

**Project Title:** Land West of Bilsham Road, Yapton

**Project No/ Document Reference:** A361-TN008

**Date:** 29 June 2022

**Author:**

## Response to Comments by National Highways Ref: HAMIS 93768

### 1. Introduction

- 1.1. This Technical Note has been prepared to address comments made in a formal response (Received 27<sup>th</sup> June 2022) by National Highways (NH) to information previously submitted within ALP Reports A361-TN005 and A361-TN007 Rev A issued on the 11<sup>th</sup> March 2022 and the 6<sup>th</sup> June 2022 respectively.
- 1.2. This report was prepared in response to a holding objection implemented within a NH consultee response to West Sussex County Council dated the 27<sup>th</sup> June 2022, with reference to the application (Ref: Y/3/22/OUT) for a proposed development of 140 dwellings on land to the west of Bilsham Road, Yapton.
- 1.3. This subsequent response from NH asks for additional details with respects the safety record to be submitted on top of that previously requested, as well as further analysis of queuing behaviour at the junction in the 2024 future year scenarios.
- 1.4. The additional collision record information was submitted via email dated the 28<sup>th</sup> June 2022, which for completeness has also been included in Section 2 of this report.
- 1.5. Section 3 of the report provides additional analysis with respect queue lengths and the likely development impact.



## 2. Highway Safety Summary

2.1. The additional details of the five reported collisions of relevance (also provided via email to National Highways) is summarised in Table 2.1 below.

**Table 2.1 – Collision Summary**

|   | Causation Factor                                                                                     | Time  | Date                                    | Weather                                            | Vehicle Types                  | Description                                                                                                            | Resulting outcomes                                                                                                  |
|---|------------------------------------------------------------------------------------------------------|-------|-----------------------------------------|----------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 1 | Careless/ Reckless/ In a Hurry/ Failed to look properly/ Disobeyed Give Way or Stop sign or markings | 18:29 | Thursday 11 <sup>th</sup> July 2019     | Daylight<br>Dry weather<br>Fine without high winds | Veh 1: Car<br>Veh 2: Car       | Veh 1 turned across west bound dual carriageway without looking and was struck by Veh 2                                | Serious injuries to the driver and passenger of Veh 1 and slight injuries to the driver and passenger of Veh 2      |
| 2 | Careless/ Reckless/ In a Hurry                                                                       | 00:10 | Thursday 12 <sup>th</sup> December 2019 | Darkness<br>Dry<br>Fine without high winds         | Veh 1: Car                     | Veh 1 failed to negotiate sweeping left bend and collided with trees and street furniture                              | A serious injury to the driver of Veh 1                                                                             |
| 3 | Careless/ Reckless/ In a Hurry<br>Failed to look properly                                            | 06:54 | Wednesday 14 <sup>th</sup> July 2019    | Daylight<br>Dry<br>Fine without high winds         | Veh 1: Car<br>Veh 2: Car       | Veh1 failed to notice Veh 2 stationary having broken down in the caraway. Veh 1 collided with rear of Veh 2            | A slight injury to the driver of Veh 1 and a serious injury to the driver of Veh 2                                  |
| 4 | Careless/ Reckless/ In a Hurry                                                                       | 16:37 | Monday 7 <sup>th</sup> June 2021        | Daylight<br>Dry<br>Fine without high winds         | Veh 1: Car<br>Veh 2: Car       | Veh 1 pulled out in front of Veh 2 which was traveling east to west along the A27 when attempting to enter Yapton Lane | No injury to the driver of vehicle 1 and a slight injury to the driver of vehicle 2                                 |
| 5 | Failed to look properly<br>Failed to judge other persons path or speed                               | 16:17 | Friday 26 <sup>th</sup> May 2017        | Daylight<br>Dry<br>Fine without high winds         | Veh 1: Car<br>Veh 2: M/C>500CC | As vehicles 1 and 2 approach the junction with Yapton Lane Veh 1 changes lane and collides with Veh 2                  | No injury to driver of Veh 1. A slight injury to the driver of Veh 2 and a serious injury to the passenger of Veh 2 |

2.2. As can be seen, none of the collisions reported occurred during periods of poor weather and the majority occurred during daylight hours. Likewise, no collisions were reported to have occurred during the peak periods and there have been no reported incidents of shunt type collisions (or any other type) because of queues forming at the right turn lane.

2.3. Of the five collisions reported only two (in a five year period) were attributed to right turners travelling to Yapton Lane where drivers attempted to cross the westbound carriageway without looking properly and travelling recklessly or in a hurry.

2.4. This clearly indicates that there is not an existing safety issue as a result of the junctions existing geometry as previously summarised. The evidence also suggests that the junction does not operate in an unsafe manor when the network is at its most busy and most heavily used i.e. during the peak AM and PM periods.



### 3. Queue Length Analysis

- 3.1. Since the previous assessment was undertaken it transpires that at least two sites have now been refused planning consent at appeal, those identified being:
- BN/28/17/RES - 38 Units
  - Y/71/21/OUT – 73 Units
- 3.2. As such traffic associated with these sites has been removed from the committed development flows previously assessed.
- 3.3. Further to this it is noted that the previous assessment also included a measure of ‘double counting’, whereby the TEMPRO growth factors were applied to all movements at the A27 / Yapton Lane junction in addition to the committed development identified. While this ensured an extremely robust initial assessment, the sensitivities we are now being asked to investigate with respects queue lengths require a more realistic approach, and therefore it is entirely appropriate to develop a modelling scenario which most accurately reflects future conditions.
- 3.4. The committed development identified results in a c.10% increase in traffic to the 2024 Baseline year while the application of the TEMPRO growth factor equates to an additional c.5% increase on top of this. It is therefore considered reasonable for the TEMPRO growth factor to be removed from movements traveling to and from Yapton Lane (as this is where committed development is most pronounced in its distortion when TEMPRO is also added), Table 3.1 below summarises the effect of removing the TEMPRO growth factors to the 2024 + Committed Development Base.

**Table 3.1 – Committed Development vs TEMPRO % Growth**

| Turning Movement             | Original<br>2024 +<br>Committed<br>Flows | Revised<br>2024 +<br>Committed<br>Flows | Percentage<br>Difference |
|------------------------------|------------------------------------------|-----------------------------------------|--------------------------|
|                              | PM                                       | PM                                      | PM                       |
| A27 Eastbound                | 895                                      | 895                                     | 0%                       |
| A27 Westbound                | 963                                      | 963                                     | 0%                       |
| A27 Eastbound to Yapton Lane | 551                                      | 521                                     | -5.5%                    |
| A27 Westbound to Yapton Lane | 81                                       | 77                                      | -5%                      |
| Yapton Lane to A27 Westbound | 272                                      | 257                                     | -5.6%                    |

- 3.5. As can be seen the removal of these ‘double counted’ flows result in a modest decrease in traffic expected to turn left and right to / from Yapton Lane.
- 3.6. The updated turning flow diagrams for the 2024 scenarios have been included in Appendix A of this report.



### Updated Assessment Results

- 3.7. As the PM peak is the critical period now under scrutiny this report only considers this part of the assessment in more detail as part of the queuing analysis. By way of comparison Table 3.2 shows the previous assessment results against the revised 'committed' development flows for the PM peak period in 2024 scenarios.

**Table 3.2: A27 / Yapton lane Junction Previous Flows**

|                    | Previous Assessment                 |                              |                              |      | Updated Committed Development Flows |                              |                              |      |
|--------------------|-------------------------------------|------------------------------|------------------------------|------|-------------------------------------|------------------------------|------------------------------|------|
|                    | Mean Queue (Veh)                    | Max 90 <sup>th</sup> % Queue | Max 95 <sup>th</sup> % Queue | RFC  | Mean Queue (Veh)                    | Max 90 <sup>th</sup> % Queue | Max 95 <sup>th</sup> % Queue | RFC  |
|                    | 2024 Base                           |                              |                              |      |                                     |                              |                              |      |
| <b>Yapton Lane</b> | 1                                   | 1                            | 1                            | 0.39 | 1                                   | 1                            | 1                            | 0.37 |
| <b>A27</b>         | 5                                   | 13                           | 24                           | 0.85 | 4                                   | 9                            | 20                           | 0.81 |
|                    | 2024 Base + Committed               |                              |                              |      |                                     |                              |                              |      |
| <b>Yapton Lane</b> | 1                                   | 1                            | 3                            | 0.43 | 1                                   | 1                            | 3                            | 0.42 |
| <b>A27</b>         | 10                                  | 29                           | 49                           | 0.94 | 7                                   | 19                           | 38                           | 0.89 |
|                    | 2024 Base + Committed + Development |                              |                              |      |                                     |                              |                              |      |
| <b>Yapton Lane</b> | 1                                   | 1                            | 3                            | 0.44 | 1                                   | 1                            | 3                            | 0.42 |
| <b>A27</b>         | 12                                  | 33                           | 53                           | 0.95 | 8                                   | 22                           | 41                           | 0.91 |

- 3.8. As can be seen, the revised committed development flows result in a small improvement to the performance of the junction with a reduction in the likely average queue lengths. However, both assessments indicate that the average maximum queues forming at the junction during the PM peak hour will not exceed the existing storage capacity of the right turn lane, which is 20 PCU's.
- 3.9. Also highlighted are the maximum 90<sup>th</sup> and 95<sup>th</sup> percentile queues calculated, this represents an extreme scenario – which by their definition do not occur on typical days. These indicate that there is potential for queues to form that exceed the existing (20 PCU's) and the agreed mitigation scheme (35PCU's) of the right turn lane in all future 2024 scenarios.



3.10. As requested by NH, an assessment of the probability of queues more than the existing (110m) and mitigated (190m) storage capacity of the right turn lane has been undertaken using inbuilt queue analysis features of the Junctions 10 software. The full capacity assessment outputs for this have been included in Appendix B, while the results are summarised in Table 3.3 below.

**Table 3.3 – Queue Length Probability (Previously Submitted Flows)**

|             | Existing Geometry                   |                                          |                                      | Mitigated Junction |                                          |                                      |
|-------------|-------------------------------------|------------------------------------------|--------------------------------------|--------------------|------------------------------------------|--------------------------------------|
|             | Mean Queue                          | Probability of reaching / exceeding 110m | Probability of exactly reaching 110m | Mean Queue         | Probability of reaching / exceeding 190m | Probability of exactly reaching 190m |
|             | 2024 Base                           |                                          |                                      |                    |                                          |                                      |
| Yapton Lane | 1                                   | n/a                                      | n/a                                  | 1                  | n/a                                      | n/a                                  |
| A27         | 5                                   | 6%                                       | 0%                                   | 4                  | <5%                                      | 0%                                   |
|             | 2024 Base + Committed               |                                          |                                      |                    |                                          |                                      |
| Yapton Lane | 1                                   | n/a                                      | n/a                                  | 1                  | n/a                                      | n/a                                  |
| A27         | 9                                   | 13%                                      | 1%                                   | 8                  | 7%                                       | 0%                                   |
|             | 2024 Base + Committed + Development |                                          |                                      |                    |                                          |                                      |
| Yapton Lane | 1                                   | n/a                                      | n/a                                  | 1                  | n/a                                      | n/a                                  |
| A27         | 10                                  | 15%                                      | 1%                                   | 9                  | 8%                                       | 0%                                   |

3.11. As can be seen, in the 2024 Base scenario with the current 110m right turn lane, the junction has a 6% chance of queues more than 110m occurring during the PM peak. This increases to a 13% chance in the 2024 Base + Committed scenario and 15% when the development traffic is included.

3.12. With the approved mitigation scheme in place, thereby increasing the storage length to 190m (35 PCU's), the probability of queues more than 190m is less than 5% in the 2024 Base, 7% when committed development is accounted for, with a modest increase of just 1% because of the development.

3.13. As discussed however, there is good reason for a revised assessment of the traffic flows to be undertaken due to recent appeal dismissals, as well as elements of double counting in the previous



committed development base. Table 3.4 therefore provides an assessment of probability of excessive queue lengths based upon the revised traffic movements.

**Table 3.4 – Queue Length Probability (Revised Committed Development Flows)**

|             | Existing Geometry                   |                                          |                                      | Mitigated Junction |                                          |                                      |
|-------------|-------------------------------------|------------------------------------------|--------------------------------------|--------------------|------------------------------------------|--------------------------------------|
|             | Mean Queue                          | Probability of reaching / exceeding 110m | Probability of exactly reaching 110m | Mean Queue         | Probability of reaching / exceeding 190m | Probability of exactly reaching 190m |
|             | 2024 Base                           |                                          |                                      |                    |                                          |                                      |
| Yapton Lane | 1                                   | n/a                                      | n/a                                  | 1                  | n/a                                      | n/a                                  |
| A27         | 3                                   | <5%                                      | 0%                                   | 3                  | <5%                                      | 0%                                   |
|             | 2024 Base + Committed               |                                          |                                      |                    |                                          |                                      |
| Yapton Lane | 1                                   | n/a                                      | n/a                                  | 1                  | n/a                                      | n/a                                  |
| A27         | 5                                   | 7%                                       | 0%                                   | 5                  | <5%                                      | 0%                                   |
|             | 2024 Base + Committed + Development |                                          |                                      |                    |                                          |                                      |
| Yapton Lane | 1                                   | n/a                                      | n/a                                  | 1                  | n/a                                      | n/a                                  |
| A27         | 6                                   | 8%                                       | 0%                                   | 6                  | <5%                                      | 0%                                   |

- 3.14. As can be seen, using the more realistic revised traffic flows the 2024 Base scenario indicates that with the current right turn lane, the junction has a less than 5% chance of queues in excess of 110m occurring during the PM peak. This increases to a 7% chance in the 2024 Base + Committed scenario and 8% when the development traffic is included.
- 3.15. However it is also noted that when the approved mitigation scheme is considered, the probability of queues more than 190m forming at the junction remains the same at less than 5%, with the mean queues calculated also remaining unchanged.
- 3.16. On this basis therefore it is considered that the effect of the proposed development of 140 dwellings on land west of Bilsham Road, Yapton is minimal and will not result in a 'severe impact' upon the continued safe operation of the A27/ Yapton Lane junction.



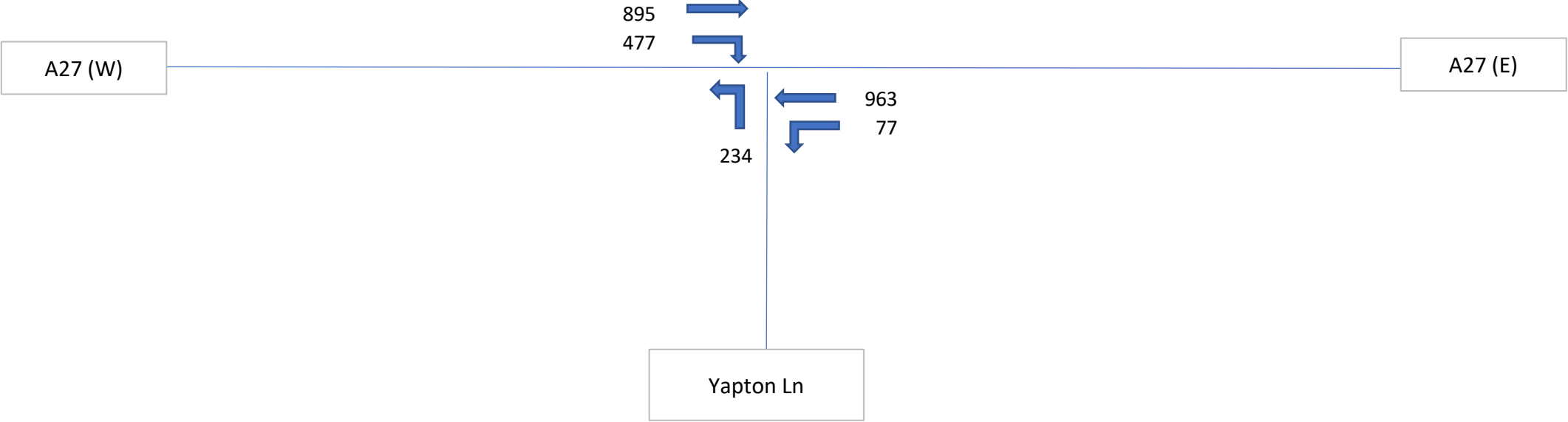
#### **4. Conclusion**

- 4.1. This report has been prepared to provide additional information to NH with respects the potential formation of queues upon the SRN.
- 4.2. Provided in this report is additional details regarding the traffic collision record, which as summarised indicates that there are no existing issues at the junction because of queues forming within the right turn lane. Further to which it is considered that the increase in traffic predicted as part of the proposed development is highly unlikely to have a discernible 'severe' impact upon the existing safety record.
- 4.3. In addition further detailed analysis of predicted queue lengths at the junction have also been provided for the 2024 opening year in the critical PM peak period.
- 4.4. It is important to note that the % probability of these queues forming does not mean that the junction will operate with excessive queues 5-8% of the time but is rather an indication of the chance of such a queue forming in the first place and as highlighted in both assessments using the original committed development base, and the revised committed development base the effect of the proposed development is minimal i.e. less than 1-2% and does not constitute a 'severe' impact.
- 4.5. This is notwithstanding the betterment the junction will see with the implementation of the already agreed mitigation scheme as part of the Land East of Tye Lane development which is currently under construction and will imminently trigger the improvement as part of its S106 agreement.
- 4.6. On this basis therefore it is considered that the contents which forms the reason for National Highways holding objections have been thoroughly assessed and do not constitute a scenario in which the key transport tests of the NPPF are not met.



## APPENDIX A

### Revised 2024 Scenario Flows



Job No

A361

Project :

Yapton, West Sussex

Date

MAY  
2022

Title :

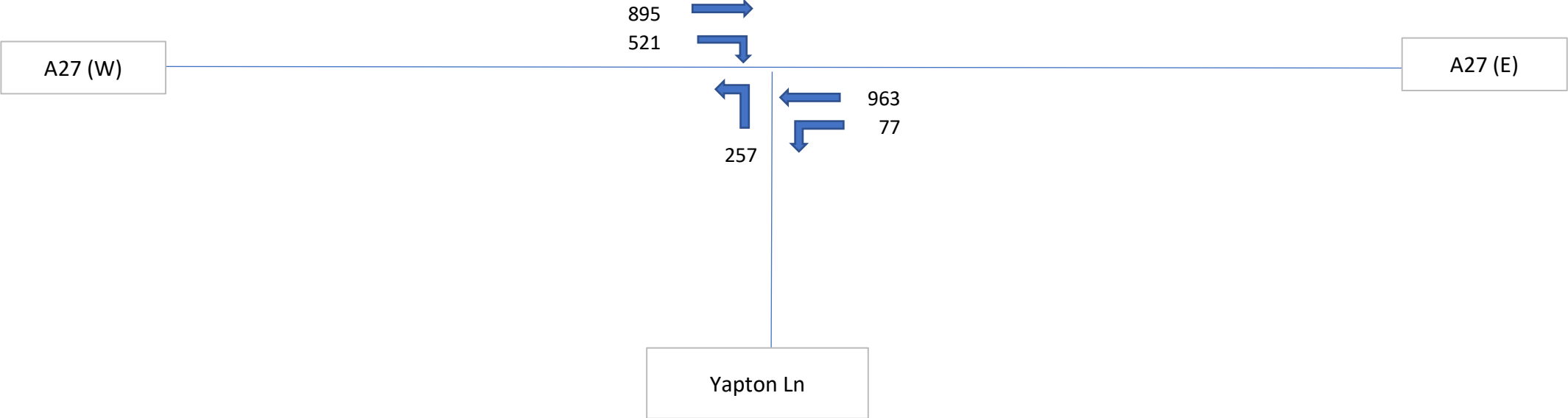
Traffic Movements 2024 Base PM

Drawn

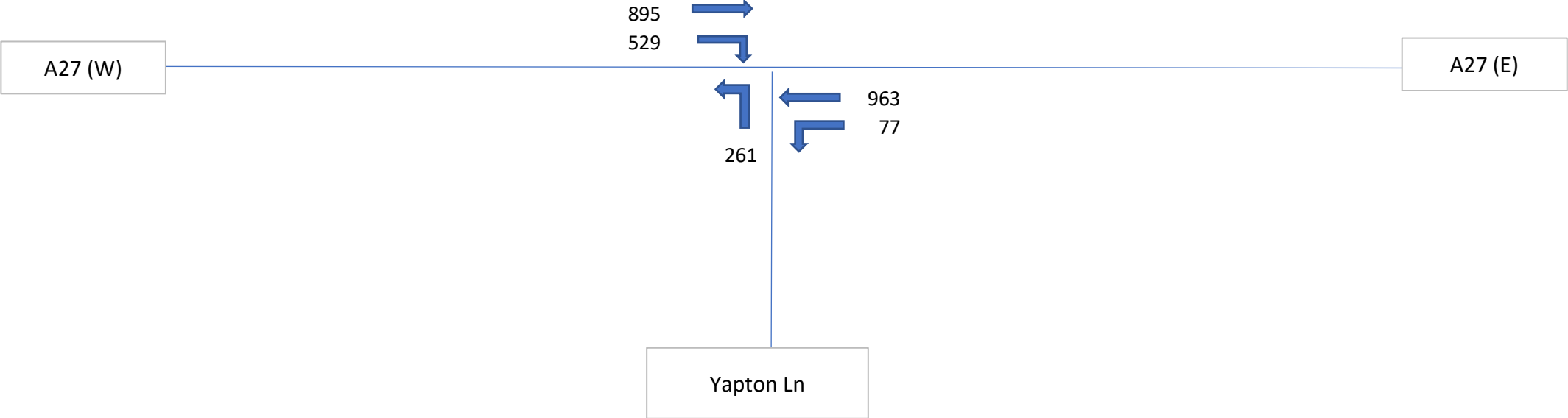
LJ

Figure No :

NA



|                     |                                                 |
|---------------------|-------------------------------------------------|
| Job No<br>A361      | Project :<br>Yapton, West Sussex                |
| Date<br>MAY<br>2022 | Title :<br>Traffic Movments 2024 + Committed PM |
| Drawn<br>LJ         | Figure No :<br>NA                               |



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Job No<br>A361      | Project :<br>Yapton, West Sussex                      |
| Date<br>MAY<br>2022 | Title :<br>Traffic Movments 2024 + Committed + Dev PM |
| Drawn<br>LJ         | Figure No :<br>NA                                     |



## APPENDIX B

### 2024 PM Peak Capacity Assessments with Queue Length Analysis

| Junctions 10                                                                                                                                                     |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| PICADY 10 - Priority Intersection Module                                                                                                                         |  |  |  |  |  |  |  |
| Version: 10.0.1.1519                                                                                                                                             |  |  |  |  |  |  |  |
| © Copyright TRL Software Limited, 2021                                                                                                                           |  |  |  |  |  |  |  |
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| +44 (0)1344 379777 software@trl.co.uk trlsoftware.com                                                                                                            |  |  |  |  |  |  |  |
| The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution |  |  |  |  |  |  |  |

**Filename:** A361 - A27 - yapton Road T Junction 220531 2024 PM Peaks.j10

**Path:** P:\A361 Lamb Field, B2132 Bilsham Road, Yapton\Deliverables\Transport\Modelling\Junction\Capacity Assessment File

**Report generation date:** 30/06/2022 20:59:38

»2024 Base , PM

»2024 Base + Committed , PM

»2024 Base + Committed + Development , PM

### Summary of junction performance

|             | PM                                  |             |                 |           |      |     |                    |
|-------------|-------------------------------------|-------------|-----------------|-----------|------|-----|--------------------|
|             | Set ID                              | Queue (Veh) | 95% Queue (Veh) | Delay (s) | RFC  | LOS | Junction Delay (s) |
|             | 2024 Base                           |             |                 |           |      |     |                    |
| Stream B-AC | D2                                  | 0.6         | 2.8             | 8.31      | 0.38 | A   | 6.39               |
| Stream C-AB |                                     | 4.4         | 22.7            | 30.17     | 0.83 | D   |                    |
|             | 2024 Base + Committed               |             |                 |           |      |     |                    |
| Stream B-AC | D4                                  | 0.7         | 3.0             | 8.89      | 0.43 | A   | 10.62              |
| Stream C-AB |                                     | 8.0         | 41.8            | 47.81     | 0.91 | E   |                    |
|             | 2024 Base + Committed + Development |             |                 |           |      |     |                    |
| Stream B-AC | D6                                  | 0.8         | 3.0             | 9.01      | 0.43 | A   | 11.57              |
| Stream C-AB |                                     | 9.0         | 45.7            | 51.13     | 0.92 | F   |                    |

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

### File summary

#### File Description

|             |                     |
|-------------|---------------------|
| Title       |                     |
| Location    |                     |
| Site number |                     |
| Date        | 02/03/2022          |
| Version     |                     |
| Status      | (new file)          |
| Identifier  |                     |
| Client      |                     |
| Jobnumber   |                     |
| Enumerator  | ALPCE\transportuser |
| Description |                     |

## 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         | Veh                 | Veh                   | perHour    | s                   | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Show lane queues in feet / metres | Show all PICADY stream intercepts | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) | Use iterations with HCM roundabouts | Max number of iterations for roundabouts |
|--------------------|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|---------------|-----------------------------|-----------------------|-------------------------------------|------------------------------------------|
| 5.75               | ✓                           | ✓                                 | ✓                                 |                                   |                             | 0.85          | 36.00                       | 35.00                 |                                     | 500                                      |

## Demand Set Summary

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base                           | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D4 | 2024 Base + Committed               | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

## Analysis Set Details

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

# 2024 Base , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 6.39               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 6.39              | A           |

## Arms

### Arms

| Arm | Name      | Description | Arm type |
|-----|-----------|-------------|----------|
| A   | A27 East  |             | Major    |
| B   | Yapton Ln |             | Minor    |
| C   | A27 West  |             | Major    |

### Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Width of kerbed central reserve (m) | Has right-turn storage | Width for right-turn storage (m) | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|-----|--------------------------|----------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|---------|----------------------|
| C   | 15.50                    | ✓                          | 7.00                                | ✓                      | 4.55                             | 250.0                         | ✓       | 35.00                |

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

### Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|-----|----------------|----------------|------------------------|-------------------------|
| B   | One lane       | 5.00           | 250                    | 250                     |

### Queue Markers

| Arm | Queue marker | Distance (m) |
|-----|--------------|--------------|
| A   |              |              |
| B   |              |              |
| C   | ✓            | 190.00       |

### Slope / Intercept / Capacity

#### Priority Intersection Slopes and Intercepts

| Stream | Intercept (Veh/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|--------|--------------------|---------------|---------------|---------------|---------------|
| B-A    | 967                | 0.089         | 0.226         | 0.142         | 0.323         |
| B-C    | 938                | 0.084         | 0.213         | -             | -             |
| C-B    | 903                | 0.205         | 0.205         | -             | -             |

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base     | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1044                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 246                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1396                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
| From |    | A   | B   | C   |
|      | A  | 0   | 81  | 963 |
|      | B  | 0   | 0   | 246 |
|      | C  | 895 | 501 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |   |   |
|------|----|---|---|---|
| From |    | A | B | C |
|      | A  | 0 | 0 | 0 |
|      | B  | 0 | 0 | 0 |
|      | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.38    | 8.31          | 0.6             | 2.8                             | A       | 226                     | 339                           | 40.20                          | 7.12                       | 0.45                                 | 40.21                                    | 7.12                                 |
| C-AB   | 0.83    | 30.17         | 4.4             | 22.7                            | D       | 460                     | 690                           | 208.98                         | 18.17                      | 2.32                                 | 209.03                                   | 18.17                                |
| C-A    |         |               |                 |                                 |         | 821                     | 1231                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 74                      | 111                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

## Main Results for each time segment

### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 185                   | 46                      | 778               | 0.238 | 184                 | 0.0               | 0.3             | 6.047     | A                             |
| C-AB   | 377                   | 94                      | 741               | 0.509 | 373                 | 0.0               | 1.0             | 9.675     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 221                   | 55                      | 747               | 0.296 | 221                 | 0.3               | 0.4             | 6.833     | A                             |
| C-AB   | 450                   | 113                     | 710               | 0.634 | 448                 | 1.0               | 1.7             | 13.586    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 271                   | 68                      | 704               | 0.385 | 270                 | 0.4               | 0.6             | 8.275     | A                             |
| C-AB   | 553                   | 138                     | 668               | 0.827 | 543                 | 1.7               | 4.1             | 26.885    | D                             |
| C-A    | 984                   | 246                     |                   |       | 984                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 271                   | 68                      | 704               | 0.385 | 271                 | 0.6               | 0.6             | 8.306     | A                             |
| C-AB   | 553                   | 138                     | 668               | 0.827 | 552                 | 4.1               | 4.4             | 30.171    | D                             |
| C-A    | 984                   | 246                     |                   |       | 984                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 221                   | 55                      | 747               | 0.296 | 222                 | 0.6               | 0.4             | 6.867     | A                             |
| C-AB   | 450                   | 113                     | 710               | 0.634 | 461                 | 4.4               | 1.8             | 14.991    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 185                   | 46                      | 778               | 0.238 | 186                 | 0.4               | 0.3             | 6.082     | A                             |
| C-AB   | 377                   | 94                      | 741               | 0.509 | 380                 | 1.8               | 1.1             | 10.048    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.49                           | 0.30                                 | 6.047                                  | A                             |
| C-AB   | 14.89                          | 0.99                                 | 9.675                                  | A                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.09                           | 0.41                                 | 6.833                                  | A                             |
| C-AB   | 24.71                          | 1.65                                 | 13.586                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 8.93                           | 0.60                                 | 8.275                                  | A                             |
| C-AB   | 56.78                          | 3.79                                 | 26.885                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.28                           | 0.62                                 | 8.306                                  | A                             |
| C-AB   | 68.06                          | 4.54                                 | 30.171                                 | D                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.56                           | 0.44                                 | 6.867                                  | A                             |
| C-AB   | 28.42                          | 1.89                                 | 14.991                                 | B                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.84                           | 0.32                                 | 6.082                                  | A                             |
| C-AB   | 16.13                          | 1.08                                 | 10.048                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.31       | 0.00      | 0.00      | 0.31      | 0.31      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.01       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.42       | 0.00      | 0.00      | 0.42      | 0.42      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.67       | 0.07      | 1.04      | 3.78      | 5.33      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.62       | 0.03      | 0.26      | 0.62      | 0.62      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 4.10       | 0.04      | 0.40      | 10.90     | 21.86     |                    |                | < 0.05                                      | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.62       | 0.03      | 0.29      | 1.25      | 2.83      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 4.39       | 0.03      | 0.32      | 7.22      | 22.72     |                    |                | < 0.05                                      | 0.00                                   |

**17:45 - 18:00**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.42       | 0.00      | 0.00      | 0.42      | 0.42      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.80       | 0.04      | 0.43      | 4.85      | 8.28      |                    |                | < 0.05                                      | 0.00                                   |

**18:00 - 18:15**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.32       | 0.00      | 0.00      | 0.32      | 0.32      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.06       | 0.03      | 0.33      | 2.36      | 5.30      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 10.62              | B            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 10.62             | B           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name         | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-----------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D4 | 2024 Base + Committed | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1044                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 272                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1446                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
|      | A  | B   | C   |     |
| From | A  | 0   | 81  | 963 |
|      | B  | 0   | 0   | 272 |
|      | C  | 895 | 551 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.43    | 8.89          | 0.7             | 3.0                             | A       | 250                     | 374                           | 46.81                          | 7.50                       | 0.52                                 | 46.81                                    | 7.50                                 |
| C-AB   | 0.91    | 47.81         | 8.0             | 41.8                            | E       | 517                     | 775                           | 320.24                         | 24.80                      | 3.56                                 | 320.31                                   | 24.80                                |
| C-A    |         |               |                 |                                 |         | 810                     | 1215                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 74                      | 111                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 205                   | 51                      | 778               | 0.263 | 203                 | 0.0               | 0.4             | 6.249     | A                             |
| C-AB   | 415                   | 104                     | 741               | 0.560 | 410                 | 0.0               | 1.2             | 10.711    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 245                   | 61                      | 747               | 0.327 | 244                 | 0.4               | 0.5             | 7.148     | A                             |
| C-AB   | 495                   | 124                     | 710               | 0.698 | 492                 | 1.2               | 2.2             | 16.193    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 299                   | 75                      | 704               | 0.425 | 298                 | 0.5               | 0.7             | 8.850     | A                             |
| C-AB   | 640                   | 160                     | 703               | 0.910 | 621                 | 2.2               | 6.8             | 37.395    | E                             |
| C-A    | 952                   | 238                     |                   |       | 952                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 299                   | 75                      | 704               | 0.425 | 299                 | 0.7               | 0.7             | 8.892     | A                             |
| C-AB   | 640                   | 160                     | 703               | 0.910 | 635                 | 6.8               | 8.0             | 47.807    | E                             |
| C-A    | 952                   | 238                     |                   |       | 952                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 245                   | 61                      | 747               | 0.327 | 245                 | 0.7               | 0.5             | 7.192     | A                             |
| C-AB   | 495                   | 124                     | 710               | 0.698 | 518                 | 8.0               | 2.4             | 20.550    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 205                   | 51                      | 778               | 0.263 | 205                 | 0.5               | 0.4             | 6.292     | A                             |
| C-AB   | 415                   | 104                     | 741               | 0.560 | 419                 | 2.4               | 1.3             | 11.336    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.13                           | 0.34                                 | 6.249                                  | A                             |
| C-AB   | 18.08                          | 1.21                                 | 10.711                                 | B                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.02                           | 0.47                                 | 7.148                                  | A                             |
| C-AB   | 32.03                          | 2.14                                 | 16.193                                 | C                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.52                          | 0.70                                 | 8.850                                  | A                             |
| C-AB   | 86.89                          | 5.79                                 | 37.395                                 | E                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.97                          | 0.73                                 | 8.892                                  | A                             |
| C-AB   | 121.34                         | 8.09                                 | 47.807                                 | E                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.62                           | 0.51                                 | 7.192                                  | A                             |
| C-AB   | 41.89                          | 2.79                                 | 20.550                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.55                           | 0.37                                 | 6.292                                  | A                             |
| C-AB   | 20.02                          | 1.33                                 | 11.336                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.35       | 0.00      | 0.00      | 0.35      | 0.35      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.24       | 0.56      | 1.10      | 1.42      | 1.71      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.48       | 0.00      | 0.00      | 0.48      | 0.48      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.18       | 0.07      | 1.09      | 5.41      | 7.84      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.73       | 0.03      | 0.26      | 0.73      | 0.73      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 6.84       | 0.07      | 1.50      | 19.60     | 30.90     |                    |                | < 0.05                                      | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.73       | 0.03      | 0.28      | 1.02      | 2.98      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 7.99       | 0.05      | 0.47      | 22.51     | 41.83     |                    |                | 0.07                                        | 0.00                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.49       | 0.04      | 0.45      | 1.27      | 1.39      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.44       | 0.04      | 0.40      | 6.58      | 12.31     |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.36       | 0.03      | 0.26      | 0.47      | 0.50      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.30       | 0.03      | 0.31      | 2.17      | 6.61      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed + Development , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 11.57              | B            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 11.57             | B           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1044                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 277                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1454                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
|      | A  | B   | C   |     |
| From | A  | 0   | 81  | 963 |
|      | B  | 0   | 0   | 277 |
|      | C  | 895 | 559 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.43    | 9.01          | 0.8             | 3.0                             | A       | 254                     | 381                           | 48.16                          | 7.58                       | 0.54                                 | 48.17                                    | 7.58                                 |
| C-AB   | 0.92    | 51.13         | 9.0             | 45.7                            | F       | 531                     | 797                           | 346.81                         | 26.11                      | 3.85                                 | 346.88                                   | 26.11                                |
| C-A    |         |               |                 |                                 |         | 803                     | 1204                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 74                      | 111                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 209                   | 52                      | 778               | 0.268 | 207                 | 0.0               | 0.4             | 6.290     | A                             |
| C-AB   | 421                   | 105                     | 741               | 0.568 | 416                 | 0.0               | 1.3             | 10.895    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 249                   | 62                      | 747               | 0.333 | 248                 | 0.4               | 0.5             | 7.212     | A                             |
| C-AB   | 503                   | 126                     | 710               | 0.708 | 499                 | 1.3               | 2.3             | 16.696    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 305                   | 76                      | 704               | 0.433 | 304                 | 0.5               | 0.8             | 8.970     | A                             |
| C-AB   | 671                   | 168                     | 727               | 0.923 | 650                 | 2.3               | 7.5             | 38.934    | E                             |
| C-A    | 930                   | 233                     |                   |       | 930                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

**17:30 - 17:45**

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 305                   | 76                      | 704               | 0.433 | 305                 | 0.8               | 0.8             | 9.014     | A                             |
| C-AB   | 671                   | 168                     | 727               | 0.923 | 665                 | 7.5               | 9.0             | 51.126    | F                             |
| C-A    | 930                   | 233                     |                   |       | 930                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

**17:45 - 18:00**

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 249                   | 62                      | 747               | 0.333 | 250                 | 0.8               | 0.5             | 7.259     | A                             |
| C-AB   | 503                   | 126                     | 710               | 0.708 | 528                 | 9.0               | 2.6             | 22.145    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

**18:00 - 18:15**

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 209                   | 52                      | 778               | 0.268 | 209                 | 0.5               | 0.4             | 6.334     | A                             |
| C-AB   | 421                   | 105                     | 741               | 0.568 | 426                 | 2.6               | 1.3             | 11.580    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

**Queueing Delay Results for each time segment**
**16:45 - 17:00**

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.25                           | 0.35                                 | 6.290                                  | A                             |
| C-AB   | 18.65                          | 1.24                                 | 10.895                                 | B                             |

**17:00 - 17:15**

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.21                           | 0.48                                 | 7.212                                  | A                             |
| C-AB   | 33.43                          | 2.23                                 | 16.696                                 | C                             |

**17:15 - 17:30**

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.85                          | 0.72                                 | 8.970                                  | A                             |
| C-AB   | 93.40                          | 6.23                                 | 38.934                                 | E                             |

**17:30 - 17:45**

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 11.32                          | 0.75                                 | 9.014                                  | A                             |
| C-AB   | 135.00                         | 9.00                                 | 51.126                                 | F                             |

**17:45 - 18:00**

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.84                           | 0.52                                 | 7.259                                  | A                             |
| C-AB   | 45.59                          | 3.04                                 | 22.145                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.69                           | 0.38                                 | 6.334                                  | A                             |
| C-AB   | 20.73                          | 1.38                                 | 11.580                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.36       | 0.00      | 0.00      | 0.36      | 0.36      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.28       | 0.56      | 1.15      | 1.58      | 1.79      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.49       | 0.00      | 0.00      | 0.49      | 0.49      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.28       | 0.07      | 1.10      | 5.74      | 8.38      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.75       | 0.03      | 0.26      | 0.75      | 0.75      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 7.50       | 0.08      | 1.61      | 21.26     | 32.62     |                    |                | 0.05                                        | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.76       | 0.03      | 0.28      | 0.97      | 3.00      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 8.98       | 0.05      | 0.77      | 26.07     | 45.74     |                    |                | 0.08                                        | 0.00                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.51       | 0.05      | 0.50      | 1.30      | 1.40      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.58       | 0.04      | 0.40      | 6.90      | 13.06     |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.37       | 0.03      | 0.27      | 0.49      | 0.85      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.35       | 0.03      | 0.31      | 2.08      | 6.76      |                    |                | < 0.05                                      | 0.00                                   |

| Junctions 10                                                                                                                                                     |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| PICADY 10 - Priority Intersection Module                                                                                                                         |  |  |  |  |  |  |  |
| Version: 10.0.1.1519                                                                                                                                             |  |  |  |  |  |  |  |
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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 |  |  |  |  |  |  |  |

**Filename:** A361 - A27 - yapton Road T Junction 220531 2024 PM Peaks.j10

**Path:** P:\A361 Lamb Field, B2132 Bilsham Road, Yapton\Deliverables\Transport\Modelling\Junction\Capacity Assessment File

**Report generation date:** 30/06/2022 20:52:56

»2024 Base , PM

»2024 Base + Committed , PM

»2024 Base + Committed + Development , PM

### Summary of junction performance

|             | PM                                  |             |                 |           |      |     |                    |
|-------------|-------------------------------------|-------------|-----------------|-----------|------|-----|--------------------|
|             | Set ID                              | Queue (Veh) | 95% Queue (Veh) | Delay (s) | RFC  | LOS | Junction Delay (s) |
|             | 2024 Base                           |             |                 |           |      |     |                    |
| Stream B-AC | D2                                  | 0.6         | 2.8             | 8.31      | 0.38 | A   | 6.31               |
| Stream C-AB |                                     | 4.5         | 23.4            | 29.36     | 0.83 | D   |                    |
|             | 2024 Base + Committed               |             |                 |           |      |     |                    |
| Stream B-AC | D4                                  | 0.7         | 3.0             | 8.89      | 0.43 | A   | 10.10              |
| Stream C-AB |                                     | 8.6         | 44.9            | 42.44     | 0.91 | E   |                    |
|             | 2024 Base + Committed + Development |             |                 |           |      |     |                    |
| Stream B-AC | D6                                  | 0.8         | 3.0             | 9.01      | 0.43 | A   | 10.96              |
| Stream C-AB |                                     | 9.8         | 49.1            | 44.60     | 0.92 | E   |                    |

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

### File summary

#### File Description

|             |                     |
|-------------|---------------------|
| Title       |                     |
| Location    |                     |
| Site number |                     |
| Date        | 02/03/2022          |
| Version     |                     |
| Status      | (new file)          |
| Identifier  |                     |
| Client      |                     |
| Jobnumber   |                     |
| Enumerator  | ALPCE\transportuser |
| Description |                     |

## 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         | Veh                 | Veh                   | perHour    | s                   | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Show lane queues in feet / metres | Show all PICADY stream intercepts | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) | Use iterations with HCM roundabouts | Max number of iterations for roundabouts |
|--------------------|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|---------------|-----------------------------|-----------------------|-------------------------------------|------------------------------------------|
| 5.75               | ✓                           | ✓                                 | ✓                                 |                                   |                             | 0.85          | 36.00                       | 20.00                 |                                     | 500                                      |

## Demand Set Summary

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base                           | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D4 | 2024 Base + Committed               | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

## Analysis Set Details

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

# 2024 Base , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 6.31               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 6.31              | A           |

## Arms

### Arms

| Arm | Name      | Description | Arm type |
|-----|-----------|-------------|----------|
| A   | A27 East  |             | Major    |
| B   | Yapton Ln |             | Minor    |
| C   | A27 West  |             | Major    |

### Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Width of kerbed central reserve (m) | Has right-turn storage | Width for right-turn storage (m) | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|-----|--------------------------|----------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|---------|----------------------|
| C   | 15.50                    | ✓                          | 7.00                                | ✓                      | 4.55                             | 250.0                         | ✓       | 20.00                |

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

### Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|-----|----------------|----------------|------------------------|-------------------------|
| B   | One lane       | 5.00           | 250                    | 250                     |

### Queue Markers

| Arm | Queue marker | Distance (m) |
|-----|--------------|--------------|
| A   |              |              |
| B   |              |              |
| C   | ✓            | 110.00       |

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

| Stream | Intercept (Veh/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|--------|--------------------|---------------|---------------|---------------|---------------|
| B-A    | 967                | 0.089         | 0.226         | 0.142         | 0.323         |
| B-C    | 938                | 0.084         | 0.213         | -             | -             |
| C-B    | 903                | 0.205         | 0.205         | -             | -             |

The slopes and intercepts shown above include custom intercept adjustments only.  
Streams may be combined, in which case capacity will be adjusted.  
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base     | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1044                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 246                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1396                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
| From |    | A   | B   | C   |
|      | A  | 0   | 81  | 963 |
|      | B  | 0   | 0   | 246 |
|      | C  | 895 | 501 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |   |   |
|------|----|---|---|---|
| From |    | A | B | C |
|      | A  | 0 | 0 | 0 |
|      | B  | 0 | 0 | 0 |
|      | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.38    | 8.31          | 0.6             | 2.8                             | A       | 226                     | 339                           | 40.20                          | 7.12                       | 0.45                                 | 40.21                                    | 7.12                                 |
| C-AB   | 0.83    | 29.36         | 4.5             | 23.4                            | D       | 466                     | 699                           | 210.91                         | 18.11                      | 2.34                                 | 210.96                                   | 18.11                                |
| C-A    |         |               |                 |                                 |         | 815                     | 1223                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 74                      | 111                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

## Main Results for each time segment

### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 185                   | 46                      | 778               | 0.238 | 184                 | 0.0               | 0.3             | 6.047     | A                             |
| C-AB   | 377                   | 94                      | 741               | 0.509 | 373                 | 0.0               | 1.0             | 9.675     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 221                   | 55                      | 747               | 0.296 | 221                 | 0.3               | 0.4             | 6.833     | A                             |
| C-AB   | 450                   | 113                     | 710               | 0.634 | 448                 | 1.0               | 1.7             | 13.584    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 271                   | 68                      | 704               | 0.385 | 270                 | 0.4               | 0.6             | 8.275     | A                             |
| C-AB   | 570                   | 143                     | 689               | 0.827 | 560                 | 1.7               | 4.2             | 26.153    | D                             |
| C-A    | 967                   | 242                     |                   |       | 967                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 271                   | 68                      | 704               | 0.385 | 271                 | 0.6               | 0.6             | 8.306     | A                             |
| C-AB   | 570                   | 143                     | 689               | 0.827 | 569                 | 4.2               | 4.5             | 29.362    | D                             |
| C-A    | 967                   | 242                     |                   |       | 967                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 221                   | 55                      | 747               | 0.296 | 222                 | 0.6               | 0.4             | 6.867     | A                             |
| C-AB   | 450                   | 113                     | 710               | 0.634 | 461                 | 4.5               | 1.8             | 15.031    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 185                   | 46                      | 778               | 0.238 | 186                 | 0.4               | 0.3             | 6.082     | A                             |
| C-AB   | 377                   | 94                      | 741               | 0.509 | 380                 | 1.8               | 1.1             | 10.050    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.49                           | 0.30                                 | 6.047                                  | A                             |
| C-AB   | 14.89                          | 0.99                                 | 9.675                                  | A                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.09                           | 0.41                                 | 6.833                                  | A                             |
| C-AB   | 24.71                          | 1.65                                 | 13.584                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 8.93                           | 0.60                                 | 8.275                                  | A                             |
| C-AB   | 57.28                          | 3.82                                 | 26.153                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.28                           | 0.62                                 | 8.306                                  | A                             |
| C-AB   | 69.43                          | 4.63                                 | 29.362                                 | D                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.56                           | 0.44                                 | 6.867                                  | A                             |
| C-AB   | 28.48                          | 1.90                                 | 15.031                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.84                           | 0.32                                 | 6.082                                  | A                             |
| C-AB   | 16.13                          | 1.08                                 | 10.050                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.31       | 0.00      | 0.00      | 0.31      | 0.31      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.01       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.42       | 0.00      | 0.00      | 0.42      | 0.42      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.67       | 0.07      | 1.03      | 3.79      | 5.36      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.62       | 0.03      | 0.26      | 0.62      | 0.62      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 4.16       | 0.04      | 0.40      | 11.11     | 22.16     |                    |                | 0.06                                        | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.62       | 0.03      | 0.29      | 1.25      | 2.83      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 4.49       | 0.03      | 0.33      | 7.59      | 23.36     |                    |                | 0.06                                        | 0.00                                   |

**17:45 - 18:00**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.42       | 0.00      | 0.00      | 0.42      | 0.42      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.80       | 0.04      | 0.43      | 4.85      | 8.28      |                    |                | < 0.05                                      | 0.00                                   |

**18:00 - 18:15**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.32       | 0.00      | 0.00      | 0.32      | 0.32      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.06       | 0.03      | 0.33      | 2.36      | 5.30      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 10.10              | B            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 10.10             | B           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name         | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-----------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D4 | 2024 Base + Committed | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1044                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 272                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1446                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
|      | A  | B   | C   |     |
| From | A  | 0   | 81  | 963 |
|      | B  | 0   | 0   | 272 |
|      | C  | 895 | 551 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.43    | 8.89          | 0.7             | 3.0                             | A       | 250                     | 374                           | 46.81                          | 7.50                       | 0.52                                 | 46.81                                    | 7.50                                 |
| C-AB   | 0.91    | 42.44         | 8.6             | 44.9                            | E       | 551                     | 826                           | 332.37                         | 24.13                      | 3.69                                 | 332.44                                   | 24.13                                |
| C-A    |         |               |                 |                                 |         | 776                     | 1164                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 74                      | 111                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 205                   | 51                      | 778               | 0.263 | 203                 | 0.0               | 0.4             | 6.249     | A                             |
| C-AB   | 415                   | 104                     | 741               | 0.560 | 410                 | 0.0               | 1.2             | 10.711    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 245                   | 61                      | 747               | 0.327 | 244                 | 0.4               | 0.5             | 7.148     | A                             |
| C-AB   | 496                   | 124                     | 711               | 0.698 | 492                 | 1.2               | 2.2             | 16.179    | C                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 299                   | 75                      | 704               | 0.425 | 298                 | 0.5               | 0.7             | 8.850     | A                             |
| C-AB   | 742                   | 186                     | 816               | 0.910 | 722                 | 2.2               | 7.2             | 33.242    | D                             |
| C-A    | 850                   | 212                     |                   |       | 850                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 299                   | 75                      | 704               | 0.425 | 299                 | 0.7               | 0.7             | 8.892     | A                             |
| C-AB   | 742                   | 186                     | 816               | 0.910 | 737                 | 7.2               | 8.6             | 42.442    | E                             |
| C-A    | 850                   | 212                     |                   |       | 850                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 245                   | 61                      | 747               | 0.327 | 245                 | 0.7               | 0.5             | 7.192     | A                             |
| C-AB   | 496                   | 124                     | 711               | 0.698 | 520                 | 8.6               | 2.4             | 21.048    | C                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 205                   | 51                      | 778               | 0.263 | 205                 | 0.5               | 0.4             | 6.292     | A                             |
| C-AB   | 415                   | 104                     | 741               | 0.560 | 419                 | 2.4               | 1.3             | 11.335    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.13                           | 0.34                                 | 6.249                                  | A                             |
| C-AB   | 18.08                          | 1.21                                 | 10.711                                 | B                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.02                           | 0.47                                 | 7.148                                  | A                             |
| C-AB   | 32.04                          | 2.14                                 | 16.179                                 | C                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.52                          | 0.70                                 | 8.850                                  | A                             |
| C-AB   | 89.42                          | 5.96                                 | 33.242                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.97                          | 0.73                                 | 8.892                                  | A                             |
| C-AB   | 129.80                         | 8.65                                 | 42.442                                 | E                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.62                           | 0.51                                 | 7.192                                  | A                             |
| C-AB   | 43.00                          | 2.87                                 | 21.048                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.55                           | 0.37                                 | 6.292                                  | A                             |
| C-AB   | 20.02                          | 1.33                                 | 11.335                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.35       | 0.00      | 0.00      | 0.35      | 0.35      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.24       | 0.56      | 1.11      | 1.45      | 1.73      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.48       | 0.00      | 0.00      | 0.48      | 0.48      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.19       | 0.06      | 1.02      | 5.52      | 8.09      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.73       | 0.03      | 0.26      | 0.73      | 0.73      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 7.20       | 0.07      | 1.15      | 20.64     | 32.41     |                    |                | 0.12                                        | 0.01                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.73       | 0.03      | 0.28      | 1.02      | 2.98      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 8.63       | 0.05      | 0.49      | 24.69     | 44.90     |                    |                | 0.13                                        | 0.01                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.49       | 0.04      | 0.45      | 1.27      | 1.39      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.45       | 0.04      | 0.40      | 6.57      | 12.36     |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.36       | 0.03      | 0.26      | 0.47      | 0.50      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.30       | 0.03      | 0.31      | 2.14      | 6.60      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed + Development , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 10.96              | B            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 10.96             | B           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1044                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 277                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1454                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|  | To |     |     |     |
|--|----|-----|-----|-----|
|  |    | A   | B   | C   |
|  | A  | 0   | 81  | 963 |
|  | B  | 0   | 0   | 277 |
|  | C  | 895 | 559 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.43    | 9.01          | 0.8             | 3.0                             | A       | 254                     | 381                           | 48.16                          | 7.58                       | 0.54                                 | 48.17                                    | 7.58                                 |
| C-AB   | 0.92    | 44.60         | 9.8             | 49.1                            | E       | 574                     | 862                           | 362.13                         | 25.22                      | 4.02                                 | 362.20                                   | 25.23                                |
| C-A    |         |               |                 |                                 |         | 760                     | 1140                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 74                      | 111                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 209                   | 52                      | 778               | 0.268 | 207                 | 0.0               | 0.4             | 6.290     | A                             |
| C-AB   | 421                   | 105                     | 741               | 0.568 | 416                 | 0.0               | 1.3             | 10.895    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 249                   | 62                      | 747               | 0.333 | 248                 | 0.4               | 0.5             | 7.212     | A                             |
| C-AB   | 503                   | 126                     | 711               | 0.708 | 499                 | 1.3               | 2.3             | 16.679    | C                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 305                   | 76                      | 704               | 0.433 | 304                 | 0.5               | 0.8             | 8.970     | A                             |
| C-AB   | 799                   | 200                     | 866               | 0.923 | 776                 | 2.3               | 8.0             | 34.042    | D                             |
| C-A    | 802                   | 200                     |                   |       | 802                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 305                   | 76                      | 704               | 0.433 | 305                 | 0.8               | 0.8             | 9.014     | A                             |
| C-AB   | 799                   | 200                     | 866               | 0.923 | 792                 | 8.0               | 9.8             | 44.602    | E                             |
| C-A    | 802                   | 200                     |                   |       | 802                 |                   |                 |           |                               |
| A-B    | 89                    | 22                      |                   |       | 89                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 249                   | 62                      | 747               | 0.333 | 250                 | 0.8               | 0.5             | 7.259     | A                             |
| C-AB   | 503                   | 126                     | 711               | 0.708 | 532                 | 9.8               | 2.6             | 22.865    | C                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 73                    | 18                      |                   |       | 73                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 209                   | 52                      | 778               | 0.268 | 209                 | 0.5               | 0.4             | 6.334     | A                             |
| C-AB   | 421                   | 105                     | 741               | 0.568 | 426                 | 2.6               | 1.3             | 11.581    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 61                    | 15                      |                   |       | 61                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.25                           | 0.35                                 | 6.290                                  | A                             |
| C-AB   | 18.65                          | 1.24                                 | 10.895                                 | B                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.21                           | 0.48                                 | 7.212                                  | A                             |
| C-AB   | 33.45                          | 2.23                                 | 16.679                                 | C                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.85                          | 0.72                                 | 8.970                                  | A                             |
| C-AB   | 96.50                          | 6.43                                 | 34.042                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 11.32                          | 0.75                                 | 9.014                                  | A                             |
| C-AB   | 145.51                         | 9.70                                 | 44.602                                 | E                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.84                           | 0.52                                 | 7.259                                  | A                             |
| C-AB   | 47.28                          | 3.15                                 | 22.865                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.69                           | 0.38                                 | 6.334                                  | A                             |
| C-AB   | 20.74                          | 1.38                                 | 11.581                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.36       | 0.00      | 0.00      | 0.36      | 0.36      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.28       | 0.56      | 1.16      | 1.60      | 1.80      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.49       | 0.00      | 0.00      | 0.49      | 0.49      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.29       | 0.06      | 1.00      | 5.85      | 8.69      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.75       | 0.03      | 0.26      | 0.75      | 0.75      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 7.96       | 0.08      | 1.76      | 22.54     | 34.49     |                    |                | 0.13                                        | 0.01                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.76       | 0.03      | 0.28      | 0.97      | 3.00      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 9.80       | 0.06      | 1.02      | 28.56     | 49.08     |                    |                | 0.15                                        | 0.01                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.51       | 0.05      | 0.50      | 1.30      | 1.40      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.58       | 0.04      | 0.39      | 6.89      | 13.18     |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.37       | 0.03      | 0.27      | 0.49      | 0.85      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.35       | 0.03      | 0.31      | 2.04      | 6.74      |                    |                | < 0.05                                      | 0.00                                   |

| Junctions 10                                                                                                                                                     |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| PICADY 10 - Priority Intersection Module                                                                                                                         |  |  |  |  |  |  |
| Version: 10.0.1.1519                                                                                                                                             |  |  |  |  |  |  |
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**Filename:** A361 - A27 - yapton Road T Junction 220628 2024 PM PEAKs.j10

**Path:** P:\A361 Lamb Field, B2132 Bilsham Road, Yapton\Deliverables\Transport\Modelling\Junction\Capacity Assessment File

**Report generation date:** 01/07/2022 10:14:27

»2024 Base , PM

»2024 Base + Committed , PM

»2024 Base + Committed + Development , PM

### Summary of junction performance

|             | PM                                  |             |           |      |     |                    |
|-------------|-------------------------------------|-------------|-----------|------|-----|--------------------|
|             | Set ID                              | Queue (Veh) | Delay (s) | RFC  | LOS | Junction Delay (s) |
|             | 2024 Base                           |             |           |      |     |                    |
| Stream B-AC | D2                                  | 0.6         | 8.05      | 0.37 | A   | 5.04               |
| Stream C-AB |                                     | 3.4         | 24.01     | 0.78 | C   |                    |
|             | 2024 Base + Committed               |             |           |      |     |                    |
| Stream B-AC | D4                                  | 0.7         | 8.54      | 0.40 | A   | 7.39               |
| Stream C-AB |                                     | 5.2         | 34.21     | 0.85 | D   |                    |
|             | 2024 Base + Committed + Development |             |           |      |     |                    |
| Stream B-AC | D6                                  | 0.7         | 8.63      | 0.41 | A   | 8.00               |
| Stream C-AB |                                     | 5.7         | 36.83     | 0.87 | E   |                    |

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

### File summary

#### File Description

|             |                     |
|-------------|---------------------|
| Title       |                     |
| Location    |                     |
| Site number |                     |
| Date        | 02/03/2022          |
| Version     |                     |
| Status      | (new file)          |
| Identifier  |                     |
| Client      |                     |
| Jobnumber   |                     |
| Enumerator  | ALPCE\transportuser |
| Description |                     |

## 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         | Veh                 | Veh                   | perHour    | s                   | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Show lane queues in feet / metres | Show all PICADY stream intercepts | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) | Use iterations with HCM roundabouts | Max number of iterations for roundabouts |
|--------------------|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|---------------|-----------------------------|-----------------------|-------------------------------------|------------------------------------------|
| 5.50               | ✓                           | ✓                                 | ✓                                 |                                   |                             | 0.85          | 36.00                       | 35.00                 |                                     | 500                                      |

## Demand Set Summary

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base                           | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D4 | 2024 Base + Committed               | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

## Analysis Set Details

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

# 2024 Base , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 5.04               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 5.04              | A           |

## Arms

### Arms

| Arm | Name      | Description | Arm type |
|-----|-----------|-------------|----------|
| A   | A27 East  |             | Major    |
| B   | Yapton Ln |             | Minor    |
| C   | A27 West  |             | Major    |

### Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Width of kerbed central reserve (m) | Has right-turn storage | Width for right-turn storage (m) | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|-----|--------------------------|----------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|---------|----------------------|
| C   | 15.50                    | ✓                          | 7.00                                | ✓                      | 4.64                             | 250.0                         | ✓       | 35.00                |

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

### Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|-----|----------------|----------------|------------------------|-------------------------|
| B   | One lane       | 5.00           | 250                    | 250                     |

### Queue Markers

| Arm | Queue marker | Distance (m) |
|-----|--------------|--------------|
| A   |              |              |
| B   |              |              |
| C   | ✓            | 190.00       |

### Slope / Intercept / Capacity

#### Priority Intersection Slopes and Intercepts

| Stream | Intercept (Veh/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|--------|--------------------|---------------|---------------|---------------|---------------|
| B-A    | 967                | 0.089         | 0.226         | 0.142         | 0.323         |
| B-C    | 938                | 0.084         | 0.213         | -             | -             |
| C-B    | 910                | 0.207         | 0.207         | -             | -             |

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base     | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1040                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 234                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1372                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
| From |    | A   | B   | C   |
|      | A  | 0   | 77  | 963 |
|      | B  | 0   | 0   | 234 |
|      | C  | 895 | 477 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |   |   |
|------|----|---|---|---|
| From |    | A | B | C |
|      | A  | 0 | 0 | 0 |
|      | B  | 0 | 0 | 0 |
|      | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.37    | 8.05          | 0.6             | 2.7                             | A       | 215                     | 322                           | 37.35                          | 6.96                       | 0.42                                 | 37.35                                    | 6.96                                 |
| C-AB   | 0.78    | 24.01         | 3.4             | 17.3                            | C       | 438                     | 657                           | 170.52                         | 15.58                      | 1.89                                 | 170.55                                   | 15.58                                |
| C-A    |         |               |                 |                                 |         | 821                     | 1232                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 71                      | 106                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

## Main Results for each time segment

### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 176                   | 44                      | 778               | 0.226 | 175                 | 0.0               | 0.3             | 5.956     | A                             |
| C-AB   | 359                   | 90                      | 748               | 0.480 | 355                 | 0.0               | 0.9             | 9.097     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 210                   | 53                      | 747               | 0.281 | 210                 | 0.3               | 0.4             | 6.694     | A                             |
| C-AB   | 429                   | 107                     | 716               | 0.599 | 427                 | 0.9               | 1.4             | 12.336    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 258                   | 64                      | 705               | 0.366 | 257                 | 0.4               | 0.6             | 8.028     | A                             |
| C-AB   | 525                   | 131                     | 673               | 0.781 | 518                 | 1.4               | 3.2             | 22.293    | C                             |
| C-A    | 985                   | 246                     |                   |       | 985                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 258                   | 64                      | 705               | 0.366 | 258                 | 0.6               | 0.6             | 8.054     | A                             |
| C-AB   | 525                   | 131                     | 673               | 0.781 | 525                 | 3.2               | 3.4             | 24.009    | C                             |
| C-A    | 985                   | 246                     |                   |       | 985                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 210                   | 53                      | 747               | 0.281 | 211                 | 0.6               | 0.4             | 6.720     | A                             |
| C-AB   | 429                   | 107                     | 716               | 0.599 | 436                 | 3.4               | 1.5             | 13.160    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 176                   | 44                      | 778               | 0.226 | 177                 | 0.4               | 0.3             | 5.988     | A                             |
| C-AB   | 359                   | 90                      | 748               | 0.480 | 362                 | 1.5               | 0.9             | 9.378     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.21                           | 0.28                                 | 5.956                                  | A                             |
| C-AB   | 13.34                          | 0.89                                 | 9.097                                  | A                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.68                           | 0.38                                 | 6.694                                  | A                             |
| C-AB   | 21.46                          | 1.43                                 | 12.336                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 8.26                           | 0.55                                 | 8.028                                  | A                             |
| C-AB   | 45.59                          | 3.04                                 | 22.293                                 | C                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 8.56                           | 0.57                                 | 8.054                                  | A                             |
| C-AB   | 51.91                          | 3.46                                 | 24.009                                 | C                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.11                           | 0.41                                 | 6.720                                  | A                             |
| C-AB   | 23.91                          | 1.59                                 | 13.160                                 | B                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.53                           | 0.30                                 | 5.988                                  | A                             |
| C-AB   | 14.31                          | 0.95                                 | 9.378                                  | A                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.29       | 0.00      | 0.00      | 0.29      | 0.29      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 0.91       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.39       | 0.00      | 0.00      | 0.39      | 0.39      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.44       | 0.08      | 1.02      | 2.99      | 4.17      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.57       | 0.03      | 0.26      | 0.57      | 0.57      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 3.21       | 0.03      | 0.34      | 6.99      | 17.29     |                    |                | < 0.05                                      | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.57       | 0.03      | 0.30      | 1.32      | 2.68      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 3.36       | 0.03      | 0.30      | 3.36      | 14.94     |                    |                | < 0.05                                      | 0.00                                   |

**17:45 - 18:00**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.40       | 0.00      | 0.00      | 0.40      | 0.40      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.54       | 0.05      | 0.46      | 3.97      | 6.42      |                    |                | < 0.05                                      | 0.00                                   |

**18:00 - 18:15**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.30       | 0.00      | 0.00      | 0.30      | 0.30      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 0.94       | 0.03      | 0.35      | 2.25      | 4.43      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 7.39               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 7.39              | A           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name         | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-----------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D4 | 2024 Base + Committed | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1040                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 257                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1416                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To  |     |     |
|------|-----|-----|-----|
|      | A   | B   | C   |
|      | 0   | 77  | 963 |
|      | 0   | 0   | 257 |
| From | 895 | 521 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.40    | 8.54          | 0.7             | 2.9                             | A       | 236                     | 354                           | 42.88                          | 7.27                       | 0.48                                 | 42.89                                    | 7.27                                 |
| C-AB   | 0.85    | 34.21         | 5.2             | 28.0                            | D       | 479                     | 719                           | 235.79                         | 19.68                      | 2.62                                 | 235.84                                   | 19.69                                |
| C-A    |         |               |                 |                                 |         | 820                     | 1230                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 71                      | 106                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 193                   | 48                      | 778               | 0.249 | 192                 | 0.0               | 0.3             | 6.128     | A                             |
| C-AB   | 392                   | 98                      | 748               | 0.525 | 388                 | 0.0               | 1.1             | 9.893     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 231                   | 58                      | 747               | 0.309 | 231                 | 0.3               | 0.4             | 6.960     | A                             |
| C-AB   | 468                   | 117                     | 716               | 0.654 | 465                 | 1.1               | 1.8             | 14.182    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 283                   | 71                      | 705               | 0.402 | 282                 | 0.4               | 0.7             | 8.502     | A                             |
| C-AB   | 577                   | 144                     | 677               | 0.853 | 565                 | 1.8               | 4.7             | 29.572    | D                             |
| C-A    | 982                   | 246                     |                   |       | 982                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 283                   | 71                      | 705               | 0.402 | 283                 | 0.7               | 0.7             | 8.537     | A                             |
| C-AB   | 577                   | 144                     | 677               | 0.853 | 575                 | 4.7               | 5.2             | 34.212    | D                             |
| C-A    | 982                   | 246                     |                   |       | 982                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 231                   | 58                      | 747               | 0.309 | 232                 | 0.7               | 0.5             | 6.997     | A                             |
| C-AB   | 468                   | 117                     | 716               | 0.654 | 481                 | 5.2               | 2.0             | 16.064    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 193                   | 48                      | 778               | 0.249 | 194                 | 0.5               | 0.3             | 6.167     | A                             |
| C-AB   | 392                   | 98                      | 748               | 0.525 | 396                 | 2.0               | 1.1             | 10.321    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.76                           | 0.32                                 | 6.128                                  | A                             |
| C-AB   | 15.82                          | 1.05                                 | 9.893                                  | A                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.47                           | 0.43                                 | 6.960                                  | A                             |
| C-AB   | 26.74                          | 1.78                                 | 14.182                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.57                           | 0.64                                 | 8.502                                  | A                             |
| C-AB   | 64.45                          | 4.30                                 | 29.572                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.96                           | 0.66                                 | 8.537                                  | A                             |
| C-AB   | 80.04                          | 5.34                                 | 34.212                                 | D                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.99                           | 0.47                                 | 6.997                                  | A                             |
| C-AB   | 31.50                          | 2.10                                 | 16.064                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.13                           | 0.34                                 | 6.167                                  | A                             |
| C-AB   | 17.23                          | 1.15                                 | 10.321                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.33       | 0.00      | 0.00      | 0.33      | 0.33      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.08       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.44       | 0.00      | 0.00      | 0.44      | 0.44      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.81       | 0.07      | 1.04      | 4.24      | 6.00      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.66       | 0.03      | 0.26      | 0.66      | 0.66      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 4.75       | 0.04      | 0.44      | 13.28     | 24.45     |                    |                | < 0.05                                      | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.67       | 0.03      | 0.29      | 1.16      | 2.90      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 5.17       | 0.03      | 0.35      | 10.69     | 28.04     |                    |                | < 0.05                                      | 0.00                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.45       | 0.00      | 0.00      | 0.45      | 0.45      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.97       | 0.04      | 0.42      | 5.33      | 9.36      |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.33       | 0.00      | 0.00      | 0.33      | 0.33      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.13       | 0.03      | 0.32      | 2.35      | 5.72      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed + Development , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 8.00               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 8.00              | A           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1040                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 261                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1424                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|  | To |     |     |     |
|--|----|-----|-----|-----|
|  |    | A   | B   | C   |
|  | A  | 0   | 77  | 963 |
|  | B  | 0   | 0   | 261 |
|  | C  | 895 | 529 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.41    | 8.63          | 0.7             | 2.9                             | A       | 239                     | 359                           | 43.90                          | 7.33                       | 0.49                                 | 43.90                                    | 7.33                                 |
| C-AB   | 0.87    | 36.83         | 5.7             | 31.0                            | E       | 487                     | 731                           | 251.75                         | 20.67                      | 2.80                                 | 251.80                                   | 20.67                                |
| C-A    |         |               |                 |                                 |         | 819                     | 1229                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 71                      | 106                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 196                   | 49                      | 778               | 0.252 | 195                 | 0.0               | 0.3             | 6.160     | A                             |
| C-AB   | 398                   | 100                     | 748               | 0.533 | 394                 | 0.0               | 1.1             | 10.051    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 235                   | 59                      | 747               | 0.314 | 234                 | 0.3               | 0.5             | 7.009     | A                             |
| C-AB   | 476                   | 119                     | 716               | 0.664 | 472                 | 1.1               | 1.9             | 14.573    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 287                   | 72                      | 705               | 0.408 | 286                 | 0.5               | 0.7             | 8.590     | A                             |
| C-AB   | 588                   | 147                     | 679               | 0.866 | 575                 | 1.9               | 5.1             | 31.233    | D                             |
| C-A    | 980                   | 245                     |                   |       | 980                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 287                   | 72                      | 705               | 0.408 | 287                 | 0.7               | 0.7             | 8.626     | A                             |
| C-AB   | 588                   | 147                     | 679               | 0.866 | 586                 | 5.1               | 5.7             | 36.828    | E                             |
| C-A    | 980                   | 245                     |                   |       | 980                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 235                   | 59                      | 747               | 0.314 | 236                 | 0.7               | 0.5             | 7.044     | A                             |
| C-AB   | 476                   | 119                     | 716               | 0.664 | 490                 | 5.7               | 2.1             | 16.806    | C                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 196                   | 49                      | 778               | 0.252 | 197                 | 0.5               | 0.3             | 6.199     | A                             |
| C-AB   | 398                   | 100                     | 748               | 0.533 | 402                 | 2.1               | 1.2             | 10.516    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.85                           | 0.32                                 | 6.160                                  | A                             |
| C-AB   | 16.32                          | 1.09                                 | 10.051                                 | B                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.61                           | 0.44                                 | 7.009                                  | A                             |
| C-AB   | 27.86                          | 1.86                                 | 14.573                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.82                           | 0.65                                 | 8.590                                  | A                             |
| C-AB   | 68.90                          | 4.59                                 | 31.233                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.22                          | 0.68                                 | 8.626                                  | A                             |
| C-AB   | 87.48                          | 5.83                                 | 36.828                                 | E                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.16                           | 0.48                                 | 7.044                                  | A                             |
| C-AB   | 33.36                          | 2.22                                 | 16.806                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.24                           | 0.35                                 | 6.199                                  | A                             |
| C-AB   | 17.83                          | 1.19                                 | 10.516                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.33       | 0.00      | 0.00      | 0.33      | 0.33      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.11       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.45       | 0.00      | 0.00      | 0.45      | 0.45      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.89       | 0.07      | 1.05      | 4.51      | 6.44      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.68       | 0.03      | 0.26      | 0.68      | 0.68      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 5.14       | 0.05      | 0.48      | 14.65     | 25.92     |                    |                | < 0.05                                      | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.68       | 0.03      | 0.29      | 1.12      | 2.92      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 5.66       | 0.04      | 0.36      | 12.91     | 30.98     |                    |                | < 0.05                                      | 0.00                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.46       | 0.00      | 0.00      | 0.46      | 0.46      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.07       | 0.04      | 0.41      | 5.61      | 9.99      |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.34       | 0.03      | 0.25      | 0.45      | 0.48      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.17       | 0.03      | 0.32      | 2.33      | 5.94      |                    |                | < 0.05                                      | 0.00                                   |

| Junctions 10                                                                                                                                                     |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| PICADY 10 - Priority Intersection Module                                                                                                                         |  |  |  |  |  |  |
| Version: 10.0.1.1519                                                                                                                                             |  |  |  |  |  |  |
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**Filename:** A361 - A27 - yapton Road T Junction 220628 2024 PM PEAKs.j10

**Path:** P:\A361 Lamb Field, B2132 Bilsham Road, Yapton\Deliverables\Transport\Modelling\Junction\Capacity Assessment File

**Report generation date:** 01/07/2022 00:41:52

»2024 Base , PM

»2024 Base + Committed , PM

»2024 Base + Committed + Development , PM

### Summary of junction performance

|             | PM                                  |             |           |      |     |                    |
|-------------|-------------------------------------|-------------|-----------|------|-----|--------------------|
|             | Set ID                              | Queue (Veh) | Delay (s) | RFC  | LOS | Junction Delay (s) |
|             | 2024 Base                           |             |           |      |     |                    |
| Stream B-AC | D2                                  | 0.6         | 8.05      | 0.37 | A   | 5.02               |
| Stream C-AB |                                     | 3.4         | 23.79     | 0.78 | C   |                    |
|             | 2024 Base + Committed               |             |           |      |     |                    |
| Stream B-AC | D4                                  | 0.7         | 8.54      | 0.40 | A   | 7.24               |
| Stream C-AB |                                     | 5.3         | 32.69     | 0.85 | D   |                    |
|             | 2024 Base + Committed + Development |             |           |      |     |                    |
| Stream B-AC | D6                                  | 0.7         | 8.63      | 0.41 | A   | 7.79               |
| Stream C-AB |                                     | 5.9         | 34.73     | 0.87 | D   |                    |

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

### File summary

#### File Description

|             |                     |
|-------------|---------------------|
| Title       |                     |
| Location    |                     |
| Site number |                     |
| Date        | 02/03/2022          |
| Version     |                     |
| Status      | (new file)          |
| Identifier  |                     |
| Client      |                     |
| Jobnumber   |                     |
| Enumerator  | ALPCE\transportuser |
| Description |                     |

## 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         | Veh                 | Veh                   | perHour    | s                   | -Min              | perMin              |

## Analysis Options

| Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Show lane queues in feet / metres | Show all PICADY stream intercepts | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) | Use iterations with HCM roundabouts | Max number of iterations for roundabouts |
|--------------------|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|---------------|-----------------------------|-----------------------|-------------------------------------|------------------------------------------|
| 5.50               | ✓                           | ✓                                 | ✓                                 |                                   |                             | 0.85          | 36.00                       | 20.00                 |                                     | 500                                      |

## Demand Set Summary

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base                           | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D4 | 2024 Base + Committed               | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

## Analysis Set Details

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

# 2024 Base , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 5.02               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 5.02              | A           |

## Arms

### Arms

| Arm | Name      | Description | Arm type |
|-----|-----------|-------------|----------|
| A   | A27 East  |             | Major    |
| B   | Yapton Ln |             | Minor    |
| C   | A27 West  |             | Major    |

### Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Width of kerbed central reserve (m) | Has right-turn storage | Width for right-turn storage (m) | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|-----|--------------------------|----------------------------|-------------------------------------|------------------------|----------------------------------|-------------------------------|---------|----------------------|
| C   | 15.50                    | ✓                          | 7.00                                | ✓                      | 4.64                             | 250.0                         | ✓       | 20.00                |

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

### Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|-----|----------------|----------------|------------------------|-------------------------|
| B   | One lane       | 5.00           | 250                    | 250                     |

### Queue Markers

| Arm | Queue marker | Distance (m) |
|-----|--------------|--------------|
| A   |              |              |
| B   |              |              |
| C   | ✓            | 110.00       |

### Slope / Intercept / Capacity

#### Priority Intersection Slopes and Intercepts

| Stream | Intercept (Veh/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|--------|--------------------|---------------|---------------|---------------|---------------|
| B-A    | 967                | 0.089         | 0.226         | 0.142         | 0.323         |
| B-C    | 938                | 0.084         | 0.213         | -             | -             |
| C-B    | 910                | 0.207         | 0.207         | -             | -             |

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D2 | 2024 Base     | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1040                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 234                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1372                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To |     |     |     |
|------|----|-----|-----|-----|
| From |    | A   | B   | C   |
|      | A  | 0   | 77  | 963 |
|      | B  | 0   | 0   | 234 |
|      | C  | 895 | 477 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |   |   |
|------|----|---|---|---|
| From |    | A | B | C |
|      | A  | 0 | 0 | 0 |
|      | B  | 0 | 0 | 0 |
|      | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.37    | 8.05          | 0.6             | 2.7                             | A       | 215                     | 322                           | 37.35                          | 6.96                       | 0.42                                 | 37.35                                    | 6.96                                 |
| C-AB   | 0.78    | 23.79         | 3.4             | 17.4                            | C       | 440                     | 659                           | 171.07                         | 15.57                      | 1.90                                 | 171.11                                   | 15.57                                |
| C-A    |         |               |                 |                                 |         | 819                     | 1229                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 71                      | 106                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

## Main Results for each time segment

### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 176                   | 44                      | 778               | 0.226 | 175                 | 0.0               | 0.3             | 5.956     | A                             |
| C-AB   | 359                   | 90                      | 748               | 0.480 | 355                 | 0.0               | 0.9             | 9.097     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 210                   | 53                      | 747               | 0.281 | 210                 | 0.3               | 0.4             | 6.694     | A                             |
| C-AB   | 429                   | 107                     | 716               | 0.599 | 427                 | 0.9               | 1.4             | 12.335    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 258                   | 64                      | 705               | 0.366 | 257                 | 0.4               | 0.6             | 8.028     | A                             |
| C-AB   | 531                   | 133                     | 680               | 0.781 | 523                 | 1.4               | 3.2             | 22.087    | C                             |
| C-A    | 980                   | 245                     |                   |       | 980                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 258                   | 64                      | 705               | 0.366 | 258                 | 0.6               | 0.6             | 8.054     | A                             |
| C-AB   | 531                   | 133                     | 680               | 0.781 | 530                 | 3.2               | 3.4             | 23.791    | C                             |
| C-A    | 980                   | 245                     |                   |       | 980                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 210                   | 53                      | 747               | 0.281 | 211                 | 0.6               | 0.4             | 6.720     | A                             |
| C-AB   | 429                   | 107                     | 716               | 0.599 | 436                 | 3.4               | 1.5             | 13.169    | B                             |
| C-A    | 805                   | 201                     |                   |       | 805                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 176                   | 44                      | 778               | 0.226 | 177                 | 0.4               | 0.3             | 5.988     | A                             |
| C-AB   | 359                   | 90                      | 748               | 0.480 | 362                 | 1.5               | 0.9             | 9.378     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.21                           | 0.28                                 | 5.956                                  | A                             |
| C-AB   | 13.34                          | 0.89                                 | 9.097                                  | A                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.68                           | 0.38                                 | 6.694                                  | A                             |
| C-AB   | 21.46                          | 1.43                                 | 12.335                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 8.26                           | 0.55                                 | 8.028                                  | A                             |
| C-AB   | 45.74                          | 3.05                                 | 22.087                                 | C                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 8.56                           | 0.57                                 | 8.054                                  | A                             |
| C-AB   | 52.30                          | 3.49                                 | 23.791                                 | C                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.11                           | 0.41                                 | 6.720                                  | A                             |
| C-AB   | 23.92                          | 1.59                                 | 13.169                                 | B                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.53                           | 0.30                                 | 5.988                                  | A                             |
| C-AB   | 14.31                          | 0.95                                 | 9.378                                  | A                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.29       | 0.00      | 0.00      | 0.29      | 0.29      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 0.91       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.39       | 0.00      | 0.00      | 0.39      | 0.39      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.44       | 0.07      | 1.01      | 2.99      | 4.18      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.57       | 0.03      | 0.26      | 0.57      | 0.57      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 3.23       | 0.03      | 0.34      | 7.06      | 17.40     |                    |                | < 0.05                                      | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.57       | 0.03      | 0.30      | 1.32      | 2.68      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 3.39       | 0.03      | 0.30      | 3.39      | 15.13     |                    |                | < 0.05                                      | 0.00                                   |

**17:45 - 18:00**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.40       | 0.00      | 0.00      | 0.40      | 0.40      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.54       | 0.05      | 0.46      | 3.97      | 6.42      |                    |                | < 0.05                                      | 0.00                                   |

**18:00 - 18:15**

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.30       | 0.00      | 0.00      | 0.30      | 0.30      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 0.94       | 0.03      | 0.35      | 2.25      | 4.43      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 7.24               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 7.24              | A           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name         | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-----------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D4 | 2024 Base + Committed | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1040                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 257                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1416                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To  |     |     |
|------|-----|-----|-----|
|      | A   | B   | C   |
|      | 0   | 77  | 963 |
|      | 0   | 0   | 257 |
| From | 895 | 521 | 0   |
|      |     |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.40    | 8.54          | 0.7             | 2.9                             | A       | 236                     | 354                           | 42.88                          | 7.27                       | 0.48                                 | 42.89                                    | 7.27                                 |
| C-AB   | 0.85    | 32.69         | 5.3             | 29.1                            | D       | 490                     | 734                           | 239.37                         | 19.55                      | 2.66                                 | 239.42                                   | 19.56                                |
| C-A    |         |               |                 |                                 |         | 810                     | 1215                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 71                      | 106                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 193                   | 48                      | 778               | 0.249 | 192                 | 0.0               | 0.3             | 6.128     | A                             |
| C-AB   | 392                   | 98                      | 748               | 0.525 | 388                 | 0.0               | 1.1             | 9.893     | A                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 231                   | 58                      | 747               | 0.309 | 231                 | 0.3               | 0.4             | 6.960     | A                             |
| C-AB   | 468                   | 117                     | 716               | 0.654 | 466                 | 1.1               | 1.8             | 14.179    | B                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 283                   | 71                      | 705               | 0.402 | 282                 | 0.4               | 0.7             | 8.502     | A                             |
| C-AB   | 608                   | 152                     | 713               | 0.853 | 596                 | 1.8               | 4.9             | 28.240    | D                             |
| C-A    | 951                   | 238                     |                   |       | 951                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 283                   | 71                      | 705               | 0.402 | 283                 | 0.7               | 0.7             | 8.537     | A                             |
| C-AB   | 608                   | 152                     | 713               | 0.853 | 606                 | 4.9               | 5.3             | 32.687    | D                             |
| C-A    | 951                   | 238                     |                   |       | 951                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 231                   | 58                      | 747               | 0.309 | 232                 | 0.7               | 0.5             | 6.997     | A                             |
| C-AB   | 468                   | 117                     | 716               | 0.654 | 482                 | 5.3               | 2.0             | 16.149    | C                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 193                   | 48                      | 778               | 0.249 | 194                 | 0.5               | 0.3             | 6.167     | A                             |
| C-AB   | 392                   | 98                      | 748               | 0.525 | 396                 | 2.0               | 1.1             | 10.321    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.76                           | 0.32                                 | 6.128                                  | A                             |
| C-AB   | 15.82                          | 1.05                                 | 9.893                                  | A                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.47                           | 0.43                                 | 6.960                                  | A                             |
| C-AB   | 26.75                          | 1.78                                 | 14.179                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.57                           | 0.64                                 | 8.502                                  | A                             |
| C-AB   | 65.32                          | 4.35                                 | 28.240                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.96                           | 0.66                                 | 8.537                                  | A                             |
| C-AB   | 82.60                          | 5.51                                 | 32.687                                 | D                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.99                           | 0.47                                 | 6.997                                  | A                             |
| C-AB   | 31.65                          | 2.11                                 | 16.149                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.13                           | 0.34                                 | 6.167                                  | A                             |
| C-AB   | 17.23                          | 1.15                                 | 10.321                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.33       | 0.00      | 0.00      | 0.33      | 0.33      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.08       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.44       | 0.00      | 0.00      | 0.44      | 0.44      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.81       | 0.07      | 1.02      | 4.27      | 6.09      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.66       | 0.03      | 0.26      | 0.66      | 0.66      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 4.86       | 0.04      | 0.45      | 13.65     | 24.98     |                    |                | 0.07                                        | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.67       | 0.03      | 0.29      | 1.16      | 2.90      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 5.35       | 0.04      | 0.35      | 11.39     | 29.12     |                    |                | 0.07                                        | 0.00                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.45       | 0.00      | 0.00      | 0.45      | 0.45      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.97       | 0.04      | 0.42      | 5.33      | 9.37      |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.33       | 0.00      | 0.00      | 0.33      | 0.33      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.13       | 0.03      | 0.32      | 2.35      | 5.72      |                    |                | < 0.05                                      | 0.00                                   |

# 2024 Base + Committed + Development , PM

## Data Errors and Warnings

| Severity | Area                           | Item             | Description                                                                                                                                                                                  |
|----------|--------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Vehicle Mix                    |                  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| Warning  | Queue variations               | Analysis Options | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.                                                                                          |
| Warning  | Queue lengths in feet / metres | Analysis Options | When this option is switched on, it is necessary to specify all lanes for multiple lane arms so as to get correct queue lengths in feet / metres.                                            |

## Junction Network

### Junctions

| Junction | Name            | Junction type | Arm A Direction | Arm B Direction | Arm C Direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|----------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------------|--------------------|--------------|
| 1        | A27/Yapton Lane | T-Junction    | Two-way         | Two-way         | Two-way         |                       | 7.79               | A            |

### Junction Network

| Driving side | Lighting       | Network delay (s) | Network LOS |
|--------------|----------------|-------------------|-------------|
| Left         | Normal/unknown | 7.79              | A           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name                       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|-------------------------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2024 Base + Committed + Development | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 1040                    | 100.000            |
| B   |            | ONE HOUR     | ✓            | 261                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 1424                    | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|  | To |     |     |     |
|--|----|-----|-----|-----|
|  |    | A   | B   | C   |
|  | A  | 0   | 77  | 963 |
|  | B  | 0   | 0   | 261 |
|  | C  | 895 | 529 | 0   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |   |   |
|--|----|---|---|---|
|  |    | A | B | C |
|  | A  | 0 | 0 | 0 |
|  | B  | 0 | 0 | 0 |
|  | C  | 0 | 0 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate of Queueing Delay (Veh-min/min) | Inclusive Total Queueing Delay (Veh-min) | Inclusive Average Queueing Delay (s) |
|--------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|--------------------------------|----------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| B-AC   | 0.41    | 8.63          | 0.7             | 2.9                             | A       | 239                     | 359                           | 43.90                          | 7.33                       | 0.49                                 | 43.90                                    | 7.33                                 |
| C-AB   | 0.87    | 34.73         | 5.9             | 32.3                            | D       | 501                     | 752                           | 256.60                         | 20.47                      | 2.85                                 | 256.65                                   | 20.48                                |
| C-A    |         |               |                 |                                 |         | 805                     | 1208                          |                                |                            |                                      |                                          |                                      |
| A-B    |         |               |                 |                                 |         | 71                      | 106                           |                                |                            |                                      |                                          |                                      |
| A-C    |         |               |                 |                                 |         | 884                     | 1325                          |                                |                            |                                      |                                          |                                      |

### Main Results for each time segment

#### 16:45 - 17:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 196                   | 49                      | 778               | 0.252 | 195                 | 0.0               | 0.3             | 6.160     | A                             |
| C-AB   | 398                   | 100                     | 748               | 0.533 | 394                 | 0.0               | 1.1             | 10.051    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

#### 17:00 - 17:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 235                   | 59                      | 747               | 0.314 | 234                 | 0.3               | 0.5             | 7.009     | A                             |
| C-AB   | 476                   | 119                     | 717               | 0.664 | 473                 | 1.1               | 1.9             | 14.569    | B                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

#### 17:15 - 17:30

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 287                   | 72                      | 705               | 0.408 | 286                 | 0.5               | 0.7             | 8.590     | A                             |
| C-AB   | 630                   | 158                     | 728               | 0.866 | 616                 | 1.9               | 5.3             | 29.438    | D                             |
| C-A    | 938                   | 234                     |                   |       | 938                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:30 - 17:45

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 287                   | 72                      | 705               | 0.408 | 287                 | 0.7               | 0.7             | 8.626     | A                             |
| C-AB   | 630                   | 158                     | 728               | 0.866 | 628                 | 5.3               | 5.9             | 34.730    | D                             |
| C-A    | 938                   | 234                     |                   |       | 938                 |                   |                 |           |                               |
| A-B    | 85                    | 21                      |                   |       | 85                  |                   |                 |           |                               |
| A-C    | 1060                  | 265                     |                   |       | 1060                |                   |                 |           |                               |

### 17:45 - 18:00

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 235                   | 59                      | 747               | 0.314 | 236                 | 0.7               | 0.5             | 7.044     | A                             |
| C-AB   | 476                   | 119                     | 717               | 0.664 | 491                 | 5.9               | 2.1             | 16.937    | C                             |
| C-A    | 804                   | 201                     |                   |       | 804                 |                   |                 |           |                               |
| A-B    | 69                    | 17                      |                   |       | 69                  |                   |                 |           |                               |
| A-C    | 866                   | 216                     |                   |       | 866                 |                   |                 |           |                               |

### 18:00 - 18:15

| Stream | Total Demand (Veh/hr) | Junction Arrivals (Veh) | Capacity (Veh/hr) | RFC   | Throughput (Veh/hr) | Start queue (Veh) | End queue (Veh) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 196                   | 49                      | 778               | 0.252 | 197                 | 0.5               | 0.3             | 6.199     | A                             |
| C-AB   | 398                   | 100                     | 748               | 0.533 | 402                 | 2.1               | 1.2             | 10.516    | B                             |
| C-A    | 674                   | 168                     |                   |       | 674                 |                   |                 |           |                               |
| A-B    | 58                    | 14                      |                   |       | 58                  |                   |                 |           |                               |
| A-C    | 725                   | 181                     |                   |       | 725                 |                   |                 |           |                               |

## Queueing Delay Results for each time segment

### 16:45 - 17:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 4.85                           | 0.32                                 | 6.160                                  | A                             |
| C-AB   | 16.32                          | 1.09                                 | 10.051                                 | B                             |

### 17:00 - 17:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 6.61                           | 0.44                                 | 7.009                                  | A                             |
| C-AB   | 27.86                          | 1.86                                 | 14.569                                 | B                             |

### 17:15 - 17:30

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 9.82                           | 0.65                                 | 8.590                                  | A                             |
| C-AB   | 70.04                          | 4.67                                 | 29.438                                 | D                             |

### 17:30 - 17:45

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 10.22                          | 0.68                                 | 8.626                                  | A                             |
| C-AB   | 90.95                          | 6.06                                 | 34.730                                 | D                             |

### 17:45 - 18:00

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 7.16                           | 0.48                                 | 7.044                                  | A                             |
| C-AB   | 33.60                          | 2.24                                 | 16.937                                 | C                             |

### 18:00 - 18:15

| Stream | Queueing total delay (Veh-min) | Queueing rate of delay (Veh-min/min) | Average delay per arriving vehicle (s) | Unsignalised level of service |
|--------|--------------------------------|--------------------------------------|----------------------------------------|-------------------------------|
| B-AC   | 5.24                           | 0.35                                 | 6.199                                  | A                             |
| C-AB   | 17.83                          | 1.19                                 | 10.516                                 | B                             |

## Queue Variation Results for each time segment

### 16:45 - 17:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.33       | 0.00      | 0.00      | 0.33      | 0.33      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.11       | 0.55      | 1.00      | 1.40      | 1.45      |                    |                | < 0.05                                      | 0.00                                   |

### 17:00 - 17:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.45       | 0.00      | 0.00      | 0.45      | 0.45      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.89       | 0.07      | 1.02      | 4.54      | 6.52      |                    |                | < 0.05                                      | 0.00                                   |

### 17:15 - 17:30

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.68       | 0.03      | 0.26      | 0.68      | 0.68      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 5.29       | 0.05      | 0.48      | 15.12     | 26.60     |                    |                | 0.08                                        | 0.00                                   |

### 17:30 - 17:45

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.68       | 0.03      | 0.29      | 1.12      | 2.92      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 5.90       | 0.04      | 0.37      | 13.83     | 32.32     |                    |                | 0.08                                        | 0.00                                   |

### 17:45 - 18:00

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.46       | 0.00      | 0.00      | 0.46      | 0.46      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 2.07       | 0.04      | 0.41      | 5.61      | 10.00     |                    |                | < 0.05                                      | 0.00                                   |

### 18:00 - 18:15

| Stream | Mean (Veh) | Q05 (Veh) | Q50 (Veh) | Q90 (Veh) | Q95 (Veh) | Percentile message | Marker message | Probability of reaching or exceeding marker | Probability of exactly reaching marker |
|--------|------------|-----------|-----------|-----------|-----------|--------------------|----------------|---------------------------------------------|----------------------------------------|
| B-AC   | 0.34       | 0.03      | 0.25      | 0.45      | 0.48      |                    |                | N/A                                         | N/A                                    |
| C-AB   | 1.17       | 0.03      | 0.32      | 2.33      | 5.94      |                    |                | < 0.05                                      | 0.00                                   |