

**APPENDIX F: LOCAL PLAN (OCTOBER 2013) HOUSING DELIVERY
SCHEDULE**

LOCAL PLAN HOUSING TRAJECTORY 2011-2031

| | Completions 2011-2014 | Permissions Granted at 31 March 2014 | Local Plan: New Allocation 2014-2031 | Total Projected Supply 2014- 2031 | 14/15 | 15/16 | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | 23/24 | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 | 29/30 | 30/31 | Plan Period Total Supply 2011-2031 |
|-------------------------------------------------------|--------------------------|-----------------------------------------------|-----------------------------------------------|--------------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------------------------------------|
| Bicester | | | | | | | | | | | | | | | | | | | | | | |
| North West Bicester (Bicester 1) | 0 | 393 | 2900 | 3293 | 71 | 143 | 179 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 200 | 200 | 200 | 200 | 3293 |
| Graven Hill (Bicester 2) | 0 | 0 | 2100 | 2100 | 0 | 0 | 50 | 150 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 150 | 100 | 100 | 100 | 50 | 0 | 2100 |
| South West Bicester Phase 1 | 280 | 1362 | 100 | 1462 | 136 | 200 | 200 | 200 | 200 | 200 | 200 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1742 |
| South West Bicester Phase 2 (Bicester 3) | 0 | 0 | 726 | 726 | 0 | 0 | 70 | 70 | 70 | 70 | 140 | 140 | 90 | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 726 |
| South East Bicester (Bicester 12) | 0 | 0 | 1500 | 1500 | 0 | 0 | 50 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 100 | 0 | 0 | 0 | 0 | 1500 |
| Gavray Drive (Bicester 13) | 0 | 0 | 300 | 300 | 0 | 0 | 50 | 125 | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 |
| Talisman Road (approved site) | 0 | 125 | 0 | 125 | 20 | 45 | 40 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 |
| Other sites - 10 or more dwellings | 48 | 54 | 100 | 154 | 12 | 12 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 0 | 0 | 202 |
| Windfall sites - less than 10 dwellings | 37 | 71 | 104 | 104 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 141 |
| Sub-Total | 365 | 2005 | 7830 | 9764 | 247 | 408 | 657 | 943 | 973 | 848 | 918 | 844 | 668 | 650 | 574 | 524 | 424 | 314 | 314 | 254 | 204 | 10129 |
| Banbury | | | | | | | | | | | | | | | | | | | | | | |
| Canalside (Banbury 1) | 0 | 0 | 700 | 700 | 0 | 0 | 0 | 0 | 0 | 50 | 50 | 100 | 100 | 100 | 100 | 100 | 100 | 0 | 0 | 0 | 0 | 700 |
| Southam Road (Banbury 2) | 0 | 600 | 0 | 600 | 0 | 145 | 150 | 150 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 600 |
| West of Bretch Hill (Banbury 3) | 0 | 0 | 400 | 400 | 0 | 50 | 120 | 120 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 400 |
| Bankside Phase 1 | 8 | 1082 | 0 | 1082 | 50 | 150 | 150 | 150 | 150 | 150 | 100 | 100 | 82 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1090 |
| Bankside Phase 2 (Banbury 4) | 0 | 0 | 600 | 600 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 100 | 100 | 100 | 100 | 100 | 50 | 0 | 0 | 0 | 0 | 600 |
| North of Hanwell Fields (Banbury 5) | 0 | 0 | 544 | 544 | 0 | 75 | 125 | 125 | 75 | 84 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 544 |
| Bolton Road (Banbury 8) | 0 | 0 | 200 | 200 | 0 | 0 | 0 | 75 | 75 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 |
| South of Salt Way - West (Banbury 16) | 0 | 0 | 150 | 150 | 0 | 0 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| South of Salt Way - East (Banbury 17) | 0 | 145 | 1200 | 1345 | 0 | 40 | 55 | 50 | 100 | 100 | 100 | 100 | 150 | 100 | 100 | 100 | 100 | 100 | 100 | 0 | 0 | 1345 |
| West of Warwick Road | 0 | 300 | 0 | 300 | 0 | 50 | 90 | 90 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 |
| Drayton Lodge Farm (Banbury 18) | 0 | 0 | 250 | 250 | 0 | 0 | 0 | 50 | 75 | 100 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 |
| Higham Way (Banbury 19) | 0 | 0 | 150 | 150 | 0 | 0 | 25 | 100 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |
| Other sites - 10 or more dwellings | 105 | 219 | 150 | 369 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 474 |
| Windfall sites - less than 10 dwellings | 100 | 156 | 416 | 416 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 516 |
| Sub-Total | 213 | 2502 | 4760 | 7106 | 104 | 564 | 819 | 1064 | 889 | 588 | 439 | 454 | 486 | 388 | 338 | 338 | 287 | 137 | 137 | 37 | 37 | 7319 |
| Elsewhere | | | | | | | | | | | | | | | | | | | | | | |
| Former RAF Upper Heyford (Villages 5) | 0 | 761 | 1600 | 2361 | 50 | 100 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 141 | 140 | 140 | 140 | 2361 |
| DLO Caversfield | 85 | 111 | 0 | 111 | 40 | 40 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 196 |
| Rural Areas (incl. Kidlington) - 10 or more dwellings | 247 | 888 | 750 | 1638 | 133 | 130 | 130 | 130 | 130 | 130 | 130 | 100 | 100 | 100 | 100 | 75 | 50 | 50 | 50 | 50 | 50 | 1885 |
| Windfall sites - less than 10 dwellings | 196 | 255 | 754 | 754 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 950 |
| Sub-Total | 528 | 2015 | 3104 | 4864 | 281 | 328 | 369 | 338 | 338 | 338 | 338 | 308 | 308 | 279 | 279 | 254 | 229 | 220 | 219 | 219 | 219 | 5392 |
| Grand Total | 1106 | 6522 | 15694 | 21734 | 632 | 1300 | 1845 | 2345 | 2200 | 1774 | 1695 | 1606 | 1462 | 1317 | 1191 | 1116 | 940 | 671 | 670 | 510 | 460 | 22840 |

- Notes:
1. The trajectory represents the anticipated annual rate of housing delivery in the current housing market (2014). It does not preclude the earlier delivery of sites.
 2. Permissions for windfall sites - less than 10 dwellings (shown in italics) are not taken into account in figures for 'Total Projected Supply 2014-2031' nor for 'Plan Period Total Supply 2011-2031' to avoid double counting with the windfall allocation for the plan period
 3. Projections will change in the light of future monitoring.

**APPENDIX G: JUNCTION MODEL OUTPUTS: BASELINE SCENARIO
WITHOUT SOUTH EAST BICESTER**

ARCADY 7

Version: 7.0.1.130 [12 March 2010]
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\2014 Peregrine Way - Wretchwick Way roundabout.arc7
Report generation date: 10/04/2015 10:44:17

- » A1 - (Default Analysis Set) - D5 - 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak, PM
- » A1 - (Default Analysis Set) - D6 - 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak, AM

Summary of roundabout performance

| | AM | | | | PM | | | |
|--------------------------------------------------------------------------------------|-------------|-------------|------|-----|-------------|-------------|------|-----|
| | Queue (PCU) | Delay (min) | RFC | LOS | Queue (PCU) | Delay (min) | RFC | LOS |
| (Default Analysis Set) - 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak | | | | | | | | |
| Arm A | 0.28 | 0.03 | 0.22 | A | | | | |
| Arm B | 0.30 | 0.06 | 0.23 | A | | | | |
| Arm C | 0.77 | 0.05 | 0.43 | A | | | | |
| (Default Analysis Set) - 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak | | | | | | | | |
| Arm A | | | | | 0.70 | 0.04 | 0.41 | A |
| Arm B | | | | | 0.28 | 0.07 | 0.22 | A |
| Arm C | | | | | 0.38 | 0.04 | 0.28 | A |

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

2014 PCU - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2014 PCU - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD +DEV180 - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD +DEV180 - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD +DEV300 - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD +DEV300 - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00

File summary

File Description

| | |
|-------------------|--------------------------------------|
| Title | Peregrine Way/Wretchwick Way AM Peak |
| Location | Bicester |
| Date | 13/07/2010 |
| Status | TIA |
| Client | JJ Gallagher |
| Jobnumber | 18578-01-1 |
| Enumerator | Alexanders [CS5DG3J] |
| 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) - D5 - 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak, 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 |
|----------------------------------------------------------|------------------------------------------------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak, PM | 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak | PM | | | Yes | | | 16:45 | 18:15 | 90 | 15 | Varies by Arm |

Roundabout Network

Roundabout Type(s)

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

Roundabout Network Options

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

Arms

Arms

| ID | Name | Description |
|----|----------------------|-------------|
| A | Neunkirchen Way | |
| B | Peregine Way | |
| C | Wretchwick Way North | |

Capacity Options

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

| | | | | |
|---|------|----------|--|------|
| B | 0.00 | 99999.00 | | 0.00 |
| C | 0.00 | 99999.00 | | 0.00 |

Standard Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| A | 7.00 | 10.00 | 25.00 | 40.00 | 49.00 | 23.00 | |
| B | 3.00 | 6.50 | 15.00 | 60.00 | 49.00 | 24.50 | |
| C | 5.50 | 8.00 | 19.00 | 45.00 | 49.00 | 12.00 | |

Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| A | None |
| B | None |
| C | 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) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| A | | ((calculated)) | ((calculated)) | 0.858 | 2913.181 |
| B | | ((calculated)) | ((calculated)) | 0.608 | 1594.519 |
| C | | ((calculated)) | ((calculated)) | 0.772 | 2396.694 |

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 |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| A | ONE HOUR | Yes | 1072.00 | 100.000 | N/A |
| B | ONE HOUR | Yes | 208.00 | 100.000 | N/A |
| C | ONE HOUR | Yes | 571.00 | 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) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 16:45-17:00 | A | 807.06 | 807.06 | N/A | N/A |
| 16:45-17:00 | B | 156.59 | 156.59 | N/A | N/A |
| 16:45-17:00 | C | 429.88 | 429.88 | N/A | N/A |
| 17:00-17:15 | A | 963.71 | 963.71 | N/A | N/A |
| 17:00-17:15 | B | 156.59 | 156.59 | N/A | N/A |
| 17:00-17:15 | C | 429.88 | 429.88 | N/A | N/A |

| | | | | | |
|-------------|---|---------|---------|-----|-----|
| 17:00-17:15 | B | 186.99 | 186.99 | N/A | N/A |
| 17:00-17:15 | C | 513.32 | 513.32 | N/A | N/A |
| 17:15-17:30 | A | 1180.29 | 1180.29 | N/A | N/A |
| 17:15-17:30 | B | 229.01 | 229.01 | N/A | N/A |
| 17:15-17:30 | C | 628.68 | 628.68 | N/A | N/A |
| 17:30-17:45 | A | 1180.29 | 1180.29 | N/A | N/A |
| 17:30-17:45 | B | 229.01 | 229.01 | N/A | N/A |
| 17:30-17:45 | C | 628.68 | 628.68 | N/A | N/A |
| 17:45-18:00 | A | 963.71 | 963.71 | N/A | N/A |
| 17:45-18:00 | B | 186.99 | 186.99 | N/A | N/A |
| 17:45-18:00 | C | 513.32 | 513.32 | N/A | N/A |
| 18:00-18:15 | A | 807.06 | 807.06 | N/A | N/A |
| 18:00-18:15 | B | 156.59 | 156.59 | N/A | N/A |
| 18:00-18:15 | C | 429.88 | 429.88 | N/A | N/A |

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Roundabout 1 (for whole period)

| | | To | | |
|------|---|--------|--------|--------|
| | | A | B | C |
| From | A | 0.00 | 241.00 | 831.00 |
| | B | 157.00 | 0.00 | 51.00 |
| | C | 515.00 | 56.00 | 0.00 |

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 0.00 | 0.22 | 0.78 |
| | B | 0.75 | 0.00 | 0.25 |
| | C | 0.90 | 0.10 | 0.00 |

Vehicle Mix

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 1.00 | 1.00 | 1.00 |
| | B | 1.00 | 1.00 | 1.00 |
| | C | 1.00 | 1.00 | 1.00 |

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 0.00 | 0.00 | 0.00 |
| | B | 0.00 | 0.00 | 0.00 |
| | C | 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) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| A | 0.41 | 0.04 | 0.70 | A | 983.69 | 1475.53 | 47.72 | 0.03 | 0.53 | 47.73 | 0.03 | 0.858 | 2913.181 |
| B | 0.22 | 0.07 | 0.28 | A | 190.86 | 286.30 | 18.68 | 0.07 | 0.21 | 18.68 | 0.07 | 0.608 | 1594.519 |
| C | 0.28 | 0.04 | 0.38 | A | 523.96 | 785.94 | 26.99 | 0.03 | 0.30 | 26.99 | 0.03 | 0.772 | 2396.694 |

Main Results

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 807.06 | 201.76 | 805.50 | 504.65 | 42.07 | 0.00 | 2877.08 | 2726.69 | 0.281 | 0.00 | 0.39 |
| B | 156.59 | 39.15 | 156.00 | 223.16 | 624.41 | 0.00 | 1215.10 | 310.16 | 0.129 | 0.00 | 0.15 |
| C | 429.88 | 107.47 | 428.96 | 662.67 | 117.75 | 0.00 | 2305.85 | 2216.08 | 0.186 | 0.00 | 0.23 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 963.71 | 240.93 | 963.25 | 603.75 | 50.32 | 0.00 | 2870.00 | 2726.69 | 0.336 | 0.39 | 0.50 |
| B | 186.99 | 46.75 | 186.80 | 266.87 | 746.69 | 0.00 | 1140.80 | 310.16 | 0.164 | 0.15 | 0.20 |
| C | 513.32 | 128.33 | 513.08 | 792.50 | 141.00 | 0.00 | 2287.92 | 2216.08 | 0.224 | 0.23 | 0.29 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 1180.29 | 295.07 | 1179.51 | 739.28 | 61.62 | 0.00 | 2860.30 | 2726.69 | 0.413 | 0.50 | 0.70 |
| B | 229.01 | 57.25 | 228.67 | 326.79 | 914.34 | 0.00 | 1038.93 | 310.16 | 0.220 | 0.20 | 0.28 |
| C | 628.68 | 157.17 | 628.30 | 970.41 | 172.60 | 0.00 | 2263.53 | 2216.08 | 0.278 | 0.29 | 0.38 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 1180.29 | 295.07 | 1180.29 | 739.88 | 61.66 | 0.00 | 2860.27 | 2726.69 | 0.413 | 0.70 | 0.70 |
| B | 229.01 | 57.25 | 229.01 | 327.00 | 914.94 | 0.00 | 1038.56 | 310.16 | 0.221 | 0.28 | 0.28 |
| C | 628.68 | 157.17 | 628.68 | 971.09 | 172.86 | 0.00 | 2263.33 | 2216.08 | 0.278 | 0.38 | 0.38 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 963.71 | 240.93 | 964.48 | 604.71 | 50.38 | 0.00 | 2869.95 | 2726.69 | 0.336 | 0.70 | 0.51 |
| B | 186.99 | 46.75 | 187.33 | 267.21 | 747.65 | 0.00 | 1140.21 | 310.16 | 0.164 | 0.28 | 0.20 |
| C | 513.32 | 128.33 | 513.69 | 793.58 | 141.40 | 0.00 | 2287.61 | 2216.08 | 0.224 | 0.38 | 0.29 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 807.06 | 201.76 | 807.52 | 506.28 | 42.18 | 0.00 | 2876.98 | 2726.69 | 0.281 | 0.51 | 0.39 |
| B | 156.59 | 39.15 | 156.79 | 223.73 | 625.98 | 0.00 | 1214.15 | 310.16 | 0.129 | 0.20 | 0.15 |
| C | 429.88 | 107.47 | 430.12 | 664.42 | 118.34 | 0.00 | 2305.39 | 2216.08 | 0.186 | 0.29 | 0.23 |

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 5.76 | 0.38 | 0.029 | A | A |
| B | 2.17 | 0.14 | 0.057 | A | A |
| C | 3.38 | 0.23 | 0.032 | A | A |

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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 7.48 | 0.50 | 0.031 | A | A |
| B | 2.88 | 0.19 | 0.063 | A | A |
| C | 4.28 | 0.29 | 0.034 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 10.36 | 0.69 | 0.036 | A | A |
| B | 4.14 | 0.28 | 0.074 | A | A |
| C | 5.68 | 0.38 | 0.037 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 10.51 | 0.70 | 0.036 | A | A |
| B | 4.22 | 0.28 | 0.074 | A | A |
| C | 5.76 | 0.38 | 0.037 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 7.70 | 0.51 | 0.032 | A | A |
| B | 3.01 | 0.20 | 0.063 | A | A |
| C | 4.40 | 0.29 | 0.034 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 5.92 | 0.39 | 0.029 | A | A |
| B | 2.26 | 0.15 | 0.057 | A | A |
| C | 3.48 | 0.23 | 0.032 | 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) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| A | 7.00 | 10.00 | 25.00 | 40.00 | 49.00 | 23.00 | | 0.858 | 2913.181 |
| B | 3.00 | 6.50 | 15.00 | 60.00 | 49.00 | 24.50 | | 0.608 | 1594.519 |
| C | 5.50 | 8.00 | 19.00 | 45.00 | 49.00 | 12.00 | | 0.772 | 2396.694 |

Overview: Time Segment Results

Time Segment Results

| Start | End | Average Delay Per |
|-------|-----|-------------------|
| | | |

| Time Segment | Arm | Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Pedestrian Demand (Ped/hr) | Queue (PCU) | Queue (PCU) | Queueing Total Delay (PCU-min) | Geometric Total Delay (PCU-min) | Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------|-------------|--------------------------------|---------------------------------|------------------------|
| 16:45-17:00 | A | 807.06 | 2877.08 | 0.281 | 0.00 | 0.00 | 0.39 | 5.76 | (0.00) | 0.029 |
| 16:45-17:00 | B | 156.59 | 1215.10 | 0.129 | 0.00 | 0.00 | 0.15 | 2.17 | (0.00) | 0.057 |
| 16:45-17:00 | C | 429.88 | 2305.85 | 0.186 | 0.00 | 0.00 | 0.23 | 3.38 | (0.00) | 0.032 |
| 17:00-17:15 | A | 963.71 | 2870.00 | 0.336 | 0.00 | 0.39 | 0.50 | 7.48 | (0.00) | 0.031 |
| 17:00-17:15 | B | 186.99 | 1140.80 | 0.164 | 0.00 | 0.15 | 0.20 | 2.88 | (0.00) | 0.063 |
| 17:00-17:15 | C | 513.32 | 2287.92 | 0.224 | 0.00 | 0.23 | 0.29 | 4.28 | (0.00) | 0.034 |
| 17:15-17:30 | A | 1180.29 | 2860.30 | 0.413 | 0.00 | 0.50 | 0.70 | 10.36 | (0.00) | 0.036 |
| 17:15-17:30 | B | 229.01 | 1038.93 | 0.220 | 0.00 | 0.20 | 0.28 | 4.14 | (0.00) | 0.074 |
| 17:15-17:30 | C | 628.68 | 2263.53 | 0.278 | 0.00 | 0.29 | 0.38 | 5.68 | (0.00) | 0.037 |
| 17:30-17:45 | A | 1180.29 | 2860.27 | 0.413 | 0.00 | 0.70 | 0.70 | 10.51 | (0.00) | 0.036 |
| 17:30-17:45 | B | 229.01 | 1038.56 | 0.221 | 0.00 | 0.28 | 0.28 | 4.22 | (0.00) | 0.074 |
| 17:30-17:45 | C | 628.68 | 2263.33 | 0.278 | 0.00 | 0.38 | 0.38 | 5.76 | (0.00) | 0.037 |
| 17:45-18:00 | A | 963.71 | 2869.95 | 0.336 | 0.00 | 0.70 | 0.51 | 7.70 | (0.00) | 0.032 |
| 17:45-18:00 | B | 186.99 | 1140.21 | 0.164 | 0.00 | 0.28 | 0.20 | 3.01 | (0.00) | 0.063 |
| 17:45-18:00 | C | 513.32 | 2287.61 | 0.224 | 0.00 | 0.38 | 0.29 | 4.40 | (0.00) | 0.034 |
| 18:00-18:15 | A | 807.06 | 2876.98 | 0.281 | 0.00 | 0.51 | 0.39 | 5.92 | (0.00) | 0.029 |
| 18:00-18:15 | B | 156.59 | 1214.15 | 0.129 | 0.00 | 0.20 | 0.15 | 2.26 | (0.00) | 0.057 |
| 18:00-18:15 | C | 429.88 | 2305.39 | 0.186 | 0.00 | 0.29 | 0.23 | 3.48 | (0.00) | 0.032 |

A1 - (Default Analysis Set) - D6 - 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak, AM

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 |
|----------------------------------------------------------|------------------------------------------------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak, AM | 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak | AM | | | Yes | | | 07:45 | 09:15 | 90 | 15 | Varies by Arm |

Roundabout Network

Roundabout Type(s)

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

Roundabout Network Options

| | | | |
|--------------|----------|--------------|-----------|
| Driving Side | Lighting | Road Surface | In London |
|--------------|----------|--------------|-----------|

| | |
|------|------------------------------------------|
| Left | Normal/unknown ((Mini-roundabouts only)) |
|------|------------------------------------------|

Arms

Arms

| ID | Name | Description |
|----|----------------------|-------------|
| A | Neunkirchen Way | |
| B | Peregine Way | |
| C | Wretchwick Way North | |

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| A | 0.00 | 99999.00 | | 0.00 |
| B | 0.00 | 99999.00 | | 0.00 |
| C | 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 |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| A | 7.00 | 10.00 | 25.00 | 40.00 | 49.00 | 23.00 | |
| B | 3.00 | 6.50 | 15.00 | 60.00 | 49.00 | 24.50 | |
| C | 5.50 | 8.00 | 19.00 | 45.00 | 49.00 | 12.00 | |

Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| A | None |
| B | None |
| C | 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) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| A | | ((calculated)) | ((calculated)) | 0.858 | 2913.181 |
| B | | ((calculated)) | ((calculated)) | 0.608 | 1594.519 |
| C | | ((calculated)) | ((calculated)) | 0.772 | 2396.694 |

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 |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
|-----|--------------|--------------------|------------------------------|-------------------------|-----|

| | | | | | |
|---|----------|-----|--------|---------|-----|
| A | ONE HOUR | Yes | 582.00 | 100.000 | N/A |
| B | ONE HOUR | Yes | 273.00 | 100.000 | N/A |
| C | ONE HOUR | Yes | 870.00 | 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) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 07:45-08:00 | A | 438.16 | 438.16 | N/A | N/A |
| 07:45-08:00 | B | 205.53 | 205.53 | N/A | N/A |
| 07:45-08:00 | C | 654.98 | 654.98 | N/A | N/A |
| 08:00-08:15 | A | 523.21 | 523.21 | N/A | N/A |
| 08:00-08:15 | B | 245.42 | 245.42 | N/A | N/A |
| 08:00-08:15 | C | 782.11 | 782.11 | N/A | N/A |
| 08:15-08:30 | A | 640.79 | 640.79 | N/A | N/A |
| 08:15-08:30 | B | 300.58 | 300.58 | N/A | N/A |
| 08:15-08:30 | C | 957.89 | 957.89 | N/A | N/A |
| 08:30-08:45 | A | 640.79 | 640.79 | N/A | N/A |
| 08:30-08:45 | B | 300.58 | 300.58 | N/A | N/A |
| 08:30-08:45 | C | 957.89 | 957.89 | N/A | N/A |
| 08:45-09:00 | A | 523.21 | 523.21 | N/A | N/A |
| 08:45-09:00 | B | 245.42 | 245.42 | N/A | N/A |
| 08:45-09:00 | C | 782.11 | 782.11 | N/A | N/A |
| 09:00-09:15 | A | 438.16 | 438.16 | N/A | N/A |
| 09:00-09:15 | B | 205.53 | 205.53 | N/A | N/A |
| 09:00-09:15 | C | 654.98 | 654.98 | N/A | N/A |

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Roundabout 1 (for whole period)

| | | To | | |
|------|---|--------|--------|--------|
| | | A | B | C |
| From | A | 0.00 | 150.00 | 432.00 |
| | B | 225.00 | 0.00 | 48.00 |
| | C | 844.00 | 26.00 | 0.00 |

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 0.00 | 0.26 | 0.74 |
| | B | 0.82 | 0.00 | 0.18 |
| | C | 0.97 | 0.03 | 0.00 |

Vehicle Mix

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 1.00 | 1.00 | 1.00 |
| | B | 1.00 | 1.00 | 1.00 |

| | | | | |
|--|---|------|------|------|
| | | | | |
| | C | 1.00 | 1.00 | 1.00 |

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | | | |
|------|---|------|------|------|
| | | To | | |
| | | A | B | C |
| From | A | 0.00 | 0.00 | 0.00 |
| | B | 0.00 | 0.00 | 0.00 |
| | C | 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) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| A | 0.22 | 0.03 | 0.28 | A | 534.05 | 801.08 | 20.47 | 0.03 | 0.23 | 20.47 | 0.03 | 0.858 | 2913.181 |
| B | 0.23 | 0.06 | 0.30 | A | 250.51 | 375.76 | 20.65 | 0.05 | 0.23 | 20.65 | 0.05 | 0.608 | 1594.519 |
| C | 0.43 | 0.05 | 0.77 | A | 798.33 | 1197.49 | 51.00 | 0.04 | 0.57 | 51.01 | 0.04 | 0.772 | 2396.694 |

Main Results

Main results: (07:45-08:00)

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 438.16 | 109.54 | 437.45 | 802.66 | 19.53 | 0.00 | 2896.43 | 2856.71 | 0.151 | 0.00 | 0.18 |
| B | 205.53 | 51.38 | 204.84 | 132.27 | 324.70 | 0.00 | 1397.22 | 306.05 | 0.147 | 0.00 | 0.17 |
| C | 654.98 | 163.75 | 653.36 | 360.72 | 168.83 | 0.00 | 2266.45 | 2202.09 | 0.289 | 0.00 | 0.41 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 523.21 | 130.80 | 523.04 | 960.35 | 23.36 | 0.00 | 2893.14 | 2856.71 | 0.181 | 0.18 | 0.22 |
| B | 245.42 | 61.36 | 245.23 | 158.16 | 388.23 | 0.00 | 1358.61 | 306.05 | 0.181 | 0.17 | 0.22 |
| C | 782.11 | 195.53 | 781.60 | 431.35 | 202.11 | 0.00 | 2240.76 | 2202.09 | 0.349 | 0.41 | 0.53 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 640.79 | 160.20 | 640.54 | 1175.84 | 28.60 | 0.00 | 2888.64 | 2856.71 | 0.222 | 0.22 | 0.28 |
| B | 300.58 | 75.14 | 300.27 | 193.69 | 475.45 | 0.00 | 1305.62 | 306.05 | 0.230 | 0.22 | 0.30 |
| C | 957.89 | 239.47 | 956.97 | 528.24 | 247.47 | 0.00 | 2205.77 | 2202.09 | 0.434 | 0.53 | 0.76 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 640.79 | 160.20 | 640.79 | 1176.98 | 28.63 | 0.00 | 2888.62 | 2856.71 | 0.222 | 0.28 | 0.28 |
| B | 300.58 | 75.14 | 300.58 | 193.78 | 475.64 | 0.00 | 1305.50 | 306.05 | 0.230 | 0.30 | 0.30 |
| C | 957.89 | 239.47 | 957.88 | 528.49 | 247.73 | 0.00 | 2205.57 | 2202.09 | 0.434 | 0.76 | 0.77 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 640.79 | 160.20 | 640.79 | 1176.98 | 28.63 | 0.00 | 2888.62 | 2856.71 | 0.222 | 0.28 | 0.28 |
| B | 300.58 | 75.14 | 300.58 | 193.78 | 475.64 | 0.00 | 1305.50 | 306.05 | 0.230 | 0.30 | 0.30 |
| C | 957.89 | 239.47 | 957.88 | 528.49 | 247.73 | 0.00 | 2205.57 | 2202.09 | 0.434 | 0.76 | 0.77 |

| | (PCU/hr) | (PCU) | (PCU/hr) | (PCU/hr) | (PCU/hr) | (PCU/hr) | (PCU/hr) | (PCU/hr) | (PCU) | (PCU) | (PCU) |
|---|----------|--------|----------|----------|----------|----------|----------|----------|-------|-------|-------|
| A | 523.21 | 130.80 | 523.46 | 962.14 | 23.40 | 0.00 | 2893.10 | 2856.71 | 0.181 | 0.28 | 0.22 |
| B | 245.42 | 61.36 | 245.73 | 158.31 | 388.55 | 0.00 | 1358.42 | 306.05 | 0.181 | 0.30 | 0.22 |
| C | 782.11 | 195.53 | 783.02 | 431.75 | 202.52 | 0.00 | 2240.45 | 2202.09 | 0.349 | 0.77 | 0.54 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 438.16 | 109.54 | 438.33 | 805.46 | 19.59 | 0.00 | 2896.37 | 2856.71 | 0.151 | 0.22 | 0.18 |
| B | 205.53 | 51.38 | 205.72 | 132.56 | 325.36 | 0.00 | 1396.82 | 306.05 | 0.147 | 0.22 | 0.17 |
| C | 654.98 | 163.75 | 655.50 | 361.53 | 169.55 | 0.00 | 2265.89 | 2202.09 | 0.289 | 0.54 | 0.41 |

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 2.64 | 0.18 | 0.024 | A | A |
| B | 2.53 | 0.17 | 0.050 | A | A |
| C | 5.98 | 0.40 | 0.037 | A | A |

Queueing Delay results: (08:00-08:15)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 3.28 | 0.22 | 0.025 | A | A |
| B | 3.25 | 0.22 | 0.054 | A | A |
| C | 7.90 | 0.53 | 0.041 | A | A |

Queueing Delay results: (08:15-08:30)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 4.23 | 0.28 | 0.027 | A | A |
| B | 4.39 | 0.29 | 0.060 | A | A |
| C | 11.25 | 0.75 | 0.048 | A | A |

Queueing Delay results: (08:30-08:45)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 4.27 | 0.28 | 0.027 | A | A |
| B | 4.47 | 0.30 | 0.060 | A | A |
| C | 11.47 | 0.76 | 0.048 | A | A |

Queueing Delay results: (08:45-09:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 3.35 | 0.22 | 0.025 | A | A |
| B | 3.37 | 0.22 | 0.054 | A | A |
| C | 8.20 | 0.55 | 0.041 | A | A |

Queueing Delay results: (09:00-09:15)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 2.70 | 0.18 | 0.024 | A | A |
| B | 2.63 | 0.18 | 0.050 | A | A |
| C | 6.20 | 0.41 | 0.037 | 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) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| A | 7.00 | 10.00 | 25.00 | 40.00 | 49.00 | 23.00 | | 0.858 | 2913.181 |
| B | 3.00 | 6.50 | 15.00 | 60.00 | 49.00 | 24.50 | | 0.608 | 1594.519 |
| C | 5.50 | 8.00 | 19.00 | 45.00 | 49.00 | 12.00 | | 0.772 | 2396.694 |

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) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 07:45-08:00 | A | 438.16 | 2896.43 | 0.151 | 0.00 | 0.00 | 0.18 | 2.64 | (0.00) | 0.024 |
| 07:45-08:00 | B | 205.53 | 1397.22 | 0.147 | 0.00 | 0.00 | 0.17 | 2.53 | (0.00) | 0.050 |
| 07:45-08:00 | C | 654.98 | 2266.45 | 0.289 | 0.00 | 0.00 | 0.41 | 5.98 | (0.00) | 0.037 |
| 08:00-08:15 | A | 523.21 | 2893.14 | 0.181 | 0.00 | 0.18 | 0.22 | 3.28 | (0.00) | 0.025 |
| 08:00-08:15 | B | 245.42 | 1358.61 | 0.181 | 0.00 | 0.17 | 0.22 | 3.25 | (0.00) | 0.054 |
| 08:00-08:15 | C | 782.11 | 2240.76 | 0.349 | 0.00 | 0.41 | 0.53 | 7.90 | (0.00) | 0.041 |
| 08:15-08:30 | A | 640.79 | 2888.64 | 0.222 | 0.00 | 0.22 | 0.28 | 4.23 | (0.00) | 0.027 |
| 08:15-08:30 | B | 300.58 | 1305.62 | 0.230 | 0.00 | 0.22 | 0.30 | 4.39 | (0.00) | 0.060 |
| 08:15-08:30 | C | 957.89 | 2205.77 | 0.434 | 0.00 | 0.53 | 0.76 | 11.25 | (0.00) | 0.048 |
| 08:30-08:45 | A | 640.79 | 2888.62 | 0.222 | 0.00 | 0.28 | 0.28 | 4.27 | (0.00) | 0.027 |
| 08:30-08:45 | B | 300.58 | 1305.50 | 0.230 | 0.00 | 0.30 | 0.30 | 4.47 | (0.00) | 0.060 |
| 08:30-08:45 | C | 957.89 | 2205.57 | 0.434 | 0.00 | 0.76 | 0.77 | 11.47 | (0.00) | 0.048 |
| 08:45-09:00 | A | 523.21 | 2893.10 | 0.181 | 0.00 | 0.28 | 0.22 | 3.35 | (0.00) | 0.025 |
| 08:45-09:00 | B | 245.42 | 1358.42 | 0.181 | 0.00 | 0.30 | 0.22 | 3.37 | (0.00) | 0.054 |
| 08:45-09:00 | C | 782.11 | 2240.45 | 0.349 | 0.00 | 0.77 | 0.54 | 8.20 | (0.00) | 0.041 |
| 09:00-09:15 | A | 438.16 | 2896.37 | 0.151 | 0.00 | 0.22 | 0.18 | 2.70 | (0.00) | 0.024 |
| 09:00-09:15 | B | 205.53 | 1396.82 | 0.147 | 0.00 | 0.22 | 0.17 | 2.63 | (0.00) | 0.050 |
| 09:00-09:15 | C | 654.98 | 2265.89 | 0.289 | 0.00 | 0.54 | 0.41 | 6.20 | (0.00) | 0.037 |

ARCADY 7

Version: 7.0.1.130 [12 March 2010]
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\2014 Seel Way - A41 East - Grav Rd N - A41 W - B4100.arc7
Report generation date: 10/04/2015 10:33:06

- » A1 - (Default Analysis Set) - D9 - 2020 PCU + CD -AM Peak, AM
- » A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - PM Peak, PM

Summary of roundabout performance

| | AM | | | | PM | | | |
|---------------------------------------------------------|-------------|-------------|------|-----|-------------|-------------|------|-----|
| | Queue (PCU) | Delay (min) | RFC | LOS | Queue (PCU) | Delay (min) | RFC | LOS |
| (Default Analysis Set) - 2020 PCU + CD -AM Peak | | | | | | | | |
| Arm A | 5.44 | 0.29 | 0.85 | C | | | | |
| Arm B | 4.56 | 0.21 | 0.83 | B | | | | |
| Arm C | 0.74 | 0.27 | 0.43 | C | | | | |
| Arm D | 2.33 | 0.12 | 0.70 | A | | | | |
| Arm E | 0.76 | 0.08 | 0.43 | A | | | | |
| (Default Analysis Set) - 2020 PCU + CD - PM Peak | | | | | | | | |
| Arm A | | | | | 1.31 | 0.11 | 0.57 | A |
| Arm B | | | | | 4.81 | 0.21 | 0.83 | B |
| Arm C | | | | | 0.35 | 0.18 | 0.26 | B |
| Arm D | | | | | 45.87 | 1.49 | 1.03 | F |
| Arm E | | | | | 3.02 | 0.25 | 0.76 | B |

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

2014 PCU -AM Peak - AM runs from 07:45:00 to 09:15:00
 2014 PCU - PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD -AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD - PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV180 -AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV180 - PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV300 -AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV300 - PM Peak - PM runs from 16:45:00 to 18:15:00

File summary

File Description

| | |
|-------------------|----------------------------------------------------------------------------------|
| Title | Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road AM Peak |
| Location | Bicester |
| Date | 13/07/2010 |
| Status | TIA |
| Client | JJ Gallagher Ltd |
| Jobnumber | 18578-01-1 |
| Enumerator | Alexanders [CS5DG3J] |
| Results Upto Date | False |

Analysis Options

[No text visible in this block]

| KPC 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) - D9 - 2020 PCU + CD -AM Peak, AM

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 |
|----------------------------|------------------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| 2020 PCU + CD -AM Peak, AM | 2020 PCU + CD -AM Peak | AM | | | Yes | | | 07:45 | 09:15 | 90 | 15 | Varies by Arm |

Roundabout Network

Roundabout Type(s)

| ID | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|----|------------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 | (untitled) | A,B,C,D,E | Standard | | | |

Roundabout Network Options

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

Arms

Arms

| ID | Name | Description |
|----|-----------------------|-------------|
| A | Seelshield Way | |
| B | A41 East | |
| C | Gravenhill Road North | |
| D | A41 West | |

| | | |
|---|-------------------|--|
| E | B4100 London Road | |
|---|-------------------|--|

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| A | 0.00 | 99999.00 | | 0.00 |
| B | 0.00 | 99999.00 | | 0.00 |
| C | 0.00 | 99999.00 | | 0.00 |
| D | 0.00 | 99999.00 | | 0.00 |
| E | 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 |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| A | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 31.00 | |
| B | 5.25 | 8.50 | 20.00 | 20.00 | 70.00 | 31.00 | |
| C | 3.50 | 7.00 | 5.00 | 20.00 | 70.00 | 20.00 | |
| D | 5.00 | 9.00 | 20.00 | 20.00 | 70.00 | 42.00 | |
| E | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 39.00 | |

Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| A | None |
| B | None |
| C | None |
| D | None |
| E | None |

Arm Slope/ Intercept and Capacity

Arm Intercept Adjustments

| Arm | Use Adjustment | Reason | Direct Intercept Adjustment (PCU/hr) |
|-----|----------------|------------------------|--------------------------------------|
| A | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| B | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| C | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| D | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| E | Yes | (ARCADY 6 CT10 Import) | 0.00 |

Slope and Intercept used in model

| Arm | Enter Directly | Slope | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| A | | ((calculated)) | ((calculated)) | 0.570 | 2113.640 |
| B | | ((calculated)) | ((calculated)) | 0.588 | 2230.844 |
| C | | ((calculated)) | ((calculated)) | 0.472 | 1435.972 |
| D | | ((calculated)) | ((calculated)) | 0.568 | 2160.167 |
| E | | ((calculated)) | ((calculated)) | 0.554 | 2054.761 |

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 | nv 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 |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| A | ONE HOUR | Yes | 1053.00 | 100.000 | N/A |
| B | ONE HOUR | Yes | 1202.00 | 100.000 | N/A |
| C | ONE HOUR | Yes | 153.00 | 100.000 | N/A |
| D | ONE HOUR | Yes | 1100.00 | 100.000 | N/A |
| E | ONE HOUR | Yes | 501.00 | 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) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 07:45-08:00 | A | 792.75 | 792.75 | N/A | N/A |
| 07:45-08:00 | B | 904.93 | 904.93 | N/A | N/A |
| 07:45-08:00 | C | 115.19 | 115.19 | N/A | N/A |
| 07:45-08:00 | D | 828.14 | 828.14 | N/A | N/A |
| 07:45-08:00 | E | 377.18 | 377.18 | N/A | N/A |
| 08:00-08:15 | A | 946.63 | 946.63 | N/A | N/A |
| 08:00-08:15 | B | 1080.57 | 1080.57 | N/A | N/A |
| 08:00-08:15 | C | 137.54 | 137.54 | N/A | N/A |
| 08:00-08:15 | D | 988.88 | 988.88 | N/A | N/A |
| 08:00-08:15 | E | 450.39 | 450.39 | N/A | N/A |
| 08:15-08:30 | A | 1159.37 | 1159.37 | N/A | N/A |
| 08:15-08:30 | B | 1323.43 | 1323.43 | N/A | N/A |
| 08:15-08:30 | C | 168.46 | 168.46 | N/A | N/A |
| 08:15-08:30 | D | 1211.12 | 1211.12 | N/A | N/A |
| 08:15-08:30 | E | 551.61 | 551.61 | N/A | N/A |
| 08:30-08:45 | A | 1159.37 | 1159.37 | N/A | N/A |
| 08:30-08:45 | B | 1323.43 | 1323.43 | N/A | N/A |
| 08:30-08:45 | C | 168.46 | 168.46 | N/A | N/A |
| 08:30-08:45 | D | 1211.12 | 1211.12 | N/A | N/A |
| 08:30-08:45 | E | 551.61 | 551.61 | N/A | N/A |
| 08:45-09:00 | A | 946.63 | 946.63 | N/A | N/A |
| 08:45-09:00 | B | 1080.57 | 1080.57 | N/A | N/A |
| 08:45-09:00 | C | 137.54 | 137.54 | N/A | N/A |
| 08:45-09:00 | D | 988.88 | 988.88 | N/A | N/A |
| 08:45-09:00 | E | 450.39 | 450.39 | N/A | N/A |
| 09:00-09:15 | A | 792.75 | 792.75 | N/A | N/A |
| 09:00-09:15 | B | 904.93 | 904.93 | N/A | N/A |
| 09:00-09:15 | C | 115.19 | 115.19 | N/A | N/A |
| 09:00-09:15 | D | 828.14 | 828.14 | N/A | N/A |
| 09:00-09:15 | E | 377.18 | 377.18 | N/A | N/A |

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Roundabout 1 (for whole period)

Turning Counts (Vehicles per Hour) - Roundabout 1 (for whole period)

| | | To | | | | |
|------|---|--------|--------|-------|--------|--------|
| | | A | B | C | D | E |
| From | A | 0.00 | 357.00 | 41.00 | 476.00 | 179.00 |
| | B | 202.00 | 0.00 | 33.00 | 705.00 | 262.00 |
| | C | 19.00 | 13.00 | 0.00 | 97.00 | 24.00 |
| | D | 294.00 | 693.00 | 59.00 | 0.00 | 54.00 |
| | E | 63.00 | 220.00 | 29.00 | 189.00 | 0.00 |

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

| | | To | | | | |
|------|---|------|------|------|------|------|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.34 | 0.04 | 0.45 | 0.17 |
| | B | 0.17 | 0.00 | 0.03 | 0.59 | 0.22 |
| | C | 0.12 | 0.08 | 0.00 | 0.63 | 0.16 |
| | D | 0.27 | 0.63 | 0.05 | 0.00 | 0.05 |
| | E | 0.13 | 0.44 | 0.06 | 0.38 | 0.00 |

Vehicle Mix

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

| | | To | | | | |
|------|---|------|------|------|------|------|
| | | A | B | C | D | E |
| From | A | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | B | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | C | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | D | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | E | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | To | | | | |
|------|---|------|------|------|------|------|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | D | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | E | 0.00 | 0.00 | 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) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| A | 0.85 | 0.29 | 5.44 | C | 966.25 | 1449.38 | 228.98 | 0.16 | 2.54 | 229.00 | 0.16 | 0.570 | 2113.640 |
| B | 0.83 | 0.21 | 4.56 | B | 1102.98 | 1654.46 | 208.03 | 0.13 | 2.31 | 208.05 | 0.13 | 0.588 | 2230.844 |
| C | 0.43 | 0.27 | 0.74 | C | 140.40 | 210.59 | 36.19 | 0.17 | 0.40 | 36.19 | 0.17 | 0.472 | 1435.972 |
| D | 0.70 | 0.12 | 2.33 | A | 1009.38 | 1514.07 | 127.96 | 0.08 | 1.42 | 127.97 | 0.08 | 0.568 | 2160.167 |
| E | 0.43 | 0.08 | 0.76 | A | 459.73 | 689.59 | 46.23 | 0.07 | 0.51 | 46.24 | 0.07 | 0.554 | 2054.761 |

Main Results

Main results: (07:45-08:00)

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 792.75 | 198.19 | 788.86 | 433.37 | 902.30 | 0.00 | 1599.52 | 951.86 | 0.496 | 0.00 | 0.97 |
| B | 904.93 | 226.23 | 900.93 | 961.95 | 729.21 | 0.00 | 1801.91 | 1552.44 | 0.502 | 0.00 | 1.00 |
| C | 115.19 | 28.80 | 114.43 | 121.45 | 1508.69 | 0.00 | 723.39 | 265.30 | 0.159 | 0.00 | 0.19 |
| D | 828.14 | 207.03 | 824.96 | 1099.36 | 523.76 | 0.00 | 1862.66 | 1672.71 | 0.445 | 0.00 | 0.79 |
| E | 377.18 | 94.29 | 375.87 | 388.92 | 959.80 | 0.00 | 1523.11 | 998.45 | 0.248 | 0.00 | 0.33 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 946.63 | 236.66 | 943.78 | 518.60 | 1079.85 | 0.00 | 1498.35 | 951.86 | 0.632 | 0.97 | 1.68 |
| B | 1080.57 | 270.14 | 1077.90 | 1151.13 | 872.51 | 0.00 | 1717.62 | 1552.44 | 0.629 | 1.00 | 1.67 |
| C | 137.54 | 34.39 | 137.08 | 145.33 | 1805.07 | 0.00 | 583.40 | 265.30 | 0.236 | 0.19 | 0.30 |
| D | 988.88 | 247.22 | 987.26 | 1315.45 | 626.70 | 0.00 | 1804.20 | 1672.71 | 0.548 | 0.79 | 1.20 |
| E | 450.39 | 112.60 | 449.85 | 465.35 | 1148.61 | 0.00 | 1418.53 | 998.45 | 0.318 | 0.33 | 0.46 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 1159.37 | 289.84 | 1145.58 | 633.07 | 1320.39 | 0.00 | 1361.29 | 951.86 | 0.852 | 1.68 | 5.13 |
| B | 1323.43 | 330.86 | 1312.69 | 1404.54 | 1061.44 | 0.00 | 1606.49 | 1552.44 | 0.824 | 1.67 | 4.35 |
| C | 168.46 | 42.11 | 166.83 | 177.23 | 2196.89 | 0.00 | 398.33 | 265.30 | 0.423 | 0.30 | 0.71 |
| D | 1211.12 | 302.78 | 1206.76 | 1601.19 | 762.53 | 0.00 | 1727.04 | 1672.71 | 0.701 | 1.20 | 2.29 |
| E | 551.61 | 137.90 | 550.45 | 566.28 | 1403.02 | 0.00 | 1277.60 | 998.45 | 0.432 | 0.46 | 0.75 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 1159.37 | 289.84 | 1158.13 | 636.19 | 1324.38 | 0.00 | 1359.02 | 951.86 | 0.853 | 5.13 | 5.44 |
| B | 1323.43 | 330.86 | 1322.59 | 1412.06 | 1070.45 | 0.00 | 1601.18 | 1552.44 | 0.827 | 4.35 | 4.56 |
| C | 168.46 | 42.11 | 168.33 | 178.28 | 2214.75 | 0.00 | 389.90 | 265.30 | 0.432 | 0.71 | 0.74 |
| D | 1211.12 | 302.78 | 1210.96 | 1614.05 | 769.03 | 0.00 | 1723.35 | 1672.71 | 0.703 | 2.29 | 2.33 |
| E | 551.61 | 137.90 | 551.59 | 571.01 | 1408.98 | 0.00 | 1274.30 | 998.45 | 0.433 | 0.75 | 0.76 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 946.63 | 236.66 | 961.36 | 523.03 | 1085.62 | 0.00 | 1495.06 | 951.86 | 0.633 | 5.44 | 1.76 |
| B | 1080.57 | 270.14 | 1091.84 | 1161.80 | 885.18 | 0.00 | 1710.16 | 1552.44 | 0.632 | 4.56 | 1.75 |
| C | 137.54 | 34.39 | 139.24 | 146.82 | 1830.21 | 0.00 | 571.53 | 265.30 | 0.241 | 0.74 | 0.32 |
| D | 988.88 | 247.22 | 993.26 | 1333.58 | 635.86 | 0.00 | 1798.99 | 1672.71 | 0.550 | 2.33 | 1.23 |
| E | 450.39 | 112.60 | 451.54 | 472.01 | 1157.11 | 0.00 | 1413.81 | 998.45 | 0.319 | 0.76 | 0.47 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 792.75 | 198.19 | 795.81 | 436.22 | 907.37 | 0.00 | 1596.63 | 951.86 | 0.497 | 1.76 | 1.00 |
| B | 904.93 | 226.23 | 907.82 | 968.31 | 734.88 | 0.00 | 1798.57 | 1552.44 | 0.503 | 1.75 | 1.02 |
| C | 115.19 | 28.80 | 115.70 | 122.28 | 1520.42 | 0.00 | 717.85 | 265.30 | 0.160 | 0.32 | 0.19 |
| D | 828.14 | 207.03 | 829.84 | 1108.05 | 528.07 | 0.00 | 1860.22 | 1672.71 | 0.445 | 1.23 | 0.81 |
| E | 377.18 | 94.29 | 377.70 | 388.92 | 959.80 | 0.00 | 1523.11 | 998.45 | 0.248 | 0.33 | 0.33 |

| | | | | | | | | | | | |
|---|--------|-------|--------|--------|--------|------|---------|--------|-------|------|------|
| E | 377.18 | 94.29 | 377.73 | 392.05 | 965.86 | 0.00 | 1519.75 | 998.45 | 0.248 | 0.47 | 0.33 |
|---|--------|-------|--------|--------|--------|------|---------|--------|-------|------|------|

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 14.10 | 0.94 | 0.074 | A | A |
| B | 14.53 | 0.97 | 0.066 | A | A |
| C | 2.73 | 0.18 | 0.098 | A | A |
| D | 11.61 | 0.77 | 0.058 | A | A |
| E | 4.82 | 0.32 | 0.052 | A | A |

Queueing Delay results: (08:00-08:15)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 24.18 | 1.61 | 0.108 | A | A |
| B | 24.07 | 1.60 | 0.093 | A | A |
| C | 4.44 | 0.30 | 0.134 | A | A |
| D | 17.51 | 1.17 | 0.073 | A | A |
| E | 6.81 | 0.45 | 0.062 | A | A |

Queueing Delay results: (08:15-08:30)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 66.72 | 4.45 | 0.263 | C | B |
| B | 58.52 | 3.90 | 0.197 | B | B |
| C | 10.01 | 0.67 | 0.257 | C | B |
| D | 32.55 | 2.17 | 0.114 | A | A |
| E | 10.99 | 0.73 | 0.082 | A | A |

Queueing Delay results: (08:30-08:45)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 79.80 | 5.32 | 0.294 | C | B |
| B | 67.24 | 4.48 | 0.214 | B | B |
| C | 11.01 | 0.73 | 0.271 | C | B |
| D | 34.73 | 2.32 | 0.117 | A | A |
| E | 11.35 | 0.76 | 0.083 | A | A |

Queueing Delay results: (08:45-09:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 28.78 | 1.92 | 0.115 | A | A |
| B | 27.89 | 1.86 | 0.099 | A | A |
| C | 5.03 | 0.34 | 0.139 | A | A |
| D | 19.15 | 1.28 | 0.075 | A | A |
| E | 7.21 | 0.48 | 0.062 | A | A |

Queueing Delay results: (09:00-09:15)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 15.41 | 1.03 | 0.075 | A | A |
| B | 15.77 | 1.05 | 0.068 | A | A |
| C | 2.97 | 0.20 | 0.100 | A | A |
| D | 12.40 | 0.83 | 0.058 | A | A |
| E | 5.00 | 0.33 | 0.055 | A | A |

| | | | | | |
|---|------|------|-------|---|---|
| E | 5.06 | 0.34 | 0.053 | 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) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| A | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 31.00 | | 0.570 | 2113.640 |
| B | 5.25 | 8.50 | 20.00 | 20.00 | 70.00 | 31.00 | | 0.588 | 2230.844 |
| C | 3.50 | 7.00 | 5.00 | 20.00 | 70.00 | 20.00 | | 0.472 | 1435.972 |
| D | 5.00 | 9.00 | 20.00 | 20.00 | 70.00 | 42.00 | | 0.568 | 2160.167 |
| E | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 39.00 | | 0.554 | 2054.761 |

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) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 07:45-08:00 | A | 792.75 | 1599.52 | 0.496 | 0.00 | 0.00 | 0.97 | 14.10 | (0.00) | 0.074 |
| 07:45-08:00 | B | 904.93 | 1801.91 | 0.502 | 0.00 | 0.00 | 1.00 | 14.53 | (0.00) | 0.066 |
| 07:45-08:00 | C | 115.19 | 723.39 | 0.159 | 0.00 | 0.00 | 0.19 | 2.73 | (0.00) | 0.098 |
| 07:45-08:00 | D | 828.14 | 1862.66 | 0.445 | 0.00 | 0.00 | 0.79 | 11.61 | (0.00) | 0.058 |
| 07:45-08:00 | E | 377.18 | 1523.11 | 0.248 | 0.00 | 0.00 | 0.33 | 4.82 | (0.00) | 0.052 |
| 08:00-08:15 | A | 946.63 | 1498.35 | 0.632 | 0.00 | 0.97 | 1.68 | 24.18 | (0.00) | 0.108 |
| 08:00-08:15 | B | 1080.57 | 1717.62 | 0.629 | 0.00 | 1.00 | 1.67 | 24.07 | (0.00) | 0.093 |
| 08:00-08:15 | C | 137.54 | 583.40 | 0.236 | 0.00 | 0.19 | 0.30 | 4.44 | (0.00) | 0.134 |
| 08:00-08:15 | D | 988.88 | 1804.20 | 0.548 | 0.00 | 0.79 | 1.20 | 17.51 | (0.00) | 0.073 |
| 08:00-08:15 | E | 450.39 | 1418.53 | 0.318 | 0.00 | 0.33 | 0.46 | 6.81 | (0.00) | 0.062 |
| 08:15-08:30 | A | 1159.37 | 1361.29 | 0.852 | 0.00 | 1.68 | 5.13 | 66.72 | (0.00) | 0.263 |
| 08:15-08:30 | B | 1323.43 | 1606.49 | 0.824 | 0.00 | 1.67 | 4.35 | 58.52 | (0.00) | 0.197 |
| 08:15-08:30 | C | 168.46 | 398.33 | 0.423 | 0.00 | 0.30 | 0.71 | 10.01 | (0.00) | 0.257 |
| 08:15-08:30 | D | 1211.12 | 1727.04 | 0.701 | 0.00 | 1.20 | 2.29 | 32.55 | (0.00) | 0.114 |
| 08:15-08:30 | E | 551.61 | 1277.60 | 0.432 | 0.00 | 0.46 | 0.75 | 10.99 | (0.00) | 0.082 |
| 08:30-08:45 | A | 1159.37 | 1359.02 | 0.853 | 0.00 | 5.13 | 5.44 | 79.80 | (0.00) | 0.294 |
| 08:30-08:45 | B | 1323.43 | 1601.18 | 0.827 | 0.00 | 4.35 | 4.56 | 67.24 | (0.00) | 0.214 |
| 08:30-08:45 | C | 168.46 | 389.90 | 0.432 | 0.00 | 0.71 | 0.74 | 11.01 | (0.00) | 0.271 |
| 08:30-08:45 | D | 1211.12 | 1723.35 | 0.703 | 0.00 | 2.29 | 2.33 | 34.73 | (0.00) | 0.117 |
| 08:30-08:45 | E | 551.61 | 1274.30 | 0.433 | 0.00 | 0.75 | 0.76 | 11.35 | (0.00) | 0.083 |
| 08:45-09:00 | A | 946.63 | 1495.06 | 0.633 | 0.00 | 5.44 | 1.76 | 28.78 | (0.00) | 0.115 |
| 08:45-09:00 | B | 1080.57 | 1710.16 | 0.632 | 0.00 | 4.56 | 1.75 | 27.89 | (0.00) | 0.099 |
| 08:45-09:00 | C | 137.54 | 571.53 | 0.241 | 0.00 | 0.74 | 0.32 | 5.03 | (0.00) | 0.139 |
| 08:45-09:00 | D | 988.88 | 1798.99 | 0.550 | 0.00 | 2.33 | 1.23 | 19.15 | (0.00) | 0.075 |
| 08:45-09:00 | E | 450.39 | 1413.81 | 0.319 | 0.00 | 0.76 | 0.47 | 7.21 | (0.00) | 0.062 |
| 09:00-09:15 | A | 792.75 | 1596.63 | 0.497 | 0.00 | 1.76 | 1.00 | 15.41 | (0.00) | 0.075 |
| 09:00-09:15 | B | 904.93 | 1798.57 | 0.503 | 0.00 | 1.75 | 1.02 | 15.77 | (0.00) | 0.068 |
| 09:00-09:15 | C | 115.19 | 717.85 | 0.160 | 0.00 | 0.32 | 0.19 | 2.97 | (0.00) | 0.100 |
| 09:00-09:15 | D | 828.14 | 1860.22 | 0.445 | 0.00 | 1.23 | 0.81 | 12.40 | (0.00) | 0.058 |
| 09:00-09:15 | E | 377.18 | 1519.75 | 0.248 | 0.00 | 0.47 | 0.33 | 5.06 | (0.00) | 0.053 |

A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - PM

Peak, 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 |
|-----------------------------|-------------------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| 2020 PCU + CD - PM Peak, PM | 2020 PCU + CD - PM Peak | PM | | | Yes | | | 16:45 | 18:15 | 90 | 15 | Varies by Arm |

Roundabout Network

Roundabout Type(s)

| ID | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|----|------------|-----------|-----------------|-----------------|------------------|--------------------|
| 1 | (untitled) | A,B,C,D,E | Standard | | | |

Roundabout Network Options

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

Arms

Arms

| ID | Name | Description |
|----|-----------------------|-------------|
| A | Seelshield Way | |
| B | A41 East | |
| C | Gravenhill Road North | |
| D | A41 West | |
| E | B4100 London Road | |

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| A | 0.00 | 99999.00 | | 0.00 |
| B | 0.00 | 99999.00 | | 0.00 |
| C | 0.00 | 99999.00 | | 0.00 |
| D | 0.00 | 99999.00 | | 0.00 |
| E | 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 |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| A | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 31.00 | |

| Arm | 1.00 | 1.00 | 0.00 | 20.00 | 70.00 | 31.00 |
|-----|------|------|-------|-------|-------|-------|
| B | 5.25 | 8.50 | 20.00 | 20.00 | 70.00 | 31.00 |
| C | 3.50 | 7.00 | 5.00 | 20.00 | 70.00 | 20.00 |
| D | 5.00 | 9.00 | 20.00 | 20.00 | 70.00 | 42.00 |
| E | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 39.00 |

Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| A | None |
| B | None |
| C | None |
| D | None |
| E | None |

Arm Slope/ Intercept and Capacity

Arm Intercept Adjustments

| Arm | Use Adjustment | Reason | Direct Intercept Adjustment (PCU/hr) |
|-----|----------------|------------------------|--------------------------------------|
| A | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| B | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| C | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| D | Yes | (ARCADY 6 CT10 Import) | 0.00 |
| E | Yes | (ARCADY 6 CT10 Import) | 0.00 |

Slope and Intercept used in model

| Arm | Enter Directly | Slope | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| A | | ((calculated)) | ((calculated)) | 0.570 | 2113.640 |
| B | | ((calculated)) | ((calculated)) | 0.588 | 2230.844 |
| C | | ((calculated)) | ((calculated)) | 0.472 | 1435.972 |
| D | | ((calculated)) | ((calculated)) | 0.568 | 2160.167 |
| E | | ((calculated)) | ((calculated)) | 0.554 | 2054.761 |

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 | 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 |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| A | ONE HOUR | Yes | 651.00 | 100.000 | N/A |
| B | ONE HOUR | Yes | 1307.00 | 100.000 | N/A |
| C | ONE HOUR | Yes | 106.00 | 100.000 | N/A |
| D | ONE HOUR | Yes | 1558.00 | 100.000 | N/A |
| E | ONE HOUR | Yes | 688.00 | 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) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 16:45-17:00 | A | 490.11 | 490.11 | N/A | N/A |
| 16:45-17:00 | B | 983.98 | 983.98 | N/A | N/A |
| 16:45-17:00 | C | 79.80 | 79.80 | N/A | N/A |
| 16:45-17:00 | D | 1172.94 | 1172.94 | N/A | N/A |
| 16:45-17:00 | E | 517.96 | 517.96 | N/A | N/A |
| 17:00-17:15 | A | 585.24 | 585.24 | N/A | N/A |
| 17:00-17:15 | B | 1174.97 | 1174.97 | N/A | N/A |
| 17:00-17:15 | C | 95.29 | 95.29 | N/A | N/A |
| 17:00-17:15 | D | 1400.61 | 1400.61 | N/A | N/A |
| 17:00-17:15 | E | 618.50 | 618.50 | N/A | N/A |
| 17:15-17:30 | A | 716.76 | 716.76 | N/A | N/A |
| 17:15-17:30 | B | 1439.03 | 1439.03 | N/A | N/A |
| 17:15-17:30 | C | 116.71 | 116.71 | N/A | N/A |
| 17:15-17:30 | D | 1715.39 | 1715.39 | N/A | N/A |
| 17:15-17:30 | E | 757.50 | 757.50 | N/A | N/A |
| 17:30-17:45 | A | 716.76 | 716.76 | N/A | N/A |
| 17:30-17:45 | B | 1439.03 | 1439.03 | N/A | N/A |
| 17:30-17:45 | C | 116.71 | 116.71 | N/A | N/A |
| 17:30-17:45 | D | 1715.39 | 1715.39 | N/A | N/A |
| 17:30-17:45 | E | 757.50 | 757.50 | N/A | N/A |
| 17:45-18:00 | A | 585.24 | 585.24 | N/A | N/A |
| 17:45-18:00 | B | 1174.97 | 1174.97 | N/A | N/A |
| 17:45-18:00 | C | 95.29 | 95.29 | N/A | N/A |
| 17:45-18:00 | D | 1400.61 | 1400.61 | N/A | N/A |
| 17:45-18:00 | E | 618.50 | 618.50 | N/A | N/A |
| 18:00-18:15 | A | 490.11 | 490.11 | N/A | N/A |
| 18:00-18:15 | B | 983.98 | 983.98 | N/A | N/A |
| 18:00-18:15 | C | 79.80 | 79.80 | N/A | N/A |
| 18:00-18:15 | D | 1172.94 | 1172.94 | N/A | N/A |
| 18:00-18:15 | E | 517.96 | 517.96 | N/A | N/A |

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Roundabout 1 (for whole period)

| | | To | | | | |
|------|---|--------|--------|--------|--------|--------|
| | | A | B | C | D | E |
| From | A | 0.00 | 194.00 | 30.00 | 298.00 | 129.00 |
| | B | 353.00 | 0.00 | 16.00 | 658.00 | 280.00 |
| | C | 24.00 | 0.00 | 0.00 | 67.00 | 15.00 |
| | D | 565.00 | 728.00 | 121.00 | 0.00 | 144.00 |
| | E | 140.00 | 341.00 | 25.00 | 182.00 | 0.00 |

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

| | | To | | | | |
|------|---|------|------|------|------|------|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.30 | 0.05 | 0.46 | 0.20 |
| | B | 0.27 | 0.00 | 0.01 | 0.50 | 0.21 |

| | | | | | | |
|------|---|------|------|------|------|------|
| From | C | 0.23 | 0.00 | 0.00 | 0.63 | 0.14 |
| | D | 0.36 | 0.47 | 0.08 | 0.00 | 0.09 |
| | E | 0.20 | 0.50 | 0.04 | 0.26 | 0.00 |

Vehicle Mix

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

| | | | | | | |
|------|------|------|------|------|------|------|
| From | To | | | | | |
| | | A | B | C | D | E |
| | A | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | B | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | C | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | D | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| E | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | | | | | |
|------|------|------|------|------|------|------|
| From | To | | | | | |
| | | A | B | C | D | E |
| | A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | D | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| E | 0.00 | 0.00 | 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) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| A | 0.57 | 0.11 | 1.31 | A | 597.37 | 896.05 | 74.58 | 0.08 | 0.83 | 74.59 | 0.08 | 0.570 | 2113.640 |
| B | 0.83 | 0.21 | 4.81 | B | 1199.33 | 1798.99 | 222.00 | 0.12 | 2.47 | 222.02 | 0.12 | 0.588 | 2230.844 |
| C | 0.26 | 0.18 | 0.35 | B | 97.27 | 145.90 | 18.99 | 0.13 | 0.21 | 18.99 | 0.13 | 0.472 | 1435.972 |
| D | 1.03 | 1.49 | 45.87 | F | 1429.65 | 2144.47 | 1170.24 | 0.55 | 13.00 | 1170.30 | 0.55 | 0.568 | 2160.167 |
| E | 0.76 | 0.25 | 3.02 | B | 631.32 | 946.98 | 139.81 | 0.15 | 1.55 | 139.82 | 0.15 | 0.554 | 2054.761 |

Main Results

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 490.11 | 122.53 | 488.21 | 810.20 | 1045.78 | 0.00 | 1517.76 | 1168.12 | 0.323 | 0.00 | 0.47 |
| B | 983.98 | 245.99 | 979.65 | 945.67 | 588.32 | 0.00 | 1884.78 | 1497.75 | 0.522 | 0.00 | 1.08 |
| C | 79.80 | 19.95 | 79.34 | 143.76 | 1424.21 | 0.00 | 763.29 | 248.77 | 0.105 | 0.00 | 0.12 |
| D | 1172.94 | 293.24 | 1165.81 | 903.16 | 600.39 | 0.00 | 1819.14 | 1564.67 | 0.645 | 0.00 | 1.78 |
| E | 517.96 | 129.49 | 515.38 | 425.59 | 1340.61 | 0.00 | 1312.17 | 1012.89 | 0.395 | 0.00 | 0.65 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 585.24 | 146.31 | 584.29 | 968.59 | 1250.04 | 0.00 | 1401.38 | 1168.12 | 0.418 | 0.47 | 0.71 |

| | | | | | | | | | | | |
|---|---------|--------|---------|---------|---------|------|---------|---------|-------|------|------|
| B | 1174.97 | 293.74 | 1172.10 | 1130.47 | 703.85 | 0.00 | 1816.82 | 1497.75 | 0.647 | 1.08 | 1.80 |
| C | 95.29 | 23.82 | 95.05 | 171.84 | 1704.11 | 0.00 | 631.08 | 248.77 | 0.151 | 0.12 | 0.18 |
| D | 1400.61 | 350.15 | 1392.61 | 1080.75 | 718.42 | 0.00 | 1752.10 | 1564.67 | 0.799 | 1.78 | 3.78 |
| E | 618.50 | 154.62 | 616.65 | 509.04 | 1601.98 | 0.00 | 1167.39 | 1012.89 | 0.530 | 0.65 | 1.11 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 716.76 | 179.19 | 714.52 | 1151.10 | 1479.19 | 0.00 | 1270.81 | 1168.12 | 0.564 | 0.71 | 1.27 |
| B | 1439.03 | 359.76 | 1427.78 | 1340.64 | 853.06 | 0.00 | 1729.06 | 1497.75 | 0.832 | 1.80 | 4.61 |
| C | 116.71 | 29.18 | 116.05 | 203.27 | 2077.57 | 0.00 | 454.69 | 248.77 | 0.257 | 0.18 | 0.34 |
| D | 1715.39 | 428.85 | 1617.08 | 1317.84 | 875.78 | 0.00 | 1662.71 | 1564.67 | 1.032 | 3.78 | 28.36 |
| E | 757.50 | 189.38 | 750.76 | 613.35 | 1879.52 | 0.00 | 1013.66 | 1012.89 | 0.747 | 1.11 | 2.79 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 716.76 | 179.19 | 716.63 | 1165.51 | 1499.26 | 0.00 | 1259.38 | 1168.12 | 0.569 | 1.27 | 1.31 |
| B | 1439.03 | 359.76 | 1438.24 | 1357.39 | 858.50 | 0.00 | 1725.85 | 1497.75 | 0.834 | 4.61 | 4.81 |
| C | 116.71 | 29.18 | 116.68 | 205.91 | 2090.83 | 0.00 | 448.43 | 248.77 | 0.260 | 0.34 | 0.35 |
| D | 1715.39 | 428.85 | 1645.36 | 1326.01 | 881.50 | 0.00 | 1659.47 | 1564.67 | 1.034 | 28.36 | 45.87 |
| E | 757.50 | 189.38 | 756.61 | 618.71 | 1908.15 | 0.00 | 997.80 | 1012.89 | 0.759 | 2.79 | 3.02 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 585.24 | 146.31 | 587.34 | 1037.46 | 1351.45 | 0.00 | 1343.59 | 1168.12 | 0.436 | 1.31 | 0.78 |
| B | 1174.97 | 293.74 | 1186.63 | 1216.77 | 722.03 | 0.00 | 1806.13 | 1497.75 | 0.651 | 4.81 | 1.89 |
| C | 95.29 | 23.82 | 95.95 | 185.96 | 1722.70 | 0.00 | 622.30 | 248.77 | 0.153 | 0.35 | 0.18 |
| D | 1400.61 | 350.15 | 1566.40 | 1092.27 | 726.39 | 0.00 | 1747.57 | 1564.67 | 0.801 | 45.87 | 4.42 |
| E | 618.50 | 154.62 | 625.07 | 528.95 | 1763.84 | 0.00 | 1077.74 | 1012.89 | 0.574 | 3.02 | 1.37 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 490.11 | 122.53 | 491.29 | 819.79 | 1059.58 | 0.00 | 1509.90 | 1168.12 | 0.325 | 0.78 | 0.48 |
| B | 983.98 | 245.99 | 987.13 | 957.40 | 593.47 | 0.00 | 1881.75 | 1497.75 | 0.523 | 1.89 | 1.11 |
| C | 79.80 | 19.95 | 80.06 | 145.54 | 1435.06 | 0.00 | 758.16 | 248.77 | 0.105 | 0.18 | 0.12 |
| D | 1172.94 | 293.24 | 1183.21 | 910.23 | 604.89 | 0.00 | 1816.58 | 1564.67 | 0.646 | 4.42 | 1.85 |
| E | 517.96 | 129.49 | 520.79 | 429.52 | 1358.58 | 0.00 | 1302.21 | 1012.89 | 0.398 | 1.37 | 0.67 |

Queueing Delay Results
Queueing Delay results: (16:45-17:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 6.95 | 0.46 | 0.058 | A | A |
| B | 15.71 | 1.05 | 0.066 | A | A |
| C | 1.69 | 0.11 | 0.088 | A | A |
| D | 25.45 | 1.70 | 0.091 | A | A |
| E | 9.41 | 0.63 | 0.075 | A | A |

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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 6.95 | 0.46 | 0.058 | A | A |
| B | 15.71 | 1.05 | 0.066 | A | A |
| C | 1.69 | 0.11 | 0.088 | A | A |
| D | 25.45 | 1.70 | 0.091 | A | A |
| E | 9.41 | 0.63 | 0.075 | A | A |

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 10.42 | 0.69 | 0.073 | A | A |
| B | 25.94 | 1.73 | 0.093 | A | A |
| C | 2.58 | 0.17 | 0.112 | A | A |
| D | 52.06 | 3.47 | 0.163 | A | A |
| E | 16.04 | 1.07 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 18.35 | 1.22 | 0.107 | A | A |
| B | 61.97 | 4.13 | 0.192 | B | B |
| C | 4.90 | 0.33 | 0.177 | B | B |
| D | 268.33 | 17.89 | 0.764 | E | D |
| E | 38.09 | 2.54 | 0.223 | B | B |

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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 19.43 | 1.30 | 0.111 | A | A |
| B | 71.01 | 4.73 | 0.207 | B | B |
| C | 5.18 | 0.35 | 0.181 | B | B |
| D | 559.57 | 37.30 | 1.491 | F | F |
| E | 44.12 | 2.94 | 0.247 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 12.03 | 0.80 | 0.080 | A | A |
| B | 30.29 | 2.02 | 0.099 | A | A |
| C | 2.82 | 0.19 | 0.114 | A | A |
| D | 235.37 | 15.69 | 0.557 | D | C |
| E | 21.85 | 1.46 | 0.134 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 7.40 | 0.49 | 0.059 | A | A |
| B | 17.09 | 1.14 | 0.067 | A | A |
| C | 1.82 | 0.12 | 0.089 | A | A |
| D | 29.46 | 1.96 | 0.096 | A | A |
| E | 10.30 | 0.69 | 0.077 | 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) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| A | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 31.00 | | 0.570 | 2113.640 |
| B | 5.25 | 8.50 | 20.00 | 20.00 | 70.00 | 31.00 | | 0.588 | 2230.844 |
| C | 3.50 | 7.00 | 5.00 | 20.00 | 70.00 | 20.00 | | 0.472 | 1435.972 |
| D | 5.00 | 9.00 | 20.00 | 20.00 | 70.00 | 42.00 | | 0.568 | 2160.167 |
| E | 7.00 | 7.00 | 0.00 | 20.00 | 70.00 | 39.00 | | 0.554 | 2054.761 |

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) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 16:45-17:00 | A | 490.11 | 1517.76 | 0.323 | 0.00 | 0.00 | 0.47 | 6.95 | (0.00) | 0.058 |
| 16:45-17:00 | B | 983.98 | 1884.78 | 0.522 | 0.00 | 0.00 | 1.08 | 15.71 | (0.00) | 0.066 |
| 16:45-17:00 | C | 79.80 | 763.29 | 0.105 | 0.00 | 0.00 | 0.12 | 1.69 | (0.00) | 0.088 |
| 16:45-17:00 | D | 1172.94 | 1819.14 | 0.645 | 0.00 | 0.00 | 1.78 | 25.45 | (0.00) | 0.091 |
| 16:45-17:00 | E | 517.96 | 1312.17 | 0.395 | 0.00 | 0.00 | 0.65 | 9.41 | (0.00) | 0.075 |
| 17:00-17:15 | A | 585.24 | 1401.38 | 0.418 | 0.00 | 0.47 | 0.71 | 10.42 | (0.00) | 0.073 |
| 17:00-17:15 | B | 1174.97 | 1816.82 | 0.647 | 0.00 | 1.08 | 1.80 | 25.94 | (0.00) | 0.093 |
| 17:00-17:15 | C | 95.29 | 631.08 | 0.151 | 0.00 | 0.12 | 0.18 | 2.58 | (0.00) | 0.112 |
| 17:00-17:15 | D | 1400.61 | 1752.10 | 0.799 | 0.00 | 1.78 | 3.78 | 52.06 | (0.00) | 0.163 |
| 17:00-17:15 | E | 618.50 | 1167.39 | 0.530 | 0.00 | 0.65 | 1.11 | 16.04 | (0.00) | 0.109 |
| 17:15-17:30 | A | 716.76 | 1270.81 | 0.564 | 0.00 | 0.71 | 1.27 | 18.35 | (0.00) | 0.107 |
| 17:15-17:30 | B | 1439.03 | 1729.06 | 0.832 | 0.00 | 1.80 | 4.61 | 61.97 | (0.00) | 0.192 |
| 17:15-17:30 | C | 116.71 | 454.69 | 0.257 | 0.00 | 0.18 | 0.34 | 4.90 | (0.00) | 0.177 |
| 17:15-17:30 | D | 1715.39 | 1662.71 | 1.032 | 0.00 | 3.78 | 28.36 | 268.33 | (0.00) | 0.764 |
| 17:15-17:30 | E | 757.50 | 1013.66 | 0.747 | 0.00 | 1.11 | 2.79 | 38.09 | (0.00) | 0.223 |
| 17:30-17:45 | A | 716.76 | 1259.38 | 0.569 | 0.00 | 1.27 | 1.31 | 19.43 | (0.00) | 0.111 |
| 17:30-17:45 | B | 1439.03 | 1725.85 | 0.834 | 0.00 | 4.61 | 4.81 | 71.01 | (0.00) | 0.207 |
| 17:30-17:45 | C | 116.71 | 448.43 | 0.260 | 0.00 | 0.34 | 0.35 | 5.18 | (0.00) | 0.181 |
| 17:30-17:45 | D | 1715.39 | 1659.47 | 1.034 | 0.00 | 28.36 | 45.87 | 559.57 | (0.00) | 1.491 |
| 17:30-17:45 | E | 757.50 | 997.80 | 0.759 | 0.00 | 2.79 | 3.02 | 44.12 | (0.00) | 0.247 |
| 17:45-18:00 | A | 585.24 | 1343.59 | 0.436 | 0.00 | 1.31 | 0.78 | 12.03 | (0.00) | 0.080 |
| 17:45-18:00 | B | 1174.97 | 1806.13 | 0.651 | 0.00 | 4.81 | 1.89 | 30.29 | (0.00) | 0.099 |
| 17:45-18:00 | C | 95.29 | 622.30 | 0.153 | 0.00 | 0.35 | 0.18 | 2.82 | (0.00) | 0.114 |
| 17:45-18:00 | D | 1400.61 | 1747.57 | 0.801 | 0.00 | 45.87 | 4.42 | 235.37 | (0.00) | 0.557 |
| 17:45-18:00 | E | 618.50 | 1077.74 | 0.574 | 0.00 | 3.02 | 1.37 | 21.85 | (0.00) | 0.134 |
| 18:00-18:15 | A | 490.11 | 1509.90 | 0.325 | 0.00 | 0.78 | 0.48 | 7.40 | (0.00) | 0.059 |
| 18:00-18:15 | B | 983.98 | 1881.75 | 0.523 | 0.00 | 1.89 | 1.11 | 17.09 | (0.00) | 0.067 |
| 18:00-18:15 | C | 79.80 | 758.16 | 0.105 | 0.00 | 0.18 | 0.12 | 1.82 | (0.00) | 0.089 |
| 18:00-18:15 | D | 1172.94 | 1816.58 | 0.646 | 0.00 | 4.42 | 1.85 | 29.46 | (0.00) | 0.096 |
| 18:00-18:15 | E | 517.96 | 1302.21 | 0.398 | 0.00 | 1.37 | 0.67 | 10.30 | (0.00) | 0.077 |

| |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARCADY 7 |
| Version: 7.0.1.130 [12 March 2010] © Copyright Transport Research Laboratory 2009 |
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File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\2014 Wretchwick - Gavray Drive - Charbridge AM Peak REV.arc7
Report generation date: 10/04/2015 10:53:09

- » A1 - (Default Analysis Set) - D9 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak, AM
- » A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak, PM

Summary of roundabout performance

| | AM | | | | PM | | | |
|------------------------------------------------------------------------------------------------|-------------|-------------|------|-----|-------------|-------------|------|-----|
| | Queue (PCU) | Delay (min) | RFC | LOS | Queue (PCU) | Delay (min) | RFC | LOS |
| (Default Analysis Set) - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak | | | | | | | | |
| Arm A | 0.42 | 0.04 | 0.30 | A | | | | |
| Arm B | 0.09 | 0.06 | 0.08 | A | | | | |
| Arm C | 0.84 | 0.06 | 0.46 | A | | | | |
| (Default Analysis Set) - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak | | | | | | | | |
| Arm A | | | | | 0.82 | 0.05 | 0.45 | A |
| Arm B | | | | | 0.06 | 0.06 | 0.06 | A |
| Arm C | | | | | 0.56 | 0.05 | 0.36 | A |

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

2014 PCU - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2014 PCU - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV180 - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV180 - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV300 - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV300 - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00

File summary

File Description

| | |
|-------------------|------------------------------------------------|
| Title | Wretchwick - Gavray Drive - Charbridge AM Peak |
| Location | Bicester |
| Date | 13/07/2010 |
| Client | JJ Gallagher |
| Jobnumber | 18578-01-1 |
| Enumerator | Alexanders [CS5DG3J] |
| 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) - D9 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak, AM

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 |
|--------------------------------------------------------------------|----------------------------------------------------------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak, AM | 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak | AM | | | Yes | | | 07:45 | 09:15 | 90 | 15 | Varies by Arm |

Roundabout Network

Roundabout Type(s)

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

Roundabout Network Options

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

Arms

Arms

| ID | Name | Description |
|----|--------------|-------------|
| A | Wretchwick | |
| B | Gavray Drive | |
| C | Charbridge | |

Capacity Options

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

| | | | | |
|---|------|----------|--|------|
| B | 0.00 | 99999.00 | | 0.00 |
| C | 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 |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| A | 6.00 | 8.00 | 15.00 | 20.00 | 45.00 | 49.00 | |
| B | 3.50 | 7.00 | 10.00 | 20.00 | 45.00 | 44.00 | |
| C | 5.75 | 7.00 | 10.00 | 35.00 | 45.00 | 34.00 | |

Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| A | None |
| B | None |
| C | 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) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| A | | ((calculated)) | ((calculated)) | 0.685 | 2094.901 |
| B | | ((calculated)) | ((calculated)) | 0.571 | 1484.915 |
| C | | ((calculated)) | ((calculated)) | 0.694 | 2027.030 |

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 | 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 |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
| A | ONE HOUR | Yes | 562.00 | 100.000 | N/A |
| B | ONE HOUR | Yes | 88.00 | 100.000 | N/A |
| C | ONE HOUR | Yes | 827.00 | 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) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 07:45-08:00 | A | 423.10 | 423.10 | N/A | N/A |
| 07:45-08:00 | B | 66.25 | 66.25 | N/A | N/A |
| 07:45-08:00 | C | 622.61 | 622.61 | N/A | N/A |
| 08:00-08:15 | A | 505.23 | 505.23 | N/A | N/A |
| 08:00-08:15 | B | 79.11 | 79.11 | N/A | N/A |

| | | | | | |
|-------------|---|--------|--------|-----|-----|
| 08:00-08:15 | C | 743.46 | 743.46 | N/A | N/A |
| 08:15-08:30 | A | 618.77 | 618.77 | N/A | N/A |
| 08:15-08:30 | B | 96.89 | 96.89 | N/A | N/A |
| 08:15-08:30 | C | 910.54 | 910.54 | N/A | N/A |
| 08:30-08:45 | A | 618.77 | 618.77 | N/A | N/A |
| 08:30-08:45 | B | 96.89 | 96.89 | N/A | N/A |
| 08:30-08:45 | C | 910.54 | 910.54 | N/A | N/A |
| 08:45-09:00 | A | 505.23 | 505.23 | N/A | N/A |
| 08:45-09:00 | B | 79.11 | 79.11 | N/A | N/A |
| 08:45-09:00 | C | 743.46 | 743.46 | N/A | N/A |
| 09:00-09:15 | A | 423.10 | 423.10 | N/A | N/A |
| 09:00-09:15 | B | 66.25 | 66.25 | N/A | N/A |
| 09:00-09:15 | C | 622.61 | 622.61 | N/A | N/A |

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Roundabout 1 (for whole period)

| | | To | | |
|------|---|--------|-------|--------|
| | | A | B | C |
| From | A | 0.00 | 43.00 | 519.00 |
| | B | 41.00 | 0.00 | 47.00 |
| | C | 817.00 | 10.00 | 0.00 |

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 0.00 | 0.08 | 0.92 |
| | B | 0.47 | 0.00 | 0.53 |
| | C | 0.99 | 0.01 | 0.00 |

Vehicle Mix

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 1.00 | 1.00 | 1.00 |
| | B | 1.00 | 1.00 | 1.00 |
| | C | 1.00 | 1.00 | 1.00 |

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 0.00 | 0.00 | 0.00 |
| | B | 0.00 | 0.00 | 0.00 |
| | C | 0.00 | 0.00 | 0.00 |

Results

Results Summary

| | | | | | | | | | | | |
|--|--|--|--|--|--|--|-------|---------|-----------|-----------|--|
| | | | | | | | Total | Rate Of | Inclusive | Inclusive | |
|--|--|--|--|--|--|--|-------|---------|-----------|-----------|--|

| Arm | Max RFC | Max Delay (min) | Max Queue (PCU) | Max LOS | Total Demand (PCU/hr) | Total Arrivals (PCU) | Queueing Delay (PCU-min) | Average Queueing Delay (min) | Queueing Delay (PCU-min/min) | Queueing Total Delay (PCU-min) | Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------|------------------------------|------------------------------|--------------------------------|------------------------------|-------|--------------------|
| A | 0.30 | 0.04 | 0.42 | A | 515.70 | 773.55 | 29.70 | 0.04 | 0.33 | 29.70 | 0.04 | 0.685 | 2094.901 |
| B | 0.08 | 0.06 | 0.09 | A | 80.75 | 121.13 | 6.45 | 0.05 | 0.07 | 6.45 | 0.05 | 0.571 | 1484.915 |
| C | 0.46 | 0.06 | 0.84 | A | 758.87 | 1138.30 | 56.02 | 0.05 | 0.62 | 56.02 | 0.05 | 0.694 | 2027.030 |

Main Results

Main results: (07:45-08:00)

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 423.10 | 105.78 | 422.09 | 644.07 | 7.51 | 0.00 | 2089.76 | 2079.14 | 0.202 | 0.00 | 0.25 |
| B | 66.25 | 16.56 | 66.03 | 39.80 | 389.80 | 0.00 | 1262.17 | 387.72 | 0.052 | 0.00 | 0.06 |
| C | 622.61 | 155.65 | 620.82 | 425.06 | 30.76 | 0.00 | 2005.69 | 1901.71 | 0.310 | 0.00 | 0.45 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 505.23 | 126.31 | 504.97 | 770.75 | 8.98 | 0.00 | 2088.74 | 2079.14 | 0.242 | 0.25 | 0.32 |
| B | 79.11 | 19.78 | 79.05 | 47.62 | 466.33 | 0.00 | 1218.44 | 387.72 | 0.065 | 0.06 | 0.07 |
| C | 743.46 | 185.86 | 742.90 | 508.55 | 36.83 | 0.00 | 2001.48 | 1901.71 | 0.371 | 0.45 | 0.59 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 618.77 | 154.69 | 618.37 | 943.67 | 11.00 | 0.00 | 2087.36 | 2079.14 | 0.296 | 0.32 | 0.42 |
| B | 96.89 | 24.22 | 96.80 | 58.31 | 571.05 | 0.00 | 1158.59 | 387.72 | 0.084 | 0.07 | 0.09 |
| C | 910.54 | 227.64 | 909.56 | 622.76 | 45.10 | 0.00 | 1995.74 | 1901.71 | 0.456 | 0.59 | 0.83 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 618.77 | 154.69 | 618.77 | 944.66 | 11.01 | 0.00 | 2087.35 | 2079.14 | 0.296 | 0.42 | 0.42 |
| B | 96.89 | 24.22 | 96.89 | 58.35 | 571.43 | 0.00 | 1158.38 | 387.72 | 0.084 | 0.09 | 0.09 |
| C | 910.54 | 227.64 | 910.53 | 623.17 | 45.14 | 0.00 | 1995.71 | 1901.71 | 0.456 | 0.83 | 0.84 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 505.23 | 126.31 | 505.63 | 772.32 | 9.00 | 0.00 | 2088.73 | 2079.14 | 0.242 | 0.42 | 0.32 |
| B | 79.11 | 19.78 | 79.20 | 47.69 | 466.94 | 0.00 | 1218.09 | 387.72 | 0.065 | 0.09 | 0.07 |
| C | 743.46 | 185.86 | 744.43 | 509.24 | 36.90 | 0.00 | 2001.43 | 1901.71 | 0.371 | 0.84 | 0.59 |

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 423.10 | 105.78 | 423.37 | 646.53 | 7.54 | 0.00 | 2089.74 | 2079.14 | 0.202 | 0.32 | 0.25 |
| B | 66.25 | 16.56 | 66.31 | 39.93 | 390.97 | 0.00 | 1261.50 | 387.72 | 0.053 | 0.07 | 0.06 |
| C | 622.61 | 155.65 | 623.18 | 426.39 | 30.89 | 0.00 | 2005.60 | 1901.71 | 0.310 | 0.59 | 0.45 |

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Queueing Delay results: (07:45-08:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 3.74 | 0.25 | 0.036 | A | A |
| B | 0.81 | 0.05 | 0.050 | A | A |
| C | 6.60 | 0.44 | 0.043 | A | A |

Queueing Delay results: (08:00-08:15)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 4.72 | 0.31 | 0.038 | A | A |
| B | 1.03 | 0.07 | 0.053 | A | A |
| C | 8.69 | 0.58 | 0.048 | A | A |

Queueing Delay results: (08:15-08:30)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 6.22 | 0.41 | 0.041 | A | A |
| B | 1.35 | 0.09 | 0.056 | A | A |
| C | 12.26 | 0.82 | 0.055 | A | A |

Queueing Delay results: (08:30-08:45)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 6.30 | 0.42 | 0.041 | A | A |
| B | 1.37 | 0.09 | 0.057 | A | A |
| C | 12.53 | 0.84 | 0.055 | A | A |

Queueing Delay results: (08:45-09:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 4.86 | 0.32 | 0.038 | A | A |
| B | 1.06 | 0.07 | 0.053 | A | A |
| C | 9.06 | 0.60 | 0.048 | A | A |

Queueing Delay results: (09:00-09:15)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 3.86 | 0.26 | 0.036 | A | A |
| B | 0.84 | 0.06 | 0.050 | A | A |
| C | 6.88 | 0.46 | 0.043 | 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) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| A | 6.00 | 8.00 | 15.00 | 20.00 | 45.00 | 49.00 | | 0.685 | 2094.901 |
| B | 3.50 | 7.00 | 10.00 | 20.00 | 45.00 | 44.00 | | 0.571 | 1484.915 |
| C | 5.75 | 7.00 | 10.00 | 35.00 | 45.00 | 34.00 | | 0.694 | 2027.030 |

Overview: Time Segment Results

Time Segment Results

| | Demand | Capacity | Pedestrian | Start | End | Queueing Total | Geometric Total | Average Delay Per |
|--|--------|----------|------------|-------|-----|----------------|-----------------|-------------------|
|--|--------|----------|------------|-------|-----|----------------|-----------------|-------------------|

| Time Segment | Arm | Volume (PCU/hr) | Capacity (PCU/hr) | RFC | Unmet Demand (Ped/hr) | Queue (PCU) | Queue (PCU) | Queueing Delay (PCU-min) | Secondary Delay (PCU-min) | Arriving Vehicle (min) |
|--------------|-----|-----------------|-------------------|-------|-----------------------|-------------|-------------|--------------------------|---------------------------|------------------------|
| 07:45-08:00 | A | 423.10 | 2089.76 | 0.202 | 0.00 | 0.00 | 0.25 | 3.74 | (0.00) | 0.036 |
| 07:45-08:00 | B | 66.25 | 1262.17 | 0.052 | 0.00 | 0.00 | 0.06 | 0.81 | (0.00) | 0.050 |
| 07:45-08:00 | C | 622.61 | 2005.69 | 0.310 | 0.00 | 0.00 | 0.45 | 6.60 | (0.00) | 0.043 |
| 08:00-08:15 | A | 505.23 | 2088.74 | 0.242 | 0.00 | 0.25 | 0.32 | 4.72 | (0.00) | 0.038 |
| 08:00-08:15 | B | 79.11 | 1218.44 | 0.065 | 0.00 | 0.06 | 0.07 | 1.03 | (0.00) | 0.053 |
| 08:00-08:15 | C | 743.46 | 2001.48 | 0.371 | 0.00 | 0.45 | 0.59 | 8.69 | (0.00) | 0.048 |
| 08:15-08:30 | A | 618.77 | 2087.36 | 0.296 | 0.00 | 0.32 | 0.42 | 6.22 | (0.00) | 0.041 |
| 08:15-08:30 | B | 96.89 | 1158.59 | 0.084 | 0.00 | 0.07 | 0.09 | 1.35 | (0.00) | 0.056 |
| 08:15-08:30 | C | 910.54 | 1995.74 | 0.456 | 0.00 | 0.59 | 0.83 | 12.26 | (0.00) | 0.055 |
| 08:30-08:45 | A | 618.77 | 2087.35 | 0.296 | 0.00 | 0.42 | 0.42 | 6.30 | (0.00) | 0.041 |
| 08:30-08:45 | B | 96.89 | 1158.38 | 0.084 | 0.00 | 0.09 | 0.09 | 1.37 | (0.00) | 0.057 |
| 08:30-08:45 | C | 910.54 | 1995.71 | 0.456 | 0.00 | 0.83 | 0.84 | 12.53 | (0.00) | 0.055 |
| 08:45-09:00 | A | 505.23 | 2088.73 | 0.242 | 0.00 | 0.42 | 0.32 | 4.86 | (0.00) | 0.038 |
| 08:45-09:00 | B | 79.11 | 1218.09 | 0.065 | 0.00 | 0.09 | 0.07 | 1.06 | (0.00) | 0.053 |
| 08:45-09:00 | C | 743.46 | 2001.43 | 0.371 | 0.00 | 0.84 | 0.59 | 9.06 | (0.00) | 0.048 |
| 09:00-09:15 | A | 423.10 | 2089.74 | 0.202 | 0.00 | 0.32 | 0.25 | 3.86 | (0.00) | 0.036 |
| 09:00-09:15 | B | 66.25 | 1261.50 | 0.053 | 0.00 | 0.07 | 0.06 | 0.84 | (0.00) | 0.050 |
| 09:00-09:15 | C | 622.61 | 2005.60 | 0.310 | 0.00 | 0.59 | 0.45 | 6.88 | (0.00) | 0.043 |

A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak, 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 |
|--------------------------------------------------------------------|----------------------------------------------------------------|------------------|-------------|--------|-------------------|------------------|--------------|--------------------|---------------------|--------------------------|---------------------------|----------------------|
| 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak, PM | 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak | PM | | | Yes | | | 16:45 | 18:15 | 90 | 15 | Varies by Arm |

Roundabout Network

Roundabout Type(s)

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

Roundabout Network Options

| Driving Side | Lighting | Road Surface | In-Land |
|--------------|----------|--------------|---------|
| | | | |

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

Arms

Arms

| ID | Name | Description |
|----|--------------|-------------|
| A | Wretchwick | |
| B | Gavray Drive | |
| C | Charbridge | |

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|-----|---------------------------|---------------------------|---------------------------|---------------------|
| A | 0.00 | 99999.00 | | 0.00 |
| B | 0.00 | 99999.00 | | 0.00 |
| C | 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 |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| A | 6.00 | 8.00 | 15.00 | 20.00 | 45.00 | 49.00 | |
| B | 3.50 | 7.00 | 10.00 | 20.00 | 45.00 | 44.00 | |
| C | 5.75 | 7.00 | 10.00 | 35.00 | 45.00 | 34.00 | |

Pedestrian Crossings

| Arm | Crossing Type |
|-----|---------------|
| A | None |
| B | None |
| C | 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) |
|-----|----------------|----------------|--------------------|-------------|--------------------------|
| A | | ((calculated)) | ((calculated)) | 0.685 | 2094.901 |
| B | | ((calculated)) | ((calculated)) | 0.571 | 1484.915 |
| C | | ((calculated)) | ((calculated)) | 0.694 | 2027.030 |

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 | 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 (%) | PUE |
|-----|--------------|--------------------|------------------------------|-------------------------|-----|
|-----|--------------|--------------------|------------------------------|-------------------------|-----|

| Arm | Frome type | Use turning Counts | Average Demand Flow (PCU/hr) | Flow scaling Factor (%) | PHF |
|-----|------------|--------------------|------------------------------|-------------------------|-----|
| A | ONE HOUR | Yes | 842.00 | 100.000 | N/A |
| B | ONE HOUR | Yes | 52.00 | 100.000 | N/A |
| C | ONE HOUR | Yes | 652.00 | 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) |
|--------------|-----|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------------|
| 16:45-17:00 | A | 633.90 | 633.90 | N/A | N/A |
| 16:45-17:00 | B | 39.15 | 39.15 | N/A | N/A |
| 16:45-17:00 | C | 490.86 | 490.86 | N/A | N/A |
| 17:00-17:15 | A | 756.94 | 756.94 | N/A | N/A |
| 17:00-17:15 | B | 46.75 | 46.75 | N/A | N/A |
| 17:00-17:15 | C | 586.13 | 586.13 | N/A | N/A |
| 17:15-17:30 | A | 927.06 | 927.06 | N/A | N/A |
| 17:15-17:30 | B | 57.25 | 57.25 | N/A | N/A |
| 17:15-17:30 | C | 717.87 | 717.87 | N/A | N/A |
| 17:30-17:45 | A | 927.06 | 927.06 | N/A | N/A |
| 17:30-17:45 | B | 57.25 | 57.25 | N/A | N/A |
| 17:30-17:45 | C | 717.87 | 717.87 | N/A | N/A |
| 17:45-18:00 | A | 756.94 | 756.94 | N/A | N/A |
| 17:45-18:00 | B | 46.75 | 46.75 | N/A | N/A |
| 17:45-18:00 | C | 586.13 | 586.13 | N/A | N/A |
| 18:00-18:15 | A | 633.90 | 633.90 | N/A | N/A |
| 18:00-18:15 | B | 39.15 | 39.15 | N/A | N/A |
| 18:00-18:15 | C | 490.86 | 490.86 | N/A | N/A |

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Roundabout 1 (for whole period)

| | | To | | |
|------|---|--------|-------|--------|
| | | A | B | C |
| From | A | 0.00 | 46.00 | 796.00 |
| | B | 39.00 | 0.00 | 13.00 |
| | C | 604.00 | 48.00 | 0.00 |

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 0.00 | 0.05 | 0.95 |
| | B | 0.75 | 0.00 | 0.25 |
| | C | 0.93 | 0.07 | 0.00 |

Vehicle Mix

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

| | | To | | |
|------|---|------|------|------|
| | | A | B | C |
| From | A | 1.00 | 1.00 | 1.00 |

| | | | | |
|--|---|------|------|------|
| | B | 1.00 | 1.00 | 1.00 |
| | C | 1.00 | 1.00 | 1.00 |

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | | | |
|------|---|------|------|------|
| | | To | | |
| | | A | B | C |
| From | A | 0.00 | 0.00 | 0.00 |
| | B | 0.00 | 0.00 | 0.00 |
| | C | 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) |
|-----|---------|-----------------|-----------------|---------|-----------------------|----------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------------------|----------------------------------------|-------|--------------------|
| A | 0.45 | 0.05 | 0.82 | A | 772.63 | 1158.95 | 54.81 | 0.05 | 0.61 | 54.81 | 0.05 | 0.685 | 2094.901 |
| B | 0.06 | 0.06 | 0.06 | A | 47.72 | 71.57 | 4.26 | 0.06 | 0.05 | 4.26 | 0.06 | 0.571 | 1484.915 |
| C | 0.36 | 0.05 | 0.56 | A | 598.29 | 897.43 | 38.76 | 0.04 | 0.43 | 38.76 | 0.04 | 0.694 | 2027.030 |

Main Results

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

| 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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 633.90 | 158.48 | 632.14 | 482.78 | 36.04 | 0.00 | 2070.20 | 2003.19 | 0.306 | 0.00 | 0.44 |
| B | 39.15 | 9.79 | 39.01 | 70.58 | 597.61 | 0.00 | 1143.42 | 402.75 | 0.034 | 0.00 | 0.04 |
| C | 490.86 | 122.71 | 489.57 | 607.36 | 29.26 | 0.00 | 2006.73 | 1817.47 | 0.245 | 0.00 | 0.32 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 756.94 | 189.24 | 756.40 | 577.68 | 43.12 | 0.00 | 2065.34 | 2003.19 | 0.367 | 0.44 | 0.58 |
| B | 46.75 | 11.69 | 46.71 | 84.45 | 715.07 | 0.00 | 1076.29 | 402.75 | 0.043 | 0.04 | 0.05 |
| C | 586.13 | 146.53 | 585.78 | 726.75 | 35.03 | 0.00 | 2002.73 | 1817.47 | 0.293 | 0.32 | 0.41 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 927.06 | 231.76 | 926.11 | 707.37 | 52.81 | 0.00 | 2058.71 | 2003.20 | 0.450 | 0.58 | 0.81 |
| B | 57.25 | 14.31 | 57.19 | 103.40 | 875.51 | 0.00 | 984.61 | 402.75 | 0.058 | 0.05 | 0.06 |
| C | 717.87 | 179.47 | 717.28 | 889.81 | 42.89 | 0.00 | 1997.27 | 1817.47 | 0.359 | 0.41 | 0.56 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 927.06 | 231.76 | 927.05 | 707.95 | 52.85 | 0.00 | 2058.68 | 2003.20 | 0.450 | 0.81 | 0.82 |
| B | 57.25 | 14.31 | 57.25 | 103.49 | 876.40 | 0.00 | 984.10 | 402.75 | 0.058 | 0.06 | 0.06 |
| C | 717.87 | 179.47 | 717.86 | 890.72 | 42.94 | 0.00 | 1997.24 | 1817.47 | 0.359 | 0.56 | 0.56 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 927.06 | 231.76 | 927.05 | 707.95 | 52.85 | 0.00 | 2058.68 | 2003.20 | 0.450 | 0.81 | 0.82 |
| B | 57.25 | 14.31 | 57.25 | 103.49 | 876.40 | 0.00 | 984.10 | 402.75 | 0.058 | 0.06 | 0.06 |
| C | 717.87 | 179.47 | 717.86 | 890.72 | 42.94 | 0.00 | 1997.24 | 1817.47 | 0.359 | 0.56 | 0.56 |

| Arm | (PCU/hr) | (PCU) | (PCU/hr) | (PCU/hr) | (PCU/hr) | Demand (Ped/hr) | (PCU/hr) | Capacity (PCU/hr) | RFC | Queue (PCU) | Queue (PCU) |
|-----|----------|--------|----------|----------|----------|-----------------|----------|-------------------|-------|-------------|-------------|
| A | 756.94 | 189.24 | 757.88 | 578.63 | 43.19 | 0.00 | 2065.29 | 2003.19 | 0.367 | 0.82 | 0.58 |
| B | 46.75 | 11.69 | 46.81 | 84.60 | 716.48 | 0.00 | 1075.49 | 402.75 | 0.043 | 0.06 | 0.05 |
| C | 586.13 | 146.53 | 586.71 | 728.18 | 35.11 | 0.00 | 2002.67 | 1817.47 | 0.293 | 0.56 | 0.42 |

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) |
|-----|-----------------|----------------|---------------------|--------------------|---------------------------|----------------------------|-------------------|------------------------------|-------|-------------------|-----------------|
| A | 633.90 | 158.48 | 634.45 | 484.45 | 36.16 | 0.00 | 2070.11 | 2003.19 | 0.306 | 0.58 | 0.44 |
| B | 39.15 | 9.79 | 39.19 | 70.82 | 599.79 | 0.00 | 1142.17 | 402.75 | 0.034 | 0.05 | 0.04 |
| C | 490.86 | 122.71 | 491.22 | 609.59 | 29.39 | 0.00 | 2006.64 | 1817.47 | 0.245 | 0.42 | 0.32 |

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

| 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 6.48 | 0.43 | 0.042 | A | A |
| B | 0.52 | 0.03 | 0.054 | A | A |
| C | 4.76 | 0.32 | 0.040 | A | A |

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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 8.51 | 0.57 | 0.046 | A | A |
| B | 0.67 | 0.04 | 0.058 | A | A |
| C | 6.11 | 0.41 | 0.042 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 11.99 | 0.80 | 0.053 | A | A |
| B | 0.91 | 0.06 | 0.065 | A | A |
| C | 8.25 | 0.55 | 0.047 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 12.23 | 0.82 | 0.053 | A | A |
| B | 0.92 | 0.06 | 0.065 | A | A |
| C | 8.39 | 0.56 | 0.047 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 8.86 | 0.59 | 0.046 | A | A |
| B | 0.69 | 0.05 | 0.058 | A | A |
| C | 6.32 | 0.42 | 0.042 | 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 |
|-----|--------------------------------|--------------------------------------|------------------------------------------|-------------------------------|-----------------------------|
| A | 6.74 | 0.45 | 0.042 | A | A |
| B | 0.54 | 0.04 | 0.054 | A | A |
| C | 4.93 | 0.33 | 0.040 | 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) |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|-------------|--------------------------|
| A | 6.00 | 8.00 | 15.00 | 20.00 | 45.00 | 49.00 | | 0.685 | 2094.901 |
| B | 3.50 | 7.00 | 10.00 | 20.00 | 45.00 | 44.00 | | 0.571 | 1484.915 |
| C | 5.75 | 7.00 | 10.00 | 35.00 | 45.00 | 34.00 | | 0.694 | 2027.030 |

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) |
|--------------|-----|-----------------|-------------------|-------|----------------------------|-------------------|-----------------|--------------------------------|---------------------------------|------------------------------------------|
| 16:45-17:00 | A | 633.90 | 2070.20 | 0.306 | 0.00 | 0.00 | 0.44 | 6.48 | (0.00) | 0.042 |
| 16:45-17:00 | B | 39.15 | 1143.42 | 0.034 | 0.00 | 0.00 | 0.04 | 0.52 | (0.00) | 0.054 |
| 16:45-17:00 | C | 490.86 | 2006.73 | 0.245 | 0.00 | 0.00 | 0.32 | 4.76 | (0.00) | 0.040 |
| 17:00-17:15 | A | 756.94 | 2065.34 | 0.367 | 0.00 | 0.44 | 0.58 | 8.51 | (0.00) | 0.046 |
| 17:00-17:15 | B | 46.75 | 1076.29 | 0.043 | 0.00 | 0.04 | 0.05 | 0.67 | (0.00) | 0.058 |
| 17:00-17:15 | C | 586.13 | 2002.73 | 0.293 | 0.00 | 0.32 | 0.41 | 6.11 | (0.00) | 0.042 |
| 17:15-17:30 | A | 927.06 | 2058.71 | 0.450 | 0.00 | 0.58 | 0.81 | 11.99 | (0.00) | 0.053 |
| 17:15-17:30 | B | 57.25 | 984.61 | 0.058 | 0.00 | 0.05 | 0.06 | 0.91 | (0.00) | 0.065 |
| 17:15-17:30 | C | 717.87 | 1997.27 | 0.359 | 0.00 | 0.41 | 0.56 | 8.25 | (0.00) | 0.047 |
| 17:30-17:45 | A | 927.06 | 2058.68 | 0.450 | 0.00 | 0.81 | 0.82 | 12.23 | (0.00) | 0.053 |
| 17:30-17:45 | B | 57.25 | 984.10 | 0.058 | 0.00 | 0.06 | 0.06 | 0.92 | (0.00) | 0.065 |
| 17:30-17:45 | C | 717.87 | 1997.24 | 0.359 | 0.00 | 0.56 | 0.56 | 8.39 | (0.00) | 0.047 |
| 17:45-18:00 | A | 756.94 | 2065.29 | 0.367 | 0.00 | 0.82 | 0.58 | 8.86 | (0.00) | 0.046 |
| 17:45-18:00 | B | 46.75 | 1075.49 | 0.043 | 0.00 | 0.06 | 0.05 | 0.69 | (0.00) | 0.058 |
| 17:45-18:00 | C | 586.13 | 2002.67 | 0.293 | 0.00 | 0.56 | 0.42 | 6.32 | (0.00) | 0.042 |
| 18:00-18:15 | A | 633.90 | 2070.11 | 0.306 | 0.00 | 0.58 | 0.44 | 6.74 | (0.00) | 0.042 |
| 18:00-18:15 | B | 39.15 | 1142.17 | 0.034 | 0.00 | 0.05 | 0.04 | 0.54 | (0.00) | 0.054 |
| 18:00-18:15 | C | 490.86 | 2006.64 | 0.245 | 0.00 | 0.42 | 0.32 | 4.93 | (0.00) | 0.040 |

| PICADY | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010) | | |
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Run Analysis

| Parameter | Values |
|--------------|-----------------------------------------------------------------|
| File Run | \\O..\Revision A\2014 Wretchwick Way -Pergrine Way Junction.vpi |
| Date Run | 10 April 2015 |
| Time Run | 11:32:01 |
| Driving Side | Drive On The Left |

Arm Names and Flow Scaling Factors

| Arm | Arm Name | Flow Scaling Factor (%) |
|-------|-------------------|-------------------------|
| Arm A | Wretchwick Way SW | 100 |
| Arm B | Peregrine Way | 100 |
| Arm C | Wretchwick Way NE | 100 |

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

| Parameter | Values |
|-------------|--------------------------------|
| Run Title | Wretchwick Way - Peregrine Way |
| Location | Bicester |
| Date | 13 July 2010 |
| Enumerator | Alexanders [CS5DG3J] |
| Job Number | 18578-01-1 |
| Status | TIA |
| Client | JJ Gallagher |
| Description | - |

Errors and Warnings

| Parameter | Values |
|-----------|-----------------------|
| Warning | No Errors Or Warnings |

Geometric Data

Geometric Parameters

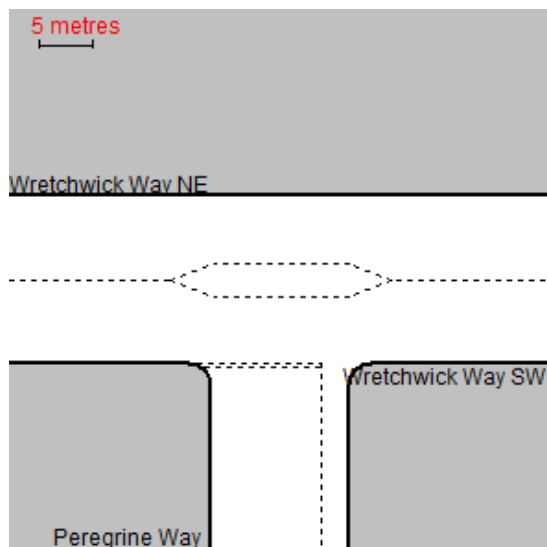
| Parameter | Minor Arm B |
|---------------------------------------------|-------------|
| Major Road Carriageway Width (m) | 12.00 |
| Major Road Kerbed Central Reserve Width (m) | 0.00 |
| Major Road Right Turning Lane Width (m) | 3.20 |
| Minor Road Width 0m Back from Junction (m) | 10.00 |
| Minor Road Width 5m Back from Junction (m) | 9.00 |
| Minor Road Width 10m Back from Junction (m) | 6.50 |
| Minor Road Width 15m Back from Junction (m) | 6.00 |
| Minor Road Width 20m Back from Junction (m) | 6.00 |
| Minor Road Flare Length (veh) | 1 |
| Minor Road Visibility To Right (m) | 120 |
| Minor Road Visibility To Left (m) | 65 |
| Major Road Right Turn Visibility (m) | 120 |
| Major Road Right Turn Blocks Traffic | No |

Slope and Intercept Values

| Stream | Intercept for Stream | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|--------|----------------------|---------------|---------------|---------------|---------------|
| B-A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| B-C | 0.000 | 0.000 | 0.000 | - | - |
| C-B | 713.487 | 0.204 | 0.204 | - | - |

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

| Parameter | Period | Duration (min) | Segment Length (min) |
|-------------------------|-------------|----------------|----------------------|
| First Modelling Period | 07:45-09:15 | 90 | 15 |
| Second Modelling Period | 16:45-18:15 | 90 | 15 |

ODTAB Turning Counts

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15

| From/To | Arm A | Arm B | Arm C |
|---------|-------|-------|-------|
| Arm A | 0.0 | 47.0 | 348.0 |
| Arm B | 86.0 | 0.0 | 119.0 |
| Arm C | 628.0 | 76.0 | 0.0 |

Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15

| From/To | Arm A | Arm B | Arm C |
|---------|-------|-------|-------|
| Arm A | 0.0 | 90.0 | 599.0 |
| Arm B | 46.0 | 0.0 | 80.0 |
| Arm C | 413.0 | 124.0 | 0.0 |

ODTAB Synthesised Flows

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15

| Arm | Rising Time | Rising Flow (veh/min) | Peak Time | Peak Flow (veh/min) | Falling Time | Falling Flow (veh/min) |
|-------|-------------|-----------------------|-----------|---------------------|--------------|------------------------|
| Arm A | 08:00 | 4.938 | 08:30 | 7.406 | 09:00 | 4.938 |
| Arm B | 08:00 | 2.563 | 08:30 | 3.844 | 09:00 | 2.563 |
| Arm C | 08:00 | 8.800 | 08:30 | 13.200 | 09:00 | 8.800 |

Heavy Vehicles Percentages

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15

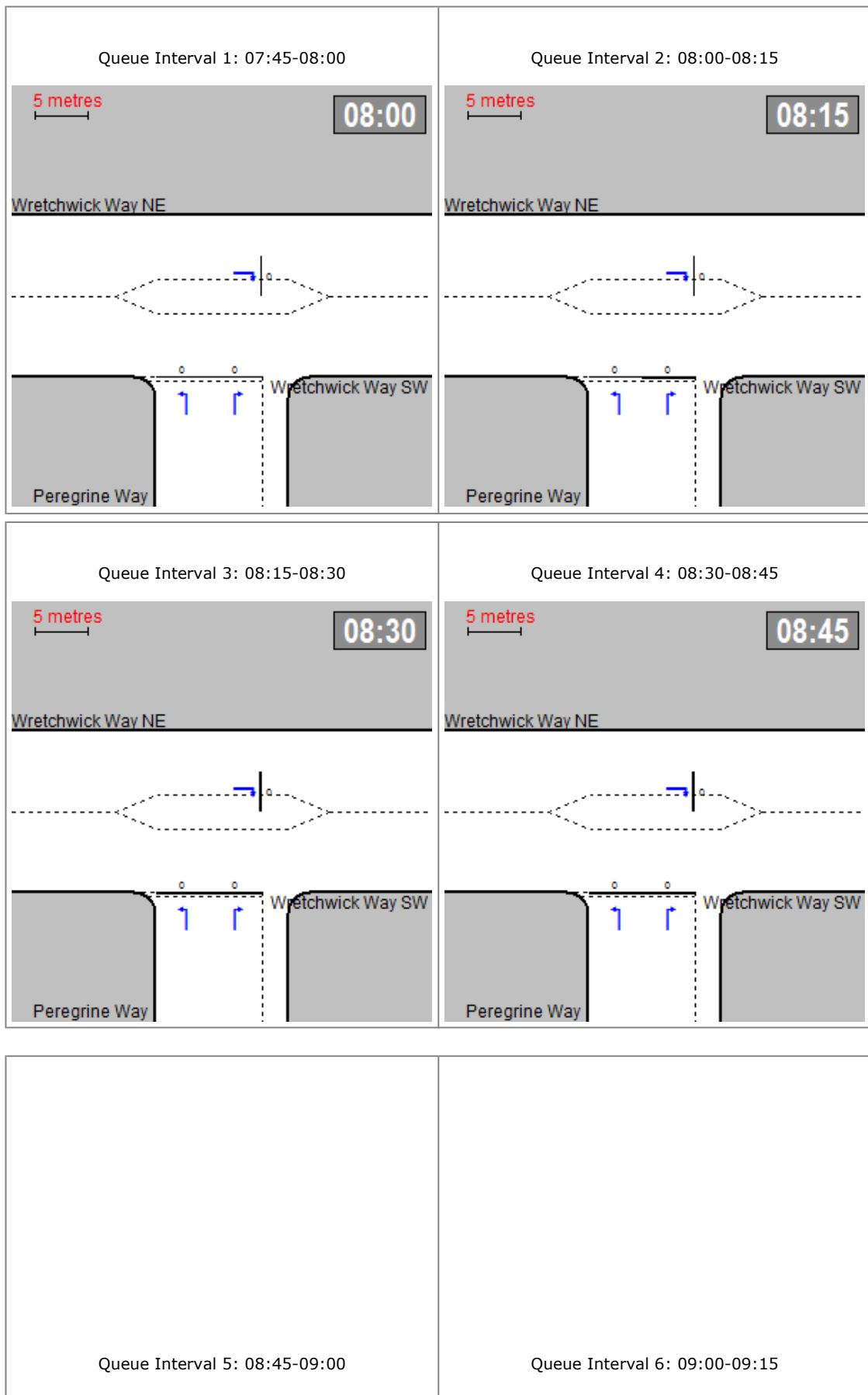
| From/To | Arm A | Arm B | Arm C |
|---------|-------|-------|-------|
| Arm A | - | 0.0 | 0.0 |
| Arm B | 0.0 | - | 0.0 |
| Arm C | 0.0 | 0.0 | - |

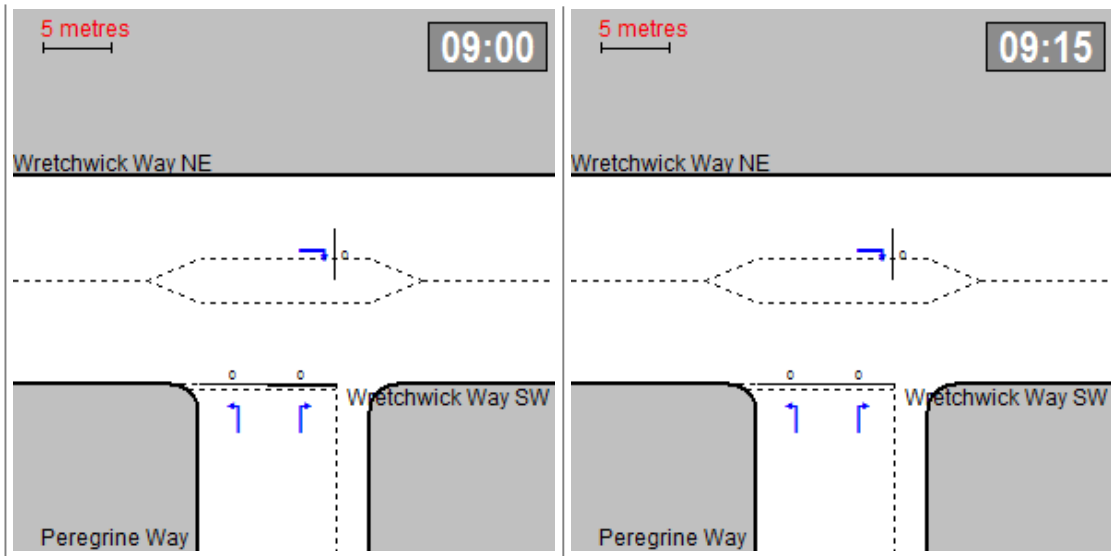
Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15

| From/To | Arm A | Arm B | Arm C |
|---------|-------|-------|-------|
| Arm A | - | 0.0 | 0.0 |
| Arm B | 0.0 | - | 0.0 |
| Arm C | 0.0 | 0.0 | - |

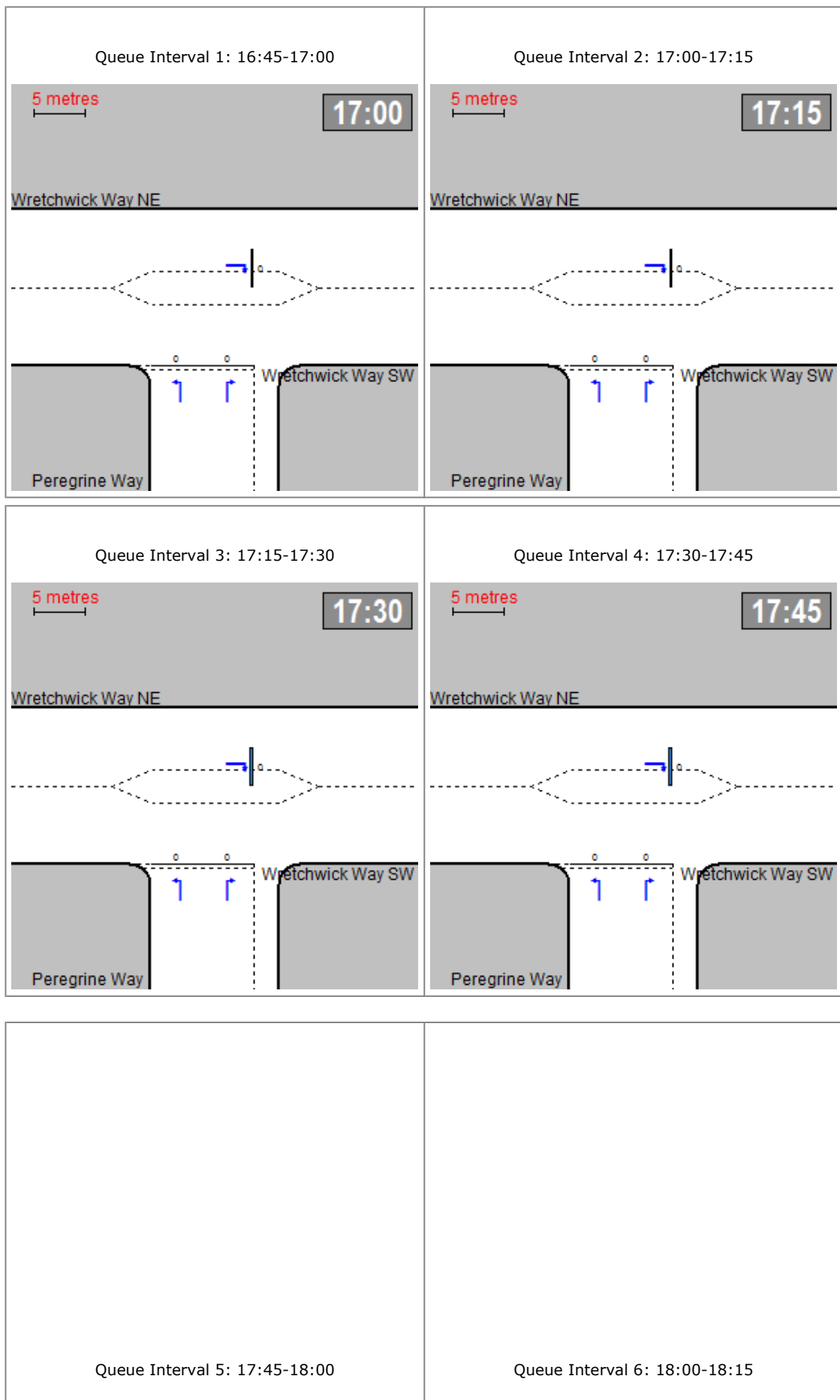
Queue Diagrams

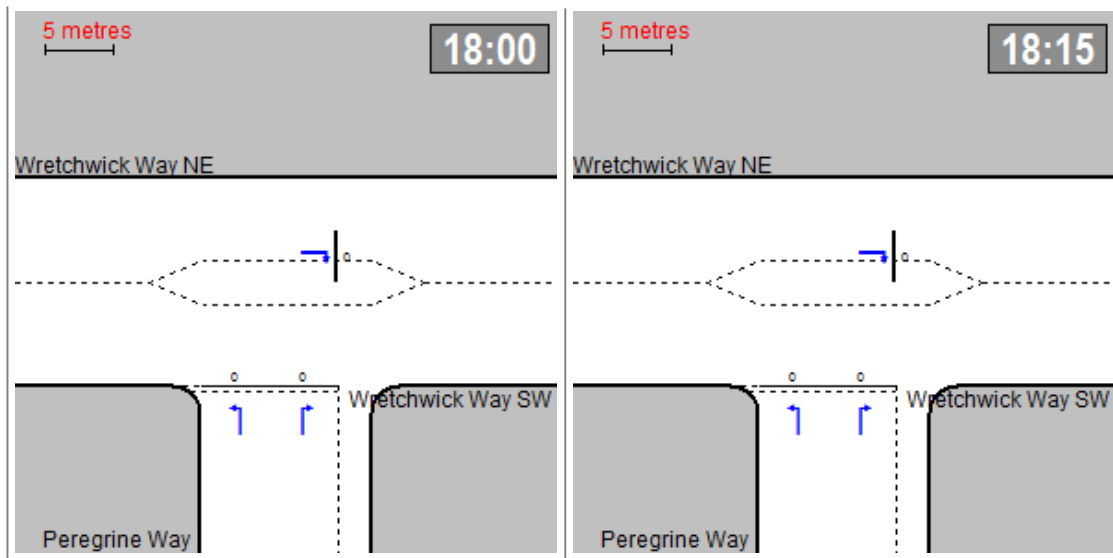
Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15
View Extent: 40m





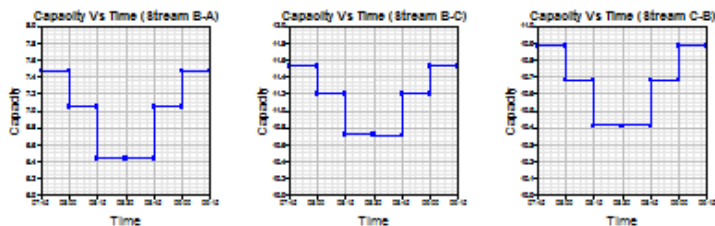
Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15
View Extent: 40m



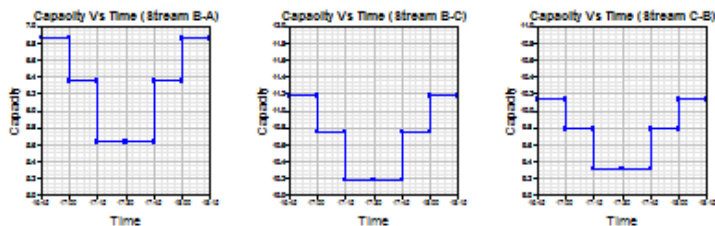


Capacity Graph

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15

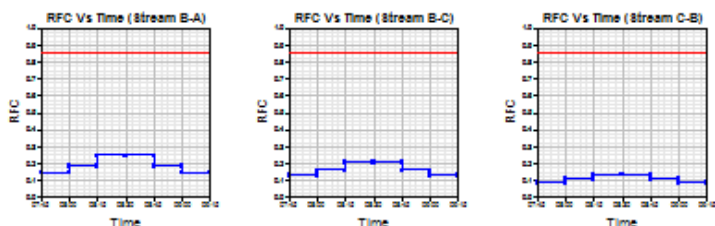


Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15



RFC Graph

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15



Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15

