 4.950     | A   |
| 3 - Elettra Avenue         | 840.00                | 210.00                  | 1552.96                   | 835.14            | 1.006 | 818.79              | 351.83                     | 20.8              | 26.1            | 113.745   | F   |
| 4 - Hambledon Road (north) | 768.00                | 192.00                  | 1224.81                   | 882.00            | 0.871 | 766.77              | 1146.93                    | 5.8               | 6.1             | 30.299    | D   |

### Main results: (17:30-17:45)

| Arm                        | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | LOS |
|----------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|----------------------------|-------------------|-----------------|-----------|-----|
| 1 - Milton road            | 574.00                | 143.50                  | 1153.44                   | 923.50            | 0.622 | 573.95              | 840.80                     | 1.6               | 1.6             | 10.293    | B   |
| 2 - Hambledon Road (south) | 1583.00               | 395.75                  | 321.90                    | 2310.01           | 0.685 | 1582.98             | 1405.50                    | 2.2               | 2.2             | 4.951     | A   |
| 3 - Elettra Avenue         | 840.00                | 210.00                  | 1552.98                   | 835.13            | 1.006 | 821.76              | 351.90                     | 26.1              | 30.7            | 134.024   | F   |
| 4 - Hambledon Road (north) | 768.00                | 192.00                  | 1226.94                   | 881.07            | 0.872 | 767.30              | 1147.79                    | 6.1               | 6.3             | 30.895    | D   |



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