

|  |   |       |       |      |
|--|---|-------|-------|------|
|  | 3 | 41.00 | 34.00 | 0.00 |
|--|---|-------|-------|------|

### Turning Proportions (PCU) - Roundabout 1 (for whole period)

|      |   | To   |      |      |
|------|---|------|------|------|
|      |   | 1    | 2    | 3    |
| From | 1 | 0.00 | 0.92 | 0.08 |
|      | 2 | 0.98 | 0.00 | 0.02 |
|      | 3 | 0.55 | 0.45 | 0.00 |

## Vehicle Mix

### Average PCU Per Vehicle - Roundabout 1 (for whole period)

|      |   | To   |      |      |
|------|---|------|------|------|
|      |   | 1    | 2    | 3    |
| From | 1 | 1.00 | 1.00 | 1.00 |
|      | 2 | 1.00 | 1.00 | 1.00 |
|      | 3 | 1.00 | 1.00 | 1.00 |

### Heavy Vehicle Percentages - Roundabout 1 (for whole period)

|      |   | To   |      |      |
|------|---|------|------|------|
|      |   | 1    | 2    | 3    |
| From | 1 | 0.00 | 0.00 | 0.00 |
|      | 2 | 0.00 | 0.00 | 0.00 |
|      | 3 | 0.00 | 0.00 | 0.00 |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.57    | 0.11            | 1.32            | A       | 596.45                | 894.68               | 83.73                          | 0.09                         | 0.93                                 | 83.74                                    | 0.09                                   | 0.563 | 1274.764           |
| 2   | 0.65    | 0.15            | 1.83            | A       | 613.89                | 920.83               | 110.29                         | 0.12                         | 1.23                                 | 110.31                                   | 0.12                                   | 0.534 | 1163.999           |
| 3   | 0.08    | 0.07            | 0.09            | A       | 68.82                 | 103.23               | 6.23                           | 0.06                         | 0.07                                 | 6.23                                     | 0.06                                   | 0.603 | 1433.915           |

### Main Results

#### Main results: (11:00-11:15)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 489.35          | 122.34         | 486.84              | 519.32             | 25.50                     | 0.00                       | 1260.39           | 1076.53                      | 0.388 | 0.00              | 0.63            |
| 2   | 503.66          | 125.91         | 500.54              | 473.39             | 38.95                     | 0.00                       | 1143.18           | 1117.97                      | 0.441 | 0.00              | 0.78            |
| 3   | 56.46           | 14.12          | 56.26               | 50.92              | 488.57                    | 0.00                       | 1139.39           | 776.09                       | 0.050 | 0.00              | 0.05            |

#### Main results: (11:15-11:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 584.34          | 146.08         | 583.42              | 622.60             | 30.54                     | 0.00                       | 1257.56           | 1076.52                      | 0.465 | 0.63              | 0.86            |
| 2   | 601.42          | 150.35         | 600.13              | 567.28             | 46.67                     | 0.00                       | 1139.05           | 1117.97                      | 0.528 | 0.78              | 1.10            |
| 3   | 67.42           | 16.86          | 67.37               | 61.03              | 585.77                    | 0.00                       | 1080.79           | 776.09                       | 0.062 | 0.05              | 0.07            |

#### Main results: (11:30-11:45)

### Main results: (11:00-11:45)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 715.66          | 178.92         | 713.87              | 761.31             | 37.39                     | 0.00                       | 1253.70           | 1076.53                      | 0.571 | 0.86              | 1.31            |
| 2   | 736.58          | 184.15         | 733.77              | 694.15             | 57.11                     | 0.00                       | 1133.48           | 1117.97                      | 0.650 | 1.10              | 1.81            |
| 3   | 82.58           | 20.64          | 82.48               | 74.66              | 716.22                    | 0.00                       | 1002.16           | 776.09                       | 0.082 | 0.07              | 0.09            |

### Main results: (11:45-12:00)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 715.66          | 178.92         | 715.62              | 764.01             | 37.43                     | 0.00                       | 1253.67           | 1076.53                      | 0.571 | 1.31              | 1.32            |
| 2   | 736.58          | 184.15         | 736.49              | 695.80             | 57.25                     | 0.00                       | 1133.40           | 1117.97                      | 0.650 | 1.81              | 1.83            |
| 3   | 82.58           | 20.64          | 82.58               | 74.86              | 718.87                    | 0.00                       | 1000.56           | 776.09                       | 0.083 | 0.09              | 0.09            |

### Main results: (12:00-12:15)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 584.34          | 146.08         | 586.10              | 626.65             | 30.61                     | 0.00                       | 1257.52           | 1076.52                      | 0.465 | 1.32              | 0.88            |
| 2   | 601.42          | 150.35         | 604.19              | 569.82             | 46.89                     | 0.00                       | 1138.94           | 1117.97                      | 0.528 | 1.83              | 1.14            |
| 3   | 67.42           | 16.86          | 67.51               | 61.34              | 589.74                    | 0.00                       | 1078.40           | 776.09                       | 0.063 | 0.09              | 0.07            |

### Main results: (12:15-12:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 489.35          | 122.34         | 490.30              | 523.84             | 25.62                     | 0.00                       | 1260.33           | 1076.53                      | 0.388 | 0.88              | 0.64            |
| 2   | 503.66          | 125.91         | 505.02              | 476.70             | 39.22                     | 0.00                       | 1143.04           | 1117.97                      | 0.441 | 1.14              | 0.80            |
| 3   | 56.46           | 14.12          | 56.52               | 51.30              | 492.94                    | 0.00                       | 1136.76           | 776.09                       | 0.050 | 0.07              | 0.05            |

## Queueing Delay Results

### Queueing Delay results: (11:00-11:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 9.15                           | 0.61                                 | 0.077                                    | A                             | A                           |
| 2   | 11.25                          | 0.75                                 | 0.093                                    | A                             | A                           |
| 3   | 0.77                           | 0.05                                 | 0.055                                    | A                             | A                           |

### Queueing Delay results: (11:15-11:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 12.55                          | 0.84                                 | 0.089                                    | A                             | A                           |
| 2   | 15.99                          | 1.07                                 | 0.111                                    | A                             | A                           |
| 3   | 0.98                           | 0.07                                 | 0.059                                    | A                             | A                           |

### Queueing Delay results: (11:30-11:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 18.90                          | 1.26                                 | 0.111                                    | A                             | A                           |
| 2   | 25.70                          | 1.71                                 | 0.149                                    | A                             | A                           |
| 3   | 1.32                           | 0.09                                 | 0.065                                    | A                             | A                           |

### Queueing Delay results: (11:45-12:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 19.72                          | 1.31                                 | 0.112                                    | A                             | A                           |

|   |       |      |       |   |   |
|---|-------|------|-------|---|---|
| 2 | 27.31 | 1.82 | 0.151 | A | A |
| 3 | 1.34  | 0.09 | 0.065 | A | A |

#### Queueing Delay results: (12:00-12:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 13.57                          | 0.90                                 | 0.090                                    | A                             | A                           |
| 2   | 17.74                          | 1.18                                 | 0.113                                    | A                             | A                           |
| 3   | 1.02                           | 0.07                                 | 0.059                                    | A                             | A                           |

#### Queueing Delay results: (12:15-12:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 9.83                           | 0.66                                 | 0.078                                    | A                             | A                           |
| 2   | 12.30                          | 0.82                                 | 0.094                                    | A                             | A                           |
| 3   | 0.80                           | 0.05                                 | 0.056                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 3.60                             | 5.00                | 5.00                            | 22.00                | 27.50                             | 40.00                              |           | 0.563       | 1274.764                 |
| 2   | 3.60                             | 4.35                | 3.50                            | 17.00                | 27.50                             | 42.00                              |           | 0.534       | 1163.999                 |
| 3   | 3.50                             | 5.00                | 27.00                           | 17.00                | 27.50                             | 30.00                              |           | 0.603       | 1433.915                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 11:00-11:15  | 1   | 489.35          | 1260.39           | 0.388 | 0.00                       | 0.00              | 0.63            | 9.15                           | (0.00)                          | 0.077                                    |
| 11:00-11:15  | 2   | 503.66          | 1143.18           | 0.441 | 0.00                       | 0.00              | 0.78            | 11.25                          | (0.00)                          | 0.093                                    |
| 11:00-11:15  | 3   | 56.46           | 1139.39           | 0.050 | 0.00                       | 0.00              | 0.05            | 0.77                           | (0.00)                          | 0.055                                    |
| 11:15-11:30  | 1   | 584.34          | 1257.56           | 0.465 | 0.00                       | 0.63              | 0.86            | 12.55                          | (0.00)                          | 0.089                                    |
| 11:15-11:30  | 2   | 601.42          | 1139.05           | 0.528 | 0.00                       | 0.78              | 1.10            | 15.99                          | (0.00)                          | 0.111                                    |
| 11:15-11:30  | 3   | 67.42           | 1080.79           | 0.062 | 0.00                       | 0.05              | 0.07            | 0.98                           | (0.00)                          | 0.059                                    |
| 11:30-11:45  | 1   | 715.66          | 1253.70           | 0.571 | 0.00                       | 0.86              | 1.31            | 18.90                          | (0.00)                          | 0.111                                    |
| 11:30-11:45  | 2   | 736.58          | 1133.48           | 0.650 | 0.00                       | 1.10              | 1.81            | 25.70                          | (0.00)                          | 0.149                                    |
| 11:30-11:45  | 3   | 82.58           | 1002.16           | 0.082 | 0.00                       | 0.07              | 0.09            | 1.32                           | (0.00)                          | 0.065                                    |
| 11:45-12:00  | 1   | 715.66          | 1253.67           | 0.571 | 0.00                       | 1.31              | 1.32            | 19.72                          | (0.00)                          | 0.112                                    |
| 11:45-12:00  | 2   | 736.58          | 1133.40           | 0.650 | 0.00                       | 1.81              | 1.83            | 27.31                          | (0.00)                          | 0.151                                    |
| 11:45-12:00  | 3   | 82.58           | 1000.56           | 0.083 | 0.00                       | 0.09              | 0.09            | 1.34                           | (0.00)                          | 0.065                                    |
| 12:00-12:15  | 1   | 584.34          | 1257.52           | 0.465 | 0.00                       | 1.32              | 0.88            | 13.57                          | (0.00)                          | 0.090                                    |
| 12:00-12:15  | 2   | 601.42          | 1138.94           | 0.528 | 0.00                       | 1.83              | 1.14            | 17.74                          | (0.00)                          | 0.113                                    |
| 12:00-12:15  | 3   | 67.42           | 1078.40           | 0.063 | 0.00                       | 0.09              | 0.07            | 1.02                           | (0.00)                          | 0.059                                    |
| 12:15-12:30  | 1   | 489.35          | 1260.33           | 0.388 | 0.00                       | 0.88              | 0.64            | 9.83                           | (0.00)                          | 0.078                                    |
| 12:15-12:30  | 2   | 503.66          | 1143.04           | 0.441 | 0.00                       | 1.14              | 0.80            | 12.30                          | (0.00)                          | 0.094                                    |
| 12:15-12:30  | 3   | 56.46           | 1136.76           | 0.050 | 0.00                       | 0.07              | 0.05            | 0.80                           | (0.00)                          | 0.056                                    |

# ARCADY 7

Version: 7.0.1.130 [12 March 2010]  
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File: T:\Projects\Aldi Goldthorpe North\T155 - Old Mill lane, Barnsley\Calculations\Arcady\ARCADY West Mini Roundabout.arc7  
Report generation date: 01/12/2015 14:15:47

## Summary of roundabout performance

|                                                 | PM          |             |      |     | SAT         |             |      |     |
|-------------------------------------------------|-------------|-------------|------|-----|-------------|-------------|------|-----|
|                                                 | Queue (PCU) | Delay (min) | RFC  | LOS | Queue (PCU) | Delay (min) | RFC  | LOS |
| <b>(Default Analysis Set) - Base 2015</b>       |             |             |      |     |             |             |      |     |
| Arm 1                                           | 2.27        | 0.16        | 0.70 | A   | 0.96        | 0.10        | 0.49 | A   |
| Arm 2                                           | 0.09        | 0.09        | 0.09 | A   | 0.13        | 0.08        | 0.12 | A   |
| Arm 3                                           | 1.83        | 0.16        | 0.65 | A   | 1.70        | 0.15        | 0.63 | A   |
| <b>(Default Analysis Set) - Base 2015 + Dev</b> |             |             |      |     |             |             |      |     |
| Arm 1                                           | 2.65        | 0.18        | 0.73 | B   | 1.16        | 0.11        | 0.54 | A   |
| Arm 2                                           | 0.22        | 0.10        | 0.18 | A   | 0.30        | 0.09        | 0.23 | A   |
| Arm 3                                           | 2.11        | 0.18        | 0.68 | B   | 2.14        | 0.18        | 0.69 | B   |
| <b>(Default Analysis Set) - Base 2020</b>       |             |             |      |     |             |             |      |     |
| Arm 1                                           | 2.91        | 0.20        | 0.75 | B   | 1.12        | 0.11        | 0.53 | A   |
| Arm 2                                           | 0.11        | 0.10        | 0.10 | A   | 0.15        | 0.08        | 0.13 | A   |
| Arm 3                                           | 2.27        | 0.18        | 0.70 | B   | 2.10        | 0.18        | 0.68 | B   |
| <b>(Default Analysis Set) - Base 2020 + Dev</b> |             |             |      |     |             |             |      |     |
| Arm 1                                           | 3.47        | 0.23        | 0.78 | B   | 1.36        | 0.12        | 0.58 | A   |
| Arm 2                                           | 0.24        | 0.11        | 0.20 | A   | 0.33        | 0.10        | 0.25 | A   |
| Arm 3                                           | 2.66        | 0.21        | 0.73 | B   | 2.72        | 0.22        | 0.74 | B   |

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

Base 2015 - PM runs from 17:00:00 to 18:30:00  
Base 2015 + Dev - PM runs from 17:00:00 to 18:30:00  
Base 2020 - PM runs from 17:00:00 to 18:30:00  
Base 2020 + Dev - PM runs from 17:00:00 to 18:30:00  
Base 2015 - SAT runs from 17:00:00 to 18:30:00  
Base 2015 + Dev - SAT runs from 17:00:00 to 18:30:00  
Base 2020 - SAT runs from 17:00:00 to 18:30:00  
Base 2020 + Dev - SAT runs from 17:00:00 to 18:30:00

## File summary

### File Description

|                   |                    |
|-------------------|--------------------|
| Title             | (untitled)         |
| Date              | 26/11/2015         |
| Status            | (new file)         |
| Enumerator        | Desktop-03\Matthew |
| Results Upto Date | False              |

## Analysis Options

|               |                    |                     |
|---------------|--------------------|---------------------|
| RFC Threshold | Vehicle Length (m) | Do Queue Variations |
| 0.85          | 5.75               |                     |

## Sorting and Display

| Show Arm Names | Arm Grouping | Sorting Direction | Sorting Type | Data Matrix Style | Time Style    |
|----------------|--------------|-------------------|--------------|-------------------|---------------|
|                | Order        | Ascending         | Numerical    | By Destination    | Absolute Time |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|----------------|-------------|---------------------|-----------------------|------------|---------------------|-------------------|---------------------|
| m              | kph         | PCU                 | PCU                   | perHour    | min                 | -Min              | perMin              |

# A1 - (Default Analysis Set) - D1 - Base 2015, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

## Demand Set Details

| Name          | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|---------------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| Base 2015, PM | Base 2015     | PM               |             |        | Yes               |                  |              | 17:00              | 18:30               | 90                       | 15                        | ONE HOUR             |

# Roundabout Network

## Roundabout Type(s)

| ID           | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|--------------|------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 (untitled) |      | 1,2,3     | Standard        |                 |                  |                    |

## Roundabout Network Options

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

# Arms

## Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |
| 3   | 0.00                      | 99999.00                  |                           | 0.00                |

## Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

## Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

## Traffic Flows

### Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 775.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 56.00                        | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 638.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 583.46                            | 583.46                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 42.16                             | 42.16                               | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 480.32                            | 480.32                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 696.71                            | 696.71                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 50.34                             | 50.34                               | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 573.55                            | 573.55                              | N/A                              | N/A                                    |
| 17:30-17:45  | 1   | 853.29                            | 853.29                              | N/A                              | N/A                                    |
| 17:30-17:45  | 2   | 61.66                             | 61.66                               | N/A                              | N/A                                    |

|             |   |        |        |     |     |
|-------------|---|--------|--------|-----|-----|
| 17:30-17:45 | 3 | 702.45 | 702.45 | N/A | N/A |
| 17:45-18:00 | 1 | 853.29 | 853.29 | N/A | N/A |
| 17:45-18:00 | 2 | 61.66  | 61.66  | N/A | N/A |
| 17:45-18:00 | 3 | 702.45 | 702.45 | N/A | N/A |
| 18:00-18:15 | 1 | 696.71 | 696.71 | N/A | N/A |
| 18:00-18:15 | 2 | 50.34  | 50.34  | N/A | N/A |
| 18:00-18:15 | 3 | 573.55 | 573.55 | N/A | N/A |
| 18:15-18:30 | 1 | 583.46 | 583.46 | N/A | N/A |
| 18:15-18:30 | 2 | 42.16  | 42.16  | N/A | N/A |
| 18:15-18:30 | 3 | 480.32 | 480.32 | N/A | N/A |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.70    | 0.16            | 2.27            | A       | 711.15                | 1066.73              | 132.49                         | 0.12                         | 1.47                                 | 132.51                                   | 0.12                                   | 0.548 | 1231.848           |
| 2   | 0.09    | 0.09            | 0.09            | A       | 51.39                 | 77.08                | 6.37                           | 0.08                         | 0.07                                 | 6.37                                     | 0.08                                   | 0.532 | 1150.623           |
| 3   | 0.65    | 0.16            | 1.83            | A       | 585.44                | 878.16               | 110.47                         | 0.13                         | 1.23                                 | 110.49                                   | 0.13                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 583.46          | 145.87         | 579.87              | 489.94             | 11.97                     | 0.00                       | 1225.29           | 1218.93                      | 0.476 | 0.00              | 0.90            |
| 2   | 42.16           | 10.54          | 41.95               | 35.16              | 556.67                    | 0.00                       | 854.52            | 528.18                       | 0.049 | 0.00              | 0.05            |
| 3   | 480.32          | 120.08         | 477.19              | 573.90             | 24.72                     | 0.00                       | 1086.81           | 939.64                       | 0.442 | 0.00              | 0.78            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 696.71          | 174.18         | 695.11              | 587.54             | 14.35                     | 0.00                       | 1223.98           | 1218.93                      | 0.569 | 0.90              | 1.30            |
| 2   | 50.34           | 12.59          | 50.28               | 42.16              | 667.30                    | 0.00                       | 795.67            | 528.18                       | 0.063 | 0.05              | 0.07            |
| 3   | 573.55          | 143.39         | 572.26              | 687.95             | 29.63                     | 0.00                       | 1084.29           | 939.64                       | 0.529 | 0.78              | 1.11            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 853.29          | 213.32         | 849.54              | 718.38             | 17.55                     | 0.00                       | 1222.23           | 1218.93                      | 0.698 | 1.30              | 2.24            |
| 2   | 61.66           | 15.41          | 61.55               | 51.53              | 815.56                    | 0.00                       | 716.81            | 528.18                       | 0.086 | 0.07              | 0.09            |
| 3   | 702.45          | 175.61         | 699.65              | 840.84             | 36.27                     | 0.00                       | 1080.88           | 939.64                       | 0.650 | 1.11              | 1.80            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 853.29          | 213.32         | 853.14              | 721.07             | 17.61                     | 0.00                       | 1222.19           | 1218.93                      | 0.698 | 2.24              | 2.27            |
| 2   | 61.66           | 15.41          | 61.66               | 51.74              | 819.02                    | 0.00                       | 714.97            | 528.18                       | 0.086 | 0.09              | 0.09            |
| 3   | 702.45          | 175.61         | 702.35              | 844.34             | 36.33                     | 0.00                       | 1080.85           | 939.64                       | 0.650 | 1.80              | 1.83            |

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

|  |  |  |  |  |  | Pedestrian |  | Saturation |  | Start | End |
|--|--|--|--|--|--|------------|--|------------|--|-------|-----|
|--|--|--|--|--|--|------------|--|------------|--|-------|-----|

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------|-----------------|
| 1   | 696.71          | 174.18         | 700.43              | 591.58             | 14.45                     | 0.00                       | 1223.93           | 1218.93                      | 0.569 | 2.27        | 1.34            |
| 2   | 50.34           | 12.59          | 50.45               | 42.47              | 672.41                    | 0.00                       | 792.96            | 528.18                       | 0.063 | 0.09        | 0.07            |
| 3   | 573.55          | 143.39         | 576.30              | 693.13             | 29.73                     | 0.00                       | 1084.24           | 939.64                       | 0.529 | 1.83        | 1.14            |

### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 583.46          | 145.87         | 585.16              | 494.48             | 12.08                     | 0.00                       | 1225.23           | 1218.93                      | 0.476 | 1.34              | 0.92            |
| 2   | 42.16           | 10.54          | 42.22               | 35.49              | 561.75                    | 0.00                       | 851.82            | 528.18                       | 0.049 | 0.07              | 0.05            |
| 3   | 480.32          | 120.08         | 481.68              | 579.09             | 24.88                     | 0.00                       | 1086.73           | 939.64                       | 0.442 | 1.14              | 0.80            |

## Queueing Delay Results

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 12.95                          | 0.86                                 | 0.092                                    | A                             | A                           |
| 2   | 0.76                           | 0.05                                 | 0.074                                    | A                             | A                           |
| 3   | 11.29                          | 0.75                                 | 0.098                                    | A                             | A                           |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 18.80                          | 1.25                                 | 0.113                                    | A                             | A                           |
| 2   | 0.99                           | 0.07                                 | 0.080                                    | A                             | A                           |
| 3   | 16.02                          | 1.07                                 | 0.117                                    | A                             | A                           |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 31.55                          | 2.10                                 | 0.159                                    | A                             | A                           |
| 2   | 1.38                           | 0.09                                 | 0.092                                    | A                             | A                           |
| 3   | 25.64                          | 1.71                                 | 0.156                                    | A                             | A                           |

### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 33.88                          | 2.26                                 | 0.162                                    | A                             | A                           |
| 2   | 1.41                           | 0.09                                 | 0.092                                    | A                             | A                           |
| 3   | 27.29                          | 1.82                                 | 0.158                                    | A                             | A                           |

### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 21.08                          | 1.41                                 | 0.115                                    | A                             | A                           |
| 2   | 1.04                           | 0.07                                 | 0.081                                    | A                             | A                           |
| 3   | 17.84                          | 1.19                                 | 0.119                                    | A                             | A                           |

### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 14.23                          | 0.95                                 | 0.094                                    | A                             | A                           |
| 2   | 0.80                           | 0.05                                 | 0.074                                    | A                             | A                           |
| 3   | 12.39                          | 0.83                                 | 0.099                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 583.46          | 1225.29           | 0.476 | 0.00                       | 0.00              | 0.90            | 12.95                          | (0.00)                          | 0.092                                    |
| 17:00-17:15  | 2   | 42.16           | 854.52            | 0.049 | 0.00                       | 0.00              | 0.05            | 0.76                           | (0.00)                          | 0.074                                    |
| 17:00-17:15  | 3   | 480.32          | 1086.81           | 0.442 | 0.00                       | 0.00              | 0.78            | 11.29                          | (0.00)                          | 0.098                                    |
| 17:15-17:30  | 1   | 696.71          | 1223.98           | 0.569 | 0.00                       | 0.90              | 1.30            | 18.80                          | (0.00)                          | 0.113                                    |
| 17:15-17:30  | 2   | 50.34           | 795.67            | 0.063 | 0.00                       | 0.05              | 0.07            | 0.99                           | (0.00)                          | 0.080                                    |
| 17:15-17:30  | 3   | 573.55          | 1084.29           | 0.529 | 0.00                       | 0.78              | 1.11            | 16.02                          | (0.00)                          | 0.117                                    |
| 17:30-17:45  | 1   | 853.29          | 1222.23           | 0.698 | 0.00                       | 1.30              | 2.24            | 31.55                          | (0.00)                          | 0.159                                    |
| 17:30-17:45  | 2   | 61.66           | 716.81            | 0.086 | 0.00                       | 0.07              | 0.09            | 1.38                           | (0.00)                          | 0.092                                    |
| 17:30-17:45  | 3   | 702.45          | 1080.88           | 0.650 | 0.00                       | 1.11              | 1.80            | 25.64                          | (0.00)                          | 0.156                                    |
| 17:45-18:00  | 1   | 853.29          | 1222.19           | 0.698 | 0.00                       | 2.24              | 2.27            | 33.88                          | (0.00)                          | 0.162                                    |
| 17:45-18:00  | 2   | 61.66           | 714.97            | 0.086 | 0.00                       | 0.09              | 0.09            | 1.41                           | (0.00)                          | 0.092                                    |
| 17:45-18:00  | 3   | 702.45          | 1080.85           | 0.650 | 0.00                       | 1.80              | 1.83            | 27.29                          | (0.00)                          | 0.158                                    |
| 18:00-18:15  | 1   | 696.71          | 1223.93           | 0.569 | 0.00                       | 2.27              | 1.34            | 21.08                          | (0.00)                          | 0.115                                    |
| 18:00-18:15  | 2   | 50.34           | 792.96            | 0.063 | 0.00                       | 0.09              | 0.07            | 1.04                           | (0.00)                          | 0.081                                    |
| 18:00-18:15  | 3   | 573.55          | 1084.24           | 0.529 | 0.00                       | 1.83              | 1.14            | 17.84                          | (0.00)                          | 0.119                                    |
| 18:15-18:30  | 1   | 583.46          | 1225.23           | 0.476 | 0.00                       | 1.34              | 0.92            | 14.23                          | (0.00)                          | 0.094                                    |
| 18:15-18:30  | 2   | 42.16           | 851.82            | 0.049 | 0.00                       | 0.07              | 0.05            | 0.80                           | (0.00)                          | 0.074                                    |
| 18:15-18:30  | 3   | 480.32          | 1086.73           | 0.442 | 0.00                       | 1.14              | 0.80            | 12.39                          | (0.00)                          | 0.099                                    |

## A1 - (Default Analysis Set) - D2 - Base 2015 + Dev, PM

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name                | Scenario Name   | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|---------------------|-----------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| Base 2015 + Dev, PM | Base 2015 + Dev | PM               |             |        | Yes               |                  |              | 17:00              | 18:30               | 90                       | 15                        | ONE HOUR             |

### Roundabout Type(s)

## Roundabout Network Options

## Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |
| 3   | 0.00                      | 99999.00                  |                           | 0.00                |

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

### Slope and Intercept used in model

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

## Traffic Flows

| Vehicle | Vehicle | Vehicle | PCU | Estimate | Turning | Turning | Turning |
|---------|---------|---------|-----|----------|---------|---------|---------|
|---------|---------|---------|-----|----------|---------|---------|---------|

| Default Vehicle Mix | Mix Varies Over Time | Mix Varies Over Turn | Mix Varies Over Entry | Vehicle Mix Source | Factor for a HV (PCU) | Default Turning Proportions | from entry/exit counts | Proportions Vary Over Time | Proportions Vary Over Turn | Proportions Vary Over Entry |
|---------------------|----------------------|----------------------|-----------------------|--------------------|-----------------------|-----------------------------|------------------------|----------------------------|----------------------------|-----------------------------|
|                     |                      | Yes                  | Yes                   | HV Percentages     | 2.00                  |                             |                        |                            | Yes                        | Yes                         |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 801.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 118.00                       | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 655.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 603.03                            | 603.03                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 88.84                             | 88.84                               | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 493.12                            | 493.12                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 720.08                            | 720.08                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 106.08                            | 106.08                              | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 588.83                            | 588.83                              | N/A                              | N/A                                    |
| 17:30-17:45  | 1   | 881.92                            | 881.92                              | N/A                              | N/A                                    |
| 17:30-17:45  | 2   | 129.92                            | 129.92                              | N/A                              | N/A                                    |
| 17:30-17:45  | 3   | 721.17                            | 721.17                              | N/A                              | N/A                                    |
| 17:45-18:00  | 1   | 881.92                            | 881.92                              | N/A                              | N/A                                    |
| 17:45-18:00  | 2   | 129.92                            | 129.92                              | N/A                              | N/A                                    |
| 17:45-18:00  | 3   | 721.17                            | 721.17                              | N/A                              | N/A                                    |
| 18:00-18:15  | 1   | 720.08                            | 720.08                              | N/A                              | N/A                                    |
| 18:00-18:15  | 2   | 106.08                            | 106.08                              | N/A                              | N/A                                    |
| 18:00-18:15  | 3   | 588.83                            | 588.83                              | N/A                              | N/A                                    |
| 18:15-18:30  | 1   | 603.03                            | 603.03                              | N/A                              | N/A                                    |
| 18:15-18:30  | 2   | 88.84                             | 88.84                               | N/A                              | N/A                                    |
| 18:15-18:30  | 3   | 493.12                            | 493.12                              | N/A                              | N/A                                    |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.73    | 0.18            | 2.65            | B       | 735.01                | 1102.52              | 149.50                         | 0.14                         | 1.66                                 | 149.53                                   | 0.14                                   | 0.548 | 1231.848           |
| 2   | 0.18    | 0.10            | 0.22            | A       | 108.28                | 162.42               | 14.52                          | 0.09                         | 0.16                                 | 14.52                                    | 0.09                                   | 0.532 | 1150.623           |
| 3   | 0.68    | 0.18            | 2.11            | B       | 601.04                | 901.56               | 123.64                         | 0.14                         | 1.37                                 | 123.66                                   | 0.14                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-----|-------------------|-----------------|
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-----|-------------------|-----------------|

|   |        |        |        |        |        |      |         |         |       |      |      |
|---|--------|--------|--------|--------|--------|------|---------|---------|-------|------|------|
| 1 | 603.03 | 150.76 | 599.14 | 516.01 | 30.66  | 0.00 | 1215.05 | 1200.55 | 0.496 | 0.00 | 0.97 |
| 2 | 88.84  | 22.21  | 88.38  | 80.77  | 549.03 | 0.00 | 858.58  | 565.44  | 0.103 | 0.00 | 0.11 |
| 3 | 493.12 | 123.28 | 489.74 | 580.48 | 56.92  | 0.00 | 1070.27 | 912.45  | 0.461 | 0.00 | 0.84 |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 720.08          | 180.02         | 718.23              | 618.80             | 36.76                     | 0.00                       | 1211.70           | 1200.55                      | 0.594 | 0.97              | 1.44            |
| 2   | 106.08          | 26.52          | 105.93              | 96.84              | 658.15                    | 0.00                       | 800.54            | 565.44                       | 0.133 | 0.11              | 0.15            |
| 3   | 588.83          | 147.21         | 587.34              | 695.85             | 68.23                     | 0.00                       | 1064.46           | 912.45                       | 0.553 | 0.84              | 1.22            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 881.92          | 220.48         | 877.27              | 756.31             | 44.93                     | 0.00                       | 1207.23           | 1200.55                      | 0.731 | 1.44              | 2.60            |
| 2   | 129.92          | 32.48          | 129.66              | 118.31             | 803.89                    | 0.00                       | 723.02            | 565.44                       | 0.180 | 0.15              | 0.22            |
| 3   | 721.17          | 180.29         | 717.73              | 850.04             | 83.51                     | 0.00                       | 1056.61           | 912.45                       | 0.683 | 1.22              | 2.08            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 881.92          | 220.48         | 881.70              | 759.57             | 45.13                     | 0.00                       | 1207.11           | 1200.55                      | 0.731 | 2.60              | 2.65            |
| 2   | 129.92          | 32.48          | 129.91              | 118.88             | 807.95                    | 0.00                       | 720.86            | 565.44                       | 0.180 | 0.22              | 0.22            |
| 3   | 721.17          | 180.29         | 721.03              | 854.19             | 83.67                     | 0.00                       | 1056.53           | 912.45                       | 0.683 | 2.08              | 2.11            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 720.08          | 180.02         | 724.72              | 623.65             | 37.07                     | 0.00                       | 1211.53           | 1200.55                      | 0.594 | 2.65              | 1.49            |
| 2   | 106.08          | 26.52          | 106.34              | 97.69              | 664.10                    | 0.00                       | 797.37            | 565.44                       | 0.133 | 0.22              | 0.15            |
| 3   | 588.83          | 147.21         | 592.23              | 701.95             | 68.49                     | 0.00                       | 1064.33           | 912.45                       | 0.553 | 2.11              | 1.26            |

#### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 603.03          | 150.76         | 605.02              | 521.05             | 30.97                     | 0.00                       | 1214.88           | 1200.55                      | 0.496 | 1.49              | 1.00            |
| 2   | 88.84           | 22.21          | 88.99               | 81.57              | 554.41                    | 0.00                       | 855.72            | 565.44                       | 0.104 | 0.15              | 0.12            |
| 3   | 493.12          | 123.28         | 494.70              | 586.08             | 57.31                     | 0.00                       | 1070.07           | 912.45                       | 0.461 | 1.26              | 0.87            |

## Queueing Delay Results

#### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 13.99                          | 0.93                                 | 0.097                                    | A                             | A                           |
| 2   | 1.68                           | 0.11                                 | 0.078                                    | A                             | A                           |
| 3   | 12.13                          | 0.81                                 | 0.103                                    | A                             | A                           |

#### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 20.72                          | 1.38                                 | 0.121                                    | A                             | A                           |
| 2   | 2.24                           | 0.15                                 | 0.086                                    | A                             | A                           |
| 3   | 17.57                          | 1.17                                 | 0.125                                    | A                             | A                           |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 36.29                          | 2.42                                 | 0.179                                    | B                             | B                           |
| 2   | 3.19                           | 0.21                                 | 0.101                                    | A                             | A                           |
| 3   | 29.25                          | 1.95                                 | 0.175                                    | B                             | B                           |

### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 39.48                          | 2.63                                 | 0.184                                    | B                             | B                           |
| 2   | 3.27                           | 0.22                                 | 0.102                                    | A                             | A                           |
| 3   | 31.47                          | 2.10                                 | 0.179                                    | B                             | B                           |

### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 23.54                          | 1.57                                 | 0.124                                    | A                             | A                           |
| 2   | 2.37                           | 0.16                                 | 0.087                                    | A                             | A                           |
| 3   | 19.81                          | 1.32                                 | 0.128                                    | A                             | A                           |

### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 15.48                          | 1.03                                 | 0.099                                    | A                             | A                           |
| 2   | 1.78                           | 0.12                                 | 0.078                                    | A                             | A                           |
| 3   | 13.41                          | 0.89                                 | 0.105                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 603.03          | 1215.05           | 0.496 | 0.00                       | 0.00              | 0.97            | 13.99                          | (0.00)                          | 0.097                                    |
| 17:00-17:15  | 2   | 88.84           | 858.58            | 0.103 | 0.00                       | 0.00              | 0.11            | 1.68                           | (0.00)                          | 0.078                                    |
| 17:00-17:15  | 3   | 493.12          | 1070.27           | 0.461 | 0.00                       | 0.00              | 0.84            | 12.13                          | (0.00)                          | 0.103                                    |
| 17:15-17:30  | 1   | 720.08          | 1211.70           | 0.594 | 0.00                       | 0.97              | 1.44            | 20.72                          | (0.00)                          | 0.121                                    |
| 17:15-17:30  | 2   | 106.08          | 800.54            | 0.133 | 0.00                       | 0.11              | 0.15            | 2.24                           | (0.00)                          | 0.086                                    |
| 17:15-17:30  | 3   | 588.83          | 1064.46           | 0.553 | 0.00                       | 0.84              | 1.22            | 17.57                          | (0.00)                          | 0.125                                    |
| 17:30-17:45  | 1   | 881.92          | 1207.23           | 0.731 | 0.00                       | 1.44              | 2.60            | 36.29                          | (0.00)                          | 0.179                                    |
| 17:30-17:45  | 2   | 129.92          | 723.02            | 0.180 | 0.00                       | 0.15              | 0.22            | 3.19                           | (0.00)                          | 0.101                                    |
| 17:30-17:45  | 3   | 721.17          | 1056.61           | 0.683 | 0.00                       | 1.22              | 2.08            | 29.25                          | (0.00)                          | 0.175                                    |
| 17:45-18:00  | 1   | 881.92          | 1207.11           | 0.731 | 0.00                       | 2.60              | 2.65            | 39.48                          | (0.00)                          | 0.184                                    |
| 17:45-18:00  | 2   | 129.92          | 723.02            | 0.180 | 0.00                       | 0.22              | 0.22            | 3.27                           | (0.00)                          | 0.102                                    |
| 17:45-18:00  | 3   | 721.17          | 1056.61           | 0.683 | 0.00                       | 2.08              | 2.08            | 31.47                          | (0.00)                          | 0.179                                    |

|             |   |        |         |       |      |      |      |       |        |       |
|-------------|---|--------|---------|-------|------|------|------|-------|--------|-------|
| 17:45-18:00 | 2 | 129.92 | 120.86  | 0.180 | 0.00 | 0.22 | 0.22 | 3.27  | (0.00) | 0.102 |
| 17:45-18:00 | 3 | 721.17 | 1056.53 | 0.683 | 0.00 | 2.08 | 2.11 | 31.47 | (0.00) | 0.179 |
| 18:00-18:15 | 1 | 720.08 | 1211.53 | 0.594 | 0.00 | 2.65 | 1.49 | 23.54 | (0.00) | 0.124 |
| 18:00-18:15 | 2 | 106.08 | 797.37  | 0.133 | 0.00 | 0.22 | 0.15 | 2.37  | (0.00) | 0.087 |
| 18:00-18:15 | 3 | 588.83 | 1064.33 | 0.553 | 0.00 | 2.11 | 1.26 | 19.81 | (0.00) | 0.128 |
| 18:15-18:30 | 1 | 603.03 | 1214.88 | 0.496 | 0.00 | 1.49 | 1.00 | 15.48 | (0.00) | 0.099 |
| 18:15-18:30 | 2 | 88.84  | 855.72  | 0.104 | 0.00 | 0.15 | 0.12 | 1.78  | (0.00) | 0.078 |
| 18:15-18:30 | 3 | 493.12 | 1070.07 | 0.461 | 0.00 | 1.26 | 0.87 | 13.41 | (0.00) | 0.105 |

## A1 - (Default Analysis Set) - D3 - Base 2020, PM

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name          | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|---------------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| Base 2020, PM | Base 2020     | PM               |             |        | Yes               |                  |              | 17:00              | 18:30               | 90                       | 15                        | ONE HOUR             |

## Roundabout Network

### Roundabout Type(s)

| ID           | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|--------------|------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 (untitled) |      | 1,2,3     | Standard        |                 |                  |                    |

### Roundabout Network Options

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

## Arms

### Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

### Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |
| 3   | 0.00                      | 99999.00                  |                           | 0.00                |

## Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

## Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

## Traffic Flows

### Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 831.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 60.00                        | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 685.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 625.62                            | 625.62                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 45.17                             | 45.17                               | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 515.70                            | 515.70                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 747.05                            | 747.05                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 53.94                             | 53.94                               | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 615.80                            | 615.80                              | N/A                              | N/A                                    |
| 17:30-17:45  | 1   | 914.95                            | 914.95                              | N/A                              | N/A                                    |

|             |   |        |        |     |     |
|-------------|---|--------|--------|-----|-----|
| 17:30-17:45 | 2 | 66.06  | 66.06  | N/A | N/A |
| 17:30-17:45 | 3 | 754.20 | 754.20 | N/A | N/A |
| 17:45-18:00 | 1 | 914.95 | 914.95 | N/A | N/A |
| 17:45-18:00 | 2 | 66.06  | 66.06  | N/A | N/A |
| 17:45-18:00 | 3 | 754.20 | 754.20 | N/A | N/A |
| 18:00-18:15 | 1 | 747.05 | 747.05 | N/A | N/A |
| 18:00-18:15 | 2 | 53.94  | 53.94  | N/A | N/A |
| 18:00-18:15 | 3 | 615.80 | 615.80 | N/A | N/A |
| 18:15-18:30 | 1 | 625.62 | 625.62 | N/A | N/A |
| 18:15-18:30 | 2 | 45.17  | 45.17  | N/A | N/A |
| 18:15-18:30 | 3 | 515.70 | 515.70 | N/A | N/A |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.75    | 0.20            | 2.91            | B       | 762.54                | 1143.81              | 161.39                         | 0.14                         | 1.79                                 | 161.41                                   | 0.14                                   | 0.548 | 1231.848           |
| 2   | 0.10    | 0.10            | 0.11            | A       | 55.06                 | 82.59                | 7.14                           | 0.09                         | 0.08                                 | 7.14                                     | 0.09                                   | 0.532 | 1150.623           |
| 3   | 0.70    | 0.18            | 2.27            | B       | 628.57                | 942.85               | 131.97                         | 0.14                         | 1.47                                 | 132.00                                   | 0.14                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 625.62          | 156.41         | 621.50              | 525.64             | 12.71                     | 0.00                       | 1224.88           | 1219.05                      | 0.511 | 0.00              | 1.03            |
| 2   | 45.17           | 11.29          | 44.94               | 37.39              | 596.82                    | 0.00                       | 833.16            | 527.94                       | 0.054 | 0.00              | 0.06            |
| 3   | 515.70          | 128.93         | 512.13              | 615.55             | 26.22                     | 0.00                       | 1086.04           | 941.33                       | 0.475 | 0.00              | 0.89            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 747.05          | 186.76         | 745.03              | 630.38             | 15.24                     | 0.00                       | 1223.49           | 1219.05                      | 0.611 | 1.03              | 1.54            |
| 2   | 53.94           | 13.48          | 53.87               | 44.83              | 715.44                    | 0.00                       | 770.07            | 527.94                       | 0.070 | 0.06              | 0.07            |
| 3   | 615.80          | 153.95         | 614.20              | 737.89             | 31.42                     | 0.00                       | 1083.37           | 941.33                       | 0.568 | 0.89              | 1.29            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 914.95          | 228.74         | 909.71              | 770.28             | 18.62                     | 0.00                       | 1221.64           | 1219.04                      | 0.749 | 1.54              | 2.85            |
| 2   | 66.06           | 16.52          | 65.94               | 54.75              | 873.59                    | 0.00                       | 685.95            | 527.94                       | 0.096 | 0.07              | 0.11            |
| 3   | 754.20          | 188.55         | 750.44              | 901.06             | 38.46                     | 0.00                       | 1079.75           | 941.33                       | 0.698 | 1.29              | 2.23            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 914.95          | 228.74         | 914.69              | 773.86             | 18.71                     | 0.00                       | 1221.59           | 1219.04                      | 0.749 | 2.85              | 2.91            |
| 2   | 66.06           | 16.52          | 66.06               | 55.04              | 878.36                    | 0.00                       | 683.40            | 527.94                       | 0.097 | 0.11              | 0.11            |
| 3   | 754.20          | 188.55         | 754.04              | 905.89             | 38.53                     | 0.00                       | 1079.71           | 941.33                       | 0.699 | 2.23              | 2.27            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 747.05          | 186.76         | 752.29              | 635.68             | 15.37                     | 0.00                       | 1223.42           | 1219.05                      | 0.611 | 2.91              | 1.60            |
| 2   | 53.94           | 13.48          | 54.06               | 45.25              | 722.42                    | 0.00                       | 766.36            | 527.94                       | 0.070 | 0.11              | 0.08            |
| 3   | 615.80          | 153.95         | 619.52              | 744.94             | 31.54                     | 0.00                       | 1083.31           | 941.33                       | 0.568 | 2.27              | 1.34            |

### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 625.62          | 156.41         | 627.79              | 530.96             | 12.84                     | 0.00                       | 1224.81           | 1219.05                      | 0.511 | 1.60              | 1.06            |
| 2   | 45.17           | 11.29          | 45.24               | 37.77              | 602.86                    | 0.00                       | 829.95            | 527.94                       | 0.054 | 0.08              | 0.06            |
| 3   | 515.70          | 128.93         | 517.41              | 621.71             | 26.39                     | 0.00                       | 1085.95           | 941.33                       | 0.475 | 1.34              | 0.92            |

## Queueing Delay Results

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 14.79                          | 0.99                                 | 0.099                                    | A                             | A                           |
| 2   | 0.84                           | 0.06                                 | 0.076                                    | A                             | A                           |
| 3   | 12.82                          | 0.85                                 | 0.104                                    | A                             | A                           |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 22.10                          | 1.47                                 | 0.125                                    | A                             | A                           |
| 2   | 1.10                           | 0.07                                 | 0.084                                    | A                             | A                           |
| 3   | 18.65                          | 1.24                                 | 0.127                                    | A                             | A                           |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 39.49                          | 2.63                                 | 0.189                                    | B                             | B                           |
| 2   | 1.56                           | 0.10                                 | 0.097                                    | A                             | A                           |
| 3   | 31.33                          | 2.09                                 | 0.180                                    | B                             | B                           |

### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 43.27                          | 2.88                                 | 0.195                                    | B                             | B                           |
| 2   | 1.59                           | 0.11                                 | 0.097                                    | A                             | A                           |
| 3   | 33.84                          | 2.26                                 | 0.184                                    | B                             | B                           |

### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 25.30                          | 1.69                                 | 0.129                                    | A                             | A                           |
| 2   | 1.16                           | 0.08                                 | 0.084                                    | A                             | A                           |
| 3   | 21.12                          | 1.41                                 | 0.130                                    | A                             | A                           |

### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 16.44                          | 1.10                                 | 0.101                                    | A                             | A                           |
| 2   | 0.88                           | 0.06                                 | 0.076                                    | A                             | A                           |
| 3   | 14.21                          | 0.95                                 | 0.106                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 625.62          | 1224.88           | 0.511 | 0.00                       | 0.00              | 1.03            | 14.79                          | (0.00)                          | 0.099                                    |
| 17:00-17:15  | 2   | 45.17           | 833.16            | 0.054 | 0.00                       | 0.00              | 0.06            | 0.84                           | (0.00)                          | 0.076                                    |
| 17:00-17:15  | 3   | 515.70          | 1086.04           | 0.475 | 0.00                       | 0.00              | 0.89            | 12.82                          | (0.00)                          | 0.104                                    |
| 17:15-17:30  | 1   | 747.05          | 1223.49           | 0.611 | 0.00                       | 1.03              | 1.54            | 22.10                          | (0.00)                          | 0.125                                    |
| 17:15-17:30  | 2   | 53.94           | 770.07            | 0.070 | 0.00                       | 0.06              | 0.07            | 1.10                           | (0.00)                          | 0.084                                    |
| 17:15-17:30  | 3   | 615.80          | 1083.37           | 0.568 | 0.00                       | 0.89              | 1.29            | 18.65                          | (0.00)                          | 0.127                                    |
| 17:30-17:45  | 1   | 914.95          | 1221.64           | 0.749 | 0.00                       | 1.54              | 2.85            | 39.49                          | (0.00)                          | 0.189                                    |
| 17:30-17:45  | 2   | 66.06           | 685.95            | 0.096 | 0.00                       | 0.07              | 0.11            | 1.56                           | (0.00)                          | 0.097                                    |
| 17:30-17:45  | 3   | 754.20          | 1079.75           | 0.698 | 0.00                       | 1.29              | 2.23            | 31.33                          | (0.00)                          | 0.180                                    |
| 17:45-18:00  | 1   | 914.95          | 1221.59           | 0.749 | 0.00                       | 2.85              | 2.91            | 43.27                          | (0.00)                          | 0.195                                    |
| 17:45-18:00  | 2   | 66.06           | 683.40            | 0.097 | 0.00                       | 0.11              | 0.11            | 1.59                           | (0.00)                          | 0.097                                    |
| 17:45-18:00  | 3   | 754.20          | 1079.71           | 0.699 | 0.00                       | 2.23              | 2.27            | 33.84                          | (0.00)                          | 0.184                                    |
| 18:00-18:15  | 1   | 747.05          | 1223.42           | 0.611 | 0.00                       | 2.91              | 1.60            | 25.30                          | (0.00)                          | 0.129                                    |
| 18:00-18:15  | 2   | 53.94           | 766.36            | 0.070 | 0.00                       | 0.11              | 0.08            | 1.16                           | (0.00)                          | 0.084                                    |
| 18:00-18:15  | 3   | 615.80          | 1083.31           | 0.568 | 0.00                       | 2.27              | 1.34            | 21.12                          | (0.00)                          | 0.130                                    |
| 18:15-18:30  | 1   | 625.62          | 1224.81           | 0.511 | 0.00                       | 1.60              | 1.06            | 16.44                          | (0.00)                          | 0.101                                    |
| 18:15-18:30  | 2   | 45.17           | 829.95            | 0.054 | 0.00                       | 0.08              | 0.06            | 0.88                           | (0.00)                          | 0.076                                    |
| 18:15-18:30  | 3   | 515.70          | 1085.95           | 0.475 | 0.00                       | 1.34              | 0.92            | 14.21                          | (0.00)                          | 0.106                                    |

## A1 - (Default Analysis Set) - D4 - Base 2020 + Dev, PM

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| Base | Base 2020     |                  |             |        |                   |                  |              |                    |                     |                          |                           | ONE                  |

## Roundabout Network

| ID | Name       | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|----|------------|-----------|-----------------|-----------------|------------------|--------------------|
| 1  | (untitled) | 1,2,3     | Standard        |                 |                  |                    |

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

## Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |
| 3   | 0.00                      | 99999.00                  |                           | 0.00                |

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

## Traffic Flows

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 857.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 123.00                       | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 701.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 645.19                            | 645.19                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 92.60                             | 92.60                               | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 527.75                            | 527.75                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 770.43                            | 770.43                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 110.57                            | 110.57                              | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 630.18                            | 630.18                              | N/A                              | N/A                                    |
| 17:30-17:45  | 1   | 943.57                            | 943.57                              | N/A                              | N/A                                    |
| 17:30-17:45  | 2   | 135.43                            | 135.43                              | N/A                              | N/A                                    |
| 17:30-17:45  | 3   | 771.82                            | 771.82                              | N/A                              | N/A                                    |
| 17:45-18:00  | 1   | 943.57                            | 943.57                              | N/A                              | N/A                                    |
| 17:45-18:00  | 2   | 135.43                            | 135.43                              | N/A                              | N/A                                    |
| 17:45-18:00  | 3   | 771.82                            | 771.82                              | N/A                              | N/A                                    |
| 18:00-18:15  | 1   | 770.43                            | 770.43                              | N/A                              | N/A                                    |
| 18:00-18:15  | 2   | 110.57                            | 110.57                              | N/A                              | N/A                                    |
| 18:00-18:15  | 3   | 630.18                            | 630.18                              | N/A                              | N/A                                    |
| 18:15-18:30  | 1   | 645.19                            | 645.19                              | N/A                              | N/A                                    |
| 18:15-18:30  | 2   | 92.60                             | 92.60                               | N/A                              | N/A                                    |
| 18:15-18:30  | 3   | 527.75                            | 527.75                              | N/A                              | N/A                                    |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.78    | 0.23            | 3.47            | B       | 786.40                | 1179.60              | 184.37                         | 0.16                         | 2.05                                 | 184.40                                   | 0.16                                   | 0.548 | 1231.848           |
| 2   | 0.20    | 0.11            | 0.24            | A       | 112.87                | 169.30               | 15.92                          | 0.09                         | 0.18                                 | 15.92                                    | 0.09                                   | 0.532 | 1150.623           |
| 3   | 0.73    | 0.21            | 2.66            | B       | 643.25                | 964.87               | 148.78                         | 0.15                         | 1.65                                 | 148.80                                   | 0.15                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand | Arrivals | Entry Flow | Exit Flow | Circulating | Pedestrian Demand | Capacity | Saturation Capacity | RFC | Start Queue | End Queue |
|-----|--------|----------|------------|-----------|-------------|-------------------|----------|---------------------|-----|-------------|-----------|
|-----|--------|----------|------------|-----------|-------------|-------------------|----------|---------------------|-----|-------------|-----------|

|   | (PCU/hr) | (PCU)  | (PCU/hr) | (PCU/hr) | Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | (PCU/hr) | Capacity (PCU/hr) | RFC   | Queue (PCU) | Queue (PCU) |
|---|----------|--------|----------|----------|---------------|----------------------------|----------|-------------------|-------|-------------|-------------|
| 1 | 645.19   | 161.30 | 640.73   | 551.67   | 31.39         | 0.00                       | 1214.65  | 1201.84           | 0.531 | 0.00        | 1.12        |
| 2 | 92.60    | 23.15  | 92.11    | 82.98    | 589.14        | 0.00                       | 837.25   | 562.81            | 0.111 | 0.00        | 0.12        |
| 3 | 527.75   | 131.94 | 523.91   | 622.09   | 59.16         | 0.00                       | 1069.12  | 913.84            | 0.494 | 0.00        | 0.96        |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 770.43          | 192.61         | 768.06              | 661.60             | 37.65                     | 0.00                       | 1211.22           | 1201.84                      | 0.636 | 1.12              | 1.71            |
| 2   | 110.57          | 27.64          | 110.41              | 99.49              | 706.22                    | 0.00                       | 774.97            | 562.81                       | 0.143 | 0.12              | 0.17            |
| 3   | 630.18          | 157.55         | 628.33              | 745.72             | 70.91                     | 0.00                       | 1063.08           | 913.84                       | 0.593 | 0.96              | 1.42            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 943.57          | 235.89         | 936.92              | 807.94             | 45.96                     | 0.00                       | 1206.66           | 1201.84                      | 0.782 | 1.71              | 3.37            |
| 2   | 135.43          | 33.86          | 135.12              | 121.40             | 861.49                    | 0.00                       | 692.38            | 562.81                       | 0.196 | 0.17              | 0.24            |
| 3   | 771.82          | 192.95         | 767.12              | 909.82             | 86.79                     | 0.00                       | 1054.93           | 913.84                       | 0.732 | 1.42              | 2.60            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 943.57          | 235.89         | 943.17              | 812.32             | 46.23                     | 0.00                       | 1206.51           | 1201.84                      | 0.782 | 3.37              | 3.47            |
| 2   | 135.43          | 33.86          | 135.42              | 122.17             | 867.23                    | 0.00                       | 689.33            | 562.81                       | 0.196 | 0.24              | 0.24            |
| 3   | 771.82          | 192.95         | 771.57              | 915.67             | 86.98                     | 0.00                       | 1054.83           | 913.84                       | 0.732 | 2.60              | 2.66            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 770.43          | 192.61         | 777.15              | 668.04             | 38.04                     | 0.00                       | 1211.00           | 1201.84                      | 0.636 | 3.47              | 1.79            |
| 2   | 110.57          | 27.64          | 110.87              | 100.61             | 714.58                    | 0.00                       | 770.52            | 562.81                       | 0.144 | 0.24              | 0.17            |
| 3   | 630.18          | 157.55         | 634.87              | 754.24             | 71.21                     | 0.00                       | 1062.93           | 913.84                       | 0.593 | 2.66              | 1.49            |

### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 645.19          | 161.30         | 647.76              | 557.59             | 31.74                     | 0.00                       | 1214.45           | 1201.84                      | 0.531 | 1.79              | 1.15            |
| 2   | 92.60           | 23.15          | 92.77               | 83.89              | 595.60                    | 0.00                       | 833.81            | 562.81                       | 0.111 | 0.17              | 0.13            |
| 3   | 527.75          | 131.94         | 529.75              | 628.79             | 59.59                     | 0.00                       | 1068.90           | 913.84                       | 0.494 | 1.49              | 0.99            |

## Queueing Delay Results

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 15.99                          | 1.07                                 | 0.104                                    | A                             | A                           |
| 2   | 1.81                           | 0.12                                 | 0.080                                    | A                             | A                           |
| 3   | 13.77                          | 0.92                                 | 0.109                                    | A                             | A                           |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 24.45                          | 1.63                                 | 0.135                                    | A                             | A                           |
| 2   | 2.43                           | 0.16                                 | 0.080                                    | A                             | A                           |

|   |       |      |       |   |   |
|---|-------|------|-------|---|---|
| 2 | 2.40  | 0.10 | 0.030 | A | A |
| 3 | 20.48 | 1.37 | 0.137 | A | A |

#### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 46.08                          | 3.07                                 | 0.217                                    | B                             | B                           |
| 2   | 3.53                           | 0.24                                 | 0.108                                    | A                             | A                           |
| 3   | 36.07                          | 2.40                                 | 0.205                                    | B                             | B                           |

#### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 51.48                          | 3.43                                 | 0.227                                    | B                             | B                           |
| 2   | 3.64                           | 0.24                                 | 0.108                                    | A                             | A                           |
| 3   | 39.53                          | 2.64                                 | 0.211                                    | B                             | B                           |

#### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 28.46                          | 1.90                                 | 0.140                                    | A                             | A                           |
| 2   | 2.59                           | 0.17                                 | 0.091                                    | A                             | A                           |
| 3   | 23.54                          | 1.57                                 | 0.142                                    | A                             | A                           |

#### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 17.92                          | 1.19                                 | 0.106                                    | A                             | A                           |
| 2   | 1.92                           | 0.13                                 | 0.081                                    | A                             | A                           |
| 3   | 15.39                          | 1.03                                 | 0.112                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 645.19          | 1214.65           | 0.531 | 0.00                       | 0.00              | 1.12            | 15.99                          | (0.00)                          | 0.104                                    |
| 17:00-17:15  | 2   | 92.60           | 837.25            | 0.111 | 0.00                       | 0.00              | 0.12            | 1.81                           | (0.00)                          | 0.080                                    |
| 17:00-17:15  | 3   | 527.75          | 1069.12           | 0.494 | 0.00                       | 0.00              | 0.96            | 13.77                          | (0.00)                          | 0.109                                    |
| 17:15-17:30  | 1   | 770.43          | 1211.22           | 0.636 | 0.00                       | 1.12              | 1.71            | 24.45                          | (0.00)                          | 0.135                                    |
| 17:15-17:30  | 2   | 110.57          | 774.97            | 0.143 | 0.00                       | 0.12              | 0.17            | 2.43                           | (0.00)                          | 0.090                                    |
| 17:15-17:30  | 3   | 630.18          | 1063.08           | 0.593 | 0.00                       | 0.96              | 1.42            | 20.48                          | (0.00)                          | 0.137                                    |
| 17:30-17:45  | 1   | 943.57          | 1206.66           | 0.782 | 0.00                       | 1.71              | 3.37            | 46.08                          | (0.00)                          | 0.217                                    |
| 17:30-17:45  | 2   | 135.43          | 692.38            | 0.196 | 0.00                       | 0.17              | 0.24            | 3.53                           | (0.00)                          | 0.108                                    |
| 17:30-17:45  | 3   | 771.82          | 1054.93           | 0.732 | 0.00                       | 1.42              | 2.60            | 36.07                          | (0.00)                          | 0.205                                    |

|             |   |        |         |       |      |      |      |       |        |       |
|-------------|---|--------|---------|-------|------|------|------|-------|--------|-------|
| 17:45-18:00 | 1 | 943.57 | 1206.51 | 0.782 | 0.00 | 3.37 | 3.47 | 51.48 | (0.00) | 0.227 |
| 17:45-18:00 | 2 | 135.43 | 689.33  | 0.196 | 0.00 | 0.24 | 0.24 | 3.64  | (0.00) | 0.108 |
| 17:45-18:00 | 3 | 771.82 | 1054.83 | 0.732 | 0.00 | 2.60 | 2.66 | 39.53 | (0.00) | 0.211 |
| 18:00-18:15 | 1 | 770.43 | 1211.00 | 0.636 | 0.00 | 3.47 | 1.79 | 28.46 | (0.00) | 0.140 |
| 18:00-18:15 | 2 | 110.57 | 770.52  | 0.144 | 0.00 | 0.24 | 0.17 | 2.59  | (0.00) | 0.091 |
| 18:00-18:15 | 3 | 630.18 | 1062.93 | 0.593 | 0.00 | 2.66 | 1.49 | 23.54 | (0.00) | 0.142 |
| 18:15-18:30 | 1 | 645.19 | 1214.45 | 0.531 | 0.00 | 1.79 | 1.15 | 17.92 | (0.00) | 0.106 |
| 18:15-18:30 | 2 | 92.60  | 833.81  | 0.111 | 0.00 | 0.17 | 0.13 | 1.92  | (0.00) | 0.081 |
| 18:15-18:30 | 3 | 527.75 | 1068.90 | 0.494 | 0.00 | 1.49 | 0.99 | 15.39 | (0.00) | 0.112 |

## A1 - (Default Analysis Set) - D5 - Base 2015, SAT

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name           | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|----------------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| Base 2015, SAT | Base 2015     | SAT              |             |        | Yes               |                  |              | 17:00              | 18:30               | 90                       | 15                        | ONE HOUR             |

## Roundabout Network

### Roundabout Type(s)

| ID           | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|--------------|------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 (untitled) |      | 1,2,3     | Standard        |                 |                  |                    |

### Roundabout Network Options

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

## Arms

### Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

### Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |

|   |      |          |      |
|---|------|----------|------|
| 3 | 0.00 | 99999.00 | 0.00 |
|---|------|----------|------|

## Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

## Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

## Traffic Flows

### Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 530.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 90.00                        | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 618.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 399.01                            | 399.01                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 67.76                             | 67.76                               | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 465.26                            | 465.26                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 476.46                            | 476.46                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 80.91                             | 80.91                               | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 555.57                            | 555.57                              | N/A                              | N/A                                    |

|             |   |        |        |     |     |
|-------------|---|--------|--------|-----|-----|
| 17:30-17:45 | 1 | 583.54 | 583.54 | N/A | N/A |
| 17:30-17:45 | 2 | 99.09  | 99.09  | N/A | N/A |
| 17:30-17:45 | 3 | 680.43 | 680.43 | N/A | N/A |
| 17:45-18:00 | 1 | 583.54 | 583.54 | N/A | N/A |
| 17:45-18:00 | 2 | 99.09  | 99.09  | N/A | N/A |
| 17:45-18:00 | 3 | 680.43 | 680.43 | N/A | N/A |
| 18:00-18:15 | 1 | 476.46 | 476.46 | N/A | N/A |
| 18:00-18:15 | 2 | 80.91  | 80.91  | N/A | N/A |
| 18:00-18:15 | 3 | 555.57 | 555.57 | N/A | N/A |
| 18:15-18:30 | 1 | 399.01 | 399.01 | N/A | N/A |
| 18:15-18:30 | 2 | 67.76  | 67.76  | N/A | N/A |
| 18:15-18:30 | 3 | 465.26 | 465.26 | N/A | N/A |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.49    | 0.10            | 0.96            | A       | 486.34                | 729.51               | 63.25                          | 0.09                         | 0.70                                 | 63.26                                    | 0.09                                   | 0.548 | 1231.848           |
| 2   | 0.12    | 0.08            | 0.13            | A       | 82.59                 | 123.88               | 9.16                           | 0.07                         | 0.10                                 | 9.16                                     | 0.07                                   | 0.532 | 1150.623           |
| 3   | 0.63    | 0.15            | 1.70            | A       | 567.09                | 850.63               | 103.90                         | 0.12                         | 1.15                                 | 103.92                                   | 0.12                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 399.01          | 99.75          | 397.03              | 436.91             | 58.35                     | 0.00                       | 1199.87           | 1165.36                      | 0.333 | 0.00              | 0.49            |
| 2   | 67.76           | 16.94          | 67.45               | 71.08              | 384.30                    | 0.00                       | 946.21            | 550.63                       | 0.072 | 0.00              | 0.08            |
| 3   | 465.26          | 116.32         | 462.28              | 418.77             | 32.98                     | 0.00                       | 1082.57           | 961.24                       | 0.430 | 0.00              | 0.75            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 476.46          | 119.11         | 475.80              | 523.92             | 69.97                     | 0.00                       | 1193.50           | 1165.36                      | 0.399 | 0.49              | 0.66            |
| 2   | 80.91           | 20.23          | 80.82               | 85.23              | 460.54                    | 0.00                       | 905.65            | 550.63                       | 0.089 | 0.08              | 0.10            |
| 3   | 555.57          | 138.89         | 554.37              | 501.85             | 39.51                     | 0.00                       | 1079.21           | 961.24                       | 0.515 | 0.75              | 1.05            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 583.54          | 145.89         | 582.34              | 640.71             | 85.56                     | 0.00                       | 1184.96           | 1165.36                      | 0.492 | 0.66              | 0.96            |
| 2   | 99.09           | 24.77          | 98.96               | 104.24             | 563.66                    | 0.00                       | 850.80            | 550.63                       | 0.116 | 0.10              | 0.13            |
| 3   | 680.43          | 170.11         | 677.88              | 614.24             | 48.38                     | 0.00                       | 1074.66           | 961.24                       | 0.633 | 1.05              | 1.68            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 583.54          | 145.89         | 583.52              | 642.92             | 85.87                     | 0.00                       | 1184.79           | 1165.36                      | 0.493 | 0.96              | 0.96            |
| 2   | 99.09           | 24.77          | 99.09               | 104.59             | 564.80                    | 0.00                       | 850.20            | 550.63                       | 0.117 | 0.13              | 0.13            |
| 3   | 680.43          | 170.11         | 680.34              | 615.45             | 48.44                     | 0.00                       | 1074.62           | 961.24                       | 0.633 | 1.68              | 1.70            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 476.46          | 119.11         | 477.63              | 527.26             | 70.44                     | 0.00                       | 1193.25           | 1165.36                      | 0.399 | 0.96              | 0.67            |
| 2   | 80.91           | 20.23          | 81.04               | 85.76              | 462.31                    | 0.00                       | 904.71            | 550.63                       | 0.089 | 0.13              | 0.10            |
| 3   | 555.57          | 138.89         | 558.07              | 503.73             | 39.62                     | 0.00                       | 1079.16           | 961.24                       | 0.515 | 1.70              | 1.08            |

### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 399.01          | 99.75          | 399.69              | 440.81             | 58.88                     | 0.00                       | 1199.58           | 1165.36                      | 0.333 | 0.67              | 0.50            |
| 2   | 67.76           | 16.94          | 67.84               | 71.70              | 386.87                    | 0.00                       | 944.84            | 550.63                       | 0.072 | 0.10              | 0.08            |
| 3   | 465.26          | 116.32         | 466.52              | 421.54             | 33.17                     | 0.00                       | 1082.47           | 961.24                       | 0.430 | 1.08              | 0.76            |

## Queueing Delay Results

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 7.21                           | 0.48                                 | 0.075                                    | A                             | A                           |
| 2   | 1.13                           | 0.08                                 | 0.068                                    | A                             | A                           |
| 3   | 10.76                          | 0.72                                 | 0.096                                    | A                             | A                           |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 9.66                           | 0.64                                 | 0.084                                    | A                             | A                           |
| 2   | 1.44                           | 0.10                                 | 0.073                                    | A                             | A                           |
| 3   | 15.17                          | 1.01                                 | 0.114                                    | A                             | A                           |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 13.94                          | 0.93                                 | 0.099                                    | A                             | A                           |
| 2   | 1.93                           | 0.13                                 | 0.080                                    | A                             | A                           |
| 3   | 23.97                          | 1.60                                 | 0.150                                    | A                             | A                           |

### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 14.43                          | 0.96                                 | 0.100                                    | A                             | A                           |
| 2   | 1.97                           | 0.13                                 | 0.080                                    | A                             | A                           |
| 3   | 25.42                          | 1.69                                 | 0.152                                    | A                             | A                           |

### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 10.33                          | 0.69                                 | 0.084                                    | A                             | A                           |
| 2   | 1.51                           | 0.10                                 | 0.073                                    | A                             | A                           |
| 3   | 16.81                          | 1.12                                 | 0.116                                    | A                             | A                           |

### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 7.69                           | 0.51                                 | 0.075                                    | A                             | A                           |
| 2   | 1.18                           | 0.08                                 | 0.068                                    | A                             | A                           |

|   |       |      |       |   |   |
|---|-------|------|-------|---|---|
| 3 | 11.77 | 0.78 | 0.098 | A | A |
|---|-------|------|-------|---|---|

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 399.01          | 1199.87           | 0.333 | 0.00                       | 0.00              | 0.49            | 7.21                           | (0.00)                          | 0.075                                    |
| 17:00-17:15  | 2   | 67.76           | 946.21            | 0.072 | 0.00                       | 0.00              | 0.08            | 1.13                           | (0.00)                          | 0.068                                    |
| 17:00-17:15  | 3   | 465.26          | 1082.57           | 0.430 | 0.00                       | 0.00              | 0.75            | 10.76                          | (0.00)                          | 0.096                                    |
| 17:15-17:30  | 1   | 476.46          | 1193.50           | 0.399 | 0.00                       | 0.49              | 0.66            | 9.66                           | (0.00)                          | 0.084                                    |
| 17:15-17:30  | 2   | 80.91           | 905.65            | 0.089 | 0.00                       | 0.08              | 0.10            | 1.44                           | (0.00)                          | 0.073                                    |
| 17:15-17:30  | 3   | 555.57          | 1079.21           | 0.515 | 0.00                       | 0.75              | 1.05            | 15.17                          | (0.00)                          | 0.114                                    |
| 17:30-17:45  | 1   | 583.54          | 1184.96           | 0.492 | 0.00                       | 0.66              | 0.96            | 13.94                          | (0.00)                          | 0.099                                    |
| 17:30-17:45  | 2   | 99.09           | 850.80            | 0.116 | 0.00                       | 0.10              | 0.13            | 1.93                           | (0.00)                          | 0.080                                    |
| 17:30-17:45  | 3   | 680.43          | 1074.66           | 0.633 | 0.00                       | 1.05              | 1.68            | 23.97                          | (0.00)                          | 0.150                                    |
| 17:45-18:00  | 1   | 583.54          | 1184.79           | 0.493 | 0.00                       | 0.96              | 0.96            | 14.43                          | (0.00)                          | 0.100                                    |
| 17:45-18:00  | 2   | 99.09           | 850.20            | 0.117 | 0.00                       | 0.13              | 0.13            | 1.97                           | (0.00)                          | 0.080                                    |
| 17:45-18:00  | 3   | 680.43          | 1074.62           | 0.633 | 0.00                       | 1.68              | 1.70            | 25.42                          | (0.00)                          | 0.152                                    |
| 18:00-18:15  | 1   | 476.46          | 1193.25           | 0.399 | 0.00                       | 0.96              | 0.67            | 10.33                          | (0.00)                          | 0.084                                    |
| 18:00-18:15  | 2   | 80.91           | 904.71            | 0.089 | 0.00                       | 0.13              | 0.10            | 1.51                           | (0.00)                          | 0.073                                    |
| 18:00-18:15  | 3   | 555.57          | 1079.16           | 0.515 | 0.00                       | 1.70              | 1.08            | 16.81                          | (0.00)                          | 0.116                                    |
| 18:15-18:30  | 1   | 399.01          | 1199.58           | 0.333 | 0.00                       | 0.67              | 0.50            | 7.69                           | (0.00)                          | 0.075                                    |
| 18:15-18:30  | 2   | 67.76           | 944.84            | 0.072 | 0.00                       | 0.10              | 0.08            | 1.18                           | (0.00)                          | 0.068                                    |
| 18:15-18:30  | 3   | 465.26          | 1082.47           | 0.430 | 0.00                       | 1.08              | 0.76            | 11.77                          | (0.00)                          | 0.098                                    |

## A1 - (Default Analysis Set) - D6 - Base 2015 + Dev, SAT

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
|------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|

|                      |                 |     |  |  |     |  |  |       |       |    |    |          |
|----------------------|-----------------|-----|--|--|-----|--|--|-------|-------|----|----|----------|
| Base 2015 + Dev, SAT | Base 2015 + Dev | SAT |  |  | Yes |  |  | 17:00 | 18:30 | 90 | 15 | ONE HOUR |
|----------------------|-----------------|-----|--|--|-----|--|--|-------|-------|----|----|----------|

## Roundabout Network

### Roundabout Type(s)

| ID           | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|--------------|------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 (untitled) |      | 1,2,3     | Standard        |                 |                  |                    |

### Roundabout Network Options

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

## Arms

### Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

### Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |
| 3   | 0.00                      | 99999.00                  |                           | 0.00                |

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

### Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

### Arm Slope/ Intercept and Capacity

#### Slope and Intercept used in model

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

## Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 567.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 181.00                       | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 646.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 426.87                            | 426.87                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 136.27                            | 136.27                              | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 486.34                            | 486.34                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 509.72                            | 509.72                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 162.72                            | 162.72                              | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 580.74                            | 580.74                              | N/A                              | N/A                                    |
| 17:30-17:45  | 1   | 624.28                            | 624.28                              | N/A                              | N/A                                    |
| 17:30-17:45  | 2   | 199.28                            | 199.28                              | N/A                              | N/A                                    |
| 17:30-17:45  | 3   | 711.26                            | 711.26                              | N/A                              | N/A                                    |
| 17:45-18:00  | 1   | 624.28                            | 624.28                              | N/A                              | N/A                                    |
| 17:45-18:00  | 2   | 199.28                            | 199.28                              | N/A                              | N/A                                    |
| 17:45-18:00  | 3   | 711.26                            | 711.26                              | N/A                              | N/A                                    |
| 18:00-18:15  | 1   | 509.72                            | 509.72                              | N/A                              | N/A                                    |
| 18:00-18:15  | 2   | 162.72                            | 162.72                              | N/A                              | N/A                                    |
| 18:00-18:15  | 3   | 580.74                            | 580.74                              | N/A                              | N/A                                    |
| 18:15-18:30  | 1   | 426.87                            | 426.87                              | N/A                              | N/A                                    |
| 18:15-18:30  | 2   | 136.27                            | 136.27                              | N/A                              | N/A                                    |
| 18:15-18:30  | 3   | 486.34                            | 486.34                              | N/A                              | N/A                                    |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.54    | 0.11            | 1.16            | A       | 520.29                | 780.43               | 73.95                          | 0.09                         | 0.82                                 | 73.95                                    | 0.09                                   | 0.548 | 1231.848           |
| 2   | 0.23    | 0.09            | 0.30            | A       | 166.09                | 249.13               | 20.44                          | 0.08                         | 0.23                                 | 20.44                                    | 0.08                                   | 0.532 | 1150.623           |
| 3   | 0.69    | 0.18            | 2.14            | B       | 592.78                | 889.17               | 124.57                         | 0.14                         | 1.38                                 | 124.59                                   | 0.14                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 426.87          | 106.72         | 424.63              | 476.42             | 89.72                     | 0.00                       | 1182.68           | 1139.71                      | 0.361 | 0.00              | 0.56            |
| 2   | 136.27          | 34.07          | 135.60              | 140.64             | 373.70                    | 0.00                       | 951.84            | 617.09                       | 0.143 | 0.00              | 0.17            |
| 3   | 486.34          | 121.59         | 482.98              | 426.14             | 83.16                     | 0.00                       | 1056.79           | 905.13                       | 0.460 | 0.00              | 0.84            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 509.72          | 127.43         | 508.92              | 571.30             | 107.60                    | 0.00                       | 1172.88           | 1139.71                      | 0.435 | 0.56              | 0.76            |
| 2   | 162.72          | 40.68          | 162.52              | 168.63             | 447.88                    | 0.00                       | 912.38            | 617.10                       | 0.178 | 0.17              | 0.22            |
| 3   | 580.74          | 145.19         | 579.23              | 510.74             | 99.67                     | 0.00                       | 1048.32           | 905.13                       | 0.554 | 0.84              | 1.22            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 624.28          | 156.07         | 622.73              | 698.25             | 131.46                    | 0.00                       | 1159.80           | 1139.71                      | 0.538 | 0.76              | 1.15            |
| 2   | 199.28          | 49.82          | 198.95              | 206.15             | 548.05                    | 0.00                       | 859.11            | 617.10                       | 0.232 | 0.22              | 0.30            |
| 3   | 711.26          | 177.81         | 707.71              | 624.99             | 122.01                    | 0.00                       | 1036.84           | 905.13                       | 0.686 | 1.22              | 2.11            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 624.28          | 156.07         | 624.24              | 701.22             | 132.09                    | 0.00                       | 1159.46           | 1139.71                      | 0.538 | 1.15              | 1.16            |
| 2   | 199.28          | 49.82          | 199.28              | 206.96             | 549.38                    | 0.00                       | 858.40            | 617.10                       | 0.232 | 0.30              | 0.30            |
| 3   | 711.26          | 177.81         | 711.11              | 626.45             | 122.21                    | 0.00                       | 1036.74           | 905.13                       | 0.686 | 2.11              | 2.14            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 509.72          | 127.43         | 511.24              | 575.71             | 108.53                    | 0.00                       | 1172.37           | 1139.71                      | 0.435 | 1.16              | 0.78            |
| 2   | 162.72          | 40.68          | 163.04              | 169.84             | 449.93                    | 0.00                       | 911.30            | 617.10                       | 0.179 | 0.30              | 0.22            |
| 3   | 580.74          | 145.19         | 584.26              | 512.98             | 99.99                     | 0.00                       | 1048.15           | 905.13                       | 0.554 | 2.14              | 1.27            |

#### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 426.87          | 106.72         | 427.70              | 481.00             | 90.64                     | 0.00                       | 1182.17           | 1139.71                      | 0.361 | 0.78              | 0.57            |
| 2   | 136.27          | 34.07          | 136.47              | 141.93             | 376.40                    | 0.00                       | 950.41            | 617.09                       | 0.143 | 0.22              | 0.17            |
| 3   | 486.34          | 121.59         | 487.95              | 429.18             | 83.69                     | 0.00                       | 1056.52           | 905.13                       | 0.460 | 1.27              | 0.86            |

## Queueing Delay Results

#### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 8.15                           | 0.54                                 | 0.079                                    | A                             | A                           |
| 2   | 2.43                           | 0.16                                 | 0.073                                    | A                             | A                           |
| 3   | 12.10                          | 0.81                                 | 0.104                                    | A                             | A                           |

#### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|

|   | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1 | 11.13                          | 0.74                                 | 0.090                                    | A                             | A                           |
| 2 | 3.18                           | 0.21                                 | 0.080                                    | A                             | A                           |
| 3 | 17.61                          | 1.17                                 | 0.127                                    | A                             | A                           |

#### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 16.61                          | 1.11                                 | 0.111                                    | A                             | A                           |
| 2   | 4.40                           | 0.29                                 | 0.091                                    | A                             | A                           |
| 3   | 29.62                          | 1.97                                 | 0.180                                    | B                             | B                           |

#### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 17.30                          | 1.15                                 | 0.112                                    | A                             | A                           |
| 2   | 4.51                           | 0.30                                 | 0.091                                    | A                             | A                           |
| 3   | 31.94                          | 2.13                                 | 0.184                                    | B                             | B                           |

#### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 12.01                          | 0.80                                 | 0.091                                    | A                             | A                           |
| 2   | 3.35                           | 0.22                                 | 0.080                                    | A                             | A                           |
| 3   | 19.90                          | 1.33                                 | 0.130                                    | A                             | A                           |

#### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 8.75                           | 0.58                                 | 0.080                                    | A                             | A                           |
| 2   | 2.57                           | 0.17                                 | 0.074                                    | A                             | A                           |
| 3   | 13.39                          | 0.89                                 | 0.106                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 426.87          | 1182.68           | 0.361 | 0.00                       | 0.00              | 0.56            | 8.15                           | (0.00)                          | 0.079                                    |
| 17:00-17:15  | 2   | 136.27          | 951.84            | 0.143 | 0.00                       | 0.00              | 0.17            | 2.43                           | (0.00)                          | 0.073                                    |
| 17:00-17:15  | 3   | 486.34          | 1056.79           | 0.460 | 0.00                       | 0.00              | 0.84            | 12.10                          | (0.00)                          | 0.104                                    |
| 17:15-17:30  | 1   | 509.72          | 1172.88           | 0.435 | 0.00                       | 0.56              | 0.76            | 11.13                          | (0.00)                          | 0.090                                    |
| 17:15-17:30  | 2   | 162.72          | 912.38            | 0.178 | 0.00                       | 0.17              | 0.22            | 3.18                           | (0.00)                          | 0.080                                    |
| 17:15-17:30  | 3   | 580.74          | 1048.32           | 0.554 | 0.00                       | 0.84              | 1.22            | 17.61                          | (0.00)                          | 0.127                                    |
| 17:30-17:45  | 1   | 624.28          | 1159.80           | 0.538 | 0.00                       | 0.76              | 1.15            | 16.61                          | (0.00)                          | 0.111                                    |
| 17:30-17:45  | 2   | 109.28          | 850.11            | 0.127 | 0.00                       | 0.22              | 0.30            | 4.40                           | (0.00)                          | 0.091                                    |

|             |   |        |         |       |      |      |      |       |        |       |
|-------------|---|--------|---------|-------|------|------|------|-------|--------|-------|
| 17:30-17:45 | 2 | 199.28 | 858.40  | 0.232 | 0.00 | 0.22 | 0.30 | 4.51  | (0.00) | 0.091 |
| 17:30-17:45 | 3 | 711.26 | 1036.84 | 0.686 | 0.00 | 1.22 | 2.11 | 29.62 | (0.00) | 0.180 |
| 17:45-18:00 | 1 | 624.28 | 1159.46 | 0.538 | 0.00 | 1.15 | 1.16 | 17.30 | (0.00) | 0.112 |
| 17:45-18:00 | 2 | 199.28 | 858.40  | 0.232 | 0.00 | 0.30 | 0.30 | 4.51  | (0.00) | 0.091 |
| 17:45-18:00 | 3 | 711.26 | 1036.74 | 0.686 | 0.00 | 2.11 | 2.14 | 31.94 | (0.00) | 0.184 |
| 18:00-18:15 | 1 | 509.72 | 1172.37 | 0.435 | 0.00 | 1.16 | 0.78 | 12.01 | (0.00) | 0.091 |
| 18:00-18:15 | 2 | 162.72 | 911.30  | 0.179 | 0.00 | 0.30 | 0.22 | 3.35  | (0.00) | 0.080 |
| 18:00-18:15 | 3 | 580.74 | 1048.15 | 0.554 | 0.00 | 2.14 | 1.27 | 19.90 | (0.00) | 0.130 |
| 18:15-18:30 | 1 | 426.87 | 1182.17 | 0.361 | 0.00 | 0.78 | 0.57 | 8.75  | (0.00) | 0.080 |
| 18:15-18:30 | 2 | 136.27 | 950.41  | 0.143 | 0.00 | 0.22 | 0.17 | 2.57  | (0.00) | 0.074 |
| 18:15-18:30 | 3 | 486.34 | 1056.52 | 0.460 | 0.00 | 1.27 | 0.86 | 13.39 | (0.00) | 0.106 |

## A1 - (Default Analysis Set) - D7 - Base 2020, SAT

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name           | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|----------------|---------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| Base 2020, SAT | Base 2020     | SAT              |             |        | Yes               |                  |              | 17:00              | 18:30               | 90                       | 15                        | ONE HOUR             |

## Roundabout Network

### Roundabout Type(s)

| ID           | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|--------------|------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 (untitled) |      | 1,2,3     | Standard        |                 |                  |                    |

### Roundabout Network Options

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

## Arms

### Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

### Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 0.000 00                  |                           | 0.00                |

|   |      |          |      |
|---|------|----------|------|
| 1 | 0.00 | 99999.00 | 0.00 |
| 2 | 0.00 | 99999.00 | 0.00 |
| 3 | 0.00 | 99999.00 | 0.00 |

## Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

## Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 569.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 96.00                        | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 664.00                       | 100.000                 | N/A |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 428.37                            | 428.37                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 72.27                             | 72.27                               | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 499.89                            | 499.89                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 511.52                            | 511.52                              | N/A                              | N/A                                    |

|             |   |        |        |     |     |
|-------------|---|--------|--------|-----|-----|
| 17:15-17:30 | 2 | 86.30  | 86.30  | N/A | N/A |
| 17:15-17:30 | 3 | 596.92 | 596.92 | N/A | N/A |
| 17:30-17:45 | 1 | 626.48 | 626.48 | N/A | N/A |
| 17:30-17:45 | 2 | 105.70 | 105.70 | N/A | N/A |
| 17:30-17:45 | 3 | 731.08 | 731.08 | N/A | N/A |
| 17:45-18:00 | 1 | 626.48 | 626.48 | N/A | N/A |
| 17:45-18:00 | 2 | 105.70 | 105.70 | N/A | N/A |
| 17:45-18:00 | 3 | 731.08 | 731.08 | N/A | N/A |
| 18:00-18:15 | 1 | 511.52 | 511.52 | N/A | N/A |
| 18:00-18:15 | 2 | 86.30  | 86.30  | N/A | N/A |
| 18:00-18:15 | 3 | 596.92 | 596.92 | N/A | N/A |
| 18:15-18:30 | 1 | 428.37 | 428.37 | N/A | N/A |
| 18:15-18:30 | 2 | 72.27  | 72.27  | N/A | N/A |
| 18:15-18:30 | 3 | 499.89 | 499.89 | N/A | N/A |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.53    | 0.11            | 1.12            | A       | 522.12                | 783.19               | 72.22                          | 0.09                         | 0.80                                 | 72.22                                    | 0.09                                   | 0.548 | 1231.848           |
| 2   | 0.13    | 0.08            | 0.15            | A       | 88.09                 | 132.14               | 10.08                          | 0.08                         | 0.11                                 | 10.08                                    | 0.08                                   | 0.532 | 1150.623           |
| 3   | 0.68    | 0.18            | 2.10            | B       | 609.30                | 913.95               | 123.62                         | 0.14                         | 1.37                                 | 123.64                                   | 0.14                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 428.37          | 107.09         | 426.16              | 468.91             | 62.81                     | 0.00                       | 1197.43           | 1165.22                      | 0.358 | 0.00              | 0.55            |
| 2   | 72.27           | 18.07          | 71.94               | 76.29              | 412.68                    | 0.00                       | 931.11            | 550.43                       | 0.078 | 0.00              | 0.08            |
| 3   | 499.89          | 124.97         | 496.50              | 449.40             | 35.22                     | 0.00                       | 1081.42           | 961.09                       | 0.462 | 0.00              | 0.85            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 511.52          | 127.88         | 510.75              | 562.32             | 75.33                     | 0.00                       | 1190.57           | 1165.22                      | 0.430 | 0.55              | 0.75            |
| 2   | 86.30           | 21.58          | 86.21               | 91.48              | 494.59                    | 0.00                       | 887.54            | 550.43                       | 0.097 | 0.08              | 0.11            |
| 3   | 596.92          | 149.23         | 595.44              | 538.59             | 42.21                     | 0.00                       | 1077.83           | 961.09                       | 0.554 | 0.85              | 1.22            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 626.48          | 156.62         | 625.01              | 687.30             | 92.06                     | 0.00                       | 1181.40           | 1165.22                      | 0.530 | 0.75              | 1.11            |
| 2   | 105.70          | 26.42          | 105.55              | 111.83             | 605.24                    | 0.00                       | 828.68            | 550.43                       | 0.128 | 0.11              | 0.15            |
| 3   | 731.08          | 182.77         | 727.69              | 659.11             | 51.67                     | 0.00                       | 1072.97           | 961.09                       | 0.681 | 1.22              | 2.07            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 626.48          | 156.62         | 626.45              | 690.22             | 92.47                     | 0.00                       | 1181.17           | 1165.22                      | 0.530 | 1.11              | 1.12            |
| 2   | 105.70          | 26.42          | 105.70              | 112.29             | 606.63                    | 0.00                       | 827.94            | 550.43                       | 0.128 | 0.15              | 0.15            |

|   |        |        |        |        |       |      |         |        |       |      |      |
|---|--------|--------|--------|--------|-------|------|---------|--------|-------|------|------|
| 3 | 731.08 | 182.77 | 730.94 | 660.58 | 51.75 | 0.00 | 1072.93 | 961.09 | 0.681 | 2.07 | 2.10 |
|---|--------|--------|--------|--------|-------|------|---------|--------|-------|------|------|

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 511.52          | 127.88         | 512.96              | 566.66             | 75.94                     | 0.00                       | 1190.23           | 1165.22                      | 0.430 | 1.12              | 0.76            |
| 2   | 86.30           | 21.58          | 86.45               | 92.17              | 496.73                    | 0.00                       | 886.40            | 550.43                       | 0.097 | 0.15              | 0.11            |
| 3   | 596.92          | 149.23         | 600.27              | 540.86             | 42.33                     | 0.00                       | 1077.77           | 961.09                       | 0.554 | 2.10              | 1.26            |

### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 428.37          | 107.09         | 429.17              | 473.46             | 63.44                     | 0.00                       | 1197.08           | 1165.22                      | 0.358 | 0.76              | 0.56            |
| 2   | 72.27           | 18.07          | 72.37               | 77.02              | 415.59                    | 0.00                       | 929.56            | 550.43                       | 0.078 | 0.11              | 0.08            |
| 3   | 499.89          | 124.97         | 501.47              | 452.53             | 35.43                     | 0.00                       | 1081.31           | 961.09                       | 0.462 | 1.26              | 0.87            |

## Queueing Delay Results

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 8.04                           | 0.54                                 | 0.078                                    | A                             | A                           |
| 2   | 1.23                           | 0.08                                 | 0.070                                    | A                             | A                           |
| 3   | 12.21                          | 0.81                                 | 0.102                                    | A                             | A                           |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 10.92                          | 0.73                                 | 0.088                                    | A                             | A                           |
| 2   | 1.58                           | 0.11                                 | 0.075                                    | A                             | A                           |
| 3   | 17.62                          | 1.17                                 | 0.124                                    | A                             | A                           |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 16.13                          | 1.08                                 | 0.108                                    | A                             | A                           |
| 2   | 2.14                           | 0.14                                 | 0.083                                    | A                             | A                           |
| 3   | 29.14                          | 1.94                                 | 0.172                                    | B                             | B                           |

### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 16.76                          | 1.12                                 | 0.108                                    | A                             | A                           |
| 2   | 2.18                           | 0.15                                 | 0.083                                    | A                             | A                           |
| 3   | 31.31                          | 2.09                                 | 0.175                                    | B                             | B                           |

### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 11.75                          | 0.78                                 | 0.089                                    | A                             | A                           |
| 2   | 1.66                           | 0.11                                 | 0.075                                    | A                             | A                           |
| 3   | 19.84                          | 1.32                                 | 0.127                                    | A                             | A                           |

### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 11.75                          | 0.78                                 | 0.089                                    | A                             | A                           |
| 2   | 1.66                           | 0.11                                 | 0.075                                    | A                             | A                           |
| 3   | 19.84                          | 1.32                                 | 0.127                                    | A                             | A                           |

|   |       |      |       |   |   |
|---|-------|------|-------|---|---|
| 1 | 8.62  | 0.57 | 0.078 | A | A |
| 2 | 1.29  | 0.09 | 0.070 | A | A |
| 3 | 13.49 | 0.90 | 0.104 | A | A |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 428.37          | 1197.43           | 0.358 | 0.00                       | 0.00              | 0.55            | 8.04                           | (0.00)                          | 0.078                                    |
| 17:00-17:15  | 2   | 72.27           | 931.11            | 0.078 | 0.00                       | 0.00              | 0.08            | 1.23                           | (0.00)                          | 0.070                                    |
| 17:00-17:15  | 3   | 499.89          | 1081.42           | 0.462 | 0.00                       | 0.00              | 0.85            | 12.21                          | (0.00)                          | 0.102                                    |
| 17:15-17:30  | 1   | 511.52          | 1190.57           | 0.430 | 0.00                       | 0.55              | 0.75            | 10.92                          | (0.00)                          | 0.088                                    |
| 17:15-17:30  | 2   | 86.30           | 887.54            | 0.097 | 0.00                       | 0.08              | 0.11            | 1.58                           | (0.00)                          | 0.075                                    |
| 17:15-17:30  | 3   | 596.92          | 1077.83           | 0.554 | 0.00                       | 0.85              | 1.22            | 17.62                          | (0.00)                          | 0.124                                    |
| 17:30-17:45  | 1   | 626.48          | 1181.40           | 0.530 | 0.00                       | 0.75              | 1.11            | 16.13                          | (0.00)                          | 0.108                                    |
| 17:30-17:45  | 2   | 105.70          | 828.68            | 0.128 | 0.00                       | 0.11              | 0.15            | 2.14                           | (0.00)                          | 0.083                                    |
| 17:30-17:45  | 3   | 731.08          | 1072.97           | 0.681 | 0.00                       | 1.22              | 2.07            | 29.14                          | (0.00)                          | 0.172                                    |
| 17:45-18:00  | 1   | 626.48          | 1181.17           | 0.530 | 0.00                       | 1.11              | 1.12            | 16.76                          | (0.00)                          | 0.108                                    |
| 17:45-18:00  | 2   | 105.70          | 827.94            | 0.128 | 0.00                       | 0.15              | 0.15            | 2.18                           | (0.00)                          | 0.083                                    |
| 17:45-18:00  | 3   | 731.08          | 1072.93           | 0.681 | 0.00                       | 2.07              | 2.10            | 31.31                          | (0.00)                          | 0.175                                    |
| 18:00-18:15  | 1   | 511.52          | 1190.23           | 0.430 | 0.00                       | 1.12              | 0.76            | 11.75                          | (0.00)                          | 0.089                                    |
| 18:00-18:15  | 2   | 86.30           | 886.40            | 0.097 | 0.00                       | 0.15              | 0.11            | 1.66                           | (0.00)                          | 0.075                                    |
| 18:00-18:15  | 3   | 596.92          | 1077.77           | 0.554 | 0.00                       | 2.10              | 1.26            | 19.84                          | (0.00)                          | 0.127                                    |
| 18:15-18:30  | 1   | 428.37          | 1197.08           | 0.358 | 0.00                       | 0.76              | 0.56            | 8.62                           | (0.00)                          | 0.078                                    |
| 18:15-18:30  | 2   | 72.27           | 929.56            | 0.078 | 0.00                       | 0.11              | 0.08            | 1.29                           | (0.00)                          | 0.070                                    |
| 18:15-18:30  | 3   | 499.89          | 1081.31           | 0.462 | 0.00                       | 1.26              | 0.87            | 13.49                          | (0.00)                          | 0.104                                    |

## A1 - (Default Analysis Set) - D8 - Base 2020 + Dev, SAT

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

| Name                   | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|------------------------|-------------|-------------------|-------------------------|------------|--------|---------------------------------|-------------------------------------|----------------------------|
| (Default Analysis Set) |             | Yes               |                         | (D1)       |        | 100.000                         | 100.000                             |                            |

### Demand Set Details

| Name | Scenario | Time Period | Description | Locked | Run | Use | Relationship | Start Time | Finish Time | Time Period | Time Segment | Traffic Profile |
|------|----------|-------------|-------------|--------|-----|-----|--------------|------------|-------------|-------------|--------------|-----------------|
|------|----------|-------------|-------------|--------|-----|-----|--------------|------------|-------------|-------------|--------------|-----------------|

| Name                 | Name            | Period Name | Description | Locked | Automatically | Relationship | Relationship | Time (HH:mm) | Time (HH:mm) | Length (min) | Length (min) | From Type |
|----------------------|-----------------|-------------|-------------|--------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Base 2020 + Dev, SAT | Base 2020 + Dev | SAT         |             |        | Yes           |              |              | 17:00        | 18:30        | 90           | 15           | ONE HOUR  |

## Roundabout Network

### Roundabout Type(s)

| ID           | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|--------------|------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 (untitled) |      | 1,2,3     | Standard        |                 |                  |                    |

### Roundabout Network Options

| Driving Side | Lighting       | Road Surface              | In London |
|--------------|----------------|---------------------------|-----------|
| Left         | Normal/unknown | ((Mini-roundabouts only)) |           |

## Arms

### Arms

| ID | Name                     | Description |
|----|--------------------------|-------------|
| 1  | Unnamed Road North       |             |
| 2  | Unnamed Road Development |             |
| 3  | Unnamed Road East        |             |

### Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| 1   | 0.00                      | 99999.00                  |                           | 0.00                |
| 2   | 0.00                      | 99999.00                  |                           | 0.00                |
| 3   | 0.00                      | 99999.00                  |                           | 0.00                |

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           |

### Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| 1   | None          |
| 2   | None          |
| 3   | None          |

### Arm Slope/ Intercept and Capacity

#### Slope and Intercept used in model

| Arm | Enter Directly | Slope          | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| 1   |                | ((calculated)) | ((calculated))     | 0.548       | 1231.848                 |
| 2   |                | ((calculated)) | ((calculated))     | 0.532       | 1150.623                 |
| 3   |                | ((calculated)) | ((calculated))     | 0.514       | 1099.507                 |

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

## Traffic Flows

## Traffic Flows

### Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---------------------|------------------------------|------------------------------|-------------------------------|--------------------|---------------------------|-----------------------------|---------------------------------|------------------------------------|------------------------------------|-------------------------------------|
|                     |                              | Yes                          | Yes                           | HV Percentages     | 2.00                      |                             |                                 |                                    | Yes                                | Yes                                 |

## Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) | PHF |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| 1   | ONE HOUR     | Yes                | 607.00                       | 100.000                 | N/A |
| 2   | ONE HOUR     | Yes                | 188.00                       | 100.000                 | N/A |
| 3   | ONE HOUR     | Yes                | 692.00                       | 100.000                 | N/A |

## Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 17:00-17:15  | 1   | 456.98                            | 456.98                              | N/A                              | N/A                                    |
| 17:00-17:15  | 2   | 141.54                            | 141.54                              | N/A                              | N/A                                    |
| 17:00-17:15  | 3   | 520.97                            | 520.97                              | N/A                              | N/A                                    |
| 17:15-17:30  | 1   | 545.68                            | 545.68                              | N/A                              | N/A                                    |
| 17:15-17:30  | 2   | 169.01                            | 169.01                              | N/A                              | N/A                                    |
| 17:15-17:30  | 3   | 622.09                            | 622.09                              | N/A                              | N/A                                    |
| 17:30-17:45  | 1   | 668.32                            | 668.32                              | N/A                              | N/A                                    |
| 17:30-17:45  | 2   | 206.99                            | 206.99                              | N/A                              | N/A                                    |
| 17:30-17:45  | 3   | 761.91                            | 761.91                              | N/A                              | N/A                                    |
| 17:45-18:00  | 1   | 668.32                            | 668.32                              | N/A                              | N/A                                    |
| 17:45-18:00  | 2   | 206.99                            | 206.99                              | N/A                              | N/A                                    |
| 17:45-18:00  | 3   | 761.91                            | 761.91                              | N/A                              | N/A                                    |
| 18:00-18:15  | 1   | 545.68                            | 545.68                              | N/A                              | N/A                                    |
| 18:00-18:15  | 2   | 169.01                            | 169.01                              | N/A                              | N/A                                    |
| 18:00-18:15  | 3   | 622.09                            | 622.09                              | N/A                              | N/A                                    |
| 18:15-18:30  | 1   | 456.98                            | 456.98                              | N/A                              | N/A                                    |
| 18:15-18:30  | 2   | 141.54                            | 141.54                              | N/A                              | N/A                                    |
| 18:15-18:30  | 3   | 520.97                            | 520.97                              | N/A                              | N/A                                    |

## Results

### Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Total Queueing Delay (PCU-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (PCU-min/min) | Inclusive Queueing Total Delay (PCU-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| 1   | 0.58    | 0.12            | 1.36            | A       | 556.99                | 835.49               | 84.88                          | 0.10                         | 0.94                                 | 84.89                                    | 0.10                                   | 0.548 | 1231.848           |
| 2   | 0.25    | 0.10            | 0.33            | A       | 172.51                | 258.77               | 22.04                          | 0.09                         | 0.24                                 | 22.04                                    | 0.09                                   | 0.532 | 1150.623           |
| 3   | 0.74    | 0.22            | 2.72            | B       | 634.99                | 952.49               | 150.51                         | 0.16                         | 1.67                                 | 150.53                                   | 0.16                                   | 0.514 | 1099.507           |

### Main Results

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 456.98          | 114.25         | 454.48              | 508.37             | 94.16                     | 0.00                       | 1180.25           | 1141.18                      | 0.387 | 0.00              | 0.63            |
| 2   | 141.54          | 35.38          | 140.83              | 145.82             | 402.81                    | 0.00                       | 936.36            | 612.61                       | 0.151 | 0.00              | 0.18            |
| 3   | 520.97          | 130.24         | 517.13              | 458.25             | 85.40                     | 0.00                       | 1055.65           | 908.71                       | 0.494 | 0.00              | 0.96            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 545.68          | 136.42         | 544.73              | 609.63             | 112.93                    | 0.00                       | 1169.96           | 1141.17                      | 0.466 | 0.63              | 0.86            |
| 2   | 169.01          | 42.25          | 168.79              | 174.85             | 482.81                    | 0.00                       | 893.81            | 612.61                       | 0.189 | 0.18              | 0.23            |
| 3   | 622.09          | 155.52         | 620.20              | 549.25             | 102.35                    | 0.00                       | 1046.94           | 908.70                       | 0.594 | 0.96              | 1.43            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 668.32          | 167.08         | 666.40              | 744.48             | 137.84                    | 0.00                       | 1156.31           | 1141.17                      | 0.578 | 0.86              | 1.34            |
| 2   | 206.99          | 51.75          | 206.61              | 213.59             | 590.65                    | 0.00                       | 836.45            | 612.61                       | 0.247 | 0.23              | 0.33            |
| 3   | 761.91          | 190.48         | 757.03              | 671.97             | 125.29                    | 0.00                       | 1035.16           | 908.70                       | 0.736 | 1.43              | 2.65            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 668.32          | 167.08         | 668.27              | 748.48             | 138.68                    | 0.00                       | 1155.85           | 1141.17                      | 0.578 | 1.34              | 1.36            |
| 2   | 206.99          | 51.75          | 206.99              | 214.65             | 592.30                    | 0.00                       | 835.57            | 612.61                       | 0.248 | 0.33              | 0.33            |
| 3   | 761.91          | 190.48         | 761.65              | 673.78             | 125.51                    | 0.00                       | 1035.04           | 908.70                       | 0.736 | 2.65              | 2.72            |

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

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 545.68          | 136.42         | 547.57              | 615.52             | 114.16                    | 0.00                       | 1169.29           | 1141.17                      | 0.467 | 1.36              | 0.89            |
| 2   | 169.01          | 42.25          | 169.38              | 176.40             | 485.33                    | 0.00                       | 892.47            | 612.61                       | 0.189 | 0.33              | 0.24            |
| 3   | 622.09          | 155.52         | 626.97              | 552.00             | 102.71                    | 0.00                       | 1046.75           | 908.70                       | 0.594 | 2.72              | 1.50            |

### Main results: (18:15-18:30)

| Arm | Demand (PCU/hr) | Arrivals (PCU) | Entry Flow (PCU/hr) | Exit Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | Saturation Capacity (PCU/hr) | RFC   | Start Queue (PCU) | End Queue (PCU) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| 1   | 456.98          | 114.25         | 457.97              | 513.74             | 95.23                     | 0.00                       | 1179.66           | 1141.18                      | 0.387 | 0.89              | 0.64            |
| 2   | 141.54          | 35.38          | 141.76              | 147.29             | 405.91                    | 0.00                       | 934.71            | 612.61                       | 0.151 | 0.24              | 0.18            |
| 3   | 520.97          | 130.24         | 523.01              | 461.71             | 85.96                     | 0.00                       | 1055.36           | 908.71                       | 0.494 | 1.50              | 0.99            |

## Queueing Delay Results

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 9.09                           | 0.61                                 | 0.082                                    | A                             | A                           |
| 2   | 2.59                           | 0.17                                 | 0.075                                    | A                             | A                           |
| 3   | 13.75                          | 0.92                                 | 0.111                                    | A                             | A                           |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 12.61                          | 0.84                                 | 0.096                                    | A                             | A                           |
| 2   | 3.41                           | 0.23                                 | 0.083                                    | A                             | A                           |
| 3   | 20.57                          | 1.37                                 | 0.140                                    | A                             | A                           |

#### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 19.36                          | 1.29                                 | 0.122                                    | A                             | A                           |
| 2   | 4.78                           | 0.32                                 | 0.095                                    | A                             | A                           |
| 3   | 36.70                          | 2.45                                 | 0.212                                    | B                             | B                           |

#### Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 20.29                          | 1.35                                 | 0.123                                    | A                             | A                           |
| 2   | 4.91                           | 0.33                                 | 0.095                                    | A                             | A                           |
| 3   | 40.36                          | 2.69                                 | 0.219                                    | B                             | B                           |

#### Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 13.72                          | 0.91                                 | 0.097                                    | A                             | A                           |
| 2   | 3.60                           | 0.24                                 | 0.083                                    | A                             | A                           |
| 3   | 23.72                          | 1.58                                 | 0.145                                    | A                             | A                           |

#### Queueing Delay results: (18:15-18:30)

| Arm | Queueing Total Delay (PCU-min) | Queueing Rate Of Delay (PCU-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| 1   | 9.81                           | 0.65                                 | 0.083                                    | A                             | A                           |
| 2   | 2.74                           | 0.18                                 | 0.076                                    | A                             | A                           |
| 3   | 15.39                          | 1.03                                 | 0.113                                    | A                             | A                           |

## Overview: Standard Roundabout Geometry

### Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| 1   | 4.08                             | 5.71                | 1.00                            | 12.55                | 19.08                             | 40.00                              |           | 0.548       | 1231.848                 |
| 2   | 3.90                             | 4.55                | 0.60                            | 14.26                | 19.31                             | 42.00                              |           | 0.532       | 1150.623                 |
| 3   | 3.66                             | 5.00                | 1.00                            | 8.04                 | 28.41                             | 30.00                              |           | 0.514       | 1099.507                 |

## Overview: Time Segment Results

### Time Segment Results

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC   | Pedestrian Demand (Ped/hr) | Start Queue (PCU) | End Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Average Delay Per Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 17:00-17:15  | 1   | 456.98          | 1180.25           | 0.387 | 0.00                       | 0.00              | 0.63            | 9.09                           | (0.00)                          | 0.082                                    |
| 17:00-17:15  | 2   | 141.54          | 936.36            | 0.151 | 0.00                       | 0.00              | 0.18            | 2.59                           | (0.00)                          | 0.075                                    |
| 17:00-17:15  | 3   | 520.97          | 1055.65           | 0.494 | 0.00                       | 0.00              | 0.96            | 13.75                          | (0.00)                          | 0.111                                    |
| 17:15-17:30  | 1   | 545.68          | 1169.96           | 0.466 | 0.00                       | 0.63              | 0.86            | 12.61                          | (0.00)                          | 0.096                                    |
| 17:15-17:30  | 2   | 169.01          | 893.81            | 0.189 | 0.00                       | 0.18              | 0.23            | 3.41                           | (0.00)                          | 0.083                                    |
| 17:15-17:30  | 3   | 622.09          | 1046.94           | 0.594 | 0.00                       | 0.96              | 1.43            | 20.57                          | (0.00)                          | 0.140                                    |

|             |   |        |         |       |      |      |      |       |        |       |
|-------------|---|--------|---------|-------|------|------|------|-------|--------|-------|
| 17:30-17:45 | 1 | 668.32 | 1156.31 | 0.578 | 0.00 | 0.86 | 1.34 | 19.36 | (0.00) | 0.122 |
| 17:30-17:45 | 2 | 206.99 | 836.45  | 0.247 | 0.00 | 0.23 | 0.33 | 4.78  | (0.00) | 0.095 |
| 17:30-17:45 | 3 | 761.91 | 1035.16 | 0.736 | 0.00 | 1.43 | 2.65 | 36.70 | (0.00) | 0.212 |
| 17:45-18:00 | 1 | 668.32 | 1155.85 | 0.578 | 0.00 | 1.34 | 1.36 | 20.29 | (0.00) | 0.123 |
| 17:45-18:00 | 2 | 206.99 | 835.57  | 0.248 | 0.00 | 0.33 | 0.33 | 4.91  | (0.00) | 0.095 |
| 17:45-18:00 | 3 | 761.91 | 1035.04 | 0.736 | 0.00 | 2.65 | 2.72 | 40.36 | (0.00) | 0.219 |
| 18:00-18:15 | 1 | 545.68 | 1169.29 | 0.467 | 0.00 | 1.36 | 0.89 | 13.72 | (0.00) | 0.097 |
| 18:00-18:15 | 2 | 169.01 | 892.47  | 0.189 | 0.00 | 0.33 | 0.24 | 3.60  | (0.00) | 0.083 |
| 18:00-18:15 | 3 | 622.09 | 1046.75 | 0.594 | 0.00 | 2.72 | 1.50 | 23.72 | (0.00) | 0.145 |
| 18:15-18:30 | 1 | 456.98 | 1179.66 | 0.387 | 0.00 | 0.89 | 0.64 | 9.81  | (0.00) | 0.083 |
| 18:15-18:30 | 2 | 141.54 | 934.71  | 0.151 | 0.00 | 0.24 | 0.18 | 2.74  | (0.00) | 0.076 |
| 18:15-18:30 | 3 | 520.97 | 1055.36 | 0.494 | 0.00 | 1.50 | 0.99 | 15.39 | (0.00) | 0.113 |