TRANSPORT PLANNING

Alan Doak
Director
AED Planning & Development Ltd
PO Box 29990
GLASGOW
G67 9EP

Our Ref: SP645_002
Your Ref:
Date: 1 June 2019

Dear Alan

**Dovesdale Farm, Stonehouse - Change of use of agricultural land, including dwelling house, at Dovesdale site to Class 5 and 6 with ancillary office accommodation**

I refer to our recent discussions regarding the above mentioned proposal and the queries you raised regarding the possible traffic impacts arising from the development.

We have previously examined the operation of the site access (during 2016) taking account of various extant consents at that time. In 2016, we listed our awareness of the extant consents and ongoing operations and we update that information below.

This letter therefore provides the analysis of the access road / Carlisle Road junction and it accounts for all permitted operations at the site whether these are fully operational or not.

***Site Operations***

Current operations / permissions at the site comprise five separate components in relation to traffic generation and these are outlined below:

1. Existing Infill (HM/08/0667)

This element of the site is currently operational. Records obtained from Wm Hamilton & Sons show that the busiest recent month covered 1344 landfill related movements. If all 12 months of the year were operating at this level, then over the course of a year there would be (1344 x 12 = 16128) vehicle movements.

The site operates 5.5 days per week and over 50 weeks per year that results in (16128 / (5.5 x 50) = 59 movements per day.

Typical periods of traffic are distributed through the day, a day being 0700 till 1700 or 10 hours.

This means that in a typical hour there are 6 movements – 3 in and 3 out.

There are no planning conditions restricting traffic movements associated with this facility.

2. Asphalt Plant (Planning permission implemented but not fully operational – HM/09/0238)

Similar information as above related to the Asphalt Plant shows that 5 vehicles in and 5 vehicles out per hour are related to the operations at this facility.

There are no planning conditions restricting traffic movements associated with this facility, however we understand activity is unlikely to exceed 5 in / 5 out per hour.

3. Waste Sourcing and Resource Recovery (Planning permission implemented but not fully operational – HM/10/0345)

The Environmental Statement prepared for this application contained a traffic and transportation chapter. Within that, Table 12.2 contained information in relation to anticipated HGV movements and these were assessed to be 7 in and 7 out per hour. It was also anticipated that 90% of traffic would travel to/from the north.

4. Part change of use of storage building to waste reception and transfer centre (HM/15/0489).

In relation to this use, a maximum 65,000 tonnes per annum of incoming material is expected and this arrives in 9.5 tonne loads. Operationally this occurs over 12 hours / 6 days per week over an assumed 50 weeks. That results in (65000 / 9.5) 6842 inbound loads annually. Over 3600 working hours that equates to 2 vehicles inbound per hour. These vehicles, once unloaded, then leave the site.

The deposited material is then handled at the site and placed in 26 tonne loads for export. Operationally this occurs over the same time periods and results in (65000 / 26) = 2500 outbound loads annually. Over 3600 working hours that equates to 1 vehicle outbound per hour. These vehicles also arrive at the site to collect their loads.

This traffic is in the updated baseline traffic surveys.

5. Extension to aggregate storage shed to provide waste transfer facilities (HM/16/0250)

Condition 1 of this approval limits the amount of vehicles leaving the site to 36 in any 24 hour period. Condition 1 also restricts working hours to 0700 – 1900, Monday to Saturday inclusive. This results in 3 vehicles in and 3 vehicles out per hour.

6. Staff Movements

Finally in relation to staff there are circa 60 staff vehicles on site and for present purposes we will assume that all of these arrive and depart at peak times.

All of the above is summarised in Table 1 below.

| Table 1 – Traffic patterns at site | | |
|---|---|---|
| **Element of development** | **Ref** | **Peak hour traffic** |
| Existing Infill | HM/08/0667 | 3 HGV in / 3 HGV out |
| Asphalt Plant | HM/09/0238 | 5 HGV in / 5 HGV out |
| Waste Sourcing and Resource Recovery | HM/10/0345 | 7 HGV in / 7 HGV out |
| Part C.O.U. Storage Building to Waste Reception & Transfer Centre | HM/15/0489 | 3 HGV in / 3 HGV out (TRAFFIC IS IN THE NEW SURVEYS) |
| Extension to aggregate storage shed to provide waste transfer facilities | HM/16/0250 | 3 HGV in / 3 HGV out |
| Staff Movements | N/A | 60 in AM / 60 out PM (traffic is in the existing surveys but for robustness, has been double counted) |
| SUB TOTAL | | 18 HGV in / 18 HGV out plus 60 staff vehicles in AM and 60 out PM |
| Change of use of agricultural land, including dwelling house, at Dovesdale site to Class 5 and 6 with ancillary office accommodation | | This traffic is presently unknown but is clearly unlikely to exceed the levels across the rest of the aggregated site, given it is a smaller component. It is assumed therefore that 18 HGV in and 18 HGV out will be tested and no allowance has been made for staff, given (see above) staff have already been double counted. |
| TOTAL | | 36 HGV in / 36 HGV out plus 60 staff vehicles in AM and 60 out PM |

***Background Traffic***

In relation to existing traffic on the B7078 / site access, surveys were undertaken on Wednesday 8th May 2019. The results of these surveys are shown in Diagrams 1 and 2 attached.

This traffic was then growthed forward using National Road Traffic Forecast 'Low' growth to 2022 for testing purposes (Diagrams 3 and 4) and the traffic in Table 1 above (Diagrams 5 and 6) added to obtain traffic for capacity testing (Diagrams 7 and 8).

***Junction Assessment***

Table 2 below summarises the junction model 'PICADY' results for the AM and PM 'with development' peak period assessments. Model output is attached to this letter.

| Table 2 – Summary of PICADY Results (B7078 / site access Priority) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Scenario | B7078 northbound | | | Site Access | | | B7078 southbound | | | Incl Queuing Delay |
| | RFC | Queue | Delay | RFC | Queue | Delay | RFC | Queue | Delay | |
| | | (pcu) | (min/ pcu) | | (pcu) | (min/ pcu) | | (pcu) | (min/ pcu) | |
| **AM peak** | - | - | - | 0.16 | 0.4 | 0.24 | 0.36 | 0.8 | 0.20 | 0.08 |
| **PM peak** | - | - | - | 0.17 | 0.6 | 0.33 | 0.31 | 1.0 | 0.16 | 0.08 |

The assessment indicates that the junction operates well within capacity during the weekday morning and evening peak periods with a maximum RFC of 0.36 and a queue of 1 vehicle occurring on the southbound B7078 approach to the junction.

**Summary**

This letter and attachments assesses the operation of the junction on the B7078 accessing the Wm Hamilton plant at Dovesdale Farm. The analysis illustrates that the junction is projected to operate well within its practical capacity.

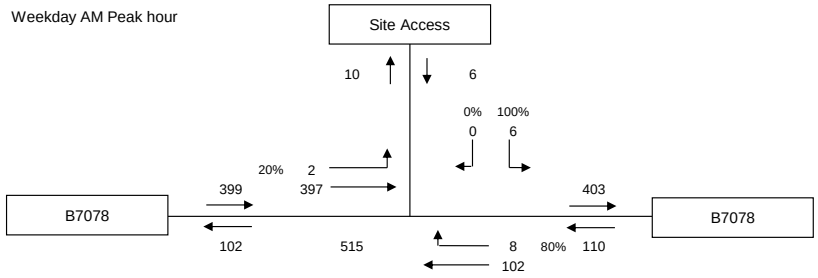
I trust you will find the above in order, Alan, and I look forward to hearing from you. Meantime if you have any queries please do not hesitate to contact me directly.

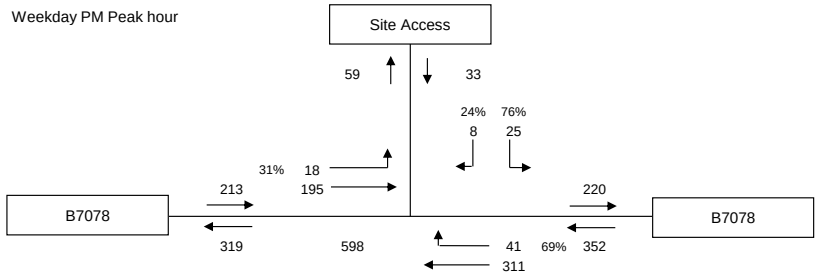
Yours sincerely

Alex Sneddon
for **Transport Planning Ltd**
e: alex@tranplanworld.co.uk

Encl

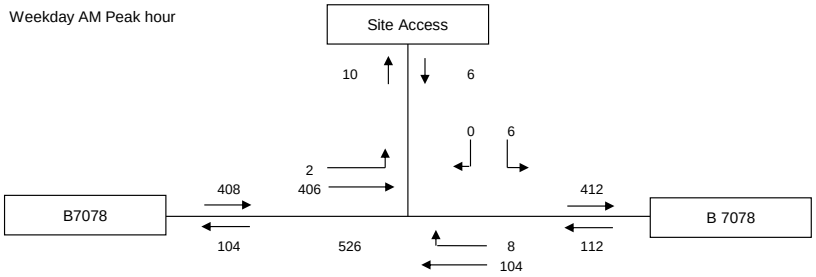
Flow diagrams
PICADY output



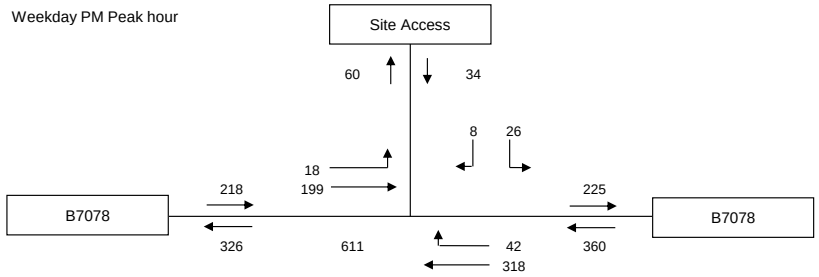




| | | |
|---|---|---|
| TRANSPORT PLANNING | TITLE<br>Dovesdale<br><br>2019 Surveyed Traffic Flows<br>Weekday AM and PM Peak Hours (07:30-08:30 and 16:15-17:15) | Diagram<br>**1** |

Weekday AM Peak hour




Weekday PM Peak hour




Low Growth

2022 1.022
2019

TRANSPORT PLANNING

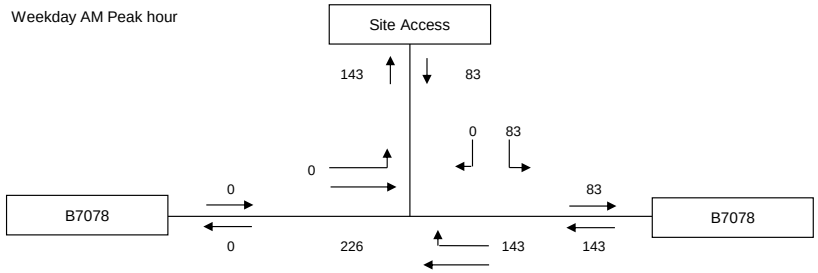
TITLE

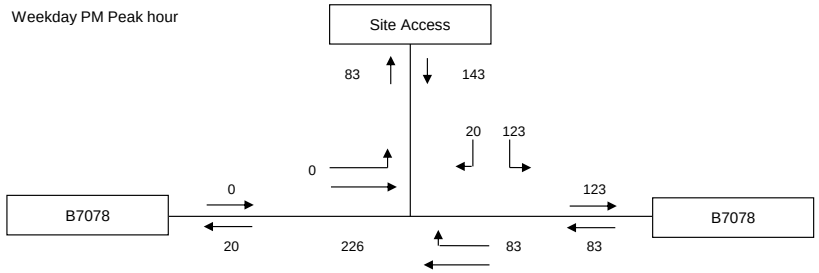
Dovesdale

2022 Projected Traffic Flows
Weekday AM and PM Peak Hours

Diagram

**2**




TRANSPORT PLANNING

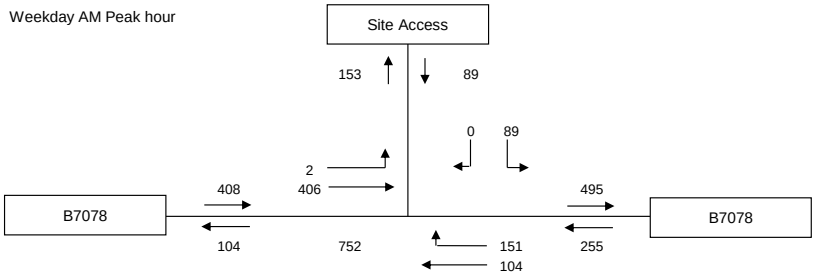
TITLE

Dovesdale

Development Traffic Flows
Weekday AM and PM Peak Hours

Diagram

**3**



TRANSPORT PLANNING

TITLE

Dovesdale

2022 Projected + Proposed Traffic Flows
Weekday AM and PM Peak Hours

Diagram

**4**

# Junctions 9

## PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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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:** B7078 Carlisle Road_Dovesdale Farm Access.j9
**Path:** C:\Users\Stuart\Documents\TPL\TP614_Larkhall, Dovesdale Farm\Junction Analysis\PICADY
**Report generation date:** 28/05/2019 13:28:08

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»2019 Surveyed, Weekday AM
»2022 Projected, Weekday AM
»2022 Projected + Dev, Weekday AM
»2019 Surveyed, Weekday PM
»2022 Projected, Weekday PM
»2022 Projected + Dev, Weekday PM

### Summary of junction performance

| | Weekday AM | | | | | Weekday PM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q (PCU) | Delay (min) | RFC | LOS | Res Cap | Q (PCU) | Delay (min) | RFC | LOS | Res Cap |
| | 2019 Surveyed | | | | | | | | | |
| Stream B-AC | 0.0 | 0.20 | 0.01 | B | 312 % | 0.1 | 0.13 | 0.06 | A | 218 % |
| Stream C-AB | 0.0 | 0.13 | 0.02 | A | [Stream B-AC] | 0.3 | 0.13 | 0.10 | A | [Stream C-AB] |
| | 2022 Projected | | | | | | | | | |
| Stream B-AC | 0.0 | 0.20 | 0.01 | B | 303 % | 0.1 | 0.13 | 0.06 | A | 211 % |
| Stream C-AB | 0.0 | 0.13 | 0.02 | A | [Stream B-AC] | 0.3 | 0.13 | 0.11 | A | [Stream C-AB] |
| | 2022 Projected + Dev | | | | | | | | | |
| Stream B-AC | 0.4 | 0.24 | 0.16 | B | 75 % | 0.6 | 0.17 | 0.33 | B | 91 % |
| Stream C-AB | 0.8 | 0.20 | 0.36 | B | [Stream C-AB] | 1.0 | 0.16 | 0.31 | A | [Stream C-AB] |

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Res Cap indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.*

### File summary

#### File Description

| | |
|---|---|
| **Title** | B7078 Carlisle Road/ Dovesdale Farm Access |
| **Location** | Dovesdale Farm, Stonehouse, Larkhall |
| **Site number** | |
| **Date** | 28/05/2019 |
| **Version** | |
| **Status** | |
| **Identifier** | |
| **Client** | Wm Hamilton |
| **Jobnumber** | TP614 |
| **Enumerator** | SL |
| **Description** | |

## Units

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

## Analysis Options

| Vehicle length (m) | Calculate Q Percentiles | Calculate detailed queueing delay | Calculate residual capacity | Residual capacity criteria type | RFC Threshold | Av. Delay threshold (min) | Q threshold (PCU) |
|---|---|---|---|---|---|---|---|
| 5.75 | | | ✓ | Delay | 0.85 | 0.60 | 20.00 |

## 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 |
|---|---|---|---|---|---|---|---|
| D1 | 2019 Surveyed | Weekday AM | ONE HOUR | 07:45 | 09:15 | 15 | ✓ |
| D2 | 2022 Projected | Weekday AM | ONE HOUR | 07:45 | 09:15 | 15 | ✓ |
| D3 | 2022 Projected + Dev | Weekday AM | ONE HOUR | 07:45 | 09:15 | 15 | ✓ |
| D4 | 2019 Surveyed | Weekday PM | ONE HOUR | 16:00 | 17:30 | 15 | ✓ |
| D5 | 2022 Projected | Weekday PM | ONE HOUR | 16:00 | 17:30 | 15 | ✓ |
| D6 | 2022 Projected + Dev | Weekday PM | ONE HOUR | 16:00 | 17:30 | 15 | ✓ |

## Analysis Set Details

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

# 2019 Surveyed, Weekday AM

### Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (min) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | B7078 Carlisle Road/ Dovesdale Farm Access | T-Junction | Two-way | | 0.00 | A |

### Junction Network Options

| Driving side | Lighting | Res Cap (%) | First arm reaching threshold |
|---|---|---|---|
| Left | Normal/unknown | 312 | Stream B-AC |

## Arms

### Arms

| Arm | Name | Description | Arm type |
|---|---|---|---|
| A | B7078 Carlisle Road (south) | | Major |
| B | Dovesdale Farm Access | | Minor |
| C | B7078 Carlisle Road (north) | | Major |

### Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|---|---|---|---|---|---|---|
| B7078 Carlisle Road (north) | 6.50 | | | 50.0 | ✓ | 0.00 |

*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) |
|---|---|---|---|---|
| Dovesdale Farm Access | One lane | 4.00 | 50 | 50 |

### Slope / Intercept / Capacity

#### Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|---|---|---|---|---|---|---|
| 1 | B-A | 570 | 0.102 | 0.257 | 0.162 | 0.367 |
| 1 | B-C | 721 | 0.108 | 0.273 | - | - |
| 1 | C-B | 603 | 0.229 | 0.229 | - | - |

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*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 |
|---|---|---|---|---|---|---|---|
| D1 | 2019 Surveyed | Weekday AM | ONE HOUR | 07:45 | 09:15 | 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 | Av. Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|---|
| B7078 Carlisle Road (south) | | ONE HOUR | ✓ | 399 | 100.000 |
| Dovesdale Farm Access | | ONE HOUR | ✓ | 6 | 100.000 |
| B7078 Carlisle Road (north) | | ONE HOUR | ✓ | 110 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 2 | 397 |
| | Dovesdale Farm Access | 0 | 0 | 6 |
| | B7078 Carlisle Road (north) | 102 | 8 | 0 |

## Vehicle Mix

### HV %s

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 100 | 5 |
| | Dovesdale Farm Access | 0 | 0 | 100 |
| | B7078 Carlisle Road (north) | 9 | 33 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (min) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|---|---|---|---|---|---|---|
| B-AC | 0.01 | 0.20 | 0.0 | B | 6 | 8 |
| C-AB | 0.02 | 0.13 | 0.0 | A | 9 | 13 |
| C-A | | | | | 92 | 138 |
| A-B | | | | | 2 | 3 |
| A-C | | | | | 364 | 546 |

### Main Results for each time segment

#### 07:45 - 08:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 639 | 0.007 | 4 | 0.0 | 0.0 | 0.189 | B |
| C-AB | 7 | 2 | 588 | 0.012 | 7 | 0.0 | 0.0 | 0.133 | A |
| C-A | 76 | 19 | | | 76 | | | | |
| A-B | 2 | 0.38 | | | 2 | | | | |
| A-C | 299 | 75 | | | 299 | | | | |

### 08:00 - 08:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 623 | 0.009 | 5 | 0.0 | 0.0 | 0.194 | B |
| C-AB | 9 | 2 | 586 | 0.015 | 9 | 0.0 | 0.0 | 0.134 | A |
| C-A | 90 | 23 | | | 90 | | | | |
| A-B | 2 | 0.45 | | | 2 | | | | |
| A-C | 357 | 89 | | | 357 | | | | |

### 08:15 - 08:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 7 | 2 | 601 | 0.011 | 7 | 0.0 | 0.0 | 0.202 | B |
| C-AB | 11 | 3 | 583 | 0.019 | 11 | 0.0 | 0.0 | 0.134 | A |
| C-A | 110 | 28 | | | 110 | | | | |
| A-B | 2 | 0.55 | | | 2 | | | | |
| A-C | 437 | 109 | | | 437 | | | | |

### 08:30 - 08:45

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 7 | 2 | 601 | 0.011 | 7 | 0.0 | 0.0 | 0.202 | B |
| C-AB | 11 | 3 | 583 | 0.019 | 11 | 0.0 | 0.0 | 0.134 | A |
| C-A | 110 | 28 | | | 110 | | | | |
| A-B | 2 | 0.55 | | | 2 | | | | |
| A-C | 437 | 109 | | | 437 | | | | |

### 08:45 - 09:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 623 | 0.009 | 5 | 0.0 | 0.0 | 0.194 | B |
| C-AB | 9 | 2 | 586 | 0.015 | 9 | 0.0 | 0.0 | 0.133 | A |
| C-A | 90 | 23 | | | 90 | | | | |
| A-B | 2 | 0.45 | | | 2 | | | | |
| A-C | 357 | 89 | | | 357 | | | | |

### 09:00 - 09:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 639 | 0.007 | 5 | 0.0 | 0.0 | 0.189 | B |
| C-AB | 7 | 2 | 588 | 0.012 | 7 | 0.0 | 0.0 | 0.133 | A |
| C-A | 76 | 19 | | | 76 | | | | |
| A-B | 2 | 0.38 | | | 2 | | | | |
| A-C | 299 | 75 | | | 299 | | | | |

# 2022 Projected, Weekday AM

### Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (min) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | B7078 Carlisle Road/ Dovesdale Farm Access | T-Junction | Two-way | | 0.00 | A |

### Junction Network Options

| Driving side | Lighting | Res Cap (%) | First arm reaching threshold |
|---|---|---|---|
| Left | Normal/unknown | 303 | Stream B-AC |

## 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 | 2022 Projected | Weekday AM | ONE HOUR | 07:45 | 09:15 | 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 | Av. Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|---|
| B7078 Carlisle Road (south) | | ONE HOUR | ✓ | 408 | 100.000 |
| Dovesdale Farm Access | | ONE HOUR | ✓ | 6 | 100.000 |
| B7078 Carlisle Road (north) | | ONE HOUR | ✓ | 112 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 2 | 406 |
| | Dovesdale Farm Access | 0 | 0 | 6 |
| | B7078 Carlisle Road (north) | 104 | 8 | 0 |

## Vehicle Mix

### HV %s

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 100 | 5 |
| | Dovesdale Farm Access | 0 | 0 | 100 |
| | B7078 Carlisle Road (north) | 9 | 33 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (min) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|---|---|---|---|---|---|---|
| B-AC | 0.01 | 0.20 | 0.0 | B | 6 | 8 |
| C-AB | 0.02 | 0.13 | 0.0 | A | 9 | 13 |
| C-A | | | | | 94 | 141 |
| A-B | | | | | 2 | 3 |
| A-C | | | | | 373 | 559 |

## Main Results for each time segment

### 07:45 - 08:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 637 | 0.007 | 4 | 0.0 | 0.0 | 0.190 | B |
| C-AB | 7 | 2 | 588 | 0.012 | 7 | 0.0 | 0.0 | 0.133 | A |
| C-A | 77 | 19 | | | 77 | | | | |
| A-B | 2 | 0.38 | | | 2 | | | | |
| A-C | 306 | 76 | | | 306 | | | | |

### 08:00 - 08:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 621 | 0.009 | 5 | 0.0 | 0.0 | 0.195 | B |
| C-AB | 9 | 2 | 586 | 0.015 | 9 | 0.0 | 0.0 | 0.134 | A |
| C-A | 92 | 23 | | | 92 | | | | |
| A-B | 2 | 0.45 | | | 2 | | | | |
| A-C | 365 | 91 | | | 365 | | | | |

### 08:15 - 08:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 7 | 2 | 599 | 0.011 | 7 | 0.0 | 0.0 | 0.203 | B |
| C-AB | 11 | 3 | 583 | 0.019 | 11 | 0.0 | 0.0 | 0.134 | A |
| C-A | 112 | 28 | | | 112 | | | | |
| A-B | 2 | 0.55 | | | 2 | | | | |
| A-C | 447 | 112 | | | 447 | | | | |

### 08:30 - 08:45

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 7 | 2 | 599 | 0.011 | 7 | 0.0 | 0.0 | 0.203 | B |
| C-AB | 11 | 3 | 583 | 0.019 | 11 | 0.0 | 0.0 | 0.134 | A |
| C-A | 112 | 28 | | | 112 | | | | |
| A-B | 2 | 0.55 | | | 2 | | | | |
| A-C | 447 | 112 | | | 447 | | | | |

### 08:45 - 09:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 621 | 0.009 | 5 | 0.0 | 0.0 | 0.195 | B |
| C-AB | 9 | 2 | 586 | 0.015 | 9 | 0.0 | 0.0 | 0.133 | A |
| C-A | 92 | 23 | | | 92 | | | | |
| A-B | 2 | 0.45 | | | 2 | | | | |
| A-C | 365 | 91 | | | 365 | | | | |

### 09:00 - 09:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 5 | 1 | 637 | 0.007 | 5 | 0.0 | 0.0 | 0.190 | B |
| C-AB | 7 | 2 | 588 | 0.012 | 7 | 0.0 | 0.0 | 0.133 | A |
| C-A | 77 | 19 | | | 77 | | | | |
| A-B | 2 | 0.38 | | | 2 | | | | |
| A-C | 306 | 76 | | | 306 | | | | |

# 2022 Projected + Dev, Weekday AM

### Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (min) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | B7078 Carlisle Road/ Dovesdale Farm Access | T-Junction | Two-way | | 0.08 | A |

### Junction Network Options

| Driving side | Lighting | Res Cap (%) | First arm reaching threshold |
|---|---|---|---|
| Left | Normal/unknown | 75 | Stream C-AB |

## 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 |
|---|---|---|---|---|---|---|---|
| D3 | 2022 Projected + Dev | Weekday AM | ONE HOUR | 07:45 | 09:15 | 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 | Av. Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|---|
| B7078 Carlisle Road (south) | | ONE HOUR | ✓ | 408 | 100.000 |
| Dovesdale Farm Access | | ONE HOUR | ✓ | 89 | 100.000 |
| B7078 Carlisle Road (north) | | ONE HOUR | ✓ | 255 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 2 | 406 |
| | Dovesdale Farm Access | 0 | 0 | 89 |
| | B7078 Carlisle Road (north) | 104 | 151 | 0 |

## Vehicle Mix

### HV %s

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 100 | 5 |
| | Dovesdale Farm Access | 0 | 0 | 100 |
| | B7078 Carlisle Road (north) | 9 | 33 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (min) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|---|---|---|---|---|---|---|
| B-AC | 0.16 | 0.24 | 0.4 | B | 82 | 123 |
| C-AB | 0.36 | 0.20 | 0.8 | B | 167 | 250 |
| C-A | | | | | 67 | 101 |
| A-B | | | | | 2 | 3 |
| A-C | | | | | 373 | 559 |

## Main Results for each time segment

### 07:45 - 08:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 67 | 17 | 637 | 0.105 | 66 | 0.0 | 0.2 | 0.210 | B |
| C-AB | 131 | 33 | 588 | 0.223 | 130 | 0.0 | 0.4 | 0.169 | B |
| C-A | 61 | 15 | | | 61 | | | | |
| A-B | 2 | 0.38 | | | 2 | | | | |
| A-C | 306 | 76 | | | 306 | | | | |

### 08:00 - 08:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 80 | 20 | 621 | 0.129 | 80 | 0.2 | 0.3 | 0.222 | B |
| C-AB | 162 | 40 | 586 | 0.276 | 161 | 0.4 | 0.6 | 0.182 | B |
| C-A | 67 | 17 | | | 67 | | | | |
| A-B | 2 | 0.45 | | | 2 | | | | |
| A-C | 365 | 91 | | | 365 | | | | |

### 08:15 - 08:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 98 | 24 | 599 | 0.164 | 98 | 0.3 | 0.4 | 0.239 | B |
| C-AB | 207 | 52 | 583 | 0.356 | 206 | 0.6 | 0.8 | 0.204 | B |
| C-A | 73 | 18 | | | 73 | | | | |
| A-B | 2 | 0.55 | | | 2 | | | | |
| A-C | 447 | 112 | | | 447 | | | | |

### 08:30 - 08:45

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 98 | 24 | 599 | 0.164 | 98 | 0.4 | 0.4 | 0.240 | B |
| C-AB | 208 | 52 | 583 | 0.356 | 208 | 0.8 | 0.8 | 0.204 | B |
| C-A | 73 | 18 | | | 73 | | | | |
| A-B | 2 | 0.55 | | | 2 | | | | |
| A-C | 447 | 112 | | | 447 | | | | |

### 08:45 - 09:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 80 | 20 | 621 | 0.129 | 80 | 0.4 | 0.3 | 0.222 | B |
| C-AB | 162 | 41 | 586 | 0.276 | 163 | 0.8 | 0.6 | 0.182 | B |
| C-A | 67 | 17 | | | 67 | | | | |
| A-B | 2 | 0.45 | | | 2 | | | | |
| A-C | 365 | 91 | | | 365 | | | | |

### 09:00 - 09:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 67 | 17 | 637 | 0.105 | 67 | 0.3 | 0.2 | 0.211 | B |
| C-AB | 131 | 33 | 588 | 0.224 | 132 | 0.6 | 0.4 | 0.170 | B |
| C-A | 61 | 15 | | | 61 | | | | |
| A-B | 2 | 0.38 | | | 2 | | | | |
| A-C | 306 | 76 | | | 306 | | | | |

# 2019 Surveyed, Weekday PM

### Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (min) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | B7078 Carlisle Road/ Dovesdale Farm Access | T-Junction | Two-way | | 0.02 | A |

### Junction Network Options

| Driving side | Lighting | Res Cap (%) | First arm reaching threshold |
|---|---|---|---|
| Left | Normal/unknown | 218 | Stream C-AB |

## 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 | 2019 Surveyed | Weekday PM | ONE HOUR | 16:00 | 17:30 | 15 | ✓ |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|---|
| B7078 Carlisle Road (south) | | ONE HOUR | ✓ | 213 | 100.000 |
| Dovesdale Farm Access | | ONE HOUR | ✓ | 33 | 100.000 |
| B7078 Carlisle Road (north) | | ONE HOUR | ✓ | 352 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 18 | 195 |
| | Dovesdale Farm Access | 8 | 0 | 25 |
| | B7078 Carlisle Road (north) | 311 | 41 | 0 |

## Vehicle Mix

### HV %s

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 89 | 5 |
| | Dovesdale Farm Access | 33 | 0 | 14 |
| | B7078 Carlisle Road (north) | 1 | 100 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (min) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|---|---|---|---|---|---|---|
| B-AC | 0.06 | 0.13 | 0.1 | A | 30 | 45 |
| C-AB | 0.10 | 0.13 | 0.3 | A | 62 | 93 |
| C-A | | | | | 261 | 392 |
| A-B | | | | | 17 | 25 |
| A-C | | | | | 179 | 268 |

## Main Results for each time segment

### 16:00 - 16:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 25 | 6 | 618 | 0.040 | 25 | 0.0 | 0.0 | 0.119 | A |
| C-AB | 46 | 11 | 727 | 0.063 | 45 | 0.0 | 0.2 | 0.134 | A |
| C-A | 219 | 55 | | | 219 | | | | |
| A-B | 14 | 3 | | | 14 | | | | |
| A-C | 147 | 37 | | | 147 | | | | |

### 16:15 - 16:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 30 | 7 | 606 | 0.049 | 30 | 0.0 | 0.1 | 0.123 | A |
| C-AB | 59 | 15 | 752 | 0.078 | 59 | 0.2 | 0.2 | 0.129 | A |
| C-A | 258 | 64 | | | 258 | | | | |
| A-B | 16 | 4 | | | 16 | | | | |
| A-C | 175 | 44 | | | 175 | | | | |

### 16:30 - 16:45

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 36 | 9 | 589 | 0.062 | 36 | 0.1 | 0.1 | 0.128 | A |
| C-AB | 80 | 20 | 787 | 0.102 | 80 | 0.2 | 0.3 | 0.121 | A |
| C-A | 307 | 77 | | | 307 | | | | |
| A-B | 20 | 5 | | | 20 | | | | |
| A-C | 215 | 54 | | | 215 | | | | |

### 16:45 - 17:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 36 | 9 | 589 | 0.062 | 36 | 0.1 | 0.1 | 0.128 | A |
| C-AB | 80 | 20 | 788 | 0.102 | 80 | 0.3 | 0.3 | 0.119 | A |
| C-A | 307 | 77 | | | 307 | | | | |
| A-B | 20 | 5 | | | 20 | | | | |
| A-C | 215 | 54 | | | 215 | | | | |

### 17:00 - 17:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 30 | 7 | 606 | 0.049 | 30 | 0.1 | 0.1 | 0.123 | A |
| C-AB | 59 | 15 | 752 | 0.079 | 59 | 0.3 | 0.2 | 0.123 | A |
| C-A | 257 | 64 | | | 257 | | | | |
| A-B | 16 | 4 | | | 16 | | | | |
| A-C | 175 | 44 | | | 175 | | | | |

### 17:15 - 17:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 25 | 6 | 618 | 0.040 | 25 | 0.1 | 0.0 | 0.119 | A |
| C-AB | 46 | 11 | 727 | 0.063 | 46 | 0.2 | 0.2 | 0.131 | A |
| C-A | 219 | 55 | | | 219 | | | | |
| A-B | 14 | 3 | | | 14 | | | | |
| A-C | 147 | 37 | | | 147 | | | | |

# 2022 Projected, Weekday PM

### Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (min) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | B7078 Carlisle Road/ Dovesdale Farm Access | T-Junction | Two-way | | 0.02 | A |

### Junction Network Options

| Driving side | Lighting | Res Cap (%) | First arm reaching threshold |
|---|---|---|---|
| Left | Normal/unknown | 211 | Stream C-AB |

## 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 |
|---|---|---|---|---|---|---|---|
| D5 | 2022 Projected | Weekday PM | ONE HOUR | 16:00 | 17:30 | 15 | ✓ |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|---|
| B7078 Carlisle Road (south) | | ONE HOUR | ✓ | 217 | 100.000 |
| Dovesdale Farm Access | | ONE HOUR | ✓ | 34 | 100.000 |
| B7078 Carlisle Road (north) | | ONE HOUR | ✓ | 360 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 18 | 199 |
| | Dovesdale Farm Access | 8 | 0 | 26 |
| | B7078 Carlisle Road (north) | 318 | 42 | 0 |

## Vehicle Mix

### HV %s

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 89 | 5 |
| | Dovesdale Farm Access | 33 | 0 | 14 |
| | B7078 Carlisle Road (north) | 1 | 100 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (min) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|---|---|---|---|---|---|---|
| B-AC | 0.06 | 0.13 | 0.1 | A | 31 | 47 |
| C-AB | 0.11 | 0.13 | 0.3 | A | 64 | 96 |
| C-A | | | | | 266 | 400 |
| A-B | | | | | 17 | 25 |
| A-C | | | | | 183 | 274 |

## Main Results for each time segment

### 16:00 - 16:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 26 | 6 | 619 | 0.041 | 25 | 0.0 | 0.1 | 0.119 | A |
| C-AB | 47 | 12 | 730 | 0.064 | 46 | 0.0 | 0.2 | 0.133 | A |
| C-A | 224 | 56 | | | 224 | | | | |
| A-B | 14 | 3 | | | 14 | | | | |
| A-C | 150 | 37 | | | 150 | | | | |

### 16:15 - 16:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 31 | 8 | 606 | 0.050 | 31 | 0.1 | 0.1 | 0.123 | A |
| C-AB | 61 | 15 | 756 | 0.081 | 61 | 0.2 | 0.2 | 0.128 | A |
| C-A | 263 | 66 | | | 263 | | | | |
| A-B | 16 | 4 | | | 16 | | | | |
| A-C | 179 | 45 | | | 179 | | | | |

### 16:30 - 16:45

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 37 | 9 | 589 | 0.064 | 37 | 0.1 | 0.1 | 0.128 | A |
| C-AB | 83 | 21 | 792 | 0.105 | 83 | 0.2 | 0.3 | 0.120 | A |
| C-A | 313 | 78 | | | 313 | | | | |
| A-B | 20 | 5 | | | 20 | | | | |
| A-C | 219 | 55 | | | 219 | | | | |

### 16:45 - 17:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 37 | 9 | 589 | 0.064 | 37 | 0.1 | 0.1 | 0.128 | A |
| C-AB | 83 | 21 | 792 | 0.105 | 83 | 0.3 | 0.3 | 0.118 | A |
| C-A | 313 | 78 | | | 313 | | | | |
| A-B | 20 | 5 | | | 20 | | | | |
| A-C | 219 | 55 | | | 219 | | | | |

### 17:00 - 17:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 31 | 8 | 606 | 0.050 | 31 | 0.1 | 0.1 | 0.123 | A |
| C-AB | 61 | 15 | 756 | 0.081 | 61 | 0.3 | 0.2 | 0.122 | A |
| C-A | 262 | 66 | | | 262 | | | | |
| A-B | 16 | 4 | | | 16 | | | | |
| A-C | 179 | 45 | | | 179 | | | | |

### 17:15 - 17:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 26 | 6 | 618 | 0.041 | 26 | 0.1 | 0.1 | 0.119 | A |
| C-AB | 47 | 12 | 730 | 0.065 | 48 | 0.2 | 0.2 | 0.130 | A |
| C-A | 224 | 56 | | | 224 | | | | |
| A-B | 14 | 3 | | | 14 | | | | |
| A-C | 150 | 37 | | | 150 | | | | |

# 2022 Projected + Dev, Weekday PM

### Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (min) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | B7078 Carlisle Road/ Dovesdale Farm Access | T-Junction | Two-way | | 0.08 | A |

### Junction Network Options

| Driving side | Lighting | Res Cap (%) | First arm reaching threshold |
|---|---|---|---|
| Left | Normal/unknown | 91 | Stream C-AB |

## 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 | 2022 Projected + Dev | Weekday PM | ONE HOUR | 16:00 | 17:30 | 15 | ✓ |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Av. Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|---|
| B7078 Carlisle Road (south) | | ONE HOUR | ✓ | 217 | 100.000 |
| Dovesdale Farm Access | | ONE HOUR | ✓ | 177 | 100.000 |
| B7078 Carlisle Road (north) | | ONE HOUR | ✓ | 443 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 18 | 199 |
| | Dovesdale Farm Access | 28 | 0 | 149 |
| | B7078 Carlisle Road (north) | 318 | 125 | 0 |

## Vehicle Mix

### HV %s

| | | To | | |
|---|---|---|---|---|
| | | B7078 Carlisle Road (south) | Dovesdale Farm Access | B7078 Carlisle Road (north) |
| From | B7078 Carlisle Road (south) | 0 | 89 | 5 |
| | Dovesdale Farm Access | 33 | 0 | 14 |
| | B7078 Carlisle Road (north) | 1 | 100 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (min) | Max Q (PCU) | Max LOS | Av. Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|---|---|---|---|---|---|---|
| B-AC | 0.33 | 0.17 | 0.6 | B | 162 | 244 |
| C-AB | 0.31 | 0.16 | 1.0 | A | 190 | 285 |
| C-A | | | | | 216 | 324 |
| A-B | | | | | 17 | 25 |
| A-C | | | | | 183 | 274 |

## Main Results for each time segment

### 16:00 - 16:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 133 | 33 | 630 | 0.211 | 132 | 0.0 | 0.3 | 0.140 | A |
| C-AB | 140 | 35 | 730 | 0.192 | 138 | 0.0 | 0.5 | 0.153 | A |
| C-A | 193 | 48 | | | 193 | | | | |
| A-B | 14 | 3 | | | 14 | | | | |
| A-C | 150 | 37 | | | 150 | | | | |

### 16:15 - 16:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 159 | 40 | 617 | 0.258 | 159 | 0.3 | 0.4 | 0.152 | A |
| C-AB | 182 | 45 | 756 | 0.240 | 181 | 0.5 | 0.7 | 0.155 | A |
| C-A | 217 | 54 | | | 217 | | | | |
| A-B | 16 | 4 | | | 16 | | | | |
| A-C | 179 | 45 | | | 179 | | | | |

### 16:30 - 16:45

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 195 | 49 | 599 | 0.325 | 194 | 0.4 | 0.6 | 0.173 | B |
| C-AB | 248 | 62 | 793 | 0.313 | 247 | 0.7 | 1.0 | 0.158 | A |
| C-A | 240 | 60 | | | 240 | | | | |
| A-B | 20 | 5 | | | 20 | | | | |
| A-C | 219 | 55 | | | 219 | | | | |

### 16:45 - 17:00

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 195 | 49 | 599 | 0.325 | 195 | 0.6 | 0.6 | 0.173 | B |
| C-AB | 249 | 62 | 793 | 0.313 | 249 | 1.0 | 1.0 | 0.154 | A |
| C-A | 239 | 60 | | | 239 | | | | |
| A-B | 20 | 5 | | | 20 | | | | |
| A-C | 219 | 55 | | | 219 | | | | |

### 17:00 - 17:15

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 159 | 40 | 617 | 0.258 | 160 | 0.6 | 0.4 | 0.153 | A |
| C-AB | 182 | 46 | 757 | 0.241 | 183 | 1.0 | 0.7 | 0.148 | A |
| C-A | 216 | 54 | | | 216 | | | | |
| A-B | 16 | 4 | | | 16 | | | | |
| A-C | 179 | 45 | | | 179 | | | | |

### 17:15 - 17:30

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (min) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|
| B-AC | 133 | 33 | 630 | 0.211 | 134 | 0.4 | 0.3 | 0.141 | A |
| C-AB | 141 | 35 | 730 | 0.193 | 142 | 0.7 | 0.5 | 0.150 | A |
| C-A | 193 | 48 | | | 193 | | | | |
| A-B | 14 | 3 | | | 14 | | | | |
| A-C | 150 | 37 | | | 150 | | | | |