## Turning Proportions

Turning Counts or Proportions (Veh/hr) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |  |
|  | $\mathbf{1}$ | 0.000 | 84.000 | 237.000 | 413.000 |  |
|  | $\mathbf{2}$ | 25.000 | 0.000 | 26.000 | 2.000 |  |
|  | $\mathbf{3}$ | 504.000 | 102.000 | 0.000 | 397.000 |  |
|  | $\mathbf{4}$ | 66.000 | 5.000 | 53.000 | 0.000 |  |

Turning Proportions (Veh) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 |
|  | $\mathbf{1}$ | 0.00 | 0.11 | 0.32 | 0.56 |
|  | $\mathbf{2}$ | 0.47 | 0.00 | 0.49 | 0.04 |
|  | 3 | 0.50 | 0.10 | 0.00 | 0.40 |
|  | $\mathbf{4}$ | 0.53 | 0.04 | 0.43 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 1.000 | 1.012 | 1.064 | 1.025 |
|  | $\mathbf{2}$ | 1.040 | 1.000 | 1.000 | 1.462 |
|  | $\mathbf{3}$ | 1.034 | 1.000 | 1.000 | 1.015 |
|  | $\mathbf{4}$ | 1.339 | 1.000 | 1.305 | 1.000 |

Heavy Vehicle Percentages - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 1.200 | 6.400 | 2.500 |
|  | $\mathbf{2}$ | 4.000 | 0.000 | 0.000 | 46.200 |
|  | $\mathbf{3}$ | 3.400 | 0.000 | 0.000 | 1.500 |
|  | $\mathbf{4}$ | 33.900 | 0.000 | 30.500 | 0.000 |

## Results

Results Summary for whole modelled period

| Name | $\begin{aligned} & \operatorname{Max} \\ & \text { RFC } \end{aligned}$ | Max Delay (s) | Max Queue (Veh) | $\begin{aligned} & \text { Max } \\ & \text { LOS } \end{aligned}$ | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Vehmin) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 0.51 | 4.66 | 1.04 | A | 673.53 | 1010.30 | 67.18 | 3.99 | 0.75 | 67.18 | 3.99 |
| Oxford Motor Park | 0.05 | 2.91 | 0.05 | A | 48.63 | 72.95 | 3.30 | 2.72 | 0.04 | 3.30 | 2.72 |
| Langford Lane (W) | 0.71 | 8.08 | 2.44 | A | 920.37 | 1380.56 | 133.74 | 5.81 | 1.49 | 133.75 | 5.81 |
| The Boulevard | 0.14 | 4.40 | 0.17 | A | 113.78 | 170.68 | 11.47 | 4.03 | 0.13 | 11.47 | 4.03 |

## Main Results for each time segment

Main results: (07:30-07:45)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~ ( ~})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 552.60 | 138.15 | 550.54 | 446.03 | 119.94 | 0.00 | 1620.02 | 1336.84 | 0.341 | 0.00 | 0.51 | 3.361 | A |
| Oxford <br> Motor Park | 39.90 | 9.98 | 39.79 | 143.21 | 527.27 | 0.00 | 1467.85 | 730.90 | 0.027 | 0.00 | 0.03 | 2.520 | A |
| Langford <br> Lane (W) | 755.11 | 188.78 | 751.80 | 237.02 | 330.04 | 0.00 | 1659.06 | 1083.73 | 0.455 | 0.00 | 0.83 | 3.954 | A |
| The <br> Boulevard | 93.35 | 23.34 | 92.97 | 608.84 | 473.00 | 0.00 | 1070.97 | 794.46 | 0.087 | 0.00 | 0.10 | 3.681 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 659.85 | 164.96 | 659.14 | 533.97 | 143.61 | 0.00 | 1603.73 | 1336.84 | 0.411 | 0.51 | 0.69 | 3.810 | A |
| Oxford <br> Motor Park | 47.65 | 11.91 | 47.62 | 171.45 | 631.30 | 0.00 | 1395.00 | 730.90 | 0.034 | 0.03 | 0.04 | 2.671 | A |
| Langford <br> Lane (W) | 901.68 | 225.42 | 899.98 | 283.78 | 395.13 | 0.00 | 1612.72 | 1083.73 | 0.559 | 0.83 | 1.25 | 5.038 | A |
| The <br> Boulevard | 111.47 | 27.87 | 111.37 | 728.90 | 566.22 | 0.00 | 1022.34 | 794.46 | 0.109 | 0.10 | 0.12 | 3.952 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 808.15 | 202.04 | 806.79 | 652.67 | 175.61 | 0.00 | 1581.71 | 1336.84 | 0.511 | 0.69 | 1.03 | 4.637 | A |
| Oxford <br> Motor Park | 58.35 | 14.59 | 58.31 | 209.66 | 772.74 | 0.00 | 1295.97 | 730.90 | 0.045 | 0.04 | 0.05 | 2.908 | A |
| Langford <br> Lane (W) | 1104.33 | 276.08 | 1099.71 | 347.39 | 483.66 | 0.00 | 1549.70 | 1083.73 | 0.713 | 1.25 | 2.41 | 7.918 | A |
| The <br> Boulevard | 136.53 | 34.13 | 136.35 | 891.43 | 691.93 | 0.00 | 956.75 | 794.46 | 0.143 | 0.12 | 0.17 | 4.386 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 808.15 | 202.04 | 808.13 | 655.03 | 176.15 | 0.00 | 1581.36 | 1336.84 | 0.511 | 1.03 | 1.04 | 4.655 | A |
| Oxford <br> Motor Park | 58.35 | 14.59 | 58.35 | 210.28 | 773.99 | 0.00 | 1295.10 | 730.90 | 0.045 | 0.05 | 0.05 | 2.910 | A |
| Langford <br> Lane (W) | 1104.33 | 276.08 | 1104.18 | 347.91 | 484.44 | 0.00 | 1549.15 | 1083.73 | 0.713 | 2.41 | 2.44 | 8.083 | A |
| The | 136.53 | 34.13 | 136.52 | 893.96 | 694.66 | 0.00 | 955.33 | 794.46 | 0.143 | 0.17 | 0.17 | 4.396 | A |
| Boulevard |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 659.85 | 164.96 | 661.19 | 537.34 | 144.39 | 0.00 | 1603.23 | 1336.84 | 0.412 | 1.04 | 0.70 | 3.826 | A |
| Oxford <br> Motor Park | 47.65 | 11.91 | 47.69 | 172.34 | 633.24 | 0.00 | 1393.65 | 730.90 | 0.034 | 0.05 | 0.04 | 2.676 | A |
| Langford <br> Lane (W) | 901.68 | 225.42 | 906.31 | 284.61 | 396.33 | 0.00 | 1611.87 | 1083.73 | 0.559 | 2.44 | 1.29 | 5.134 | A |
| The <br> Boulevard | 111.47 | 27.87 | 111.65 | 732.56 | 570.08 | 0.00 | 1020.32 | 794.46 | 0.109 | 0.17 | 0.12 | 3.962 | A |

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

| Name | Total Demand (Veh/hr) | Junction Arrivals (Veh) | $\begin{aligned} & \text { Entry } \\ & \text { Flow } \\ & \text { (Veh/hr) } \end{aligned}$ | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane ( E ) | 552.60 | 138.15 | 553.33 | 448.91 | 120.69 | 0.00 | 1619.51 | 1336.84 | 0.341 | 0.70 | 0.52 | 3.378 | A |
| Oxford Motor Park | 39.90 | 9.98 | 39.93 | 144.06 | 529.95 | 0.00 | 1465.97 | 730.90 | 0.027 | 0.04 | 0.03 | 2.524 | A |
| Langford <br> Lane (W) | 755.11 | 188.78 | 756.88 | 238.20 | 331.68 | 0.00 | 1657.89 | 1083.73 | 0.455 | 1.29 | 0.84 | 4.004 | A |
| The Boulevard | 93.35 | 23.34 | 93.46 | 612.43 | 476.13 | 0.00 | 1069.33 | 794.46 | 0.087 | 0.12 | 0.10 | 3.691 | A |

## Queueing Delay Results for each time segment

Queueing Delay results: (07:30-07:45)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 7.54 | 0.50 | 3.361 | A |  |
| Oxford Motor <br> Park | 0.41 | 0.03 | 2.520 | A |  |
| Langford Lane <br> (W) | 12.06 | 0.80 | 3.954 | A |  |
| The Boulevard | 1.40 | 0.09 | 3.681 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 10.21 | 0.68 | 3.810 | A |  |
| Oxford Motor <br> Park | 0.52 | 0.03 | 2.671 | A |  |
| Langford Lane <br> (W) | 18.22 | 1.21 | 5.038 | A |  |
| The Boulevard | 1.80 | 0.12 | 3.952 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 15.10 | 1.01 | 4.637 | A |  |
| Oxford Motor <br> Park | 0.70 | 0.05 | 2.908 | A |  |
| Langford Lane <br> (W) | 34.00 | 2.27 | 7.918 | A |  |
| The Boulevard | 2.44 | 0.16 | 4.386 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> $\mathrm{min} / \mathrm{min})$ | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 15.56 | 1.04 | 4.655 | A |  |
| Oxford Motor <br> Park | 0.71 | 0.05 | 2.910 | A |  |
| Langford Lane <br> (W) | 36.45 | 2.43 | 8.083 | A |  |
| The Boulevard | 2.49 | 0.17 | 4.396 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle ( $\mathbf{s}$ ) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 10.81 | 0.72 | 3.826 | A |  |
| Oxford Motor <br> Park | 0.54 | 0.04 | 2.676 | A |  |
| Langford Lane <br> (W) | 20.03 | 1.34 | 5.134 | A |  |
| The Boulevard | 1.88 | 0.13 | 3.962 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 7.95 | 0.53 | 3.378 | A |  |
| Oxford Motor <br> Park | 0.43 | 0.03 | 2.524 | A |  |
| Langford Lane <br> (W) | 12.97 | 0.86 | 4.004 | A |  |
| The Boulevard | 1.46 | 0.10 | 3.691 | A | A |

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

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout <br> Capacity Model | Description | Include In <br> Report | Use Specific <br> Demand Set(s) | Specific <br> Demand Set <br> (s) | Locked | Network Flow <br> Scaling Factor <br> (\%) | Network Capacity <br> Scaling Factor (\%) | Reason For <br> Scaling <br> Factors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (Default <br> Analysis Set) | ARCADY |  | $\checkmark$ |  |  |  | 100.000 | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type |  |  | Model <br> Time <br> Period <br> Length <br> (min) | Time Segment Length (min) | Results For Central Hour Only | Single <br> Time <br> Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2015$ <br> Base, <br> PM | $\begin{aligned} & 2015 \\ & \text { Base } \end{aligned}$ | PM |  | ONE HOUR | 16:15 | 17:45 | 90 | 15 |  |  |  | $\checkmark$ |  |  |

## Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Do Geometric Delay | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Spires Business Park roundabout | Roundabout | $1,2,3,4$ |  |  |  | 4.43 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normalunknown |

## Arms

## Arms

| Name | Name | Description |
| :---: | :---: | :---: |
| Langford Lane (E) | Langford Lane (E) |  |
| Oxford Motor Park | Oxford Motor Park |  |
| Langford Lane (W) | Langford Lane (W) |  |
| The Boulevard | The Boulevard |  |

## Capacity Options

| Name | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 0.00 | 99999.00 |  | 0.00 |
| Oxford Motor Park | 0.00 | 99999.00 |  | 0.00 |
| Langford Lane (W) | 0.00 | 99999.00 |  | 0.00 |
| The Boulevard | 0.00 | 99999.00 |  | 0.00 |

## Roundabout Geometry

| Name | V - Approach road half- <br> width $(\mathrm{m})$ | E-Entry <br> width $(\mathrm{m})$ | r-Effective flare <br> length $(\mathrm{m})$ | R - Entry <br> radius $(\mathrm{m})$ | D - Inscribed circle <br> diameter $(\mathrm{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 3.80 | 8.10 | 14.00 | 10.00 | 40.00 | 23.00 |  |
| Oxford Motor <br> Park | 3.50 | 7.80 | 24.00 | 15.00 | 40.00 | 23.00 |  |
| Langford Lane <br> (W) | 3.50 | 7.00 | 28.50 | 25.00 | 40.00 | 14.50 |  |
| The Boulevard | 4.60 | 5.70 | 9.00 | 22.50 | 40.00 | 15.00 |  |

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

| Name | Crossing Type |
| :---: | :---: |
| Langford Lane (E) | None |
| Oxford Motor Park | None |
| Langford Lane (W) | None |
| The Boulevard | None |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Name | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) |  | (calculated) | (calculated) | 0.647 | 1763.975 |
| Oxford Motor Park |  | (calculated) | (calculated) | 0.685 | 1903.704 |
| Langford Lane (W) |  | (calculated) | (calculated) | 0.709 | 1937.620 |
| The Boulevard |  | (calculated) | (calculated) | 0.665 | 1727.286 |

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

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle Mix <br> Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor for <br> a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions <br> Vary Over Turn | 2.00 |  |  |  |  |

## Entry Flows

## General Flows Data

| Name | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | ONE HOUR | $\checkmark$ | 531.00 | 100.000 |
| Oxford Motor Park | ONE HOUR | $\checkmark$ | 121.00 | 100.000 |
| Langford Lane (W) | ONE HOUR | $\checkmark$ | 308.00 | 100.000 |
| The Boulevard | ONE HOUR | $\checkmark$ | 721.00 | 100.000 |

## Turning Proportions

Turning Counts or Proportions (Veh/hr) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 48.000 | 431.000 | 52.000 |
|  | $\mathbf{2}$ | 59.000 | 0.000 | 55.000 | 7.000 |
|  | $\mathbf{3}$ | 236.000 | 31.000 | 0.000 | 41.000 |
|  | $\mathbf{4}$ | 346.000 | 8.000 | 367.000 | 0.000 |

Turning Proportions (Veh) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.00 | 0.09 | 0.81 | 0.10 |
|  | $\mathbf{2}$ | 0.49 | 0.00 | 0.45 | 0.06 |
|  | $\mathbf{3}$ | 0.77 | 0.10 | 0.00 | 0.13 |
|  | $\mathbf{4}$ | 0.48 | 0.01 | 0.51 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 1.000 | 1.000 | 1.028 | 1.176 |
|  | $\mathbf{2}$ | 1.034 | 1.000 | 1.019 | 1.137 |
|  | $\mathbf{3}$ | 1.060 | 1.000 | 1.000 | 1.270 |
|  | $\mathbf{4}$ | 1.021 | 1.260 | 1.011 | 1.000 |

Heavy Vehicle Percentages - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 0.000 | 2.800 | 17.600 |
|  | $\mathbf{2}$ | 3.400 | 0.000 | 1.900 | 13.700 |
|  | $\mathbf{3}$ | 6.000 | 0.000 | 0.000 | 27.000 |
|  | $\mathbf{4}$ | 2.100 | 26.000 | 1.100 | 0.000 |

## Results

Results Summary for whole modelled period

| Name | $\begin{aligned} & \text { Max } \\ & \text { RFC } \end{aligned}$ | Max Delay (s) | Max Queue (Veh) | $\begin{aligned} & \text { Max } \\ & \text { LOS } \end{aligned}$ | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Vehmin) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (5) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 0.41 | 4.34 | 0.70 | A | 487.26 | 730.88 | 46.12 | 3.79 | 0.51 | 46.13 | 3.79 |
| Oxford Motor Park | 0.11 | 3.36 | 0.12 | A | 111.03 | 166.55 | 8.46 | 3.05 | 0.09 | 8.46 | 3.05 |
| Langford <br> Lane (W) | 0.20 | 2.65 | 0.25 | A | 282.63 | 423.94 | 17.85 | 2.53 | 0.20 | 17.85 | 2.53 |
| The Boulevard | 0.55 | 5.49 | 1.20 | A | 661.60 | 992.40 | 74.83 | 4.52 | 0.83 | 74.83 | 4.52 |

## Main Results for each time segment

Main results: (16:15-16:30)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 399.77 | 99.94 | 398.32 | 480.92 | 304.46 | 0.00 | 1503.86 | 1406.73 | 0.266 | 0.00 | 0.36 | 3.252 | A |
| Oxford <br> Motor Park | 91.10 | 22.77 | 90.82 | 65.28 | 637.50 | 0.00 | 1407.41 | 748.09 | 0.065 | 0.00 | 0.07 | 2.734 | A |
| Langford <br> Lane (W) | 231.88 | 57.97 | 231.26 | 639.77 | 88.54 | 0.00 | 1726.97 | 1405.57 | 0.134 | 0.00 | 0.15 | 2.405 | A |
| The <br> Boulevard | 542.81 | 135.70 | 540.62 | 75.05 | 244.76 | 0.00 | 1528.15 | 612.28 | 0.355 | 0.00 | 0.55 | 3.638 | A |

Main results: (16:30-16:45)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( ) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 477.36 | 119.34 | 476.88 | 575.69 | 364.53 | 0.00 | 1465.91 | 1406.73 | 0.326 | 0.36 | 0.48 | 3.637 | A |
| Oxford <br> Motor Park | 108.78 | 27.19 | 108.70 | 78.14 | 763.26 | 0.00 | 1321.54 | 748.09 | 0.082 | 0.07 | 0.09 | 2.967 | A |
| Langford <br> Lane (W) | 276.88 | 69.22 | 276.74 | 765.97 | 105.99 | 0.00 | 1714.37 | 1405.57 | 0.162 | 0.15 | 0.19 | 2.503 | A |
| The <br> Boulevard | 648.17 | 162.04 | 647.32 | 89.83 | 292.90 | 0.00 | 1495.18 | 612.28 | 0.434 | 0.55 | 0.76 | 4.241 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 584.64 | 146.16 | 583.77 | 704.68 | 446.09 | 0.00 | 1414.39 | 1406.73 | 0.413 | 0.48 | 0.70 | 4.329 | A |
| Oxford <br> Motor Park | 133.22 | 33.31 | 133.09 | 95.67 | 934.19 | 0.00 | 1204.85 | 748.09 | 0.111 | 0.09 | 0.12 | 3.358 | A |
| Langford <br> Lane (W) | 339.11 | 84.78 | 338.89 | 937.51 | 129.76 | 0.00 | 1697.20 | 1405.57 | 0.200 | 0.19 | 0.25 | 2.650 | A |
| The <br> Boulevard | 793.84 | 198.46 | 792.10 | 109.98 | 358.67 | 0.00 | 1450.13 | 612.28 | 0.547 | 0.76 | 1.19 | 5.456 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 584.64 | 146.16 | 584.63 | 705.73 | 447.00 | 0.00 | 1413.81 | 1406.73 | 0.414 | 0.70 | 0.70 | 4.341 | A |
| Oxford <br> Motor Park | 133.22 | 33.31 | 133.22 | 95.79 | 935.84 | 0.00 | 1203.72 | 748.09 | 0.111 | 0.12 | 0.12 | 3.362 | A |
| Langford <br> Lane (W) | 339.11 | 84.78 | 339.11 | 939.14 | 129.92 | 0.00 | 1697.09 | 1405.57 | 0.200 | 0.25 | 0.25 | 2.650 | A |
| The <br> Boulevard | 793.84 | 198.46 | 793.81 | 110.10 | 358.93 | 0.00 | 1449.95 | 612.28 | 0.547 | 1.19 | 1.20 | 5.486 | A |

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

| Name | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End Queue (Veh) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 477.36 | 119.34 | 478.22 | 577.31 | 365.90 | 0.00 | 1465.04 | 1406.73 | 0.326 | 0.70 | 0.49 | 3.650 | A |
| Oxford Motor Park | 108.78 | 27.19 | 108.91 | 78.33 | 765.79 | 0.00 | 1319.82 | 748.09 | 0.082 | 0.12 | 0.09 | 2.972 | A |
| Langford <br> Lane (W) | 276.88 | 69.22 | 277.11 | 768.47 | 106.24 | 0.00 | 1714.19 | 1405.57 | 0.162 | 0.25 | 0.19 | 2.506 | A |
| The Boulevard | 648.17 | 162.04 | 649.89 | 90.02 | 293.33 | 0.00 | 1494.88 | 612.28 | 0.434 | 1.20 | 0.77 | 4.268 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 399.77 | 99.94 | 400.25 | 483.15 | 306.12 | 0.00 | 1502.80 | 1406.73 | 0.266 | 0.49 | 0.36 | 3.265 | A |
| Oxford <br> Motor Park | 91.10 | 22.77 | 91.18 | 65.57 | 640.81 | 0.00 | 1405.15 | 748.09 | 0.065 | 0.09 | 0.07 | 2.741 | A |
| Langford <br> Lane (W) | 231.88 | 57.97 | 232.03 | 643.06 | 88.93 | 0.00 | 1726.69 | 1405.57 | 0.134 | 0.19 | 0.16 | 2.408 | A |
| The <br> Boulevard | 542.81 | 135.70 | 543.68 | 75.36 | 245.60 | 0.00 | 1527.58 | 612.28 | 0.355 | 0.77 | 0.55 | 3.664 | A |

## Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> $\mathrm{min} / \mathrm{min})$ | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 5.29 | 0.35 | 3.252 | A |  |
| Oxford Motor <br> Park | 1.02 | 0.07 | 2.734 | A |  |
| Langford Lane <br> (W) | 2.29 | 0.15 | 2.405 | A |  |
| The Boulevard | 8.01 | 0.53 | 3.638 | A | A |

Queueing Delay results: (16:30-16:45)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 7.08 | 0.47 | 3.637 | A | A |
| Oxford Motor <br> Park | 1.33 | 0.09 | 2.967 | A | A |
| Langford Lane <br> (W) | 2.85 | 0.19 | 2.503 | A | A |
| The Boulevard | 11.14 | 0.74 | 4.241 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> $\mathbf{m i n} / \mathrm{min})$ | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 10.25 | 0.68 | 4.329 | A | A |
| Oxford Motor <br> Park | 1.83 | 0.12 | 3.358 | A |  |
| Langford Lane <br> (W) | 3.69 | 0.25 | 2.650 | A | A |
| The Boulevard | 17.33 | 1.16 | 5.456 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 10.51 | 0.70 | 4.341 | A |  |
| Oxford Motor <br> Park | 1.86 | 0.12 | 3.362 | A |  |
| Langford Lane <br> (W) | 3.74 | 0.25 | 2.650 | A |  |
| The Boulevard | 17.98 | 1.20 | 5.486 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 7.44 | 0.50 | 3.650 | A | A |
| Oxford Motor <br> Park | 1.37 | 0.09 | 2.972 | A |  |
| Langford Lane <br> (W) | 2.93 | 0.20 | 2.506 | A | A |
| The Boulevard | 11.88 | 0.79 | 4.268 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (5) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 5.55 | 0.37 | 3.265 | A |  |
| Oxford Motor <br> Park | 1.06 | 0.07 | 2.741 | A |  |
| Langford Lane <br> (W) | 2.36 | 0.16 | 2.408 | A |  |
| The Boulevard | 8.48 | 0.57 | 3.664 | A | A |

## (Default Analysis Set) - 2021 Base, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout <br> Capacity Model | Description | Include In <br> Report | Use Specific <br> Demand Set(s) | Specific <br> Demand Set <br> ( $\mathbf{s})$ | Locked | Network Flow <br> Scaling Factor <br> $(\%)$ | Network Capacity <br> Scaling Factor (\%) | Reason For <br> Scaling <br> Factors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (Default | ARCADY |  | $\checkmark$ |  |  |  | 100.000 | 100.000 |  |
| Analysis Set) | ARC |  |  |  |  |  |  |  |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Mode Start Time (HH:mm) | Model Finish Time ( $\mathrm{HH}: \mathrm{mm}$ ) | Model Time Period Length (min) | Time Segment Length ( min ) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2021$ <br> Base, AM | $\begin{aligned} & 2021 \\ & \text { Base } \end{aligned}$ | AM |  | ONE HOUR | 07:30 | 09:00 | 90 | 15 |  |  |  | $\checkmark$ |  |  |

## Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Do Geometric Delay | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Spires Business Park roundabout | Roundabout | $1,2,3,4$ |  |  |  | 8.28 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Norma/unknown |

## Arms

## Arms

| Name | Name | Description |
| :---: | :---: | :---: |
| Langford Lane (E) | Langford Lane (E) |  |
| Oxford Motor Park | Oxford Motor Park |  |
| Langford Lane (W) | Langford Lane (W) |  |
| The Boulevard | The Boulevard |  |

## Capacity Options

| Name | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 0.00 | 99999.00 |  | 0.00 |
| Oxford Motor Park | 0.00 | 99999.00 |  | 0.00 |
| Langford Lane (W) | 0.00 | 99999.00 |  | 0.00 |
| The Boulevard | 0.00 | 99999.00 |  | 0.00 |

## Roundabout Geometry

| Name | V - Approach road half- <br> width $(\mathbf{m})$ | E-Entry <br> width $(\mathbf{m})$ | r-Effective flare <br> length $(\mathbf{m})$ | R - Entry <br> radius $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 3.80 | 8.10 | 14.00 | 10.00 | 40.00 | 23.00 |  |
| Oxford Motor <br> Park | 3.50 | 7.80 | 24.00 | 15.00 | 40.00 | 23.00 |  |
| Langford Lane <br> (W) | 3.50 | 7.00 | 28.50 | 25.00 | 40.00 | 14.50 |  |
| The Boulevard | 4.60 | 5.70 | 9.00 | 22.50 | 40.00 | 15.00 |  |

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

| Name | Crossing Type |
| :---: | :---: |
| Langford Lane (E) | None |
| Oxford Motor Park | None |
| Langford Lane (W) | None |
| The Boulevard | None |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Name | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) |  | (calculated) | (calculated) | 0.647 | 1763.975 |
| Oxford Motor Park |  | (calculated) | (calculated) | 0.685 | 1903.704 |
| Langford Lane (W) |  | (calculated) | (calculated) | 0.709 | 1937.620 |
| The Boulevard |  | (calculated) | (calculated) | 0.665 | 1727.286 |

[^0]
## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle Mix <br> Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor for <br> a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

## General Flows Data

| Name | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | ONE HOUR | $\checkmark$ | 801.00 | 100.000 |
| Oxford Motor Park | ONE HOUR | $\checkmark$ | 59.00 | 100.000 |
| Langford Lane (W) | ONE HOUR | $\checkmark$ | 1094.00 | 100.000 |
| The Boulevard | ONE HOUR | $\checkmark$ | 136.00 | 100.000 |

## Turning Proportions

Turning Counts or Proportions (Veh/hr) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 92.000 | 260.000 | 449.000 |
|  | $\mathbf{2}$ | 28.000 | 0.000 | 29.000 | 2.000 |
|  | $\mathbf{3}$ | 551.000 | 112.000 | 0.000 | 431.000 |
|  | $\mathbf{4}$ | 72.000 | 6.000 | 58.000 | 0.000 |

Turning Proportions (Veh) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.00 | 0.11 | 0.32 | 0.56 |
|  | $\mathbf{2}$ | 0.47 | 0.00 | 0.49 | 0.03 |
|  | $\mathbf{3}$ | 0.50 | 0.10 | 0.00 | 0.39 |
|  | $\mathbf{4}$ | 0.53 | 0.04 | 0.43 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 1.000 | 1.012 | 1.064 | 1.025 |
|  | $\mathbf{2}$ | 1.040 | 1.000 | 1.000 | 1.465 |
|  | $\mathbf{3}$ | 1.034 | 1.000 | 1.000 | 1.015 |
|  | $\mathbf{4}$ | 1.340 | 1.000 | 1.307 | 1.000 |

Heavy Vehicle Percentages - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 1.200 | 6.400 | 2.500 |
|  | $\mathbf{2}$ | 4.000 | 0.000 | 0.000 | 46.500 |
|  | $\mathbf{3}$ | 3.400 | 0.000 | 0.000 | 1.500 |
|  | $\mathbf{4}$ | 34.000 | 0.000 | 30.700 | 0.000 |

## Results

Results Summary for whole modelled period

| Name | $\begin{aligned} & \text { Max } \\ & \text { RFC } \end{aligned}$ | Max Delay (5) | Max Queue (Veh) | $\begin{aligned} & \text { Max } \\ & \text { LOS } \end{aligned}$ | Average <br> Demand <br> (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Vehmin) | Average Queueing Delay (5) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 0.56 | 5.24 | 1.27 | A | 735.01 | 1102.51 | 80.16 | 4.36 | 0.89 | 80.16 | 4.36 |
| Oxford Motor Park | 0.05 | 3.04 | 0.05 | A | 54.14 | 81.21 | 3.81 | 2.82 | 0.04 | 3.81 | 2.82 |
| Langford Lane (W) | 0.79 | 11.41 | 3.72 | B | 1003.88 | 1505.82 | 184.39 | 7.35 | 2.05 | 184.41 | 7.35 |
| The Boulevard | 0.16 | 4.67 | 0.19 | A | 124.80 | 187.19 | 13.20 | 4.23 | 0.15 | 13.20 | 4.23 |

## Main Results for each time segment

Main results: (07:30-07:45)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 603.03 | 150.76 | 600.66 | 487.80 | 131.89 | 0.00 | 1611.68 | 1335.89 | 0.374 | 0.00 | 0.59 | 3.554 | A |
| Oxford <br> Motor Park | 44.42 | 11.10 | 44.29 | 157.40 | 575.15 | 0.00 | 1436.36 | 734.51 | 0.031 | 0.00 | 0.03 | 2.585 | A |
| Langford <br> Lane (W) | 823.62 | 205.91 | 819.62 | 260.22 | 359.22 | 0.00 | 1638.30 | 1086.02 | 0.503 | 0.00 | 1.00 | 4.377 | A |
| The <br> Boulevard | 102.39 | 25.60 | 101.96 | 661.10 | 517.74 | 0.00 | 1047.53 | 790.61 | 0.098 | 0.00 | 0.11 | 3.804 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> FFlow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 720.08 | 180.02 | 719.19 | 583.95 | 157.92 | 0.00 | 1593.77 | 1335.89 | 0.452 | 0.59 | 0.82 | 4.112 | A |
| Oxford <br> Motor Park | 53.04 | 13.26 | 53.00 | 188.43 | 688.67 | 0.00 | 1356.73 | 734.51 | 0.039 | 0.03 | 0.04 | 2.760 | A |
| Langford <br> Lane (W) | 983.49 | 245.87 | 981.09 | 311.58 | 430.09 | 0.00 | 1587.85 | 1086.02 | 0.619 | 1.00 | 1.60 | 5.909 | A |
| The <br> Boulevard | 122.26 | 30.57 | 122.13 | 791.45 | 619.73 | 0.00 | 994.33 | 790.61 | 0.123 | 0.11 | 0.14 | 4.127 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow <br> (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (5) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 881.91 | 220.48 | 880.12 | 712.56 | 192.85 | 0.00 | 1569.71 | 1335.89 | 0.562 | 0.82 | 1.27 | 5.207 | A |
| Oxford <br> Motor Park | 64.96 | 16.24 | 64.90 | 230.17 | 842.80 | 0.00 | 1248.62 | 734.51 | 0.052 | 0.04 | 0.05 | 3.040 | A |
| Langford <br> Lane (W) | 1204.52 | 301.13 | 1196.45 | 381.35 | 526.35 | 0.00 | 1519.33 | 1086.02 | 0.793 | 1.60 | 3.62 | 10.885 | B |
| The <br> Boulevard | 149.74 | 37.43 | 149.53 | 966.91 | 755.89 | 0.00 | 923.30 | 790.61 | 0.162 | 0.14 | 0.19 | 4.651 | A |

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

| Name | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane ( E ) | 881.91 | 220.48 | 881.88 | 716.55 | 193.74 | 0.00 | 1569.14 | 1335.89 | 0.562 | 1.27 | 1.27 | 5.237 | A |
| Oxford Motor Park | 64.96 | 16.24 | 64.96 | 231.17 | 844.45 | 0.00 | 1247.47 | 734.51 | 0.052 | 0.05 | 0.05 | 3.043 | A |
| Langford Lane (W) | 1204.52 | 301.13 | 1204.11 | 382.04 | 527.37 | 0.00 | 1518.61 | 1086.02 | 0.793 | 3.62 | 3.72 | 11.407 | B |
| The Boulevard | 149.74 | 37.43 | 149.73 | 970.92 | 760.56 | 0.00 | 920.86 | 790.61 | 0.163 | 0.19 | 0.19 | 4.668 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 720.08 | 180.02 | 721.85 | 589.53 | 159.16 | 0.00 | 1592.96 | 1335.89 | 0.452 | 1.27 | 0.83 | 4.142 | A |
| Oxford <br> Motor Park | 53.04 | 13.26 | 53.10 | 189.84 | 691.17 | 0.00 | 1354.99 | 734.51 | 0.039 | 0.05 | 0.04 | 2.764 | A |
| Langford <br> Lane (W) | 983.49 | 245.87 | 991.74 | 312.64 | 431.63 | 0.00 | 1586.76 | 1086.02 | 0.620 | 3.72 | 1.66 | 6.130 | A |
| The <br> Boulevard | 122.26 | 30.57 | 122.47 | 797.15 | 626.22 | 0.00 | 990.94 | 790.61 | 0.123 | 0.19 | 0.14 | 4.145 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 603.03 | 150.76 | 603.95 | 491.47 | 132.82 | 0.00 | 1611.05 | 1335.89 | 0.374 | 0.83 | 0.60 | 3.579 | A |
| Oxford <br> Motor Park | 44.42 | 11.10 | 44.45 | 158.47 | 578.31 | 0.00 | 1434.15 | 734.51 | 0.031 | 0.04 | 0.03 | 2.590 | A |
| Langford <br> Lane (W) | 823.62 | 205.91 | 826.17 | 261.61 | 361.15 | 0.00 | 1636.93 | 1086.02 | 0.503 | 1.66 | 1.02 | 4.453 | A |
| The <br> Boulevard | 102.39 | 25.60 | 102.52 | 665.53 | 521.78 | 0.00 | 1045.42 | 790.61 | 0.098 | 0.14 | 0.11 | 3.820 | A |

## Queueing Delay Results for each time segment

Queueing Delay results: (07:30-07:45)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 8.69 | 0.58 | 3.554 | A |  |
| Oxford Motor <br> Park | 0.47 | 0.03 | 2.585 | A |  |
| Langford Lane <br> (W) | 14.51 | 0.97 | 4.377 | A |  |
| The Boulevard | 1.58 | 0.11 | 3.804 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 12.00 | 0.80 | 4.112 | A | A |
| Oxford Motor <br> Park | 0.60 | 0.04 | 2.760 | A | A |
| Langford Lane <br> (W) | 23.09 | 1.54 | 5.909 | A | A |
| The Boulevard | 2.06 | 0.14 | 4.127 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> $\mathrm{min} / \mathrm{min}$ ) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 18.39 | 1.23 | 5.207 | A |  |
| Oxford Motor <br> Park | 0.81 | 0.05 | 3.040 | A |  |
| Langford Lane <br> (W) | 49.51 | 3.30 | 10.885 | A |  |
| The Boulevard | 2.83 | 0.19 | 4.651 | B | B |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 19.07 | 1.27 | 5.237 | A |  |
| Oxford Motor <br> Park | 0.82 | 0.05 | 3.043 | A |  |
| Langford Lane <br> (W) | 55.22 | 3.68 | 11.407 | A |  |
| The Boulevard | 2.90 | 0.19 | 4.668 | B | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 12.80 | 0.85 | 4.142 | A |  |
| Oxford Motor <br> Park | 0.62 | 0.04 | 2.764 | A |  |
| Langford Lane <br> (W) | 26.25 | 1.75 | 6.130 | A |  |
| The Boulevard | 2.16 | 0.14 | 4.145 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 9.21 | 0.61 | 3.579 | A |  |
| Oxford Motor <br> Park | 0.49 | 0.03 | 2.590 | A |  |
| Langford Lane <br> (W) | 15.80 | 1.05 | 4.453 | A |  |
| The Boulevard | 1.66 | 0.11 | 3.820 | A | A |

## (Default Analysis Set) - 2021 Base, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout <br> Capacity Model | Description | Include In <br> Report | Use Specific <br> Demand Set(s) | Specific <br> Demand Set <br> (s) | Locked | Network Flow <br> Scaling Factor <br> (\%) | Network Capacity <br> Scaling Factor (\%) | Reason For <br> Scaling <br> Factors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (Default <br> Analysis Set) | ARCADY |  | $\checkmark$ |  |  |  | 100.000 | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time <br> ( $\mathrm{HH}: \mathrm{mm}$ ) | Model Time Period Length (min) | Time Segment Length (min) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2021 <br> Base, PM | $\begin{aligned} & 2021 \\ & \text { Base } \end{aligned}$ | PM |  | ONE HOUR | 16:15 | 17:45 | 90 | 15 |  |  |  | $\checkmark$ |  |  |

## Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Do Geometric Delay | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Spires Business Park roundabout | Roundabout | $1,2,3,4$ |  |  |  | 4.99 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normalunknown |

## Arms

## Arms

| Name | Name | Description |
| :---: | :---: | :---: |
| Langford Lane (E) | Langford Lane (E) |  |
| Oxford Motor Park | Oxford Motor Park |  |
| Langford Lane (W) | Langford Lane (W) |  |
| The Boulevard | The Boulevard |  |

## Capacity Options

| Name | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 0.00 | 99999.00 |  | 0.00 |
| Oxford Motor Park | 0.00 | 99999.00 |  | 0.00 |
| Langford Lane (W) | 0.00 | 99999.00 |  | 0.00 |
| The Boulevard | 0.00 | 99999.00 |  | 0.00 |

## Roundabout Geometry

| Name | V-Approach road half- <br> width $(\mathrm{m})$ | E-Entry <br> width $(\mathrm{m})$ | r-Effective flare <br> length $(\mathrm{m})$ | R - Entry <br> radius $(\mathrm{m})$ | D- Inscribed circle <br> diameter $(\mathrm{m})$ | PHI - Conflict (entry) <br> angle (deg) | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 3.80 | 8.10 | 14.00 | 10.00 | 40.00 | 23.00 |  |
| Oxford Motor <br> Park | 3.50 | 7.80 | 24.00 | 15.00 | 40.00 | 23.00 |  |
| Langford Lane <br> (W) | 3.50 | 7.00 | 28.50 | 25.00 | 40.00 | 14.50 |  |
| The Boulevard | 4.60 | 5.70 | 9.00 | 22.50 | 40.00 | 15.00 |  |

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

| Name | Crossing Type |
| :---: | :---: |
| Langford Lane (E) | None |
| Oxford Motor Park | None |
| Langford Lane (W) | None |
| The Boulevard | None |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Name | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) |  | (calculated) | (calculated) | 0.647 | 1763.975 |
| Oxford Motor Park |  | (calculated) | (calculated) | 0.685 | 1903.704 |
| Langford Lane (W) |  | (calculated) | (calculated) | 0.709 | 1937.620 |
| The Boulevard |  | (calculated) | (calculated) | 0.665 | 1727.286 |

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

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle Mix <br> Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor for <br> a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

## General Flows Data

| Name | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | ONE HOUR | $\checkmark$ | 582.00 | 100.000 |
| Oxford Motor Park | ONE HOUR | $\checkmark$ | 133.00 | 100.000 |
| Langford Lane (W) | ONE HOUR | $\checkmark$ | 337.00 | 100.000 |
| The Boulevard | ONE HOUR | $\checkmark$ | 784.00 | 100.000 |

## Turning Proportions

Turning Counts or Proportions (Veh/hr) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 52.000 | 473.000 | 57.000 |
|  | $\mathbf{2}$ | 65.000 | 0.000 | 60.000 | 8.000 |
|  | $\mathbf{3}$ | 258.000 | 34.000 | 0.000 | 45.000 |
|  | $\mathbf{4}$ | 376.000 | 8.000 | 400.000 | 0.000 |

Turning Proportions (Veh) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.00 | 0.09 | 0.81 | 0.10 |
|  | $\mathbf{2}$ | 0.49 | 0.00 | 0.45 | 0.06 |
|  | $\mathbf{3}$ | 0.77 | 0.10 | 0.00 | 0.13 |
|  | $\mathbf{4}$ | 0.48 | 0.01 | 0.51 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 1.000 | 1.000 | 1.028 | 1.176 |
|  | $\mathbf{2}$ | 1.034 | 1.000 | 1.019 | 1.137 |
|  | $\mathbf{3}$ | 1.060 | 1.000 | 1.000 | 1.271 |
|  | $\mathbf{4}$ | 1.021 | 1.262 | 1.011 | 1.000 |

Heavy Vehicle Percentages - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 0.000 | 2.800 | 17.600 |
|  | $\mathbf{2}$ | 3.400 | 0.000 | 1.900 | 13.700 |
|  | $\mathbf{3}$ | 6.000 | 0.000 | 0.000 | 27.100 |
|  | $\mathbf{4}$ | 2.100 | 26.200 | 1.100 | 0.000 |

## Results

Results Summary for whole modelled period

| Name | $\begin{aligned} & \operatorname{Max} \\ & \text { RFC } \end{aligned}$ | Max (s) | Max Queue (Veh) | $\begin{aligned} & \text { Max } \\ & \text { LOS } \end{aligned}$ | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Vehmin) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 0.46 | 4.81 | 0.85 | A | 534.05 | 801.08 | 54.72 | 4.10 | 0.61 | 54.72 | 4.10 |
| Oxford Motor Park | 0.13 | 3.61 | 0.15 | A | 122.04 | 183.06 | 9.84 | 3.23 | 0.11 | 9.84 | 3.23 |
| Langford <br> Lane (W) | 0.22 | 2.73 | 0.28 | A | 309.24 | 463.86 | 20.04 | 2.59 | 0.22 | 20.04 | 2.59 |
| The Boulevard | 0.60 | 6.39 | 1.52 | A | 719.41 | 1079.12 | 91.03 | 5.06 | 1.01 | 91.04 | 5.06 |

## Main Results for each time segment

Main results: (16:15-16:30)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (5) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 438.16 | 109.54 | 436.50 | 524.34 | 331.37 | 0.00 | 1486.89 | 1406.07 | 0.295 | 0.00 | 0.42 | 3.421 | A |
| Oxford <br> Motor Park | 100.13 | 25.03 | 99.81 | 70.52 | 697.34 | 0.00 | 1366.14 | 746.32 | 0.073 | 0.00 | 0.08 | 2.842 | A |
| Langford <br> Lane (W) | 253.71 | 63.43 | 253.02 | 699.62 | 97.53 | 0.00 | 1720.16 | 1404.16 | 0.147 | 0.00 | 0.17 | 2.452 | A |
| The | 590.23 | 147.56 | 587.69 | 82.54 | 268.02 | 0.00 | 1512.53 | 613.68 | 0.390 | 0.00 | 0.64 | 3.883 | A |

Main results: (16:30-16:45)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{5})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 523.21 | 130.80 | 522.62 | 627.69 | 396.77 | 0.00 | 1445.59 | 1406.07 | 0.362 | 0.42 | 0.56 | 3.898 | A |
| Oxford <br> Motor Park | 119.56 | 29.89 | 119.47 | 84.42 | 834.96 | 0.00 | 1272.21 | 746.32 | 0.094 | 0.08 | 0.10 | 3.122 | A |
| Langford <br> Lane (W) | 302.96 | 75.74 | 302.79 | 837.68 | 116.76 | 0.00 | 1706.28 | 1404.16 | 0.178 | 0.17 | 0.22 | 2.564 | A |
| The <br> Boulevard | 704.80 | 176.20 | 703.72 | 98.80 | 320.74 | 0.00 | 1476.41 | 613.68 | 0.477 | 0.64 | 0.90 | 4.652 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> F Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( 5 ) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 640.80 | 160.20 | 639.66 | 768.18 | 485.38 | 0.00 | 1389.64 | 1406.07 | 0.461 | 0.56 | 0.85 | 4.793 | A |
| Oxford <br> Motor Park | 146.44 | 36.61 | 146.26 | 103.34 | 1021.69 | 0.00 | 1144.76 | 746.32 | 0.128 | 0.10 | 0.15 | 3.605 | A |
| Langford <br> Lane (W) | 371.04 | 92.76 | 370.78 | 1025.02 | 142.93 | 0.00 | 1687.39 | 1404.16 | 0.220 | 0.22 | 0.28 | 2.734 | A |
| The <br> Boulevard | 863.20 | 215.80 | 860.80 | 120.96 | 392.75 | 0.00 | 1427.07 | 613.68 | 0.605 | 0.90 | 1.50 | 6.331 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( 5 ) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 640.80 | 160.20 | 640.78 | 769.59 | 486.62 | 0.00 | 1388.85 | 1406.07 | 0.461 | 0.85 | 0.85 | 4.812 | A |
| Oxford <br> Motor Park | 146.44 | 36.61 | 146.43 | 103.49 | 1023.90 | 0.00 | 1143.25 | 746.32 | 0.128 | 0.15 | 0.15 | 3.610 | A |
| Langford <br> Lane (W) | 371.04 | 92.76 | 371.04 | 1027.21 | 143.13 | 0.00 | 1687.24 | 1404.16 | 0.220 | 0.28 | 0.28 | 2.734 | A |
| The <br> Boulevard | 863.20 | 215.80 | 863.14 | 121.11 | 393.06 | 0.00 | 1426.86 | 613.68 | 0.605 | 1.50 | 1.52 | 6.386 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 523.21 | 130.80 | 524.33 | 629.81 | 398.61 | 0.00 | 1444.43 | 1406.07 | 0.362 | 0.85 | 0.57 | 3.917 | A |
| Oxford <br> Motor Park | 119.56 | 29.89 | 119.73 | 84.65 | 838.29 | 0.00 | 1269.95 | 746.32 | 0.094 | 0.15 | 0.10 | 3.129 | A |
| Langford <br> Lane (W) | 302.96 | 75.74 | 303.22 | 840.95 | 117.07 | 0.00 | 1706.05 | 1404.16 | 0.178 | 0.28 | 0.22 | 2.566 | A |
| The <br> Boulevard | 704.80 | 176.20 | 707.18 | 99.04 | 321.24 | 0.00 | 1476.06 | 613.68 | 0.477 | 1.52 | 0.92 | 4.697 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (5) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 438.16 | 109.54 | 438.77 | 526.96 | 333.36 | 0.00 | 1485.64 | 1406.07 | 0.295 | 0.57 | 0.42 | 3.440 | A |
| Oxford <br> Motor Park | 100.13 | 25.03 | 100.23 | 70.85 | 701.27 | 0.00 | 1363.47 | 746.32 | 0.073 | 0.10 | 0.08 | 2.849 | A |
| Langford <br> Lane (W) | 253.71 | 63.43 | 253.88 | 703.52 | 97.98 | 0.00 | 1719.83 | 1404.16 | 0.148 | 0.22 | 0.17 | 2.455 | A |
| The <br> Boulevard | 590.23 | 147.56 | 591.35 | 82.90 | 268.97 | 0.00 | 1511.88 | 613.68 | 0.390 | 0.92 | 0.64 | 3.915 | A |

## Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 6.09 | 0.41 | 3.421 | A |  |
| Oxford Motor <br> Park | 1.16 | 0.08 | 2.842 | A |  |
| Langford Lane <br> (W) | 2.55 | 0.17 | 2.452 | A |  |
| The Boulevard | 9.27 | 0.62 | 3.883 | A | A |

Queueing Delay results: (16:30-16:45)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 8.30 | 0.55 | 3.898 | A |  |
| Oxford Motor <br> Park | 1.53 | 0.10 | 3.122 | A |  |
| Langford Lane <br> (W) | 3.19 | 0.21 | 2.564 | A |  |
| The Boulevard | 13.23 | 0.88 | 4.652 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 12.39 | 0.83 | 4.793 | A | A |
| Oxford Motor <br> Park | 2.16 | 0.14 | 3.605 | A | A |
| Langford Lane <br> (W) | 4.16 | 0.28 | 2.734 | A | A |
| The Boulevard | 21.68 | 1.45 | 6.331 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 12.76 | 0.85 | 4.812 | A |  |
| Oxford Motor <br> Park | 2.20 | 0.15 | 3.610 | A |  |
| Langford Lane <br> (W) | 4.22 | 0.28 | 2.734 | A |  |
| The Boulevard | 22.69 | 1.51 | 6.386 | A |  |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 8.77 | 0.58 | 3.917 | A |  |
| Oxford Motor <br> Park | 1.59 | 0.11 | 3.129 | A |  |
| Langford Lane <br> (W) | 3.29 | 0.22 | 2.566 | A |  |
| The Boulevard | 14.27 | 0.95 | 4.697 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 6.42 | 0.43 | 3.440 | A | A |
| Oxford Motor <br> Park | 1.21 | 0.08 | 2.849 | A |  |
| Langford Lane <br> (W) | 2.63 | 0.18 | 2.455 | A |  |
| The Boulevard | 9.89 | 0.66 | 3.915 | A |  |

## (Default Analysis Set) - 2025 Base, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout <br> Capacity Model | Description | Include In <br> Report | Use Specific <br> Demand Set(s) | Specific <br> Demand Set <br> (s) | Locked | Network Flow <br> Scaling Factor <br> (\%) | Network Capacity <br> Scaling Factor (\%) | Reason For <br> Scaling <br> Factors |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (Default <br> Analysis Set) | ARCADY |  | $\checkmark$ |  |  |  | 100.000 | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time ( $\mathrm{HH}: \mathrm{mm}$ ) | Model Time Period Length (min) | Time Segment Length (min) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2025$ <br> Base, <br> AM | $\begin{aligned} & 2025 \\ & \text { Base } \end{aligned}$ | AM |  | ONE HOUR | 07:30 | 09:00 | 90 | 15 |  |  |  | $\checkmark$ |  |  |

## Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Do Geometric Delay | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Spires Business Park roundabout | Roundabout | $1,2,3,4$ |  |  |  | 10.89 | B |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Norma/unknown |

## Arms

## Arms

| Name | Name | Description |
| :---: | :---: | :---: |
| Langford Lane (E) | Langford Lane (E) |  |
| Oxford Motor Park | Oxford Motor Park |  |
| Langford Lane (W) | Langford Lane (W) |  |
| The Boulevard | The Boulevard |  |

## Capacity Options

| Name | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | 0.00 | 99999.00 |  | 0.00 |
| Oxford Motor Park | 0.00 | 99999.00 |  | 0.00 |
| Langford Lane (W) | 0.00 | 99999.00 |  | 0.00 |
| The Boulevard | 0.00 | 99999.00 |  | 0.00 |

## Roundabout Geometry

| Name | V-Approach road half- <br> width $(\mathrm{m})$ | E-Entry <br> width $(\mathrm{m})$ | r- Effective flare <br> length $(\mathrm{m})$ | R - Entry <br> radius $(\mathrm{m})$ | D - Inscribed circle <br> diameter $(\mathrm{m})$ | PHI - Conflict (entry) <br> angle (deg) | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 3.80 | 8.10 | 14.00 | 10.00 | 40.00 | 23.00 |  |
| Oxford Motor <br> Park | 3.50 | 7.80 | 24.00 | 15.00 | 40.00 | 23.00 |  |
| Langford Lane <br> (W) | 3.50 | 7.00 | 28.50 | 25.00 | 40.00 | 14.50 |  |
| The Boulevard | 4.60 | 5.70 | 9.00 | 22.50 | 40.00 | 15.00 |  |

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

| Name | Crossing Type |
| :---: | :---: |
| Langford Lane (E) | None |
| Oxford Motor Park | None |
| Langford Lane (W) | None |
| The Boulevard | None |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Name | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) |  | (calculated) | (calculated) | 0.647 | 1763.975 |
| Oxford Motor Park |  | (calculated) | (calculated) | 0.685 | 1903.704 |
| Langford Lane (W) |  | (calculated) | (calculated) | 0.709 | 1937.620 |
| The Boulevard |  | (calculated) | (calculated) | 0.665 | 1727.286 |

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

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle Mix <br> Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor for <br> a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

## General Flows Data

| Name | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| Langford Lane (E) | ONE HOUR | $\checkmark$ | 848.00 | 100.000 |
| Oxford Motor Park | ONE HOUR | $\checkmark$ | 63.00 | 100.000 |
| Langford Lane (W) | ONE HOUR | $\checkmark$ | 1160.00 | 100.000 |
| The Boulevard | ONE HOUR | $\checkmark$ | 143.00 | 100.000 |

## Turning Proportions

Turning Counts or Proportions (Veh/hr) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 98.000 | 276.000 | 474.000 |
|  | $\mathbf{2}$ | 29.000 | 0.000 | 31.000 | 3.000 |
|  | $\mathbf{3}$ | 585.000 | 119.000 | 0.000 | 456.000 |
|  | $\mathbf{4}$ | 76.000 | 6.000 | 61.000 | 0.000 |

Turning Proportions (Veh) - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.00 | 0.12 | 0.33 | 0.56 |
|  | $\mathbf{2}$ | 0.46 | 0.00 | 0.49 | 0.05 |
|  | $\mathbf{3}$ | 0.50 | 0.10 | 0.00 | 0.39 |
|  | $\mathbf{4}$ | 0.53 | 0.04 | 0.43 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 1.000 | 1.012 | 1.064 | 1.025 |
|  | $\mathbf{2}$ | 1.040 | 1.000 | 1.000 | 1.467 |
|  | $\mathbf{3}$ | 1.034 | 1.000 | 1.000 | 1.015 |
|  | $\mathbf{4}$ | 1.341 | 1.000 | 1.307 | 1.000 |

Heavy Vehicle Percentages - Spires Business Park roundabout (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
|  | $\mathbf{1}$ | 0.000 | 1.200 | 6.400 | 2.500 |
|  | $\mathbf{2}$ | 4.000 | 0.000 | 0.000 | 46.700 |
|  | $\mathbf{3}$ | 3.400 | 0.000 | 0.000 | 1.500 |
|  | $\mathbf{4}$ | 34.100 | 0.000 | 30.700 | 0.000 |

## Results

Results Summary for whole modelled period

| Name | Max <br> RFC | Max <br> Delay <br> (s) | Max <br> Queue <br> (Veh) | Max <br> LOS | Average <br> Demand <br> (Veh/hr) | Total <br> Junction <br> Arrivals <br> (Veh) | Total <br> Queueing <br> Delay (Veh- <br> min) | Average <br> Queueing <br> Delay ( $\mathbf{s}$ ) | Rate Of <br> Queueing Delay <br> (Veh-min/min) | Inclusive Total <br> Queueing Delay <br> (Veh-min) | Inclusive <br> Average <br> Queueing <br> Delay ( $\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 0.60 | 5.73 | 1.47 | A | 778.14 | 1167.21 | 90.76 | 4.67 | 1.01 | 90.76 |  |
| Oxford <br> Motor Park | 0.06 | 3.16 | 0.06 | A | 57.81 | 86.71 | 4.20 | 2.91 | 0.05 | 4.20 | 2.91 |
| Langford <br> Lane (W) | 0.85 | 16.09 | 5.48 | C | 1064.44 | 1596.66 | 244.55 | 9.19 | 2.72 | 244.58 | 9.19 |
| The <br> Boulevard | 0.18 | 4.87 | 0.21 | A | 131.22 | 196.83 | 14.36 | 4.38 | 0.16 | 14.36 | 4.38 |

## Main Results for each time segment

Main results: (07:30-07:45)

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 638.42 | 159.60 | 635.80 | 516.84 | 139.34 | 0.00 | 1606.56 | 1334.75 | 0.397 | 0.00 | 0.65 | 3.700 | A |
| Oxford <br> Motor Park | 47.43 | 11.86 | 47.29 | 167.09 | 608.05 | 0.00 | 1405.30 | 729.71 | 0.034 | 0.00 | 0.03 | 2.650 | A |
| Langford <br> Lane (W) | 873.31 | 218.33 | 868.71 | 275.93 | 379.41 | 0.00 | 1623.71 | 1087.07 | 0.538 | 0.00 | 1.15 | 4.740 | A |
| The <br> Boulevard | 107.66 | 26.91 | 107.19 | 699.13 | 548.98 | 0.00 | 1030.24 | 795.71 | 0.105 | 0.00 | 0.12 | 3.898 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{5})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 762.34 | 190.58 | 761.29 | 618.62 | 166.82 | 0.00 | 1587.66 | 1334.75 | 0.480 | 0.65 | 0.92 | 4.351 | A |
| Oxford <br> Motor Park | 56.64 | 14.16 | 56.60 | 200.02 | 728.09 | 0.00 | 1321.58 | 729.71 | 0.043 | 0.03 | 0.04 | 2.845 | A |
| Langford <br> Lane (W) | 1042.82 | 260.70 | 1039.68 | 330.41 | 454.28 | 0.00 | 1570.38 | 1087.07 | 0.664 | 1.15 | 1.93 | 6.743 | A |
| The <br> Boulevard | 128.55 | 32.14 | 128.41 | 836.93 | 657.03 | 0.00 | 973.94 | 795.71 | 0.132 | 0.12 | 0.15 | 4.258 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( 5 ) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 933.67 | 233.42 | 931.48 | 752.94 | 203.33 | 0.00 | 1562.50 | 1334.75 | 0.598 | 0.92 | 1.46 | 5.686 | A |
| Oxford <br> Motor Park | 69.36 | 17.34 | 69.30 | 243.92 | 890.89 | 0.00 | 1208.04 | 729.71 | 0.057 | 0.04 | 0.06 | 3.160 | A |
| Langford <br> Lane (W) | 1277.19 | 319.30 | 1264.08 | 404.33 | 555.86 | 0.00 | 1498.02 | 1087.07 | 0.853 | 1.93 | 5.21 | 14.631 | B |
| The <br> Boulevard | 157.45 | 39.36 | 157.21 | 1020.87 | 799.06 | 0.00 | 899.92 | 795.71 | 0.175 | 0.15 | 0.21 | 4.846 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> FFow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{5})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 933.67 | 233.42 | 933.62 | 759.16 | 204.68 | 0.00 | 1561.64 | 1334.75 | 0.598 | 1.46 | 1.47 | 5.732 | A |
| Oxford <br> Motor Park | 69.36 | 17.34 | 69.36 | 245.41 | 892.88 | 0.00 | 1206.66 | 729.71 | 0.057 | 0.06 | 0.06 | 3.164 | A |
| Langford <br> Lane (W) | 1277.19 | 319.30 | 1276.11 | 405.16 | 557.09 | 0.00 | 1497.15 | 1087.07 | 0.853 | 5.21 | 5.48 | 16.088 | C |
| The <br> Boulevard | 157.45 | 39.36 | 157.44 | 1026.80 | 806.39 | 0.00 | 896.10 | 795.71 | 0.176 | 0.21 | 0.21 | 4.873 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{5})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 762.34 | 190.58 | 764.50 | 627.42 | 168.74 | 0.00 | 1586.43 | 1334.75 | 0.481 | 1.47 | 0.93 | 4.391 | A |
| Oxford <br> Motor Park | 56.64 | 14.16 | 56.70 | 202.15 | 731.09 | 0.00 | 1319.50 | 729.71 | 0.043 | 0.06 | 0.04 | 2.850 | A |
| Langford <br> Lane (W) | 1042.82 | 260.70 | 1056.64 | 331.66 | 456.13 | 0.00 | 1569.07 | 1087.07 | 0.665 | 5.48 | 2.03 | 7.208 | A |
| The <br> Boulevard | 128.55 | 32.14 | 128.79 | 845.39 | 667.37 | 0.00 | 968.55 | 795.71 | 0.133 | 0.21 | 0.15 | 4.287 | A |

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

| Name | Total <br> Demand <br> (Veh/hr) | Junction <br> Arrivals <br> (Veh) | Entry <br> Flow <br> (Veh/hr) | Exit Flow <br> (Veh/hr) | Circulating <br> Flow (Veh/hr) | Pedestrian <br> Demand <br> (Ped/hr) | Capacity <br> (Veh/hr) | Saturation <br> Capacity <br> (Veh/hr) | RFC | Start <br> Queue <br> (Veh) | End <br> Queue <br> (Veh) | Delay <br> ( $\mathbf{~})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Langford <br> Lane (E) | 638.42 | 159.60 | 639.50 | 521.27 | 140.45 | 0.00 | 1605.82 | 1334.75 | 0.398 | 0.93 | 0.66 | 3.728 | A |
| Oxford <br> Motor Park | 47.43 | 11.86 | 47.47 | 168.36 | 611.58 | 0.00 | 1402.84 | 729.71 | 0.034 | 0.04 | 0.04 | 2.655 | A |
| Langford <br> Lane (W) | 873.31 | 218.33 | 876.70 | 277.48 | 381.56 | 0.00 | 1622.18 | 1087.07 | 0.538 | 2.03 | 1.18 | 4.850 | A |
| The <br> Boulevard | 107.66 | 26.91 | 107.80 | 704.34 | 553.91 | 0.00 | 1027.67 | 795.71 | 0.105 | 0.15 | 0.12 | 3.913 | A |

## Queueing Delay Results for each time segment

Queueing Delay results: (07:30-07:45)

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 9.57 | 0.64 | 3.700 | A |  |
| Oxford Motor <br> Park | 0.51 | 0.03 | 2.650 | A |  |
| Langford Lane <br> (W) | 16.61 | 1.11 | 4.740 | A |  |
| The Boulevard | 1.71 | 0.11 | 3.898 | A | A |

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

| Name | Queueing Total Delay <br> (Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle ( $\mathbf{s})$ | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 13.41 | 0.89 | 4.351 | A |  |
| Oxford Motor <br> Park | 0.66 | 0.04 | 2.845 | A |  |
| Langford Lane <br> (W) | 27.70 | 1.85 | 6.743 | A |  |
| The Boulevard | 2.23 | 0.15 | 4.258 | A | A |

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

| Name | Queueing Total Delay <br> $($ Veh-min) | Queueing Rate Of Delay (Veh- <br> min/min) | Average Delay Per Arriving <br> Vehicle (s) | Unsignalised Level Of <br> Service | Signalised Level Of <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Langford Lane <br> (E) | 21.15 | 1.41 | 5.686 | A |  |
| Oxford Motor <br> Park | 0.90 | 0.06 | 3.160 | A |  |
| Langford Lane <br> (W) | 68.39 | 4.56 | 14.631 | A |  |
| The Boulevard | 3.10 | 0.21 | 4.846 | B | A |


[^0]:    The slope and intercept shown above include any corrections and adjustments.

