

Shepway District Council

Transport Strategy Highways Impact Report

January 2011

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Transport Strategy: Highways Impact Report January 2011

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1 Introduction

1.1 Background

- 1.1.1 URS / Scott Wilson (URS/SW) has been commissioned by Shepway District Council (SDC) to prepare the Transport Strategy for the District. The remit of the Transport Strategy is to include and consider both transport matters which relate to the existing District area, as well as those relating to the Strategic Site allocations and their possible future implications.
- 1.1.2 SDC is currently preparing its Core Strategy, which is its lead document in the Local Development Framework. The Transport Strategy will form part of the evidence base for the Core Strategy, which has been subject to public consultation at both the issues and options, and preferred options stages.

1.2 Purpose

- 1.2.1 Following consultation with SDC, Kent County Council (KCC - as the local Highways Authority), and the Highways Agency (HA), a spreadsheet model has been developed to inform the Transport Strategy and to form a robust evidence base for subsequent investigations.
- 1.2.2 The purpose of this document is to report and analyse the information presented in the spreadsheet model, in terms of the potential impact of both the predicted background traffic growth and the Core Strategy site allocations on the highway network, within the District of Shepway. Further information concerning the methodology and construction of the spreadsheet model can be found in the **Modelling Methodology Note** and subsequent **Spreadsheet Model Report**, which forms part of the Transport Strategy.
- 1.2.3 As such, this document will use a number of industry standard software junction modelling programmes and good practice guidelines to assess the capacity of identified junctions and highway links within the study area, for both their existing operation and their predicted future operation, in accordance with the Core Strategy site allocation proposals.
- 1.2.4 In addition, this document also considers the high level road safety record of the District, according to identified corridors and junctions.

1.3 Structure

- 1.3.1 The remainder of this report is set out as follows:
- Section 2 – Baseline operation of the Highway Network
 - Section 3 – Future year operation of the Highway Network
 - Section 4 - Summary

2 Baseline Operation of the Highway Network

2.1 Introduction

- 2.1.1 In order to both consider the future operation and assess the potential future impact of the Core Strategy site allocations on the highway network, an initial analysis is first required to establish the existing operation of the network, for a 'base' year. This is assumed to be the current year (i.e. 2010), as this offers the opportunity to assess the outputs of the various junction models with on-site observations and knowledge of the network.
- 2.1.2 As discussed in the **Spreadsheet Model Report**, a number of traffic surveys were obtained from various sources for sites throughout the District. Seasonal variation and traffic growth factors were then calculated and applied to this data, to establish a common base year of 2010.
- 2.1.3 The following industry standard software programmes and guidance has then been used to assess the operation of the highway network, and consider the amount of spare capacity (if any) at the identified locations:
- ARCADY (version 6) – for roundabout junctions
 - PICADY (version 5) – for priority junctions
 - LinSig (version 3) – for signalised junctions
 - Design Manual for Roads and Bridges – TA 79/99 Traffic capacity of urban roads
 - Design Manual for Roads and Bridges – TA 46/97 Traffic flow ranges for use in the assessment of new rural roads
- 2.1.4 Additionally, Personal Injury Accident (PIA) data has been obtained for the most recent 5 year period for the whole of the District, for comment and review as part of the baseline analysis.

2.2 2010 Baseline Highway Analysis

- 2.2.1 As discussed above, an analysis has been undertaken concerning the existing operation of the highway network. As such, the following junctions and links have been identified for consideration in this report, following liaison with SDC, KCC and the HA. The locations of these junctions are also illustrated in **FIGURE 2.1**.
1. M20 Junction 11
 2. M20 Junction 12
 3. M20 Junction 13
 4. A20 / A261 / Stone Street
 5. Lympne Hill – Link Assessment only
 6. A259 / A261 Scanlons Bridge
 7. Horn Street, at railway bridge – Link Assessment only
 8. Cheriton High Street / A20 Cheriton High Street (towards M20 J12)
 9. Horn Street through Horn Street Village - Link Assessment only

10. A2034 Cheriton Road / A20 Cherry Garden Avenue / B2064 Beachborough Road
 11. B2064 Shorncliffe Road / Beachborough Road
 12. A259 Sandgate High Street - Link Assessment only
 13. A2034 Cheriton Road / A259 Radnor Park Road
 14. Folkestone One Way System:
 - i. Middleburg Square / Cheriton Gardens
 - ii. Foresters Way / Grace Hill
 - iii. Grace Hill / Foord Road / New Street
 - iv. Tontine Street / A2033 Dover Road
 - v. A260 The Tram Road / A260 Harbour Street
 15. A259 Lydd Road / B2075 Romney Road
 16. A259 High Street / B2071 Station Road
 17. A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road
 18. A260 Alkham Valley Road / A20
 19. A260 Alkham Valley Road / A260 Canterbury Road
- 2.2.2 Appropriate mapping and junction design information was sourced from SDC and KCC to enable the geometric alignment of each junction to be entered into the appropriate junction modelling software (including phasing and staging information for the signalised junctions).
- 2.2.3 To this extent, the identified junction modelling programmes present their outputs in different forms, relating to the type of junction they have been designed to assess. Essentially, a value is provided, indicating the level of capacity that has been used on a particular approach to the junction. This value is then supplemented with an estimated queue length for that particular approach. **TABLE 2.1** summarises the key information provided by each modelling programme.
- TABLE 2.1 Modelling Programme Outputs**
- | Modelling Programme | Key Output(s) | Ideal Operational Capacity | Theoretical Capacity | Over Capacity |
|---------------------|---|----------------------------|---------------------------|----------------|
| PICADY and ARCADY | Ratio of Flow to Capacity (RFC) | RFC of 0.85 or lower | RFC between 0.85 and 1.00 | RFC over 1.00 |
| LinSig | Degree of Saturation (DoS) | DoS of 90% or lower | DoS between 90% and 100% | DoS over 100% |
| | Practical Reserve Capacity (PRC) – for the whole junction | PRC of 0% or higher | PRC between -10% and 0% | PRC below -10% |
- 2.2.4 Both the RFC and DoS are measures of the amount of traffic using an approach, compared to the calculated capacity of the approach (i.e. the level of flow of vehicles using an approach before congestion occurs). For signalised junctions, the PRC indicates the amount of overall spare capacity that the junction has to accommodate additional traffic.
- 2.2.5 The Design Manual for Roads and Bridges' (DMRB) TA 79/99 and TA 46/97 have been used to establish the capacity for road links in urban and rural locations, respectively. TA 79/99 presents

the capacity of urban roads, according to carriageway width and road type, whilst TA 46/97 indicates example congestion reference flows (defined as a measure of the performance of a road link between junctions) for rural roads.

- 2.2.6 Additionally, TA 46/97 defines capacity as the maximum sustainable hourly lane throughput, that can be calculated as follows, (where 'A' and 'B' are set parameters that depend on the type of road, and PK%H is the percentage of heavy vehicles in the peak hour):

$$\text{Capacity} = A - B * Pk\%H$$

- 2.2.7 It should be noted that whilst TA 46/97 is primarily aimed at assessing new rural roads, it is nevertheless considered useful in providing capacity information concerning existing rural roads.
- 2.2.8 As such, each of the junctions and links identified above have been analysed according to an appropriate junction modelling programme, or with reference to TA 79/99 or TA 46/97. The results of the analysis are briefly summarised on an individual basis below, whilst the detailed results of the modelling analysis are presented in **APPENDIX A** of this report. It should be noted that as agreed with SDC, KCC and the HA, the analysis has focused on the AM (0800-0900) and PM (1700-1800) peak hours respectively, as these traditionally represent the time periods when most vehicles are travelling on the highway network, and congestion (if any) is at its worst.

1. M20 Junction 11

- 2.2.9 Junction 11 of the M20 is located to the north of Westenhanger, consisting of seven approach / exit roads that provide access to the M20, A20 and B2068. The junction was tested using ARCADY, with the results indicating that it is predicted to operate within capacity in both the AM and PM peak hours in the 2010 Baseline scenario.

2. M20 Junction 12

- 2.2.10 This junction is located at Cheriton, to the north west of Folkestone, consisting of six approach / exit roads that provide access to the M20 and A20. The junction was tested using ARCADY, with the results indicating that it is predicted to operate within capacity in both the AM and PM peak hours, in the 2010 Baseline scenario.

3. M20 Junction 13

- 2.2.11 Junction 13 of the M20 consists of two separate roundabouts located to the north and south of the main M20 carriageway, respectively. As such, they have been tested on an individual basis using ARCADY.
- 2.2.12 The northern roundabout has five arms; however two of these arms (providing access into the Channel Tunnel and to Castle Street, respectively) are closed to traffic. The roundabout therefore provides eastbound access and egress to / from the M20, and access to the southern roundabout of the Junction 13 complex.
- 2.2.13 The results of the ARCADY analysis suggest that the (northern) roundabout is predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.
- 2.2.14 The southern roundabout also has five arms, providing access to the M20, A20 and northern roundabout of the Junction 13 complex. Additionally, a feeder lane is provided for traffic wishing to access the M20 westbound from the A20 Cherry Garden Avenue, meaning that traffic associated with this movement does not pass through the roundabout itself.

- 2.2.15 The results of the ARCADY analysis indicate that the junction is predicted to operate within capacity in the AM and PM peak hours of the 2010 Baseline scenario.

4. A20 / A261 / Stone Street

- 2.2.16 This junction complex is located at Newingreen, and consists of two priority junctions onto the A20 Ashford Road, forming an unconventional four arm priority junction. These two junctions have been modelled separately in PICADY; however, due to the non-standard configuration of the junction complex, it should be noted that caution should be observed over the results of the capacity analysis.
- 2.2.17 The results of the capacity analysis suggest that the A20 Ashford Road / A261 Hythe Road junction is predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.
- 2.2.18 The analysis undertaken for the A20 Ashford Road / Stone Street junction indicates that the junction is predicted to operate within its theoretical capacity within the AM peak hour of the 2010 Baseline scenario, and within its ideal operational capacity in the PM peak hour. Thus, the RFC in the AM peak is in excess of 0.85, but less than 1.00.

5. Lymgne Hill (Link Assessment)

- 2.2.19 Lymgne Hill is located to the east of Lymgne, providing access onwards to the A259 Dymchurch Road via Botolphs Bridge Road. Observations indicate that the road is rural in nature, and is subject to stretches of both national and local (30mph) speed limits.
- 2.2.20 As discussed above, TA 46/97 indicates that the capacity of a road can be estimated using known parameters and the percentage of heavy goods vehicles travelling along the road. As such, the capacity of Lymgne Hill has been estimated as approximately 1350 vehicles per hour, per lane.
- 2.2.21 The traffic data collected to inform the spreadsheet model indicates that there are approximately 246 northbound and 81 southbound trips in the AM peak hour, respectively. This indicates that the link is operating within capacity in the AM peak hour of the 2010 Baseline scenario.
- 2.2.22 Similarly, the spreadsheet model indicates that there are approximately 89 northbound and 218 southbound trips in the PM peak hour, respectively. Again, this indicates that the link is operating within capacity in the PM peak hour of the 2010 Baseline scenario, as presented in **TABLE 2.2** below.

TABLE 2.2 Lymgne Hill 2010 Baseline Scenario

Direction	AM Peak Hour (vehicles)	PM Peak Hour (vehicles)
Northbound	246	89
Southbound	81	218
Estimated capacity (per lane)	1350	1350

6. A259 / A261 Scanlons Bridge

- 2.2.23 This junction complex is located at the west of Hythe, and forms part of the one-way system extending towards the town centre. The complex consists of two individual signal controlled junctions, which are linked to optimise their performance. The first of the signal junctions (to the

north) provides access to the A261 London Road, A261 Military Road, A259 Scanlons Bridge Road and Green Lane. The second junction (to the south) provides access to the A259 Dymchurch Road, and Scanlons Bridge Road.

- 2.2.24 LinSig was used to assess the operation of the junction complex for the PM peak only, as traffic data is unavailable for the AM peak. The results of the analysis suggest that the junction is predicted to operate within capacity in the PM peak of the 2010 Baseline scenario.

7. Horn Street, at Railway Bridge (Link Assessment)

- 2.2.25 Horn Street is located at the west of Cheriton, providing access to the A259 Seabrook Road. This assessment focuses specifically on the northern section of Horn Street, where on site observations suggest that the narrow railway bridge can constrict the flow of vehicles. It should be noted that it is possible for two vehicles to pass on the bridge, however the narrow carriageway reduces vehicle speeds as caution is taken as vehicles pass one another.
- 2.2.26 TA 79/99 (Traffic capacity of urban roads) has been used to establish the capacity of this section of Horn Street, based on the characteristics of the road, and road width. With reference to TA 79/99, Horn Street has been classified as a UAP3 road type (variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings).
- 2.2.27 TA 79/99 indicates that a road type of UAP3 with a width of 6.1m (minimum width available), has a capacity of 900 vehicles per hour, in each direction.
- 2.2.28 The spreadsheet model indicates that there are approximately 539 and 719 northbound and southbound trips respectively in the AM peak hour; and 430 and 664 northbound and southbound trips respectively in the PM peak hour. As presented in **TABLE 2.3**, this suggests that the link is operating within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.

TABLE 2.3 Horn Street, at Railway Bridge 2010 Baseline Scenario

Direction	AM Peak Hour (vehicles)	PM Peak Hour (vehicles)
Northbound	539	430
Southbound	719	664
Estimated capacity (per lane)	900	900

8. Cheriton High Street / A20 Cheriton High Street

- 2.2.29 This priority junction is located in Cheriton, to the south of M20 Junction 12. At this location, the A20 consists of a dual carriageway extending to / from the north, and reducing to a single carriageway at the point at which it meets Cheriton High Street. A dedicated right turn lane is provided for those vehicles travelling southbound from the motorway junction wishing to turn into Cheriton High Street. Additionally, a separate left turn lane is provided in advance of the junction for vehicles travelling northbound along the A20, hence this traffic does not pass through the junction.
- 2.2.30 PICADY was used to assess the operation of the Cheriton High Street / A20 Cheriton High Street junction. The results indicate that all approaches to the junction are predicted to operate beyond their theoretical capacities in both the AM and PM peak hours of the 2010 Baseline scenario. It is therefore anticipated that junction improvements could be required at this location,

to accommodate the existing level of traffic demand, as well as that that may be associated with background traffic growth, prior to the addition of any development related traffic.

9. Horn Street, through Horn Street Village (Link Assessment)

- 2.2.31 As discussed above, Horn Street provides access from Cheriton towards the A259 Seabrook Road. The link assessment has been undertaken on Horn Street to the south of the railway bridge, and Church Road.
- 2.2.32 The capacity assessment undertaken indicates that the link can accommodate approximately 900 vehicles per hour, in each direction. Analysis of the spreadsheet model suggests that approximately 228 and 164 vehicles travel northbound and southbound respectively in the AM peak hour, and 151 and 260 travelling northbound and southbound respectively in the PM peak hour. As presented in **TABLE 2.4**, this indicates that the link is predicted to operate within capacity in the 2010 Baseline scenario.

TABLE 2.4 Horn Street, through Horn Street Village 2010 Baseline Scenario

Direction	AM Peak Hour (vehicles)	PM Peak Hour (vehicles)
Northbound	228	151
Southbound	164	260
Estimated capacity (per lane)	900	900

10. A20 Cheriton Rd / A20 Cherry Garden Ave / B2064 Beachborough Rd

- 2.2.33 This signalised junction is located to the north of Folkestone West rail station, providing access into central Folkestone from the M20 at junctions 12 and 13. LinSig was used to assess the existing operation of the junction.
- 2.2.34 The results of the analysis suggest that the junction is predicted to operate within its theoretical capacity (but beyond its ideal operational capacity) in both the AM and PM peak hours of the 2010 Baseline scenario.

11. B2064 Shorncliffe Road / Beachborough Road

- 2.2.35 This junction is located to the immediate east of Folkestone West train station. It is understood that it has recently been upgraded from a priority junction, into a signalised junction. As such, LinSig has been used to assess its operation in the 2010 Baseline scenario.
- 2.2.36 The results of the analysis suggest that the junction is predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.

12. A259 Sandgate High Street (Link Assessment)

- 2.2.37 The A259 Sandgate High Street passes through Sandgate, to the west of Folkestone. The link itself extends from Folkestone to New Romney and onwards towards Hastings and beyond. Specifically, this assessment considers the capacity of the link at the town of Sandgate.
- 2.2.38 As such, the road has been classified according to TA 79/99 as UAP4 (Busy High Street carrying predominantly local traffic with frontage activity including loading and unloading), with a capacity of approximately 750 vehicles per hour, in each direction.

- 2.2.39 Analysis suggests that approximately 404 and 714 vehicles travel westbound and eastbound respectively along this section of the road in the AM peak hour, with 568 and 531 vehicles westbound and eastbound respectively in the PM peak hour. As presented in **TABLE 2.5**, this suggests that the link is operating within capacity in both peak hours of the 2010 Baseline scenario.

TABLE 2.5 A259 Sandgate High Street 2010 Baseline

Direction	AM Peak Hour (vehicles)	PM Peak Hour (vehicles)
Westbound	404	568
Eastbound	714	531
Estimated capacity (per lane)	750	750

13. A2034 Cheriton Road / A259 Radnor Park Road

- 2.2.40 This roundabout junction is located to the immediate north of Folkestone Central rail station, providing access into Folkestone town centre. The junction was tested using ARCADY.
- 2.2.41 The results of the analysis suggest that the junction is predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.

14. Folkestone One Way System

- 2.2.42 For this assessment, it has been considered that the Folkestone one way system consists of the following primary junctions:
- Middleburg Square / Cheriton Gardens
 - Foresters Way / Grace Hill
 - Grace Hill / Foord Road / New Street (data available for AM only)
 - Tontine Street / A2033 Dover Road
 - A260 The Tram Road / A260 Harbour Street
- 2.2.43 Each junction was tested individually using either ARCADY or PICADY, as appropriate. The results of the analysis are summarised in **TABLE 2.2** below.

TABLE 2.2 Folkestone One Way – 2010 Baseline Scenario Capacity Analysis Summary

Junction	AM peak hour	PM peak hour
Middleburg Square / Cheriton Gardens	✓✓	✓✓
Foresters Way / Grace Hill	✓✓	✓
Grace Hill / Foord Road / New Street	✓✓	N/A
Tontine Street / A2033 Dover Road	✓✓	✓✓
A260 The Tram Road / A260 Harbour Street	✓	✓✓

✓✓ = predicted to operate within ideal operational capacity; ✓ = predicted to operate within theoretical capacity; x = predicted to operate over capacity; N/A = traffic data unavailable

- 2.2.44 Analysis of **TABLE 2.2** above suggests that the Folkestone one way system junctions are predicted to operate within capacity in the 2010 Baseline scenario. It is noted however; that two of the junctions (Foresters Way / Grace Hill and A260 The Tram Road / A260 Harbour Street)

are predicted to operate beyond their ideal operational capacity, but within their theoretical capacities in the PM and AM peak hours of the 2010 Baseline scenario, respectively.

15. A259 Lydd Road / B2075 Romney Road

- 2.2.45 This priority junction is located to the west of New Romney, providing access to Lydd and Lydd Airport. The junction consists of single lane approaches, with a flare for vehicles turning left from Romney Road onto Lydd Road.
- 2.2.46 PICADY was used to assess the operation of the junction in the 2010 Baseline scenario. The results of the analysis suggest that the junction is predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.

16. A259 High Street / B2071 Station Road

- 2.2.47 This signalised junction is located in the centre of New Romney, providing access from the High Street towards the Romney, Hythe & Dymchurch Railway, and Littlestone-on-Sea. LinSig was used to assess the operation of the junction in the 2010 Baseline scenario.
- 2.2.48 The results of the analysis suggest that the junction is predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.

17. A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road

- 2.2.49 This roundabout junction is located to the south of Hawkinge, and provides access to / from the A20 eastbound. The junction consists of five arms, one of which is an exit only arm to the A20.
- 2.2.50 ARCADY was used to assess the operation of the junction in the 2010 Baseline scenario, with the results of the analysis suggesting that the junction is predicted to operate within its theoretical capacity in both the AM and PM peak hours.

18. A260 Alkham Valley Road / A20

- 2.2.51 This roundabout junction is located to the south of Hawkinge and the A20, providing access to / from the A20 westbound. The junction consists of four arms, one of which is an exit only arm to the A20 westbound.
- 2.2.52 Again, ARCADY was used to assess the operation of the junction. The results of the analysis suggest that the junction is predicted to operate within its theoretical capacity in the AM peak hour of the 2010 Baseline scenario, and within its ideal operational capacity in the PM peak hour.

19. A260 Alkham Valley Road / A260 Canterbury Road

- 2.2.53 This priority junction is located to the south of Hawkinge, providing access to eastern Folkestone, and Alkham. A right turn lane is provided for vehicles wishing to turn into Alkham Valley Road from the Folkestone direction. Additionally, a short flare is provided at the Alkham Valley Road approach, allowing both left turn and right turn lanes onto the A260 Canterbury Road.
- 2.2.54 PICADY was used to assess the operation of the junction in the 2010 Baseline scenario. The results of the analysis suggest that the junction is predicted to operate over capacity in both the AM and PM peak hours of this scenario. It is anticipated that junction improvements could be

required at this location, to accommodate the existing traffic demand, as well as that which may be associated with background traffic growth prior to the addition of any development related traffic.

2.3 2010 Baseline Highway Analysis Summary

2.3.1 As discussed above, the majority of junctions and links considered within this assessment are predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario. Several junctions have been identified however, that operate beyond their ideal operational capacity. **TABLE 2.3** presents a summary of the results for the 2010 Baseline Scenario.

TABLE 2.3 2010 Baseline Scenario Results Summary

Junction ID	Junction	AM Peak Hour (0800-0900)	PM Peak Hour (1700-1800)
1	M20 Junction 11	✓✓	✓✓
2	M20 Junction 12	✓✓	✓✓
3(a)	M20 Junction 13 – Northern Roundabout	✓✓	✓✓
3(b)	M20 Junction 13 – Southern Roundabout	✓✓	✓✓
4(a)	A20 / A261 / Stone Street – Ashford Rd / Hythe Rd	✓✓	✓✓
4(b)	A20 / A261 / Stone Street – Ashford Rd / Stone Street	✓	✓✓
5	Lympne Hill Link Assessment only	✓✓	✓✓
6	A259 / A261 Scanlons Bridge	N/A	✓✓
7	Horn Street, at railway bridge – Link Assessment only	✓✓	✓✓
8	Cheriton High Street / A20 Cheriton High Street (towards M20 J12)	x	x
9	Horn Street through Horn Street Village Link Assessment only	✓✓	✓✓
10	A2034 Cheriton Road / A20 Cherry Garden Avenue / B2064 Beachborough Road	✓	✓
11	B2064 Shorncliffe Road / Beachborough Road	✓✓	✓✓
12	A259 Sandgate High Street Link Assessment only	✓✓	✓✓
13	A2034 Cheriton Road / A259 Radnor Park Road	✓✓	✓✓
14	Folkestone One Way System:		
	Middleburg Square / Cheriton Gardens	✓✓	✓✓
	Foresters Way / Grace Hill	✓✓	✓
	Grace Hill / Foord Road / New Street	✓✓	N/A
	Tontine Street / A2033 Dover Road	✓✓	✓✓
	A260 The Tram Road / A260 Harbour Street	✓	✓✓
15	A259 Lydd Road / B2075 Romney Road	✓✓	✓✓
16	A259 High Street / B2071 Station Road	✓✓	✓✓
17	A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road	✓	✓
18	A260 Alkham Valley Road / A20	✓	✓✓
19	A260 Alkham Valley Road / A260 Canterbury Road	x	x

✓✓ = predicted to operate within ideal operational capacity; ✓ = predicted to operate within theoretical capacity; x = predicted to operate over capacity; N/A = traffic data unavailable

2.4 Accidents

2.4.1 In addition to an analysis of the existing operation of the highway network, a review has been undertaken of the recent accident record within the District. Personal Injury Accident (PIA) data was obtained for the most recent five year period from KCC, with the information indicating the severity, location and cause of each accident. In terms of severity, each accident has been recorded by the Police as either slight, serious or fatal in severity.

2.4.2 As presented in **FIGURE 2.2**, each of the reported accidents has been plotted onto a map of the district. A total of 1477 accidents were recorded over the five year period of January 2005 to December 2009. **TABLE 2.4** summarises the accidents, in terms of severity.

TABLE 2.4 Summary of Accidents, by Severity

Severity	Number of accidents
Fatal	29
Serious	164
Slight	1284
TOTAL	1477

2.4.3 As illustrated in **FIGURE 2.2**, there are clear location trends of accidents along the highway corridors within the District. The accidents within these corridors have been analysed and summarised below. It should be noted that due to the number of reported accidents, this analysis has focused on those reported as fatal or serious in severity for the purposes of this high level review. Additionally, a review has been undertaken of the accidents occurring within the major centres of the District. **FIGURE 2.3** presents the location of each area of analysis.

A20 Ashford Road & A261 Hythe Road Corridor

2.4.4 There were a total of 33 reported accidents in this corridor, within the 5 year study period. 27 of these were reported as slight in severity, 3 as serious and 3 as fatal.

2.4.5 All of the accidents reported as serious or fatal in severity occurred at different locations within this corridor. Two of these accidents involved motorbikes, and a further two involved drivers losing control. There was no common connection for the remaining incidents reported as serious or fatal in severity.

A259 Dymchurch Road & A259 Seabrook Road

2.4.6 For the purposes of this review, the A259 corridor considers those sections of the A259 outside of Hythe, New Romney and Folkestone (refer to **FIGURE 2.3**). A total of 107 accidents were reported on this corridor within the study period, 5 of which were fatal and 11 serious.

2.4.7 All of the accidents reported as fatal occurred at different locations within the corridor. Two of the accidents involved vehicles overtaking; however there are no common causation factors for the remaining three fatal accidents.

2.4.8 All of the accidents reported as serious in severity also occurred at different locations within the corridor. Four of the accidents occurred at junctions along the A259, four involved drivers losing control and three involved pedestrians (two of these accidents involved buses).

A260

- 2.4.9 There were a total of 64 accidents reported on this corridor within the study period; one of which was fatal and ten were recorded as serious in severity. The fatal accident involved a driver losing control and striking a tree.
- 2.4.10 Three of the accidents recorded as serious in severity occurred at a similar location, at the junction of the A260 with Crete Road East / West. Two of these accidents involved vehicles exiting the junction, and all of these accidents involved motorcycles.
- 2.4.11 The remaining accidents reported as serious in severity occurred at different locations within this corridor. Two of these accidents involved pedestrians being struck by vehicles, and another two involved rear shunts. There were no common causation factors for the remaining accidents.

B2068 Stone Street

- 2.4.12 There were a total of 55 accidents reported within this corridor, eight of which were recorded as serious in severity, and none as fatal.
- 2.4.13 There are several clusters of accidents reported as serious in severity. Two accidents occurred at a bend in the road, to the north of the Church Lane (involving vehicles colliding at the bend). A further three accidents occurred on a straight stretch of road, in proximity of the Thorn Lane / Stone Street / Curtis Lane junction. All of these accidents involved drivers losing control (two due to driving in wet conditions).
- 2.4.14 Another two accidents occurred at the Thorn Lane / Stone Street / Curtis Lane junction, one of which involved driving under the influence of alcohol, and the other involving a car and motorcycle colliding on a narrow section of Curtis Lane. The remaining accident reported as serious in severity was caused by a collision at a junction.

M20

- 2.4.15 A total of 129 accidents were reported on the M20 corridor during the five year study period. Two of these accidents were reported as fatal and 17 as serious in severity. The accidents reported as fatal in severity involved drivers losing control, and rear shunts, respectively.
- 2.4.16 Six of the accidents reported as serious in severity occurred in proximity of Junction 12 of the M20. Two of these accidents involved vehicles colliding on the roundabout, and four involved drivers losing control of their vehicles.
- 2.4.17 Eight accidents involved vehicles colliding or drivers losing control on the motorway, and one involved a pedestrian running into the carriageway. Two of these accidents occurred during Operation Stack.

Folkestone

- 2.4.18 There were a total of 554 reported accidents within the Folkestone study area, over the five year study period. Three of these were recorded as fatal in severity, and 46 as serious. Analysis of **FIGURE 2.3** suggests that there are a higher number of accidents along the key highways into and out of the town centre; however, this is anticipated to be related to the level of traffic following these routes.

- 2.4.19 The accidents reported as fatal in severity occurred at different locations, to the north of Folkestone town centre. Two of these accidents involved drivers losing control, and another occurred during an overtaking manoeuvre.
- 2.4.20 There are no specific clusters of the 46 accidents recorded as serious in severity. It should be noted however, that 23 (50%) of these 46 accidents involved pedestrians. Of the remaining accidents, 10 involved drivers losing control of their vehicles, 4 involved bicycles, 4 occurred during junction manoeuvres, 4 involved vehicles colliding and one involved a vehicle overtaking.

Hythe

- 2.4.21 There were 33 reported accidents in central Hythe during the study period; one of which was reported as fatal, and three as serious in severity. The fatal accident involved a vehicle striking a pedestrian.
- 2.4.22 Of the three accidents reported as serious in severity, two involved pedestrians and one involved a driver falling asleep at the wheel.

New Romney, Lydd and Hinterland

- 2.4.23 As presented in **FIGURE 2.3**, this area consists of the towns of New Romney, Lydd, and the area in proximity to the A259 and A2070. There were a total of 199 recorded accidents within the study area, over the 5 year study period. Ten of these were reported as fatal in severity, 41 as serious and 148 as slight.
- 2.4.24 Two of the accidents reported as fatal in severity occurred at similar locations, on the A2070 to the north of Brenzett. Both of these accidents involved drivers losing control of their vehicles, although the vehicles were travelling in opposite directions. The remaining 8 accidents that were reported as fatal in severity occurred at different locations. Three of these involved pedestrians, three involved loss of control of the vehicle, and the final two accidents involved vehicles colliding and an overtaking manoeuvre, respectively.
- 2.4.25 Four of the accidents reported as serious in severity occurred at the A259 Lydd Road / B2075 Romney Road junction. All of these accidents involved vehicles turning at the junction. A further two accidents occurred at a similar location on the A259 Lydd Road, to the immediate west of New Romney. Both of these accidents involved motorcycles.
- 2.4.26 Two accidents also occurred at the junction of the A259 Dymchurch Road / B2071 Station Road junction in New Romney. Both of these accidents involved pedestrians running into the carriageway at the signalised crossing.
- 2.4.27 The remaining accidents recorded as serious in severity occurred at separate locations. 17 of these accidents involved drivers losing control, 3 involved vehicles colliding, 3 involved pedestrians, 2 involved bicycles and a further 2 involved overtaking manoeuvres.

Other

- 2.4.28 Outside of the above corridors and areas (as presented in **FIGURE 2.3**), a further 303 accidents were reported within the five year study period. Four of these were fatal, 25 were recorded as serious in severity, and the remaining 274 as slight in severity.
- 2.4.29 All of the accidents reported as fatal in severity occurred at different locations. Two of these involved cyclists, and two involved drivers losing control of their vehicle.

- 2.4.30 Of the 25 accidents reported as serious in severity, ten involved drivers losing control of their vehicle, six occurred at junctions, three involved pedestrians, three involved overtaking and the final three accidents involved vehicles colliding.

2.5 Accident Analysis Summary

- 2.5.1 A review has been undertaken of the recent accident record of the highways within the Shepway District. PIA data was obtained from KCC for the five year period from January 2005 to December 2009, with a total of 1477 accidents being reported within this study period.
- 2.5.2 Further analysis has been undertaken of the accidents reported as either fatal or severe in severity, according to their location within the District. This has identified where clusters of accidents have taken place, and the causes of these accidents.
- 2.5.3 A more detailed analysis of the accidents within the District would be required to identify specific locations where road safety improvements may be required; however this high level review indicates that the causes of the reported accidents are consistent with the respective road type and conditions found within the District. It should be noted however; that approximately 50% of the accidents reported as serious in severity within the Folkestone area involved pedestrians.
- 2.5.4 An increase in traffic, associated with both natural growth and additional traffic generated by committed / Strategic Site developments, may result in an increase in the number of reported accidents within the District. It is anticipated that any transport investigations in relation to individual committed developments and Strategic Site allocations will include an analysis of the accident record in the vicinity of the site. This will highlight in greater detail any issues of concern, and should identify any potential safety improvement measures, as appropriate. As part of this process, it is recommended that accident rates for key junctions are derived and compared against typical accident rates (as discussed in the DfT's Cost Benefit Analysis programme – COBA) for similar junction types, as appropriate.

3 Future Year Operation of the Highway Network

3.1 Introduction

- 3.1.1 As discussed, an analysis has been undertaken of the existing operation of the highway network within Shepway. This has identified that the majority of the identified junctions are predicted to operate within capacity in both the AM and PM peak hours of the 2010 Baseline scenario.
- 3.1.2 In order to calculate the potential impact of both background traffic growth (including planned / committed developments) and the Strategic Site allocations on the highway network, a future year analysis has also been undertaken. This has considered both the predicted change in highway operation from the base year (2010), and the potential impact of the traffic associated with the Strategic Site allocations on the highway network in the future.
- 3.1.3 The Core Strategy is being developed for the period up to the year 2026, and as such, the following two scenarios have been considered as part of this assessment:
- 2026 Do Minimum – i.e. 2010 Baseline traffic + traffic growth + committed development traffic
 - 2026 Do Something – i.e. 2026 Do Minimum + traffic associated with Strategic Site allocations
- 3.1.4 The **Spreadsheet Model Report** provides further detail concerning the elements above; however, for clarification:
- Traffic Growth = the anticipated background growth in traffic within the District, calculated according to local planning data forecasts and national forecasts. This has been adjusted to take into consideration large scale developments (such as the Core Strategy allocations, which are contained within the planning data forecasts), so as to avoid the double counting of trips.
 - Committed Development Traffic = additional traffic associated with committed developments (i.e. those which have received planning consent, but are yet to be built) within the District. This has been agreed with SDC, KCC and the HA, and in some cases includes developments that are currently going through the planning process, by agreement with the stakeholders.
 - Strategic Site Allocations Traffic = residential and employment related traffic associated with the Strategic Site allocations. The level of traffic has been calculated according to the anticipated level of development within each individual site allocation, and projected land use within each of these sites.
- 3.1.5 It should be noted that where possible a 'worst case scenario' has been used when calculating the level of potential additional traffic on the highway network. For example, it has been assumed that all of the Strategic Site allocations will be built in the future (by the year 2026); whereas in reality, this may not be the case. Additionally, measures such as travel planning and the promotion of sustainable travel have not been considered (as this could potentially reduce the overall level of traffic being generated by development sites, and within the District in general).

3.1.6 Furthermore, as a worst case, it has been assumed that the configuration of each identified link and junction will remain the same in the future years. It is anticipated however, that improvements may take place at locations within the District that are recognised as suffering from congestion, before the year 2026. This will serve to improve the operation of the highway network at these locations, and it is considered that the conclusions of this assessment will help to inform this process.

3.1.7 A summary of the operation of the highway network in the future year scenarios is provided below, with detailed junction capacity analysis results presented in **APPENDIX B** (2026 Do Minimum Scenario and **APPENDIX C** (2026 Do Something Scenario).

3.2 2026 Do Minimum Scenario

3.2.1 It is anticipated that the general operation of the highway network will become more strained in the future, due to the natural growth in traffic on the network, and additional traffic associated with committed developments. Further analysis has therefore been undertaken on each of the identified links and junctions discussed in **Section 2** of this document, to establish and compare the predicted operation of the highway network in the 2026 Do Minimum scenario.

3.2.2 The results of the analysis are summarised in **TABLE 3.1** below.

TABLE 3.1 Comparison of 2010 Baseline and 2026 Do Minimum Analysis

Junction ID	Junction	2010 Baseline		2026 Do Minimum	
		AM Peak Hour (0800-0900)	PM Peak Hour (1700-1800)	AM Peak Hour (0800-0900)	PM Peak Hour (1700-1800)
1	M20 Junction 11	✓✓	✓✓	✓✓	✓✓
2	M20 Junction 12	✓✓	✓✓	✓✓	✓✓
3(a)	M20 Junction 13 – Northern Roundabout	✓✓	✓✓	✓✓	✓✓
3(b)	M20 Junction 13 – Southern Roundabout	✓✓	✓✓	✓✓	✓✓
4(a)	A20 / A261 / Stone Street – Ashford Rd / Hythe Rd	✓✓	✓✓	x	x
4(b)	A20 / A261 / Stone Street – Ashford Rd / Stone Street	✓	✓✓	x	✓✓
5	Lympne Hill Link Assessment only	✓✓	✓✓	✓✓	✓✓
6	A259 / A261 Scanlons Bridge	N/A	✓✓	N/A	✓
7	Horn Street, at railway bridge – Link Assessment only	✓✓	✓✓	✓	✓✓
8	Cheriton High Street / A20 Cheriton High Street (towards M20 J12)	x	x	x	x
9	Horn Street through Horn Street Village Link Assessment only	✓✓	✓✓	✓✓	✓✓
10	A2034 Cheriton Road / A20 Cherry Garden Avenue / B2064 Beachborough Road	✓	✓	x	x
11	B2064 Shornccliffe Road / Beachborough Road	✓✓	✓✓	✓	✓✓
12	A259 Sandgate High Street Link Assessment only	✓✓	✓✓	x	✓
13	A2034 Cheriton Road / A259 Radnor Park Road	✓✓	✓✓	✓✓	✓✓
14	Folkestone One Way System:				
	Middleburg Square / Cheriton Gardens	✓✓	✓✓	✓✓	✓✓
	Foresters Way / Grace Hill	✓✓	✓	✓✓	x
	Grace Hill / Foord Road / New Street	✓✓	N/A	x	N/A
	Tontine Street / A2033 Dover Road	✓✓	✓✓	✓	✓✓
	A260 The Tram Road / A260 Harbour Street	✓	✓✓	x	✓
15	A259 Lydd Road / B2075 Romney Road	✓✓	✓✓	x	x
16	A259 High Street / B2071 Station Road	✓✓	✓✓	✓	x
17	A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road	✓	✓	x	x
18	A260 Alkham Valley Road / A20	✓	✓✓	x	x
19	A260 Alkham Valley Road / A260 Canterbury Road	x	x	x	x

✓✓ = predicted to operate within ideal operational capacity; ✓ = predicted to operate within theoretical capacity; x = predicted to operate over capacity; N/A = traffic data unavailable

3.2.3 As presented in **TABLE 3.1**, the operation of a number of the identified links and junctions is predicted to deteriorate in the future, with some locations predicted to operate over capacity when previously they operated within their ideal operational capacity.

3.2.4 Further detail concerning those locations predicted to operate over capacity is provided below.

4(a). A20 / A261 / Stone Street – Ashford Rd / Hythe Rd

3.2.5 This junction is predicted to operate within capacity in the 2010 Baseline scenario, but over capacity in both the AM and PM peak hours of the 2026 Do Minimum scenario. As discussed above, PICADY has been used to assess the operation of this junction; however the results should be treated with caution due to the non standard geometric layout of the junction, and further analysis could therefore be necessary.

3.2.6 The results of the analysis suggest that the A261 Hythe Road approach will operate beyond capacity in both the AM and PM peak hours. The remaining approaches are predicted to operate within capacity, however.

4(b). A20 / A261 / Stone Street – Ashford Rd / Stone Street

3.2.7 The analysis suggests that this junction will operate over capacity in the AM peak hour of the 2026 Do Minimum scenario. It should be noted that it was predicted to operate within its theoretical capacity (but beyond its ideal operational capacity) in the 2010 Baseline scenario.

3.2.8 The detailed results suggest that the Stone Street approach will operate beyond capacity in the 2026 Do Minimum scenario. The remaining approaches are predicted to operate within capacity, however.

3.2.9 It is suggested that further investigation is undertaken of this junction complex (including the A20 Ashford Road / A261 Hythe Road junction), in order to identify if additional capacity can be provided. This may involve the implementation of signals at this location.

8. Cheriton High Street / A20 Cheriton High Street

3.2.10 This junction is predicted to operate beyond capacity in both the 2010 Baseline and 2026 Do Minimum scenarios. The PICADY analysis suggests that both the Cheriton High Street (west) and A20 Cheriton High Street (north) will operate beyond capacity in the AM and PM peak hours.

3.2.11 It is suggested that further investigation is undertaken to establish if additional capacity is available at the junction; again, this may involve a revised junction geometry and / or type of junction.

10. A2034 Cheriton Road / A20 Cherry Garden Avenue / B2064 Beachborough Road

3.2.12 This junction is predicted to operate within its theoretical capacity in the 2010 Baseline scenario, but beyond capacity in the AM and PM peak hours of the 2026 Do Minimum scenario.

3.2.13 Analysis of the results suggests that the A20 Cherry Garden Avenue, A2034 Cheriton Road (right turn), and the B2064 Beachborough Road approaches are predicted to operate beyond capacity in the AM peak hour, and the A20 Cherry Garden Avenue (left turn), A2034 Cheriton

Road, and the B2064 Beachborough Road approaches are predicted to operate beyond capacity in the PM peak hour of the 2026 Do Minimum scenario.

- 3.2.14 As the junction is signal controlled, it is suggested that in the first instance, investigations are undertaken concerning possible changes to the signal timing and phasing / staging, in order to accommodate the increase in traffic from the 2010 Baseline scenario to the 2026 Do Minimum scenario. Should this not be possible, changes to the geometry of the junction could be investigated, in order to release any spare capacity available at this location.

12. A259 Sandgate High Street Link Assessment only

- 3.2.15 This link is predicted to operate within capacity in the 2010 Baseline scenario, but beyond capacity in the AM peak hour of the 2026 Do Minimum scenario. Due to the nature and location of the link, it is unlikely that additional capacity could be generated by widening the road; however, investigations could be undertaken involving a change in the speed limit (e.g. a reduction in speed limit could result in vehicles being able to move more freely throughout the link), role of on-street parking and junctions that connect to the High Street.

14. Foresters Way / Grace Hill

- 3.2.16 This junction is predicted to operate within capacity in the 2010 Baseline scenario, but beyond capacity in the PM peak hour of the 2026 Do Minimum scenario. Analysis of the detailed results indicates that the Foresters Way approach is predicted to operate over capacity in the 2026 Do Minimum scenario. All other approaches are predicted to operate within capacity however.
- 3.2.17 It is suggested that further investigations may be required in order to identify if additional capacity can be provided at this junction.

14. Grace Hill / Foord Road / New Street

- 3.2.18 This junction is predicted to operate within capacity in the 2010 Baseline scenario, but beyond capacity in the AM peak hour of the 2026 Do Minimum scenario. Analysis of the detailed results suggests that the Foord Road approach is predicted to operate beyond capacity in the 2026 Do Minimum scenario.
- 3.2.19 It is suggested that further investigations are therefore undertaken to establish how capacity may be improved at this junction.

14. A260 The Tram Road / A260 Harbour Street

- 3.2.20 This junction is predicted to operate within its theoretical and ideal capacities in the AM and PM peak hours of the 2010 Baseline scenarios, respectively. However, the junction is predicted to operate beyond capacity in the AM peak hour of the 2026 Do Minimum scenario. Analysis of the detailed results suggests that the A260 The Tram Road approach is predicted to operate beyond capacity in this scenario.
- 3.2.21 It should be noted that due to the non-standard configuration of the junction, the results of the analysis should be treated with caution. However, it is suggested that further work is undertaken, investigating how the overall capacity of the junction can be improved. This may include a revised junction arrangement at this location.

15. A259 Lydd Road / B2075 Romney Road

- 3.2.22 This junction is predicted to operate within capacity in the 2010 Baseline scenario, but beyond capacity in the 2026 Do Minimum scenario, in both the AM and PM peak hours. Analysis of the detailed results indicates that the B2075 Romney Road approach is predicted to operate over capacity in the AM and PM peak hours of the 2026 Do Minimum scenario, whilst the A259 Lydd Road is predicted to operate within capacity at these times.
- 3.2.23 It is suggested that further analysis is undertaken, to investigate if additional capacity can be delivered at this junction. It is anticipated that this may include the widening of the B2075 Romney Road approach, with an increased flare for those vehicles wishing to turn left onto the A259 Lydd Road, subject to land ownership constraints.

16. A259 High Street / B2071 Station Road

- 3.2.24 This signalised junction is predicted to operate within capacity in the 2010 Baseline scenario, but over capacity in the PM peak hour of the 2026 Do Minimum scenario. Further analysis indicates that all approaches to the junction are predicted to operate beyond capacity in this situation, with the exception of the Church Road approach, which is predicted to operate within its theoretical capacity (but beyond its ideal operational capacity).
- 3.2.25 Again, further analysis should be undertaken to investigate if additional capacity is deliverable at this junction. This may involve changes to the junction geometry and signal timings / phasing.

17. A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road

- 3.2.26 This junction is predicted to operate within its theoretical capacity in the 2010 Baseline scenario, but over capacity in the 2026 Do Minimum scenario. Detailed analysis indicates that the A260 Spitfire Way and the A20 approaches are predicted to operate over capacity in the AM peak hour, with the A20 approach also predicted to operate over capacity in the PM peak hour of the 2026 Do Minimum scenario.
- 3.2.27 Additional analysis may identify areas where additional capacity is available at this junction. This may include changes to the junction geometry and / or approach road widths.

18. A260 Alkham Valley Road / A20

- 3.2.28 This roundabout junction is predicted to operate within capacity in the 2010 Baseline scenario, but over capacity in the 2026 Do Minimum scenario. Analysis of the detailed results indicate that the Alkham Valley Road west approach is predicted to operate over capacity in both the AM and PM peak hours of the 2026 Do Minimum scenario, with all other approaches operating within their ideal operational capacity.
- 3.2.29 Further investigations may be able to identify if additional capacity is available at this location. This may involve changes to the junction geometry, and include investigations into the provision of a dedicated lane for those vehicles wishing to access the A20 westbound.

19. A260 Alkham Valley Road / A260 Canterbury Road

- 3.2.30 This priority junction is predicted to operate beyond capacity in both the AM and PM peak hours of the 2010 Baseline and 2026 Do Minimum scenarios. Analysis of the detailed results suggest that the Alkham Valley Road and A260 Canterbury Road south approaches are predicted to operate beyond capacity in the AM and PM peak hours of the 2026 Do Minimum scenario.

- 3.2.31 It is suggested that further investigations are undertaken, concerning the operation of the junction, and possible junction improvements at this location. This may include the implementation of signals, or changes to the junction geometry.

3.3 2026 Do Something Scenario

- 3.3.1 The vehicular traffic associated with the Strategic Site allocations was added to the highway network, and an assessment was then undertaken of the operation of the highway network in the 2026 Do Something scenario.
- 3.3.2 **TABLE 3.2** presents a comparison of the predicted operation of the highway network in the 2026 Do Something scenario, when compared to the 2010 Baseline and 2026 Do Minimum scenarios, as previously discussed. The detailed junction capacity results for the 2026 Do Something scenario are presented in **APPENDIX C** of this document.

TABLE 3.2 Comparison of 2010 Baseline, 2026 Do Minimum and 2026 Do Something Scenario Analysis

Junction ID	Junction	2010 Baseline		2026 Do Minimum		2026 Do Something	
		AM Peak Hour (0800-0900)	PM Peak Hour (1700-1800)	AM Peak Hour (0800-0900)	PM Peak Hour (1700-1800)	AM Peak Hour (0800-0900)	PM Peak Hour (1700-1800)
1	M20 Junction 11	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
2	M20 Junction 12	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
3(a)	M20 Junction 13 – Northern Roundabout	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
3(b)	M20 Junction 13 – Southern Roundabout	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
4(a)	A20 / A261 / Stone Street – Ashford Rd / Hythe Rd	✓✓	✓✓	x	x	x	x
4(b)	A20 / A261 / Stone Street – Ashford Rd / Stone Street	✓	✓✓	x	✓✓	x	x
5	Lympne Hill Link Assessment only	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
6	A259 / A261 Scanlons Bridge	N/A	✓✓	N/A	✓	N/A	x
7	Horn Street, at railway bridge Link Assessment only	✓✓	✓✓	✓	✓✓	✓	✓
8	Cheriton High Street / A20 Cheriton High Street (towards M20 J12)	x	x	x	x	x	x
9	Horn Street through Horn Street Village Link Assessment only	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
10	A2034 Cheriton Road / A20 Cherry Garden Avenue / B2064 Beachborough Road	✓	✓	x	x	x	x
11	B2064 Shornccliffe Road / Beachborough Road	✓✓	✓✓	✓	✓✓	✓	✓✓
12	A259 Sandgate High Street Link Assessment only	✓✓	✓✓	x	✓	x	x
13	A2034 Cheriton Road / A259 Radnor Park Road	✓✓	✓✓	✓✓	✓✓	✓	✓
14	Folkestone One Way System:						
	Middleburg Square / Cheriton Gardens	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	Foresters Way / Grace Hill	✓✓	✓	✓✓	x	✓✓	x
	Grace Hill / Foord Road / New Street	✓✓	N/A	x	N/A	x	N/A
	Tontine Street / A2033 Dover Road	✓✓	✓✓	✓	✓✓	✓	✓✓
	A260 The Tram Road / A260 Harbour Street	✓	✓✓	x	✓	x	✓
15	A259 Lydd Road / B2075 Romney Road	✓✓	✓✓	x	x	x	x
16	A259 High Street / B2071 Station Road	✓✓	✓✓	✓	x	x	x
17	A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road	✓	✓	x	x	x	x
18	A260 Alkham Valley Road / A20	✓	✓✓	x	x	x	✓
19	A260 Alkham Valley Road / A260 Canterbury Road	x	x	x	x	x	x

✓✓ = predicted to operate within ideal operational capacity; ✓ = predicted to operate within theoretical capacity; x = predicted to operate over capacity; N/A = traffic data unavailable

- 3.3.3 As presented in **TABLE 3.2**, the results of the 2026 Do Something analysis are similar to those of the 2026 Do Minimum analysis. However; there are a number of links / junctions that are expected to experience a reduction in operational efficiency, when the vehicular traffic associated with the Strategic Sites is added to the highway network. Those locations where the identified links / junctions are predicted to operate over capacity following the addition of the Strategic Site allocations are summarised below.

4(b). A20 / A261 / Stone Street – Ashford Rd / Stone Street

- 3.3.4 This junction is predicted to operate within capacity in the PM peak hour of the 2026 Do Minimum scenario, but beyond capacity in the PM peak hour of the 2026 Do Something scenario. (Additionally, the junction is predicted to operate beyond capacity in the AM peak hour in both the 2026 Do Minimum and 2026 Do Something scenarios).
- 3.3.5 Analysis of the detailed results suggests that the Stone Street approach is predicted to operate over capacity in the AM and PM peak hours of the 2026 Do Something scenario. It should be noted that these results should be treated with caution, due to the non-standard configuration of the junction (including the A20 Ashford Road / A261 Hythe Road junction).
- 3.3.6 The Strategic Sites in the immediate vicinity of the junction are Folkestone Racecourse, the former airfield at Lympe and land at Sellindge. It is recommended that further investigations are undertaken in relation to improving the operation of the junction, should the Strategic Site allocations be implemented in the vicinity of this junction.

6. A259 / A261 Scanlons Bridge

- 3.3.7 This signalised junction complex is predicted to operate within its theoretical capacity in the PM peak hour of the 2026 Do Minimum scenario, but beyond capacity in the 2026 Do Something scenario. It should be noted that it has not been possible to assess the operation of the junction complex in the AM peak hour, as traffic data is unavailable for this.
- 3.3.8 Analysis of the detailed results indicate that the A259 Dymchurch Road east right turn, and A259 Dymchurch road west (left turn only) approaches are predicted to operate beyond capacity in the 2026 Do Something scenario. It is suggested that improvements may be required at this location, should the Strategic Site allocations be implemented by the year 2026.

12. A259 Sandgate High Street Link Assessment only

- 3.3.9 The analysis indicates that this link is predicted to operate beyond capacity in the AM peak hour of both the 2026 Do Minimum and 2026 Do Something scenarios. The link is also predicted to operate within capacity in the PM peak hour of the 2026 Do Minimum scenario, but beyond capacity in the same peak hour of the 2026 Do Something scenario.
- 3.3.10 Further analysis (assuming a capacity of 750 vehicles per hour in each direction) indicates that both the eastbound and westbound carriageways are anticipated to operate beyond capacity in the PM peak of the 2026 Do Something scenario. As discussed above, it is therefore suggested that further investigations are undertaken, relating to increasing the capacity of the link. Due to the nature of this link, this is unlikely (nor desirable) to include the widening of the carriageway, however may involve changes to the speed limit, or other forms of traffic management.

16. A259 High Street / B2071 Station Road

- 3.3.11 This signal junction is predicted to operate beyond capacity in the PM peak hour of both the 2026 Do Minimum and 2026 Do Something scenarios. However; the addition of the traffic associated with the Strategic Site allocations is anticipated to reduce the operational efficiency of the junction between the AM peak of the 2026 Do Minimum and 2026 Do Something scenarios, such that the junction is predicted to operate over capacity in the 2026 Do Something scenario.
- 3.3.12 Analysis of the detailed results indicate that the A259 Dymchurch Road and B2071 Station Road approaches are predicted to operate over capacity in the AM peak hour of the 2026 Do Something scenario.
- 3.3.13 The New Romney Strategic Site is located in the vicinity of this junction. It is therefore suggested that should any improvements be implemented under the 2026 Do Minimum scenario, these are designed and implemented in such a way that they are able to accommodate the additional traffic associated with the Strategic Site allocations, or can be supplemented, as necessary.

18. A260 Alkham Valley Road / A20

- 3.3.14 **TABLE 3.2** indicates that the operation of this junction is predicted to improve, when comparing the PM peak hour of the 2026 Do Minimum and 2026 Do Something scenarios. This is due to the adjustment of the growth factor, which occurs when traffic associated with the Strategic Sites is added to the highway network.
- 3.3.15 As discussed above, the growth factor has been calculated according to local planning data and national forecasts. The growth factor is then adjusted to take into consideration the traffic associated with the Strategic Sites (under the Do Something scenario). Therefore, in the Do Minimum scenario, a 'blanket' growth factor is applied to all traffic on the highway network within the District; whereas in the Do Something scenario, the location of each Strategic Site allocation is taken into consideration, resulting in a more accurate estimation of the change in traffic at specific locations on the highway network, and a change in the growth factor applied across the District as a whole.
- 3.3.16 As the overall growth factor has been adjusted (so as to avoid double counting of trips associated with the Strategic Site allocations), this may lead to both a reduction in traffic at specific locations, and revised turning movements at junctions on the highway network, when comparing the Do Something and Do Minimum scenarios.
- 3.3.17 Therefore, the operation of the A260 Alkham Valley Road / A20 junction is predicted to improve when comparing the 2026 Do Minimum and 2026 Do Something scenarios. For reference, the Hawkinge Strategic Site is in the immediate vicinity of this junction.

3.4 Summary

- 3.4.1 An analysis has been undertaken, comparing the predicted operation of the identified junctions and links under the 2010 Baseline, 2026 Do Minimum and 2026 Do Something scenarios. **FIGURES 3.1 to 3.3** present the location of each of the identified links and junctions, and associated predicted operation in the 2010 Baseline, 2026 Do Minimum and 2026 Do Something scenarios, respectively.

3.4.2 The analysis indicates that approximately thirteen of the identified junctions / links that are predicted to operate within capacity in either the AM and / or PM peak hours of the 2010 Baseline scenario, are predicted to operate over capacity in the 2026 Do Minimum scenario:

- 4(a). A20 / A261 / Stone Street – Ashford Rd / Hythe Rd
- 4(b). A20 / A261 / Stone Street – Ashford Rd / Stone Street
- 8. Cheriton High Street / A20 Cheriton High Street
- 10. A2034 Cheriton Road / A20 Cherry Garden Avenue / B2064 Beachborough Road
- 12. A259 Sandgate High Street Link Assessment only
- 14. Foresters Way / Grace Hill
- 14. Grace Hill / Foord Road / New Street
- 14. A260 The Tram Road / A260 Harbour Street
- 15. A259 Lydd Road / B2075 Romney Road
- 16. A259 High Street / B2071 Station Road
- 17. A260 Spitfire Way / Canterbury Road / A20 / A260 Canterbury Road
- 18. A260 Alkham Valley Road / A20
- 19. A260 Alkham Valley Road / A260 Canterbury Road

3.4.3 Following this, the addition of traffic associated with the Strategic Site allocations under the 2026 Do Something scenario is predicted to result in four of the identified junctions / links operating over capacity in either the AM / PM peak hour, when they had been predicted to operate within capacity in the 2026 Do Minimum scenario.

- 4(b). A20 / A261 / Stone Street – Ashford Rd / Stone Street
- 6. A259 / A261 Scanlons Bridge
- 12. A259 Sandgate High Street Link Assessment only
- 16. A259 High Street / B2071 Station Road

3.4.4 It is suggested that further investigations are undertaken, concerning potential improvements at the identified junctions, so that they are able to cater not only for the natural growth in traffic, but also the potential additional traffic associated with the Strategic Site allocations. It is recognised however, that all of the Strategic Site allocations may not be brought forward as part of the Core Strategy. More detailed analysis and option testing specifically at certain locations in relation to nearby Strategic Sites is therefore recommended in relation to improvements and investment programmes.

3.4.5 It should be noted that where potential improvements have been highlighted, these are suggestions only, and have not taken into consideration factors such as land ownership and other options / constraints at each specific link or junction.

3.4.6 Finally, it is noted that wherever possible, the worst case scenario has been assumed for each of the junction / link analyses presented in this document. The operation of the highway network in real terms may therefore differ to those results presented herein.

4 Summary

- 4.1.1 URS / SW has been commissioned by SDC to prepare the Transport Strategy for the District. The remit of the Transport Strategy is to include and consider both transport matters which relate to the existing District area, as well as those relating to the Strategic Site allocations and their possible future implications.
- 4.1.2 Following consultation with SDC, KCC and the HA, a spreadsheet model has been developed to inform the Transport Strategy and form a robust evidence base for subsequent investigations. This is discussed in greater detail in the **Modelling Methodology Note**, and subsequent **Spreadsheet Model Report**. The purpose of this **Highways Impact Report** is to apply the information presented in the spreadsheet model, to consider the existing and potential future operation of the highway network within the District, and to estimate the impact (if any) that the Strategic Site allocations may have.
- 4.1.3 As such; using industry standard software, a review was undertaken of the existing operation of the highway network, at agreed locations, under the 2010 Baseline scenario. This suggests that the majority of the identified locations are predicted to operate within their ideal operational capacities in both the AM and PM peak hours of this scenario.
- 4.1.4 A review was also undertaken of the accident record within the District, using Personal Injury Accident data obtained from KCC for the most recent five year period (January 2005 to December 2009). This indicated that there were a total of 1477 accidents reported within Shepway during this time period, of which 29 were reported as fatal, 164 as serious and 1284 as slight in severity.
- 4.1.5 Clusters of accidents were identified according to specific highway corridors, and it is suggested that the general causes of accidents are consistent with the road type and conditions found within the District. However, it was noted that approximately 50% of the accidents reported as serious in severity within the Folkestone area involved pedestrians, and it has been recommended that some local trends are investigated further.
- 4.1.6 In addition, it is anticipated that individual Transport Assessments will be prepared in relation to future developments within the District (including the Strategic Site allocations). These should consider the accident record in the vicinity of the individual sites in greater detail, and suggest safety improvements, including any safety issues in relation to proposed changes to junctions and highway links, as appropriate. This accident analysis could also include a comparison with accident rates contained within the DfT's COBA programme, as appropriate.
- 4.1.7 Following this, the operation of the highway network in the future year was assessed, with comparison being made between the 2010 Baseline, 2026 Do Minimum and 2026 Do Something scenarios. The results of this analysis indicate that thirteen of the identified links and junctions that are predicted to operate within capacity in the 2010 Baseline scenario are predicted to operate beyond capacity in the 2026 Do Minimum scenario. This is anticipated to be a reflection of the natural growth in traffic over the 16 year period between 2010 and 2026.
- 4.1.8 Following this, four of the identified links / junctions that are predicted to operate within capacity in the AM and / or PM peak hours of the 2026 Do Minimum scenario, are predicted to operate beyond capacity in the 2026 Do Something scenario. It is anticipated that this is due to the addition of the traffic associated with the Strategic Site allocations across the District.

- 4.1.9 It is therefore suggested that additional analysis is undertaken to investigate potential improvements to specific links and junctions, as appropriate. This may reduce the impact that the natural growth in traffic could have on the highway network, in addition to the traffic associated with the Strategic Site allocations.
- 4.1.10 Furthermore; whilst this impact assessment has sought to consider the effect of background traffic, committed development traffic and that associated with the Strategic Sites through comparing the model results against pre-determined thresholds, it is noted that other (potentially minor) changes in traffic composition, tidality and overall flow could be of concern to KCC, as the local highway authority.
- 4.1.11 Therefore, in addition to the junctions which have been identified herein as being 'over capacity' in the future scenario, Transport Assessments and Travel Plans will need to be prepared in relation to each of the Strategic Sites. The scope of these will need to be agreed in advance with KCC and SDC, but in each case, the assessments will need to consider in detail, the transport implications of the proposed schemes. The spreadsheet model which has already been prepared should provide a key analytical tool in this process.
- 4.1.12 Finally, it is noted that wherever possible, the worst case scenario has been assumed for each of the junction / link analyses presented in this document. The operation of the highway network in real terms may therefore differ to the results presented herein.



Location of Junctions for Analysis

Figure 2.1



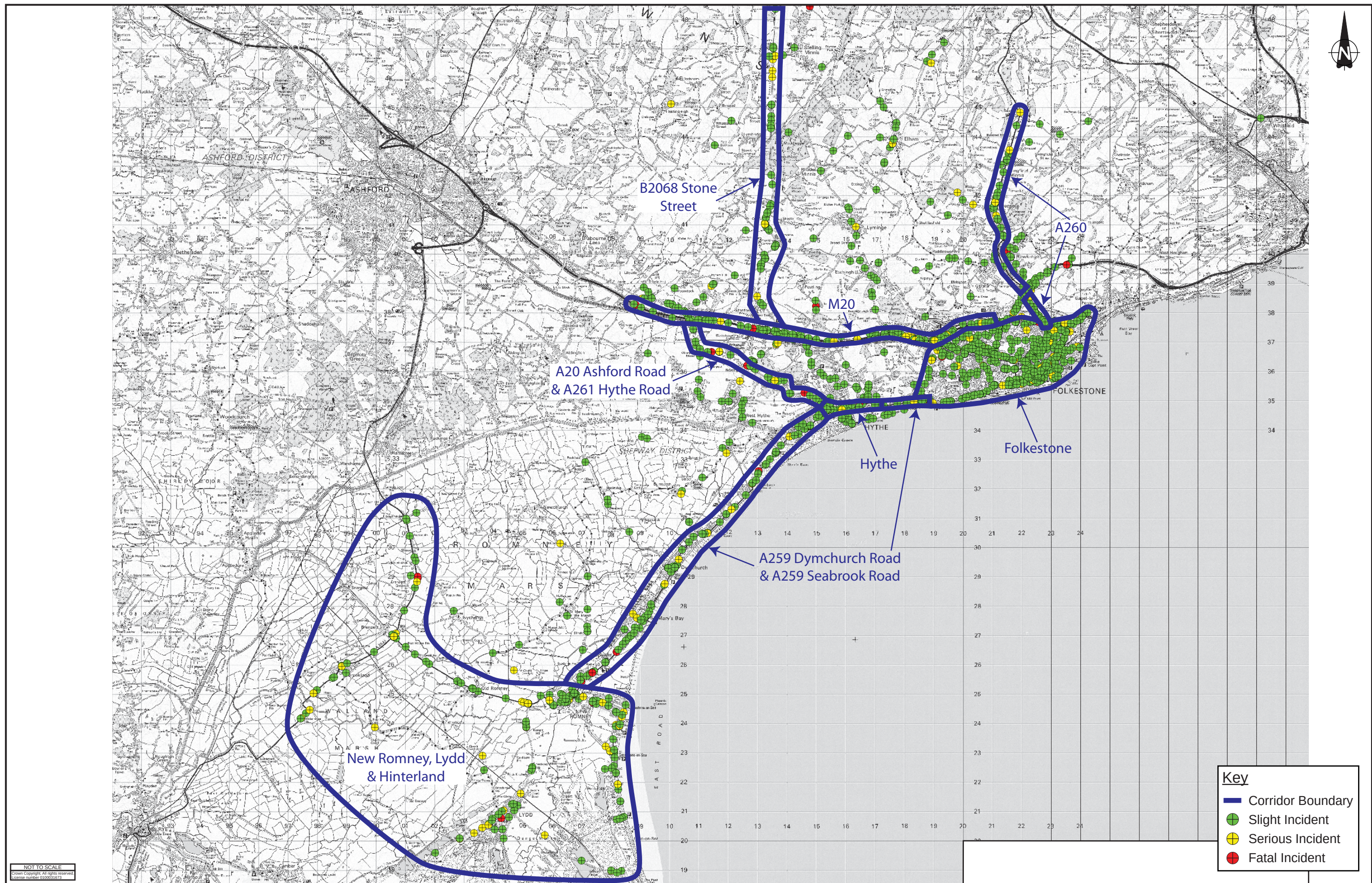


Personal Injury Accident Plot (5 years)



Figure 2.2





Personal Injury Accidents - Analysis Corridors



Figure 2.3





2010 Baseline Highway Operational Analysis

Figure 3.1





2026 Do Minimum Highway Operational Analysis

Figure 3.2





2026 Do Something Highway Operational Analysis

Figure 3.3



A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\A20_Alkhams Valley\
A20_Alkhams Valley 2010 Base PM.vai"
(drive-on-the-left) at 16:02:59 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: A20 / Alkhams Valley
LOCATION:
DATE: 08/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries from Hawkings Mixed Use developmnet TA (Obtained
from SDC planning site)

A20_Alkham valley 2010 Base PM.vao

.INPUT DATA

ARM A - Alkham Valley Rd west

ARM B - A20 Onslip

ARM C - A20 Offslip

ARM D - Alkham Valley Rd east

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I		ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)			I															

I	ARM	A	I	4.10	I	6.90	I	9.10	I	24.40	I	43.70	I	30.0	I	0.632	I	28.075
I	ARM	C	I	7.20	I	8.10	I	11.40	I	24.80	I	43.70	I	24.0	I	0.793	I	41.199
I	ARM	D	I	3.60	I	7.80	I	26.70	I	21.00	I	43.70	I	60.0	I	0.610	I	29.002
I			I															

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

A20_Alkhams valley 2010 Base PM.vao

 .TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A20 / Alkhams valley 2010 Base PM

I I I	I I I	NUMBER OF MINUTES FROM START WHEN			I RATE OF FLOW (VEH/MIN) I		
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
		I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I ARM A	I	15.00	I 45.00	I 75.00	I 11.82	I 17.74	I 11.82
I ARM C	I	15.00	I 45.00	I 75.00	I 1.56	I 2.34	I 1.56
I ARM D	I	15.00	I 45.00	I 75.00	I 3.94	I 5.91	I 3.94

DEMAND SET TITLE: A20 / Alkhams valley 2010 Base PM

		TURNING PROPORTIONS								
		TURNING COUNTS (VEH/HR)								
		(PERCENTAGE OF H.V.S)								

	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				

	16.45 - 18.15									
		ARM A	0.000	0.428	0.000	0.572				
			0.0	405.0	0.0	541.0				
			(0.0)	(12.0)	(0.0)	(10.0)				
		ARM C	0.912	0.000	0.000	0.088				
			114.0	0.0	0.0	11.0				
			(10.0)	(0.0)	(0.0)	(18.0)				
		ARM D	0.378	0.622	0.000	0.000				
			119.0	196.0	0.0	0.0				
			(11.0)	(8.0)	(0.0)	(0.0)				

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

A20_Alkhaym valley 2010 Base PM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.82	23.82	0.496		0.0	1.0	14.1		0.08
ARM C	1.56	31.92	0.049		0.0	0.1	0.8		0.03
ARM D	3.94	25.70	0.153		0.0	0.2	2.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	14.12	23.53	0.600		1.0	1.5	21.3		0.11
ARM C	1.87	30.87	0.060		0.1	0.1	1.0		0.03
ARM D	4.70	25.53	0.184		0.2	0.2	3.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

A20_Alkhaym valley 2010 Base PM.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.15-17.30									
I ARM A	17.29	23.12	0.748		1.5	2.8	39.6		0.17
I ARM C	2.29	29.47	0.078		0.1	0.1	1.2		0.04
I ARM D	5.76	25.30	0.228		0.2	0.3	4.3		0.05
I									
I									

.									
I TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.30-17.45									
I ARM A	17.29	23.12	0.748		2.8	2.9	43.2		0.17
I ARM C	2.29	29.43	0.078		0.1	0.1	1.3		0.04
I ARM D	5.76	25.29	0.228		0.3	0.3	4.4		0.05
I									
I									

.									
I TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.45-18.00									

A20_Alkhram valley 2010 Base PM.vao

I	I	ARM A	14.12	23.52	0.600	2.9	1.5	24.0	0.11
I	I	ARM C	1.87	30.81	0.061	0.1	0.1	1.0	0.03
I	I	ARM D	4.70	25.53	0.184	0.3	0.2	3.4	0.05
I	I								
I	I								

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	18.00-18.15									
I	I	ARM A	11.82	23.82	0.496		1.5	1.0	15.4		0.08
I	I	ARM C	1.56	31.87	0.049		0.1	0.1	0.8		0.03
I	I	ARM D	3.94	25.70	0.153		0.2	0.2	2.8		0.05
I	I										
I	I										

.QUEUE AT ARM A

TIME SEGMENT	NO. OF	
ENDING	VEHICLES	
	IN QUEUE	
17.00	1.0	*
17.15	1.5	*
17.30	2.8	***
17.45	2.9	***
18.00	1.5	**
18.15	1.0	*

A20_Alkham valley 2010 Base PM.vao

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	1297.2	I	864.8	I	157.7	I
I	C	I	171.4	I	114.3	I	6.0	I
I	D	I	431.9	I	288.0	I	20.9	I
I	ALL	I	1900.5	I	1267.0	I	184.6	I

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\A20_Alkhams Valley\
A20_Alkhams Valley 2010 Base AM.vai"
(drive-on-the-left) at 16:04:30 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: A20 / Alkhams Valley
LOCATION:
DATE: 08/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries from Hawkings Mixed Use developmnet TA (Obtained
from SDC planning site)

A20_Alkham valley 2010 Base AM.vao

.INPUT DATA

ARM A - Alkham Valley Rd west

ARM B - A20 Onslip

ARM C - A20 Offslip

ARM D - Alkham Valley Rd east

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	4.10	I	6.90	I	9.10	I	24.40	I	43.70	I	30.0	I	0.632	I	28.075
I	ARM	C	I	7.20	I	8.10	I	11.40	I	24.80	I	43.70	I	24.0	I	0.793	I	41.199
I	ARM	D	I	3.60	I	7.80	I	26.70	I	21.00	I	43.70	I	60.0	I	0.610	I	29.002
I																		

V = approach half-width

E = entry width

L = effective flare length

R = entry radius

D = inscribed circle diameter

PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW SCALE(%)	I

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I

A20_Alkhams valley 2010 Base AM.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15

.LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A20 / Alkhams valley

2010 Base AM

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)				I					
			I	FLOW STARTS	I	TOP OF PEAK		I	FLOW STOPS	I	BEFORE		I	AT TOP	I	AFTER	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.79	I	17.68	I	11.79	I			
I	ARM C	I	15.00	I	45.00	I	75.00	I	1.02	I	1.54	I	1.02	I			
I	ARM D	I	15.00	I	45.00	I	75.00	I	8.14	I	12.21	I	8.14	I			

DEMAND SET TITLE: A20 / Alkhams valley

2010 Base AM

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										

	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D						
	07.45 - 09.15											
		ARM A	0.000	0.753	0.000	0.247						
			0.0	710.0	0.0	233.0						
			(0.0)	(11.0)	(0.0)	(18.0)						
		ARM C	0.939	0.012	0.000	0.049						
			77.0	1.0	0.0	4.0						
			(19.0)	(0.0)	(0.0)	(0.0)						
		ARM D	0.290	0.710	0.000	0.000						
			189.0	462.0	0.0	0.0						
			(9.0)	(10.0)	(0.0)	(0.0)						

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

A20_Alkhaym valley 2010 Base AM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	11.79	21.35	0.552		0.0	1.2	17.4		0.10
ARM C	1.02	32.67	0.031		0.0	0.0	0.5		0.03
ARM D	8.14	25.79	0.315		0.0	0.5	6.7		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	14.08	20.65	0.682		1.2	2.1	29.4		0.15
ARM C	1.22	32.21	0.038		0.0	0.0	0.6		0.03
ARM D	9.72	25.67	0.379		0.5	0.6	8.9		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

A20_Alkhram valley 2010 Base AM.vao										
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I 08.15-08.30										
I ARM A	17.24	19.70	0.875		2.1	5.9	75.1		0.34	
I ARM C	1.50	31.63	0.047		0.0	0.0	0.7		0.03	
I ARM D	11.90	25.50	0.467		0.6	0.9	12.7		0.07	
I										
I										

.										
I TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I 08.30-08.45										
I ARM A	17.24	19.69	0.876		5.9	6.4	93.1		0.39	
I ARM C	1.50	31.59	0.047		0.0	0.0	0.7		0.03	
I ARM D	11.90	25.49	0.467		0.9	0.9	13.0		0.07	
I										
I										

.										
I TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I 08.45-09.00										

A20_Alkhram valley 2010 Base AM.vao

I	I	ARM A	14.08	20.64	0.682	6.4	2.2	37.2	0.17
I	I	ARM C	1.22	32.15	0.038	0.0	0.0	0.6	0.03
I	I	ARM D	9.72	25.67	0.379	0.9	0.6	9.4	0.06
I	I								
I	I								

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	09.00-09.15									
I	I	ARM A	11.79	21.33	0.553		2.2	1.3	19.6		0.11
I	I	ARM C	1.02	32.64	0.031		0.0	0.0	0.5		0.03
I	I	ARM D	8.14	25.79	0.316		0.6	0.5	7.1		0.06
I	I										
I	I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.2	*
08.15	2.1	**
08.30	5.9	*****
08.45	6.4	*****
09.00	2.2	**
09.15	1.3	*

A20_Alkham valley 2010 Base AM.vao

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.5

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	1293.1	I	862.0	I	271.8	I
I	C	I	112.4	I	75.0	I	3.6	I
I	D	I	892.7	I	595.1	I	57.9	I
I	ALL	I	2298.1	I	1532.1	I	333.3	I
							0.15	
							0.21	
							0.03	
							0.06	
							0.15	

A20_Alkham valley 2010 Base AM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\A20_Stone Street\
A20 Ashford Rd_Stone Street 2010 Base 01_001.vpi"
(drive-on-the-left) at 11:22:21 on Friday, 24 September 2010

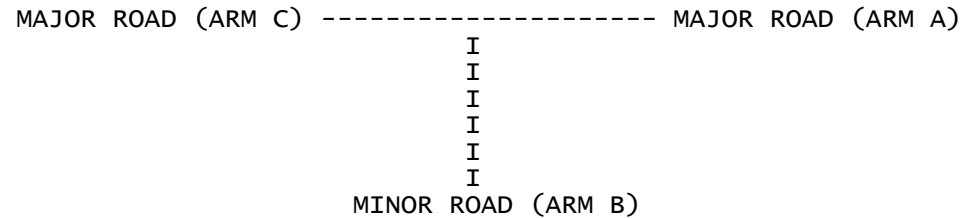
.RUN INFORMATION

RUN TITLE	: A20 Ashford Rd / Stone Street
LOCATION	:
DATE	: 24/09/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo



ARM A IS A20 Ashford Rd (north)
 ARM B IS Stone Street
 ARM C IS A20 Ashford Rd (west)

.STREAM LABELLING CONVENTION

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      STREAM  A-B  CONTAINS TRAFFIC GOING FROM ARM  A TO ARM  B
      STREAM  B-AC CONTAINS TRAFFIC GOING FROM ARM  B TO ARM  A AND TO ARM  C
      ETC.
  
```

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 2 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	608.71	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A20 Ashford Rd / Stone Street 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I																	
			I	FLOW STARTS	I	TOP OF PEAK		I	FLOW STOPS	I		BEFORE	I	AT TOP	I	AFTER												
																	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	5.40	I	8.10	I	5.40	I													
I	ARM	B	I	15.00	I	45.00	I	75.00	I	4.99	I	7.48	I	4.99	I													
I	ARM	C	I	15.00	I	45.00	I	75.00	I	4.25	I	6.38	I	4.25	I													

.Demand set: A20 Ashford Rd / Stone Street 2010 Base AM

		I	TURNING PROPORTIONS								I		
		I	TURNING COUNTS								I		
		I	(PERCENTAGE OF H.V.S)								I		

	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I

I	07.45 - 08.00	I		I			I			I			I
I		I	ARM	A	I	0.000	I	0.234	I	0.766	I		I
I		I			I	0.0	I	101.0	I	331.0	I		I
I		I			I	(0.0)	I	(2.0)	I	(4.0)	I		I
I		I			I		I		I		I		I
I		I	ARM	B	I	0.950	I	0.000	I	0.050	I		I
I		I			I	379.0	I	0.0	I	20.0	I		I
I		I			I	(4.0)	I	(0.0)	I	(0.0)	I		I
I		I			I		I		I		I		I
I		I	ARM	C	I	0.991	I	0.009	I	0.000	I		I
I		I			I	337.0	I	3.0	I	0.0	I		I
I		I			I	(8.0)	I	(0.0)	I	(0.0)	I		I
I		I			I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Rd / Stone Street 2010 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	I	I	I	I	I	I	I	I	I	I

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo										
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE	(MIN)
07.45-08.00										
	B-C	0.25	7.53	0.033	0.00	0.03	0.5		0.14	
	B-A	4.76	8.32	0.571	0.00	1.28	17.5		0.27	
	C-AB	0.04	9.05	0.004	0.00	0.00	0.1		0.11	
	A-B	1.27								
	A-C	4.15								

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	0.37	1.67	0.219		0.05	0.26	3.5		0.75
B-A	6.95	7.49	0.928		2.27	6.83	78.1		0.95
C-AB	0.06	8.55	0.006		0.00	0.01	0.1		0.12
A-B	1.85								
A-C	6.07								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	0.37	0.68	0.543		0.26	0.87	10.2		2.63
B-A	6.95	7.49	0.928		6.83	8.32	114.9		1.28
C-AB	0.06	8.55	0.006		0.01	0.01	0.1		0.12
A-B	1.85								
A-C	6.07								

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00									
I	B-C	0.30	5.00	0.060		0.87	0.06	1.2		0.22
I	B-A	5.68	7.97	0.712		8.32	2.72	54.2		0.59
I	C-AB	0.04	8.84	0.005		0.01	0.01	0.1		0.11
I	A-B	1.51								
I	A-C	4.96								

--

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15									
I	B-C	0.25	7.35	0.034		0.06	0.04	0.6		0.14
I	B-A	4.76	8.32	0.572		2.72	1.39	22.6		0.29
I	C-AB	0.04	9.05	0.004		0.01	0.00	0.1		0.11
I	A-B	1.27								
I	A-C	4.15								

I
I-----
WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR. QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.0	
08.15	0.1	
08.30	0.3	
08.45	0.9	*
09.00	0.1	
09.15	0.0	

. QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.3	*
08.15	2.3	**
08.30	6.8	*****
08.45	8.3	*****
09.00	2.7	***
09.15	1.4	*

. QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

		I	I	I	I	I	I	I	I	I
		(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-C	I 27.5	I 18.4	I 16.7	I 0.61	I 16.7	I 0.61	I	I	I
I	B-A	I 521.7	I 347.8	I 318.0	I 0.61	I 318.1	I 0.61	I	I	I
I	C-AB	I 4.1	I 2.8	I 0.5	I 0.11	I 0.5	I 0.11	I	I	I
I	A-B	I 139.0	I 92.7	I	I	I	I	I	I	I
I	A-C	I 455.6	I 303.7	I	I	I	I	I	I	I
I	ALL	I 1611.8	I 1074.5	I 335.2	I 0.21	I 335.3	I 0.21	I	I	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

I 608.71 0.19 0.19 I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

.Demand set: A20 Ashford Rd / Stone Street 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.79	I	10.18	I	6.79	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	1.67	I	2.51	I	1.67	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.86	I	8.79	I	5.86	I

.Demand set: A20 Ashford Rd / Stone Street 2010 Base PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.501	I	0.499	I		I	
I		I		I	0.0	I	272.0	I	271.0	I		I	
I		I	(0.0)	I	(1.0)	I	(7.0)	I		I		I	

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

I	I	I	I	I	I
I	I	ARM B	I	0.843	I 0.000 I 0.157 I
I	I		I	113.0	I 0.0 I 21.0 I
I	I		I	(4.0)	I (0.0) I (5.0) I
I	I		I		I I I
I	I	ARM C	I	0.940	I 0.060 I 0.000 I
I	I		I	441.0	I 28.0 I 0.0 I
I	I		I	(2.0)	I (0.0) I (0.0) I
I	I		I		I I I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Rd / Stone Street 2010 Base PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	0.26	9.03	0.029		0.00	0.03	0.4		0.11
B-A	1.42	7.95	0.178		0.00	0.21	3.1		0.15
C-AB	0.35	8.76	0.040		0.00	0.04	0.6		0.12
A-B	3.41								
A-C	3.40								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.00-17.15							
I B-C	0.31	8.72	0.036	0.03	0.04	0.5	0.12
I B-A	1.69	7.54	0.224	0.21	0.29	4.2	0.17
I C-AB	0.42	8.50	0.049	0.04	0.05	0.8	0.12
I A-B	4.08						
I A-C	4.06						
I							
I							

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I B-C	0.39	8.26	0.047		0.04	0.05	0.7		0.13
I B-A	2.07	6.99	0.297		0.29	0.41	6.0		0.20
I C-AB	0.51	8.13	0.063		0.05	0.07	1.0		0.13
I A-B	4.99								
I A-C	4.97								
I									
I									

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.39	8.26	0.047		0.05	0.05	0.7		0.13
B-A	2.07	6.99	0.297		0.41	0.42	6.2		0.20
C-AB	0.51	8.13	0.063		0.07	0.07	1.0		0.13
A-B	4.99								
A-C	4.97								

[illegible]

A20 Ashford Rd_Stone Street 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	0.26	9.02	0.029		0.04	0.03	0.5		0.11
B-A	1.42	7.94	0.178		0.29	0.22	3.4		0.15
C-AB	0.35	8.76	0.040		0.05	0.04	0.6		0.12
A-B	3.41								
A-C	3.40								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I			
						* DELAY *			* DELAY *					
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I			
I	B-C	I	28.9	I	19.3	I	3.5	I	0.12	I	3.5	I	0.12	I
I	B-A	I	155.5	I	103.7	I	27.4	I	0.18	I	27.4	I	0.18	I
I	C-AB	I	38.5	I	25.7	I	4.8	I	0.13	I	4.8	I	0.13	I
I	A-B	I	374.4	I	249.6	I		I		I		I		I
I	A-C	I	373.0	I	248.7	I		I		I		I		I
I	ALL	I	1577.4	I	1051.6	I	35.7	I	0.02	I	35.7	I	0.02	I

*****END OF RUN*****

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

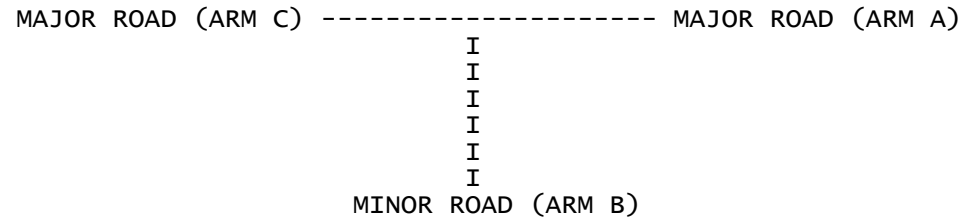
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\A20_A261\
A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpi"
(drive-on-the-left) at 10:51:02 on Friday, 24 September 2010

.RUN INFORMATION

RUN TITLE	: A20 Ashford Road / A261 Hythe Rd
LOCATION	:
DATE	: 24/09/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS A20 Ashford Rd (north)
 ARM B IS A261 Hythe Rd
 ARM C IS A20 Ashford Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 5.50 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 5.00 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 70.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 60.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	6.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	794.21	0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A20 Ashford Road / A261 Hythe Rd 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)			I																	
			I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I		BEFORE	I	AT TOP	I	AFTER												
																I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.13	I	10.69	I	7.13	I												
I	ARM	B	I	15.00	I	45.00	I	75.00	I	2.95	I	4.43	I	2.95	I												
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.95	I	13.42	I	8.95	I												

.Demand set: A20 Ashford Road / A261 Hythe Rd 2010 Base AM

[illegible]

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Road / A261 Hythe Rd 2010 Base AM
AND FOR TIME PERIOD 1

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC	DELAY	AVERAGE	DELAY

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo										
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE	(MIN)
I	07.45-08.00									
I	B-C	0.83	7.73	0.107	0.00	0.12	1.7		0.14	
I	B-A	2.13	7.31	0.292	0.00	0.40	5.7		0.19	
I	C-A	7.29								
I	C-B	1.69	10.50	0.161	0.00	0.19	2.8		0.11	
I	A-B	2.56								
I	A-C	4.59								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	B-C	0.99	7.17	0.138		0.12	0.16	2.3		0.16
I	B-A	2.55	6.76	0.377		0.40	0.59	8.5		0.24
I	C-A	8.71								
I	C-B	2.02	10.16	0.199		0.19	0.25	3.6		0.12
I	A-B	3.06								
I	A-C	5.48								
I										
I										

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	1.21	6.14	0.197		0.16	0.24	3.5		0.20
B-A	3.12	6.00	0.520		0.59	1.04	14.5		0.34
C-A	10.66								
C-B	2.48	9.69	0.256		0.25	0.34	4.9		0.14
A-B	3.74								
A-C	6.72								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	1.21	6.11	0.198		0.24	0.25	3.7		0.20
B-A	3.12	5.99	0.521		1.04	1.06	15.8		0.35
C-A	10.66								
C-B	2.48	9.69	0.256		0.34	0.34	5.1		0.14

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo

I
I A-B 3.74
I
I A-C 6.72
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I
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.45-09.00									
I	B-C	0.99	7.14	0.138		0.25	0.16	2.5		0.16
I	B-A	2.55	6.76	0.377		1.06	0.62	9.8		0.24
I	C-A	8.71								
I	C-B	2.02	10.16	0.199		0.34	0.25	3.9		0.12
I	A-B	3.06								
I	A-C	5.48								
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	09.00-09.15									
I										

				A20 Ashford Rd_A261	Hythe Rd	2010	Base	01_001.vpo	
I	B-C	0.83	7.70	0.107	0.16	0.12		1.9	0.15
I									
I	B-A	2.13	7.30	0.292	0.62	0.42		6.6	0.19
I									
I	C-A	7.29							
I									
I	C-B	1.69	10.50	0.161	0.25	0.19		3.0	0.11
I									
I	A-B	2.56							
I									
I	A-C	4.59							
I									
I									

QUEUE FOR STREAM		B-C
TIME	NO. OF	
SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	0.1	
08.15	0.2	
08.30	0.2	
08.45	0.2	
09.00	0.2	
09.15	0.1	

QUEUE FOR STREAM		B-A
TIME	NO. OF	
SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	1.0	*
08.45	1.1	*
09.00	0.6	*
09.15	0.4	

QUEUE FOR STREAM		C-B
TIME	NO. OF	
SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	0.2	

08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.3
09.15	0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE *	I	QUEUEING *
I		I		I		I	* DELAY *	I	* DELAY *	I	
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I	(MIN/VEH)
I		I		I		I		I		I	
I	B-C	I	90.8	I	60.6	I	15.6	I	15.6	I	0.17
I	B-A	I	234.0	I	156.0	I	60.8	I	60.8	I	0.26
I	C-A	I	799.7	I	533.1	I		I		I	
I	C-B	I	185.8	I	123.9	I	23.3	I	23.3	I	0.13
I	A-B	I	280.8	I	187.2	I		I		I	
I	A-C	I	503.8	I	335.8	I		I		I	

I	ALL	I	2094.9	I	1396.6	I	99.7	I	99.7	I	0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	I	Slope	I	For Opposing	I	Slope	I	For Opposing	I
I	STREAM	I	B-C	I	STREAM	I	A-C	I	STREAM	I
I		I		I		I		I		I
I		I	0.00	I		I	0.00	I		I

* Due to the presence of a flare, data is not available

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo

I Intercept For I STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	I
I 0.00	I 0.00	I 0.00	I 0.00	I 0.00	I

* Due to the presence of a flare, data is not available

I Intercept For I STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
I 794.21	I 0.25	I 0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM	I FLOW	SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

.Demand set: A20 Ashford Road / A261 Hythe Rd 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM	I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	RATE OF FLOW (VEH/MIN) I BEFORE I AT TOP I AFTER	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I ARM A	I	I 15.00 I 45.00 I 75.00	I	I 8.46 I 12.69 I 8.46	I
I ARM B	I	I 15.00 I 45.00 I 75.00	I	I 3.45 I 5.18 I 3.45	I
I ARM C	I	I 15.00 I 45.00 I 75.00	I	I 6.93 I 10.39 I 6.93	I

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo
Demand set: A20 Ashford Road / A261 Hythe Rd 2010 Base PM

I	I	TURNING PROPORTIONS										I				
		I	TURNING COUNTS										I			
			I	(PERCENTAGE OF H.V.S)										I		
I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I			
I	16.45 - 17.00	I		I		I		I		I		I				
I		I	ARM A	I	0.000	I	0.357	I	0.643	I		I				
I		I		I	0.0	I	242.0	I	435.0	I		I				
I		I		I	(0.0)	I	(3.0)	I	(7.0)	I		I				
I		I		I		I		I		I		I				
I		I	ARM B	I	0.605	I	0.000	I	0.395	I		I				
I		I		I	167.0	I	0.0	I	109.0	I		I				
I		I		I	(5.0)	I	(0.0)	I	(0.0)	I		I				
I		I		I		I		I		I		I				
I		I	ARM C	I	0.724	I	0.276	I	0.000	I		I				
I		I		I	401.0	I	153.0	I	0.0	I		I				
I		I		I	(4.0)	I	(1.0)	I	(0.0)	I		I				
I		I		I		I		I		I		I				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR DEMAND SET A20 Ashford Road / A261 Hythe Rd 2010 Base PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	B-C	1.37	8.19	0.167		0.00	0.20	2.9		0.15
I	B-A	2.10	7.38	0.284		0.00	0.39	5.5		0.19
I	C-A	5.03								
I	C-B	1.92	10.91	0.176		0.00	0.21	3.1		0.11

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo

I A-B 3.04

I A-C 5.46

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I 17.00-17.15

I B-C 1.63 7.61 0.215 0.20 0.27 3.9 0.17

I B-A 2.50 6.82 0.367 0.39 0.57 8.1 0.23

I C-A 6.01

I C-B 2.29 10.48 0.219 0.21 0.28 4.1 0.12

I A-B 3.63

I A-C 6.52

I

I

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I 17.15-17.30

I B-C 2.00 6.57 0.304 0.27 0.43 6.2 0.22

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo

I									
I	B-A	3.06	6.00	0.511		0.57	1.00	14.0	0.33
I									
I	C-A	7.36							
I									
I	C-B	2.81	9.89	0.284		0.28	0.39	5.7	0.14
I									
I	A-B	4.44							
I									
I	A-C	7.98							
I									
I									

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	B-C	2.00	6.54	0.306		0.43	0.44	6.5		0.22
I										
I	B-A	3.06	5.99	0.511		1.00	1.02	15.2		0.34
I										
I	C-A	7.36								
I										
I	C-B	2.81	9.89	0.284		0.39	0.39	5.9		0.14
I										
I	A-B	4.44								
I										
I	A-C	7.98								
I										
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I										
.	-----									
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--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

A20 Ashford Rd_A261 Hythe Rd 2010 Base 01_001.vpo										
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I	17.45-18.00									
I	B-C	1.63	7.58	0.215		0.44	0.28	4.3		0.17
I	B-A	2.50	6.81	0.367		1.02	0.59	9.4		0.24
I	C-A	6.01								
I	C-B	2.29	10.48	0.219		0.39	0.28	4.4		0.12
I	A-B	3.63								
I	A-C	6.52								
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I	B-C	1.37	8.17	0.167		0.28	0.20	3.1		0.15
I	B-A	2.10	7.37	0.284		0.59	0.40	6.3		0.19
I	C-A	5.03								
I	C-B	1.92	10.91	0.176		0.28	0.22	3.3		0.11
I	A-B	3.04								
I	A-C	5.46								
I										
I										
I										

 .
 --
 .
 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

 .
 --
 .
 QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	1.0	*
17.45	1.0	*
18.00	0.6	*
18.15	0.4	

 .
 --
 .
 QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

 .
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 .
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH) (VEH/H)	I	(MIN) (MIN/VEH)	I	(MIN) (MIN/VEH)	I

						A20 Ashford Rd_A261		Hythe Rd 2010		Base 01_001.vpo				
I	B-C	I	150.0	I	100.0	I	26.9	I	0.18	I	26.9	I	0.18	I
I	B-A	I	229.9	I	153.2	I	58.5	I	0.25	I	58.6	I	0.25	I
I	C-A	I	551.9	I	368.0	I		I		I		I		I
I	C-B	I	210.6	I	140.4	I	26.4	I	0.13	I	26.4	I	0.13	I
I	A-B	I	333.1	I	222.1	I		I		I		I		I
I	A-C	I	598.7	I	399.2	I		I		I		I		I

I	ALL	I	2074.3	I	1382.8	I	111.8	I	0.05	I	111.9	I	0.05	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Basic Results Summary

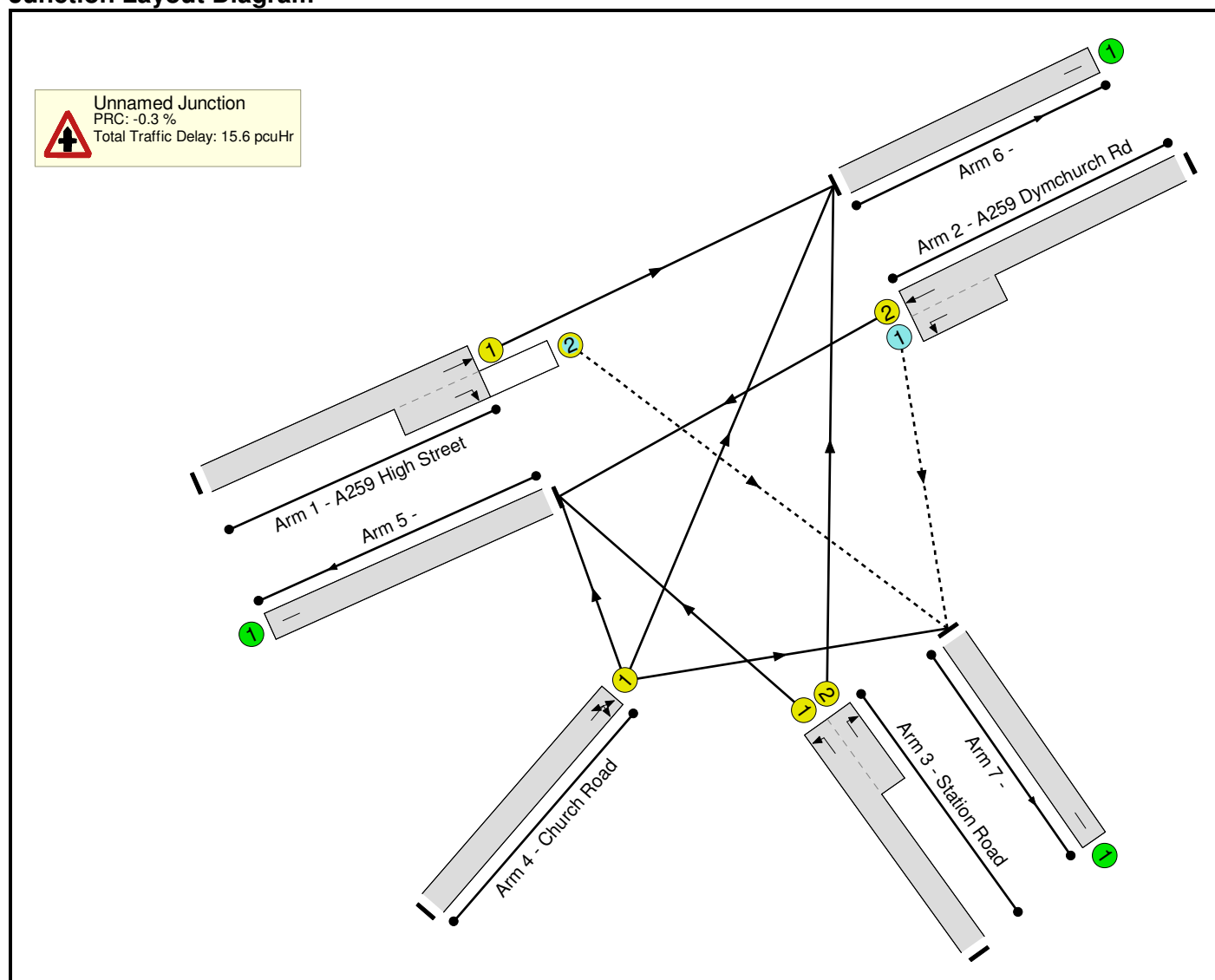
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	A259 High Street_Station Rd_stage 3 and 5 every other cycle 01_001.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base AM' (FG1: '2010 Base AM', Plan 1: 'Network Control Plan 1')

Junction Layout Diagram

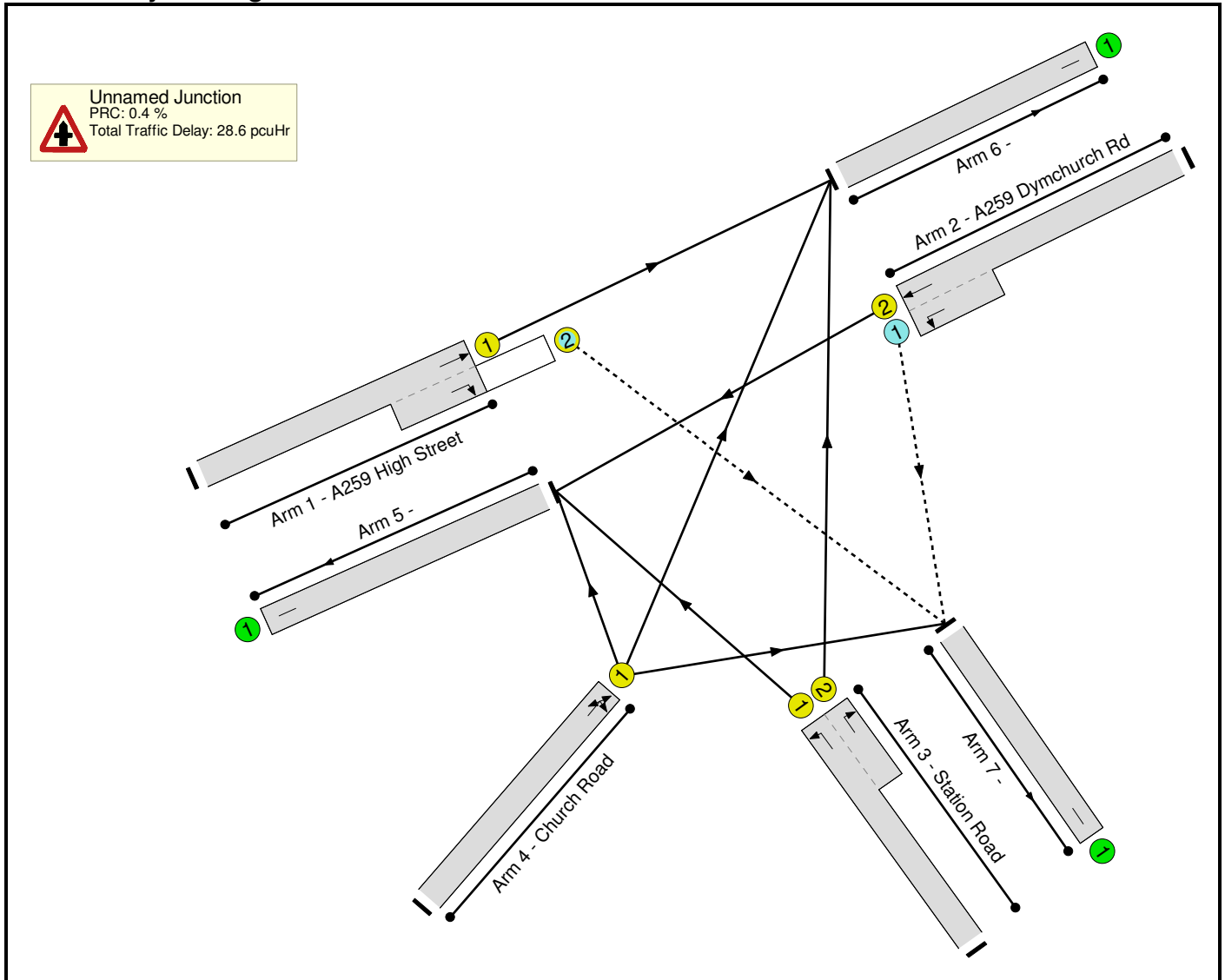


Basic Results Summary

Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	90.3%	15.6	-	-
Unnamed Junction	-	-	-	-	90.3%	15.6	-	-
1/1+1/2	A259 High Street Ahead Right	377	1940:1731	547	68.9%	3.1	29.8	5.4
2/2+2/1	A259 Dymchurch Rd Ahead Left	604	1965:1400	814	74.2%	2.9	17.2	5.3
3/1+3/2	Station Road Left Right	695	1754:1827	770	90.3%	7.8	40.2	9.8
4/1	Church Road U-Turn Ahead Right	60	1933	141	42.7%	1.2	71.0	2.1
5/1		562	1940	1940	29.0%	0.2	1.3	0.2
6/1		517	1940	1940	26.6%	0.2	1.3	0.2
7/1		657	1965	1965	33.4%	0.3	1.4	0.8
C1 PRC for Signalled Lanes (%): -0.3 PRC Over All Lanes (%): -0.3 Total Delay for Signalled Lanes (pcuHr): 14.96 Total Delay Over All Lanes(pcuHr): 15.59 Cycle Time (s): 110								

Junction Layout Diagram

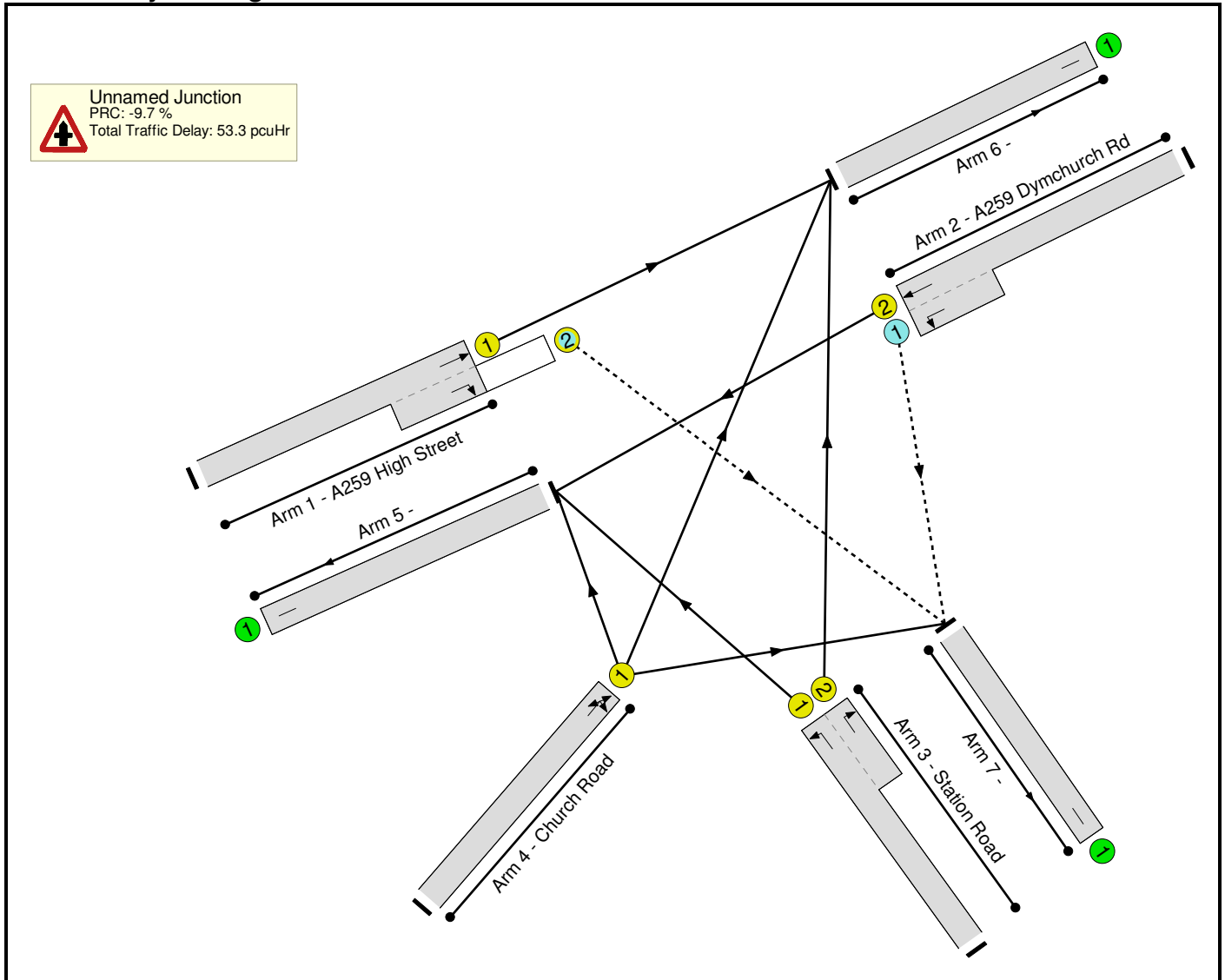


Basic Results Summary

Link Results

[illegible]

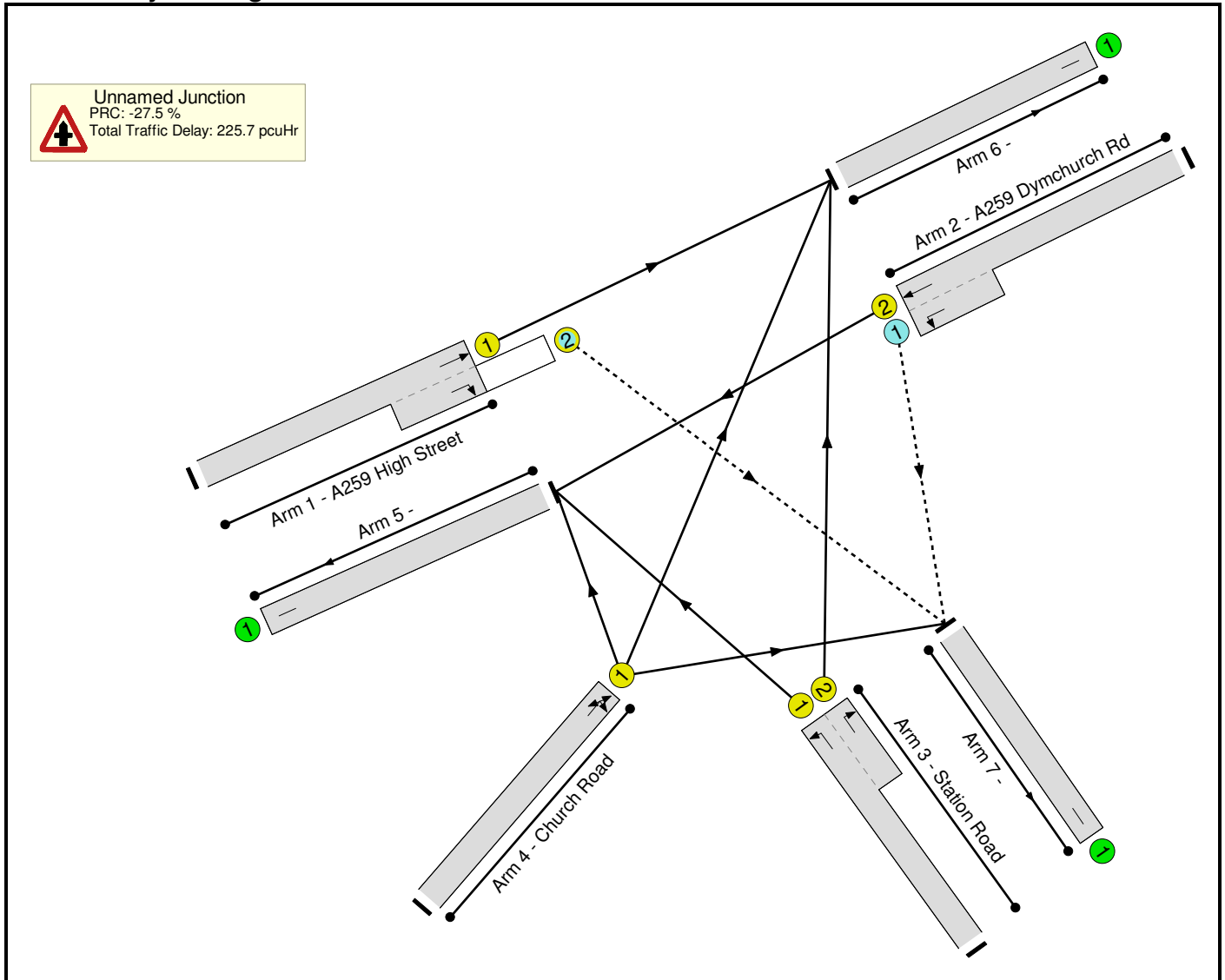
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	98.7%	53.3	-	-
Unnamed Junction	-	-	-	-	98.7%	53.3	-	-
1/1+1/2	A259 High Street Ahead Right	525	1940:1731	554	94.8%	11.6	79.8	20.3
2/2+2/1	A259 Dymchurch Rd Ahead Left	771	1965:1400	781	98.7%	17.2	80.5	42.3
3/1+3/2	Station Road Left Right	872	1754:1827	883	98.7%	20.7	85.6	35.3
4/1	Church Road U-Turn Ahead Right	60	1933	81	74.1%	2.8	167.0	4.4
5/1		713	1940	1940	36.8%	0.3	1.5	0.3
6/1		695	1940	1940	35.8%	0.3	1.4	0.3
7/1		820	1965	1965	41.7%	0.4	1.6	1.5
C1 PRC for Signalled Lanes (%): -9.7 PRC Over All Lanes (%): -9.7 Total Delay for Signalled Lanes (pcuHr): 52.39 Total Delay Over All Lanes(pcuHr): 53.32 Cycle Time (s): 191								

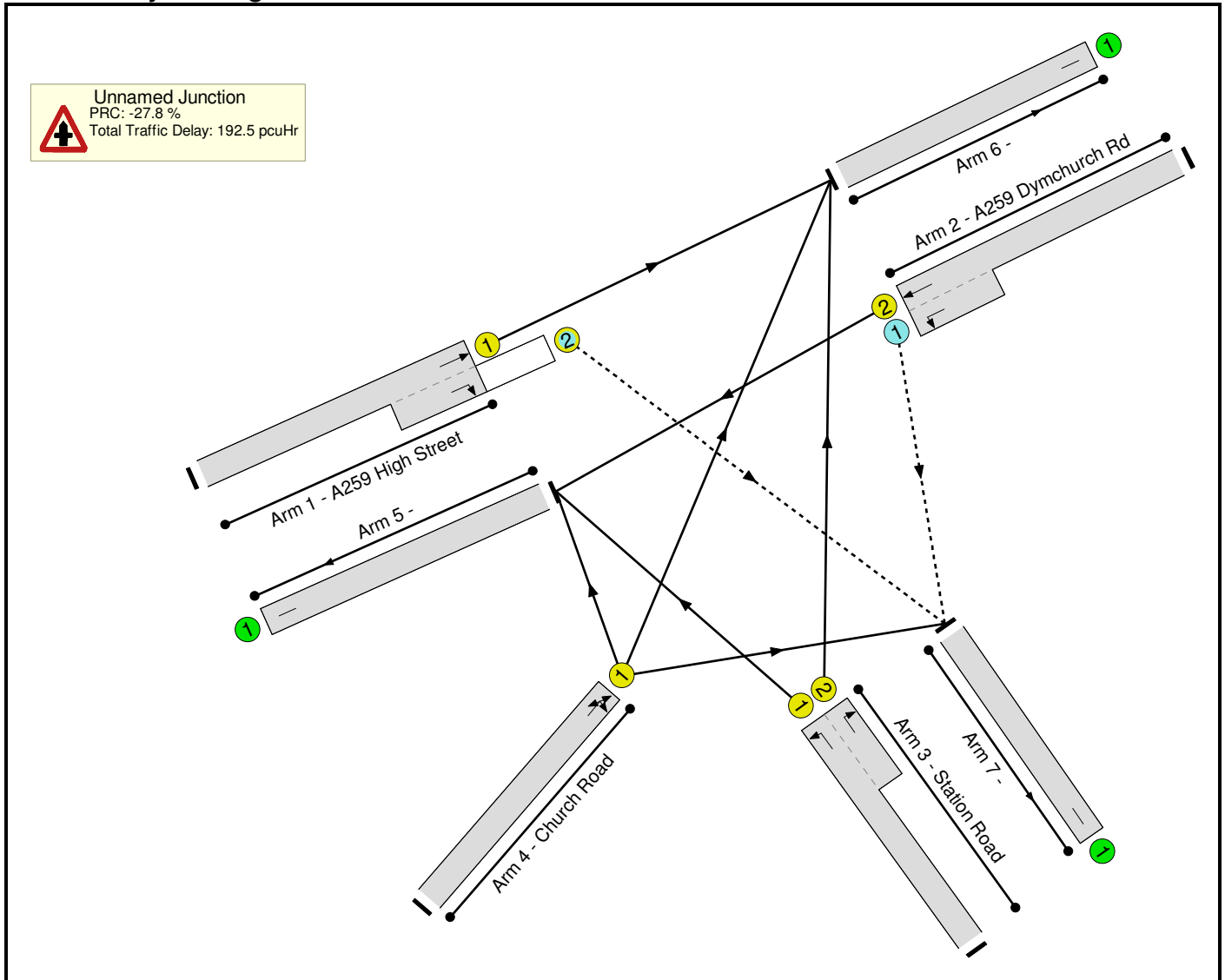
Junction Layout Diagram



Link Results

[illegible]

Junction Layout Diagram

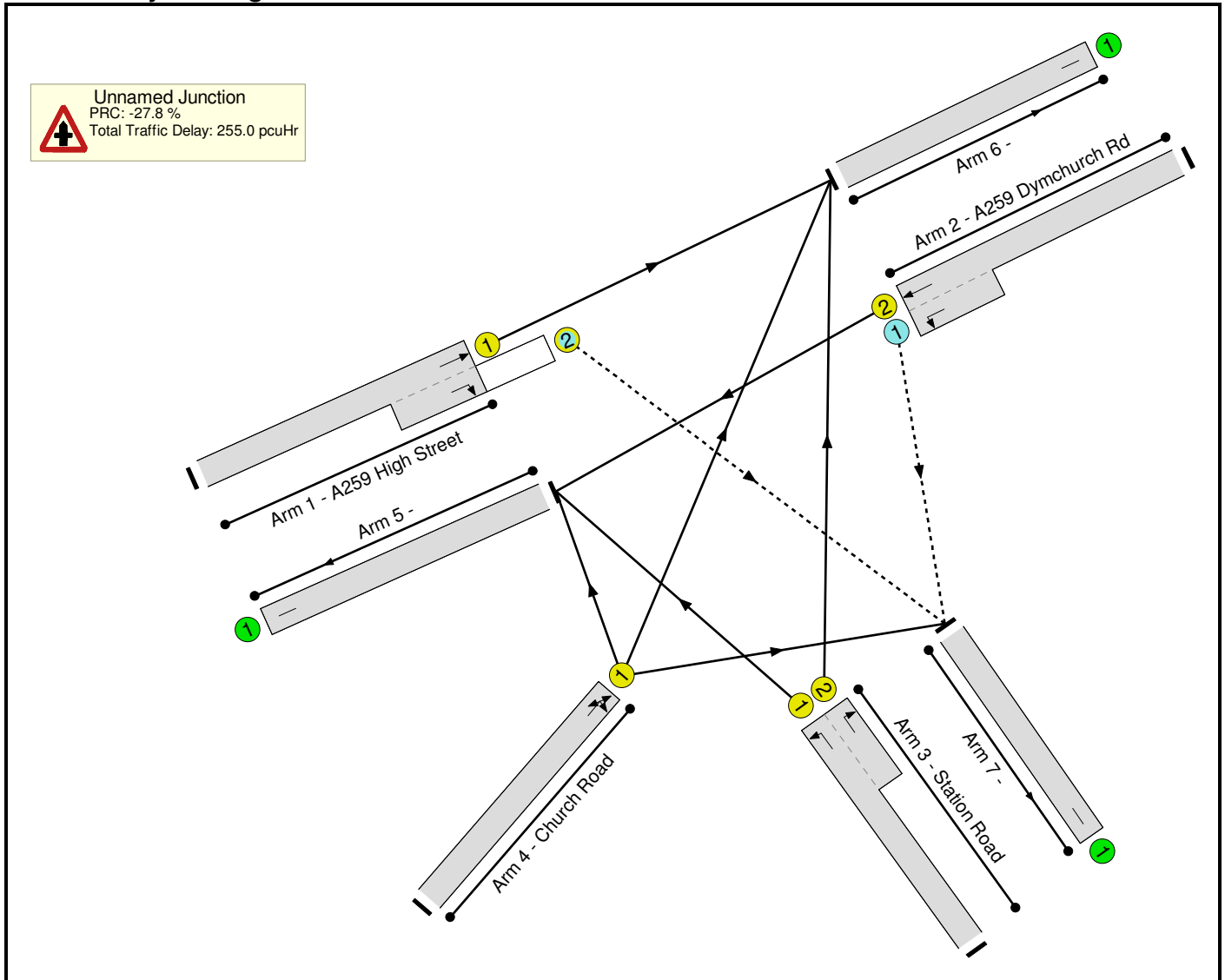


Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	115.0%	192.5	-	-
Unnamed Junction	-	-	-	-	115.0%	192.5	-	-
1/1+1/2	A259 High Street Ahead Right	589	1940:1731	590	99.8%	17.2	105.3	23.4
2/2+2/1	A259 Dymchurch Rd Ahead Left	967	1965:1400	841	115.0%	89.5	333.2	207.7
3/1+3/2	Station Road Left Right	808	1754:1827	703	114.9%	80.0	356.7	100.2
4/1	Church Road U-Turn Ahead Right	60	1933	64	93.1%	4.8	290.9	6.9
5/1		915	1940	1940	41.2%	0.3	1.4	0.3
6/1		748	1940	1940	35.7%	0.3	1.3	0.3
7/1		761	1965	1965	35.7%	0.3	1.3	3.1

C1	PRC for Signalled Lanes (%):	-27.8	Total Delay for Signalled Lanes (pcuHr):	191.62	Cycle Time (s): 240
	PRC Over All Lanes (%):	-27.8	Total Delay Over All Lanes(pcuHr):	192.53	

Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	115.0%	255.0	-	-
Unnamed Junction	-	-	-	-	115.0%	255.0	-	-
1/1+1/2	A259 High Street Ahead Right	1063	1940:1731	925	115.0%	99.8	337.9	133.3
2/2+2/1	A259 Dymchurch Rd Ahead Left	750	1965:1400	654	114.7%	72.7	349.0	167.7
3/1+3/2	Station Road Left Right	761	1754:1827	662	115.0%	76.6	362.5	97.8
4/1	Church Road U-Turn Ahead Right	60	1933	64	93.1%	4.8	290.9	6.9
5/1		673	1940	1940	30.3%	0.2	1.2	0.2
6/1		1005	1940	1940	45.2%	0.4	1.5	0.4
7/1		956	1965	1965	42.5%	0.4	1.4	3.1
C1 PRC for Signalled Lanes (%): -27.8 PRC Over All Lanes (%): -27.8 Total Delay for Signalled Lanes (pcuHr): 253.96 Total Delay Over All Lanes(pcuHr): 254.96 Cycle Time (s): 240								

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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RG40 3GA, UK	

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Southern Rb\M20 Junction 13 southern RB_2010 BASE AM 01_001.vai"
(drive-on-the-left) at 15:16:21 on Tuesday, 21 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 southern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

ARM A - M20 westbound exit slip
 ARM B - Churchill Avenue
 ARM C - Cherry Garden Lane
 ARM D - M20 westbound entry slip
 ARM E - A20 north

.GEOMETRIC DATA

ARM D IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I INTERCEPT
(PCU/MIN)		I														

I ARM	A	I	8.00	I	11.00	I	17.00	I	13.50	I	61.00	I	47.0	I	0.711	I 45.949
I ARM	B	I	5.00	I	11.00	I	33.00	I	57.00	I	61.00	I	34.0	I	0.730	I 45.198
I ARM	C	I	6.00	I	8.00	I	15.00	I	61.00	I	61.00	I	51.0	I	0.619	I 35.884
I ARM	E	I	7.00	I	8.50	I	9.00	I	32.00	I	61.00	I	44.0	I	0.654	I 39.072

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM B: Effective flare length is outside normal range.
 Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

 I ARM I FLOW SCALE(%) I

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 southern Rb 2010 AM BASE

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK
I	I	I	I	I	IF FALLING	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	6.76	I	10.14
I	ARM B	I	15.00	I	45.00	I	11.07	I	16.61
I	ARM C	I	15.00	I	45.00	I	7.80	I	11.70
I	ARM E	I	15.00	I	45.00	I	11.15	I	16.72

DEMAND SET TITLE: M20 Junction 13 southern Rb 2010 AM BASE

I	TURNING PROPORTIONS										I
I	TURNING COUNTS (VEH/HR)										I
I	(PERCENTAGE OF H.V.S)										I
I	-----										I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	I	I	I	I	I	I	I	I	I	I	I
I	07.45 - 09.15	I		I		I		I		I	
I		I	ARM A	I	0.000	I	0.166	I	0.786	I	0.000
I		I		I	0.0	I	90.0	I	425.0	I	0.0
I		I		I	(0.0)	I	(2.0)	I	(1.0)	I	(0.0)
I		I		I		I		I		I	
I		I	ARM B	I	0.000	I	0.000	I	0.378	I	0.567
I		I		I	0.0	I	0.0	I	335.0	I	502.0
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I	(5.0)
I		I		I		I		I		I	
I		I	ARM C	I	0.000	I	0.479	I	0.000	I	0.000
I		I		I	0.0	I	299.0	I	0.0	I	0.0

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

I	I	I	(0.0)	I	(2.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	
I	I	I		I		I		I		I		I	
I	I	ARM E	I	0.000	I	0.439	I	0.559	I	0.001	I	0.000	I
I	I		I	0.0	I	392.0	I	499.0	I	1.0	I	0.0	I
I	I		I	(0.0)	I	(3.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	6.76	34.67	0.195		0.0	0.2	3.6		0.04
ARM B	11.07	35.12	0.315		0.0	0.5	6.8		0.04
ARM C	7.80	30.57	0.255		0.0	0.3	5.0		0.04
ARM E	11.15	35.91	0.310		0.0	0.4	6.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	8.08	32.58	0.248		0.2	0.3	4.9		0.04
ARM B	13.22	33.47	0.395		0.5	0.6	9.6		0.05

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

I	ARM C	9.31	29.66	0.314		0.3	0.5	6.7		0.05
I	ARM E	13.31	35.43	0.376		0.4	0.6	8.9		0.05

I
I
I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I 08.15-08.30

I	ARM A	9.89	29.74	0.333		0.3	0.5	7.3		0.05
I	ARM B	16.20	31.20	0.519		0.6	1.1	15.6		0.07
I	ARM C	11.41	28.43	0.401		0.5	0.7	9.8		0.06
I	ARM E	16.31	34.78	0.469		0.6	0.9	12.9		0.05

I
I
I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I 08.30-08.45

I	ARM A	9.89	29.72	0.333		0.5	0.5	7.5		0.05
I	ARM B	16.20	31.19	0.519		1.1	1.1	16.1		0.07

I

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

I	ARM C	11.41	28.41	0.401		0.7	0.7	10.0		0.06
I	ARM E	16.31	34.77	0.469		0.9	0.9	13.2		0.05

I
I
I

-
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 08.45-09.00

I	ARM A	8.08	32.55	0.248		0.5	0.3	5.0		0.04
I	ARM B	13.22	33.44	0.395		1.1	0.7	10.1		0.05
I	ARM C	9.31	29.64	0.314		0.7	0.5	7.0		0.05
I	ARM E	13.31	35.42	0.376		0.9	0.6	9.2		0.05

I
I
I

-
.

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 09.00-09.15

I	ARM A	6.76	34.63	0.195		0.3	0.2	3.7		0.04
I	ARM B	11.07	35.09	0.316		0.7	0.5	7.0		0.04
I	ARM C	7.80	30.55	0.255		0.5	0.3	5.2		0.04

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

I								
I	ARM E	11.15	35.90	0.311		0.6	0.5	6.9
I								
I								
I								0.04

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.2

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	1.1 *
08.45	1.1 *
09.00	0.7 *
09.15	0.5

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3

M20 Junction 13 southern RB_2010 BASE AM 01_001.vao

08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.3	

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.5	

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	741.8	I	494.6	I	31.9	I	31.9	I
I	B	I	1214.9	I	809.9	I	65.2	I	65.2	I
I	C	I	855.6	I	570.4	I	43.8	I	43.8	I
I	E	I	1223.1	I	815.4	I	57.7	I	57.7	I
I	ALL	I	4035.5	I	2690.3	I	198.6	I	198.6	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 12\
M20 junction 12_2010 BASE PM 01_001.vai"
(drive-on-the-left) at 15:27:35 on Monday, 20 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 12
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 junction 12_2010 BASE PM 01_001.vao

ARM A - M20 eastbound entry slip
 ARM B - M20 westbound exit slip
 ARM C - A20 (south)
 ARM D - M20 westbound entry slip
 ARM E - M20 eastbound exit slip
 ARM F - A20 (north)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	7.00	I	7.00	I	0.00	I	113.00	I	125.00	I	7.0	I	0.565	I	39.594
I	ARM C	I	7.00	I	10.00	I	13.00	I	41.00	I	125.00	I	43.0	I	0.565	I	43.181
I	ARM E	I	7.00	I	7.00	I	0.00	I	32.00	I	125.00	I	22.0	I	0.528	I	36.980
I	ARM F	I	5.50	I	8.00	I	13.00	I	57.00	I	125.00	I	37.0	I	0.510	I	35.856

V = approach half-width				L = effective flare length				D = inscribed circle diameter							
E = entry width				R = entry radius				PHI = entry angle							

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 junction 12_2010 BASE PM 01_001.vao

I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 12 2010 BASE PM

I	I	NUMBER OF MINUTES FROM START WHEN					RATE OF FLOW (VEH/MIN)				I			
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I	I	I	TO RISE	I	IS REACHED	I	IF FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	10.01	I	15.02	I	10.01	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	15.02	I	22.54	I	15.02	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	7.21	I	10.82	I	7.21	I
I	ARM F	I	15.00	I	45.00	I	75.00	I	5.18	I	7.76	I	5.18	I

DEMAND SET TITLE: M20 Junction 12 2010 BASE PM

I	TURNING PROPORTIONS														I	
I	TURNING COUNTS (VEH/HR)														I	
I	(PERCENTAGE OF H.V.S)														I	
I															I	
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I
I	16.45 - 18.15	I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.649	I	0.000	I	0.000	I	0.351	I
I		I		I	0.0	I	0.0	I	520.0	I	0.0	I	0.0	I	281.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I		I		I		I
I		I	ARM C	I	0.557	I	0.000	I	0.000	I	0.348	I	0.000	I	0.095	I
I		I		I	670.0	I	0.0	I	0.0	I	418.0	I	0.0	I	114.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I		I

M20 junction 12_2010 BASE PM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.946	I	0.000	I	0.000	I	0.054	I
I	I		I	0.0	I	0.0	I	546.0	I	0.0	I	0.0	I	31.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(4.0)	I
I	I		I		I		I		I		I		I		I
I	I	ARM F	I	0.329	I	0.000	I	0.594	I	0.077	I	0.000	I	0.000	I
I	I		I	136.0	I	0.0	I	246.0	I	32.0	I	0.0	I	0.0	I
I	I		I	(4.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM B	10.01	33.67	0.297		0.0	0.4	6.2		0.04
I	ARM C	15.02	40.96	0.367		0.0	0.6	8.5		0.04
I	ARM E	7.21	29.89	0.241		0.0	0.3	4.7		0.04
I	ARM F	5.18	27.76	0.186		0.0	0.2	3.4		0.04

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	ARM B	11.96	32.54	0.367		0.4	0.6	8.5		0.05

M20 junction 12_2010 BASE PM 01_001.vao

I									
I	ARM C	17.94	40.52	0.443		0.6	0.8	11.7	0.04
I									
I	ARM E	8.61	28.52	0.302		0.3	0.4	6.4	0.05
I									
I	ARM F	6.18	26.26	0.235		0.2	0.3	4.5	0.05
I									
I									
I									

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.15-17.30									
I										
I	ARM B	14.64	30.99	0.473		0.6	0.9	13.0		0.06
I										
I	ARM C	21.97	39.92	0.550		0.8	1.2	17.8		0.06
I										
I	ARM E	10.55	26.64	0.396		0.4	0.7	9.6		0.06
I										
I	ARM F	7.57	24.21	0.313		0.3	0.5	6.7		0.06
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45									
I										
I	ARM B	14.64	30.98	0.473		0.9	0.9	13.4		0.06
I										

M20 junction 12_2010 BASE PM 01_001.vao

I	ARM C	21.97	39.92	0.550	1.2	1.2	18.3	0.06
I								
I	ARM E	10.55	26.62	0.396	0.7	0.7	9.8	0.06
I								
I	ARM F	7.57	24.20	0.313	0.5	0.5	6.8	0.06
I								
I								
I								

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM B	11.96	32.52	0.368		0.9	0.6	8.9		0.05
I										
I	ARM C	17.94	40.51	0.443		1.2	0.8	12.2		0.04
I										
I	ARM E	8.61	28.50	0.302		0.7	0.4	6.6		0.05
I										
I	ARM F	6.18	26.24	0.236		0.5	0.3	4.7		0.05
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I										
I	ARM B	10.01	33.65	0.298		0.6	0.4	6.5		0.04
I										
I	ARM C	15.02	40.95	0.367		0.8	0.6	8.9		0.04

M20 junction 12_2010 BASE PM 01_001.vao

I							
I	ARM E	7.21	29.87	0.241	0.4	0.3	4.9
I							0.04
I	ARM F	5.18	27.73	0.187	0.3	0.2	3.5
I							0.04
I							
I							

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.2 *
17.45	1.2 *
18.00	0.8 *
18.15	0.6 *

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

M20 junction 12_2010 BASE PM 01_001.vao

17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.7 *
18.00	0.4
18.15	0.3

.QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	B	I	1098.3	I	732.2	I	56.6	I
I		I		I		I	0.05	I
I	C	I	1648.2	I	1098.8	I	77.3	I
I		I		I		I	0.05	I
I	E	I	791.2	I	527.5	I	41.9	I
I		I		I		I	0.05	I
I	F	I	567.7	I	378.5	I	29.6	I
I		I		I		I	0.05	I
I	ALL	I	4105.4	I	2736.9	I	205.3	I
I		I		I		I	0.05	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2010 BASE PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 12\
M20 junction 12_2010 BASE AM 01_001.vai"
(drive-on-the-left) at 15:22:30 on Monday, 20 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 12
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 junction 12_2010 BASE AM 01_001.vao

ARM A - M20 eastbound entry slip
 ARM B - M20 westbound exit slip
 ARM C - A20 (south)
 ARM D - M20 westbound entry slip
 ARM E - M20 eastbound exit slip
 ARM F - A20 (north)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN) I																	

I	ARM B	I	7.00	I	7.00	I	0.00	I	113.00	I	125.00	I	7.0	I	0.565	I	39.594
I	ARM C	I	7.00	I	10.00	I	13.00	I	41.00	I	125.00	I	43.0	I	0.565	I	43.181
I	ARM E	I	7.00	I	7.00	I	0.00	I	32.00	I	125.00	I	22.0	I	0.528	I	36.980
I	ARM F	I	5.50	I	8.00	I	13.00	I	57.00	I	125.00	I	37.0	I	0.510	I	35.856

V = approach half-width				L = effective flare length				D = inscribed circle diameter							
E = entry width				R = entry radius				PHI = entry angle							

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 junction 12_2010 BASE AM 01_001.vao

I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 12 2010 BASE AM

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	11.74	I	17.61	I	11.74	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	15.49	I	23.23	I	15.49	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	6.68	I	10.01	I	6.68	I
I	ARM F	I	15.00	I	45.00	I	75.00	I	7.80	I	11.70	I	7.80	I

DEMAND SET TITLE: M20 Junction 12 2010 BASE AM

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I
I	07.45 - 09.15	I	ARM B	I	0.000	I	0.000	I	0.654	I	0.000	I	0.000	I	0.346	I
I		I		I	0.0	I	0.0	I	614.0	I	0.0	I	0.0	I	325.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I
I		I	ARM C	I	0.408	I	0.000	I	0.000	I	0.432	I	0.000	I	0.160	I
I		I		I	506.0	I	0.0	I	0.0	I	535.0	I	0.0	I	198.0	I
I		I		I	(2.0)	I	(0.0)	I	(0.0)	I	(1.0)	I	(0.0)	I	(1.0)	I

M20 junction 12_2010 BASE AM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.890	I	0.000	I	0.000	I	0.110	I
I	I		I	0.0	I	0.0	I	475.0	I	0.0	I	0.0	I	59.0	I
I	I		I	(0.0)	I	(0.0)	I	(3.0)	I	(0.0)	I	(0.0)	I	(2.0)	I
I	I		I		I		I		I		I		I		I
I	I	ARM F	I	0.482	I	0.000	I	0.498	I	0.019	I	0.000	I	0.000	I
I	I		I	301.0	I	0.0	I	311.0	I	12.0	I	0.0	I	0.0	I
I	I		I	(2.0)	I	(0.0)	I	(0.0)	I	(10.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	ARM B	11.74	33.63	0.349		0.0	0.5	7.8		0.05
I	ARM C	15.49	40.19	0.385		0.0	0.6	9.2		0.04
I	ARM E	6.68	29.24	0.228		0.0	0.3	4.3		0.04
I	ARM F	7.80	29.13	0.268		0.0	0.4	5.4		0.05

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	ARM B	14.02	32.52	0.431		0.5	0.8	11.1		0.05

M20 junction 12_2010 BASE AM 01_001.vao

I									
I	ARM C	18.49	39.72	0.466		0.6	0.9	12.8	0.05
I									
I	ARM E	7.97	27.93	0.285		0.3	0.4	5.9	0.05
I									
I	ARM F	9.31	27.88	0.334		0.4	0.5	7.4	0.05
I									
I									
I									

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.15-08.30									
I										
I	ARM B	17.17	30.99	0.554		0.8	1.2	17.9		0.07
I										
I	ARM C	22.65	39.07	0.580		0.9	1.4	20.0		0.06
I										
I	ARM E	9.76	26.14	0.374		0.4	0.6	8.7		0.06
I										
I	ARM F	11.41	26.19	0.436		0.5	0.8	11.2		0.07
I										
I										
I										

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--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM B	17.17	30.98	0.554		1.2	1.2	18.5		0.07
I										

M20 junction 12_2010 BASE AM 01_001.vao

I	ARM C	22.65	39.07	0.580	1.4	1.4	20.6	0.06
I								
I	ARM E	9.76	26.12	0.374	0.6	0.6	8.9	0.06
I								
I	ARM F	11.41	26.18	0.436	0.8	0.8	11.5	0.07
I								
I								
I								

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM B	14.02	32.50	0.431		1.2	0.8	11.7		0.05
I										
I	ARM C	18.49	39.71	0.466		1.4	0.9	13.4		0.05
I										
I	ARM E	7.97	27.91	0.286		0.6	0.4	6.1		0.05
I										
I	ARM F	9.31	27.86	0.334		0.8	0.5	7.7		0.05
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	09.00-09.15									
I										
I	ARM B	11.74	33.61	0.349		0.8	0.5	8.2		0.05
I										
I	ARM C	15.49	40.18	0.385		0.9	0.6	9.6		0.04

M20 junction 12_2010 BASE AM 01_001.vao

I								
I	ARM E	6.68	29.22	0.228	0.4	0.3	4.5	0.04
I								
I	ARM F	7.80	29.10	0.268	0.5	0.4	5.6	0.05
I								
I								
I								

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.2	*
08.45	1.2	*
09.00	0.8	*
09.15	0.5	*

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.9	*
08.30	1.4	*
08.45	1.4	*
09.00	0.9	*
09.15	0.6	*

 .QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

M20 junction 12_2010 BASE AM 01_001.vao

08.00	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

.QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.8	*
08.45	0.8	*
09.00	0.5	*
09.15	0.4	

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	B	I	1287.6	I	858.4	I	75.3	I
							0.06	
I	C	I	1698.9	I	1132.6	I	85.5	I
							0.05	
I	E	I	732.2	I	488.2	I	38.5	I
							0.05	
I	F	I	855.6	I	570.4	I	48.8	I
							0.06	
I	ALL	I	4574.4	I	3049.6	I	248.0	I
							0.05	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2010 BASE AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 11\
M20 Junction 11_2010 BASE PM 01_001.vai"
(drive-on-the-left) at 15:20:09 on Monday, 20 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 11
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 11_2010 BASE PM 01_001.vao

ARM A - B2068
 ARM B - M20 (eastbound exit)
 ARM C - M20 (westbound entry)
 ARM D - A20
 ARM E - Services
 ARM F - M20 (westbound exit)
 ARM G - M20 (eastbound entry)

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

ARM F IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I																

I	ARM A	I	3.50	I	8.00	I	20.00	I	48.00	I	172.00	I	21.0	I	0.495	I	32.733
I	ARM C	I	8.00	I	8.00	I	0.00	I	102.00	I	172.00	I	16.0	I	0.594	I	43.951
I	ARM D	I	8.00	I	8.00	I	0.00	I	30.00	I	172.00	I	22.0	I	0.570	I	42.180
I	ARM E	I	4.00	I	4.00	I	0.00	I	46.00	I	172.00	I	41.0	I	0.374	I	19.987
I	ARM G	I	6.50	I	6.50	I	0.00	I	84.00	I	172.00	I	9.0	I	0.536	I	36.440
I	ARM I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

M20 Junction 11_2010 BASE PM 01_001.vao

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I
I	G	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 11 BASE PM

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	2.60	I	3.90	I	2.60	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.06	I	6.09	I	4.06	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	7.00	I	10.50	I	7.00	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	0.50	I	0.75	I	0.50	I
I	ARM G	I	15.00	I	45.00	I	75.00	I	4.47	I	6.71	I	4.47	I

DEMAND SET TITLE: M20 Junction 11 BASE PM

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I	ARM G	I
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.337	I	0.000	I	0.389	I	0.048	I	0.226	I	0.000	I
I		I		I	0.0	I	70.0	I	0.0	I	81.0	I	10.0	I	47.0	I	0.0	I
I		I		I	(0.0)	I	(2.0)	I	(0.0)	I	(1.0)	I	(5.0)	I	(2.0)	I	(0.0)	I

M20 Junction 11_2010 BASE PM 01_001.vao

I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.222	I	0.000	I	0.000	I	0.748	I	0.031	I	0.000	I	0.000	I
I	I		I	72.0	I	0.0	I	0.0	I	243.0	I	10.0	I	0.0	I	0.0	I
I	I		I	(1.0)	I	(0.0)	I	(0.0)	I	(3.0)	I	(5.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM D	I	0.318	I	0.330	I	0.000	I	0.000	I	0.018	I	0.334	I	0.000	I
I	I		I	178.0	I	185.0	I	0.0	I	0.0	I	10.0	I	187.0	I	0.0	I
I	I		I	(2.0)	I	(7.0)	I	(0.0)	I	(0.0)	I	(5.0)	I	(6.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM E	I	0.250	I	0.250	I	0.000	I	0.250	I	0.000	I	0.250	I	0.000	I
I	I		I	10.0	I	10.0	I	0.0	I	10.0	I	0.0	I	10.0	I	0.0	I
I	I		I	(5.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM G	I	0.128	I	0.000	I	0.000	I	0.844	I	0.028	I	0.000	I	0.000	I
I	I		I	46.0	I	0.0	I	0.0	I	302.0	I	10.0	I	0.0	I	0.0	I
I	I		I	(6.0)	I	(0.0)	I	(0.0)	I	(4.0)	I	(5.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
	16.45-17.00									
	ARM A	2.60	28.86	0.090		0.0	0.1	1.5		0.04
	ARM C	4.06	39.39	0.103		0.0	0.1	1.7		0.03
	ARM D	7.00	39.12	0.179		0.0	0.2	3.2		0.03
	ARM E	0.50	15.93	0.031		0.0	0.0	0.5		0.06
	ARM G	4.47	31.83	0.141		0.0	0.2	2.4		0.04

M20 Junction 11_2010 BASE PM 01_001.vao

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
17.00-17.15									
ARM A	3.10	28.22	0.110		0.1	0.1	1.8		0.04
ARM C	4.85	38.71	0.125		0.1	0.1	2.1		0.03
ARM D	8.36	38.92	0.215		0.2	0.3	4.1		0.03
ARM E	0.60	15.32	0.039		0.0	0.0	0.6		0.07
ARM G	5.34	31.22	0.171		0.2	0.2	3.1		0.04

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
17.15-17.30									
ARM A	3.80	27.34	0.139		0.1	0.2	2.4		0.04
ARM C	5.94	37.80	0.157		0.1	0.2	2.8		0.03
ARM D	10.24	38.65	0.265		0.3	0.4	5.3		0.04
ARM E	0.73	14.49	0.050		0.0	0.1	0.8		0.07
ARM G	6.54	30.40	0.215		0.2	0.3	4.1		0.04

M20 Junction 11_2010 BASE PM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	3.80	27.34	0.139		0.2	0.2	2.4		0.04
ARM C	5.94	37.80	0.157		0.2	0.2	2.8		0.03
ARM D	10.24	38.65	0.265		0.4	0.4	5.4		0.04
ARM E	0.73	14.49	0.050		0.1	0.1	0.8		0.07
ARM G	6.54	30.40	0.215		0.3	0.3	4.1		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	3.10	28.21	0.110		0.2	0.1	1.9		0.04
ARM C	4.85	38.71	0.125		0.2	0.1	2.2		0.03
ARM D	8.36	38.92	0.215		0.4	0.3	4.2		0.03
ARM E	0.60	15.31	0.039		0.1	0.0	0.6		0.07
ARM G	5.34	31.22	0.171		0.3	0.2	3.1		0.04

M20 Junction 11_2010 BASE PM 01_001.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I	ARM A	2.60	28.85	0.090		0.1	0.1	1.5		0.04
I	ARM C	4.06	39.38	0.103		0.1	0.1	1.7		0.03
I	ARM D	7.00	39.12	0.179		0.3	0.2	3.3		0.03
I	ARM E	0.50	15.92	0.031		0.0	0.0	0.5		0.06
I	ARM G	4.47	31.83	0.141		0.2	0.2	2.5		0.04
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

.QUEUE AT ARM G

M20 Junction 11_2010 BASE PM 01_001.vao

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	285.2	I	190.1	I	11.5	I
I	C	I	445.6	I	297.1	I	13.3	I
I	D	I	767.9	I	511.9	I	25.5	I
I	E	I	54.8	I	36.6	I	3.8	I
I	G	I	490.9	I	327.3	I	19.3	I
I	ALL	I	2044.5	I	1363.0	I	73.3	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 11\
M20 Junction 11_2010 BASE AM 01_001.vai"
(drive-on-the-left) at 15:10:01 on Monday, 20 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 11
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 11_2010 BASE AM 01_001.vao

ARM A - B2068
 ARM B - M20 (eastbound exit)
 ARM C - M20 (westbound entry)
 ARM D - A20
 ARM E - Services
 ARM F - M20 (westbound exit)
 ARM G - M20 (eastbound entry)

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

ARM F IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I																

I	ARM A	I	3.50	I	8.00	I	20.00	I	48.00	I	172.00	I	21.0	I	0.495	I	32.733
I	ARM C	I	8.00	I	8.00	I	0.00	I	102.00	I	172.00	I	16.0	I	0.594	I	43.951
I	ARM D	I	8.00	I	8.00	I	0.00	I	30.00	I	172.00	I	22.0	I	0.570	I	42.180
I	ARM E	I	4.00	I	4.00	I	0.00	I	46.00	I	172.00	I	41.0	I	0.374	I	19.987
I	ARM G	I	6.50	I	6.50	I	0.00	I	84.00	I	172.00	I	9.0	I	0.536	I	36.440
I	ARM I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

M20 Junction 11_2010 BASE AM 01_001.vao

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I
I	G	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 11 AM Base

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.59	I	5.38	I	3.59	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.64	I	6.96	I	4.64	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	9.86	I	14.79	I	9.86	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	0.50	I	0.75	I	0.50	I
I	ARM G	I	15.00	I	45.00	I	75.00	I	2.63	I	3.94	I	2.63	I

DEMAND SET TITLE: M20 Junction 11 AM Base

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I	ARM G	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.624	I	0.000	I	0.091	I	0.035	I	0.251	I	0.000	I
I		I		I	0.0	I	179.0	I	0.0	I	26.0	I	10.0	I	72.0	I	0.0	I
I		I		I	(0.0)	I	(4.0)	I	(0.0)	I	(13.0)	I	(5.0)	I	(5.0)	I	(0.0)	I

		ARM C	0.181	0.000	0.000	0.792	0.027	0.000	0.000			
			67.0	0.0	0.0	294.0	10.0	0.0	0.0			
			(3.0)	(0.0)	(0.0)	(6.0)	(5.0)	(0.0)	(0.0)			
		ARM D	0.195	0.284	0.000	0.000	0.013	0.508	0.000			
			154.0	224.0	0.0	0.0	10.0	401.0	0.0			
			(3.0)	(12.0)	(0.0)	(0.0)	(5.0)	(6.0)	(0.0)			
		ARM E	0.250	0.250	0.000	0.250	0.000	0.250	0.000			
			10.0	10.0	0.0	10.0	0.0	10.0	0.0			
			(5.0)	(5.0)	(0.0)	(5.0)	(0.0)	(5.0)	(0.0)			
		ARM G	0.233	0.000	0.000	0.719	0.048	0.000	0.000			
			49.0	0.0	0.0	151.0	10.0	0.0	0.0			
			(7.0)	(0.0)	(0.0)	(14.0)	(5.0)	(0.0)	(0.0)			

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.59	28.48	0.126		0.0	0.1	2.1		0.04
ARM C	4.64	39.52	0.117		0.0	0.1	2.0		0.03
ARM D	9.86	38.21	0.258		0.0	0.3	5.1		0.04
ARM E	0.50	14.69	0.034		0.0	0.0	0.5		0.07
ARM G	2.63	29.51	0.089		0.0	0.1	1.4		0.04

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TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
08.00-08.15									
ARM A	4.28	27.95	0.153		0.1	0.2	2.7		0.04
ARM C	5.54	39.09	0.142		0.1	0.2	2.4		0.03
ARM D	11.78	37.98	0.310		0.3	0.4	6.6		0.04
ARM E	0.60	13.83	0.043		0.0	0.0	0.7		0.08
ARM G	3.13	28.91	0.108		0.1	0.1	1.8		0.04

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
08.15-08.30									
ARM A	5.25	27.24	0.193		0.2	0.2	3.5		0.05
ARM C	6.78	38.51	0.176		0.2	0.2	3.2		0.03
ARM D	14.42	37.67	0.383		0.4	0.6	9.1		0.04
ARM E	0.73	12.66	0.058		0.0	0.1	0.9		0.08
ARM G	3.84	28.09	0.137		0.1	0.2	2.3		0.04

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	5.25	27.23	0.193		0.2	0.2	3.6		0.05
ARM C	6.78	38.51	0.176		0.2	0.2	3.2		0.03
ARM D	14.42	37.67	0.383		0.6	0.6	9.3		0.04
ARM E	0.73	12.66	0.058		0.1	0.1	0.9		0.08
ARM G	3.84	28.09	0.137		0.2	0.2	2.4		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	4.28	27.95	0.153		0.2	0.2	2.8		0.04
ARM C	5.54	39.09	0.142		0.2	0.2	2.5		0.03
ARM D	11.78	37.98	0.310		0.6	0.5	6.9		0.04
ARM E	0.60	13.82	0.043		0.1	0.0	0.7		0.08
ARM G	3.13	28.90	0.108		0.2	0.1	1.8		0.04

M20 Junction 11_2010 BASE AM 01_001.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I	ARM A	3.59	28.47	0.126		0.2	0.1	2.2		0.04
I	ARM C	4.64	39.51	0.117		0.2	0.1	2.0		0.03
I	ARM D	9.86	38.21	0.258		0.5	0.3	5.3		0.04
I	ARM E	0.50	14.67	0.034		0.0	0.0	0.5		0.07
I	ARM G	2.63	29.50	0.089		0.1	0.1	1.5		0.04
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.6 *
08.45	0.6 *
09.00	0.5
09.15	0.3

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

.QUEUE AT ARM G

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TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	393.5	I	262.4	I	16.8	I
I	C	I	508.7	I	339.1	I	15.3	I
I	D	I	1081.9	I	721.3	I	42.3	I
I	E	I	54.8	I	36.6	I	4.2	I
I	G	I	288.0	I	192.0	I	11.3	I
I	ALL	I	2326.9	I	1551.3	I	90.0	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Northern Rb\M20 J13 northern rb_2010 BASE PM 01_001.vai"
(drive-on-the-left) at 16:42:56 on Monday, 20 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 northern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Castle Hill
 ARM B - M20 eastbound exit
 ARM C - A20
 ARM D - M20 Eastbound entry
 ARM E - Channel Tunnel access

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	3.50	I	8.50	I	26.00	I	23.00	I	40.00	I	39.0	I	0.684	I	32.478
I		I																
I	ARM	C	I	3.50	I	4.50	I	4.50	I	22.00	I	40.00	I	23.0	I	0.565	I	21.219
I		I																
I	ARM	D	I	10.00	I	10.00	I	0.00	I	10.00	I	40.00	I	51.0	I	0.797	I	44.351
I		I																
I	ARM	E	I	3.00	I	3.00	I	0.00	I	8.00	I	40.00	I	52.0	I	0.412	I	12.882
I		I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE (%)	I

I A	I	100		I
I B	I	100		I

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I C I 100 I
I D I 100 I
I E I 100 I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 northern Rb 2010 BASE PM

I	I	I	I	I	I	I	I	I	I	I
ARM	FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	IF FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK				
ARM A	15.00	45.00	75.00	0.00	0.00	0.00				
ARM C	15.00	45.00	75.00	7.20	10.80	7.20				
ARM D	15.00	45.00	75.00	10.13	15.19	10.13				
ARM E	15.00	45.00	75.00	0.00	0.00	0.00				

DEMAND SET TITLE: M20 Junction 13 northern Rb 2010 BASE PM

I	I	I	I	I	I	I	I	I	I
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E			
16.45 - 18.15	ARM A	0.000	0.000	0.000	0.000	0.000			
		0.0	0.0	0.0	0.0	0.0			
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)			
	ARM C	0.000	1.000	0.000	0.000	0.000			
		0.0	576.0	0.0	0.0	0.0			
		(0.0)	(1.0)	(0.0)	(0.0)	(0.0)			
	ARM D	0.000	0.000	1.000	0.000	0.000			
		0.0	0.0	810.0	0.0	0.0			
		(0.0)	(0.0)	(1.0)	(0.0)	(0.0)			


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M20 J13 northern rb_2010 BASE PM 01_001.vao
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I

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QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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I  TIME          DEMAND  CAPACITY  DEMAND/  PEDESTRIAN  START  END      DELAY  GEOMETRIC DELAY  AVERAGE DELAY
I          (VEH/MIN) (VEH/MIN) CAPACITY  FLOW      QUEUE  QUEUE    (VEH.MIN/  (VEH.MIN/  PER ARRIVING
I                                     (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 16.45-17.00
I
I ARM A          0.00     20.55   0.000                0.0    0.0      0.0                0.00
I
I ARM C          7.20     21.01   0.343                0.0    0.5      7.5                0.07
I
I ARM D         10.13     38.20   0.265                0.0    0.4      5.3                0.04
I
I ARM E          0.00      5.71   0.000                0.0    0.0      0.0                0.00
I
I
I

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I  TIME          DEMAND  CAPACITY  DEMAND/  PEDESTRIAN  START  END      DELAY  GEOMETRIC DELAY  AVERAGE DELAY
I          (VEH/MIN) (VEH/MIN) CAPACITY  FLOW      QUEUE  QUEUE    (VEH.MIN/  (VEH.MIN/  PER ARRIVING
I                                     (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 17.00-17.15
I
I ARM A          0.00     18.20   0.000                0.0    0.0      0.0                0.00
I
I ARM C          8.60     21.01   0.409                0.5    0.7     10.1                0.08
I
I ARM D         12.09     37.07   0.326                0.4    0.5      7.1                0.04

```

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I	ARM E	0.00	4.29	0.000		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	0.00	15.00	0.000		0.0	0.0	0.0		0.00
I	ARM C	10.53	21.01	0.501		0.7	1.0	14.5		0.10
I	ARM D	14.81	35.54	0.417		0.5	0.7	10.5		0.05
I	ARM E	0.00	2.37	0.000		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	0.00	14.97	0.000		0.0	0.0	0.0		0.00
I	ARM C	10.53	21.01	0.501		1.0	1.0	14.9		0.10
I	ARM D	14.81	35.52	0.417		0.7	0.7	10.7		0.05
I										

I ARM E 0.00 2.35 0.000 0.0 0.0 0.0 0.00
 I
 I
 I

 .
 --
 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 17.45-18.00
 I
 I ARM A 0.00 18.16 0.000 0.0 0.0 0.0 0.00
 I
 I ARM C 8.60 21.01 0.409 1.0 0.7 10.8 0.08
 I
 I ARM D 12.09 37.04 0.326 0.7 0.5 7.4 0.04
 I
 I ARM E 0.00 4.27 0.000 0.0 0.0 0.0 0.00
 I
 I
 I

 .
 --
 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 18.00-18.15
 I
 I ARM A 0.00 20.50 0.000 0.0 0.0 0.0 0.00
 I
 I ARM C 7.20 21.01 0.343 0.7 0.5 8.0 0.07
 I
 I ARM D 10.13 38.16 0.265 0.5 0.4 5.5 0.04
 I
 I ARM E 0.00 5.67 0.000 0.0 0.0 0.0 0.00

I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.0 *
17.45	1.0 *
18.00	0.7 *
18.15	0.5 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5
17.30	0.7 *

17.45	0.7	*
18.00	0.5	
18.15	0.4	

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	0.0	I	0.0	I	0.0	I
I	C	I	789.8	I	526.5	I	65.8	I
I	D	I	1110.7	I	740.5	I	46.5	I
I	E	I	0.0	I	0.0	I	0.0	I
I	ALL	I	1900.5	I	1267.0	I	112.3	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Northern Rb\M20 J13 northern rb_2010 BASE AM 01_001.vai"
(drive-on-the-left) at 16:42:44 on Monday, 20 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 northern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Castle Hill
 ARM B - M20 eastbound exit
 ARM C - A20
 ARM D - M20 Eastbound entry
 ARM E - Channel Tunnel access

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	3.50	I	8.50	I	26.00	I	23.00	I	40.00	I	39.0	I	0.684	I	32.478
	I																	
I	ARM	C	I	3.50	I	4.50	I	4.50	I	22.00	I	40.00	I	23.0	I	0.565	I	21.219
	I																	
I	ARM	D	I	10.00	I	10.00	I	0.00	I	10.00	I	40.00	I	51.0	I	0.797	I	44.351
	I																	
I	ARM	E	I	3.00	I	3.00	I	0.00	I	8.00	I	40.00	I	52.0	I	0.412	I	12.882
	I																	

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE (%)	I

I A	I	100		I
I B	I	100		I

M20 J13 northern rb_2010 BASE AM 01_001.vao

I C I 100 I
I D I 100 I
I E I 100 I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 northern Rb 2010 BASE AM

I	I	I	I	I	I	I	I	I	I	I
ARM	FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	IF FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK				
ARM A	15.00	45.00	75.00	0.00	0.00	0.00				
ARM C	15.00	45.00	75.00	5.00	7.50	5.00				
ARM D	15.00	45.00	75.00	11.16	16.74	11.16				
ARM E	15.00	45.00	75.00	0.00	0.00	0.00				

DEMAND SET TITLE: M20 Junction 13 northern Rb 2010 BASE AM

I	I	I	I	I	I	I	I	I	I
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E			
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000	0.000			
		0.0	0.0	0.0	0.0	0.0			
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)			
	ARM C	0.000	1.000	0.000	0.000	0.000			
		0.0	400.0	0.0	0.0	0.0			
	(0.0)	(20.0)	(0.0)	(0.0)	(0.0)	(0.0)			
	ARM D	0.000	0.000	1.000	0.000	0.000			
		0.0	0.0	893.0	0.0	0.0			
	(0.0)	(0.0)	(20.0)	(0.0)	(0.0)	(0.0)			


```

M20 J13 northern rb_2010 BASE AM 01_001.vao
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
I      I      I      I      I      I      I      I      I      I
-----

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QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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-----
I  TIME          DEMAND  CAPACITY  DEMAND/  PEDESTRIAN  START  END      DELAY  GEOMETRIC DELAY  AVERAGE DELAY
I          (VEH/MIN) (VEH/MIN) CAPACITY  FLOW      QUEUE  QUEUE    (VEH.MIN/  (VEH.MIN/  PER ARRIVING
I                                     (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 07.45-08.00
I
I ARM A          0.00    19.26  0.000                0.0    0.0      0.0                0.00
I
I ARM C          5.00    17.68  0.283                0.0    0.4      5.7                0.08
I
I ARM D         11.16    32.99  0.338                0.0    0.5      7.5                0.05
I
I ARM E          0.00     4.93  0.000                0.0    0.0      0.0                0.00
I
I
I
-----

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-----
I  TIME          DEMAND  CAPACITY  DEMAND/  PEDESTRIAN  START  END      DELAY  GEOMETRIC DELAY  AVERAGE DELAY
I          (VEH/MIN) (VEH/MIN) CAPACITY  FLOW      QUEUE  QUEUE    (VEH.MIN/  (VEH.MIN/  PER ARRIVING
I                                     (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 08.00-08.15
I
I ARM A          0.00    16.65  0.000                0.0    0.0      0.0                0.00
I
I ARM C          5.97    17.68  0.338                0.4    0.5      7.4                0.09
I
I ARM D         13.33    32.21  0.414                0.5    0.7     10.3                0.05
I
-----

```

M20 J13 northern rb_2010 BASE AM 01_001.vao

I	ARM E	0.00	3.36	0.000		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	0.00	13.11	0.000		0.0	0.0	0.0		0.00
I	ARM C	7.31	17.68	0.414		0.5	0.7	10.2		0.10
I	ARM D	16.32	31.14	0.524		0.7	1.1	16.0		0.07
I	ARM E	0.00	1.23	0.000		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	0.00	13.08	0.000		0.0	0.0	0.0		0.00
I	ARM C	7.31	17.68	0.414		0.7	0.7	10.5		0.10
I	ARM D	16.32	31.13	0.524		1.1	1.1	16.4		0.07
I										

I ARM E 0.00 1.21 0.000 0.0 0.0 0.0 0.00
 I
 I
 I

 .-----
 --
 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 08.45-09.00
 I
 I ARM A 0.00 16.60 0.000 0.0 0.0 0.0 0.00
 I
 I ARM C 5.97 17.68 0.338 0.7 0.5 7.9 0.09
 I
 I ARM D 13.33 32.19 0.414 1.1 0.7 10.9 0.05
 I
 I ARM E 0.00 3.33 0.000 0.0 0.0 0.0 0.00
 I
 I
 I

 .-----
 --
 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 09.00-09.15
 I
 I ARM A 0.00 19.19 0.000 0.0 0.0 0.0 0.00
 I
 I ARM C 5.00 17.68 0.283 0.5 0.4 6.1 0.08
 I
 I ARM D 11.16 32.97 0.339 0.7 0.5 7.8 0.05
 I
 I ARM E 0.00 4.89 0.000 0.0 0.0 0.0 0.00

I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.5 *
08.30	0.7 *
08.45	0.7 *
09.00	0.5 *
09.15	0.4

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.1 *

08.45	1.1	*
09.00	0.7	*
09.15	0.5	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	0.0	I	0.0	I	0.0	I
I	C	I	548.5	I	365.7	I	47.8	I
I	D	I	1224.5	I	816.3	I	68.9	I
I	E	I	0.0	I	0.0	I	0.0	I
I	ALL	I	1773.0	I	1182.0	I	116.7	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Lydd Rd_Romney Rd 2010 Base 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Lydd Rd_Romney Rd\
Lydd Rd_Romney Rd 2010 Base 01_001.vpi"
(drive-on-the-left) at 12:21:13 on Friday, 3 September 2010

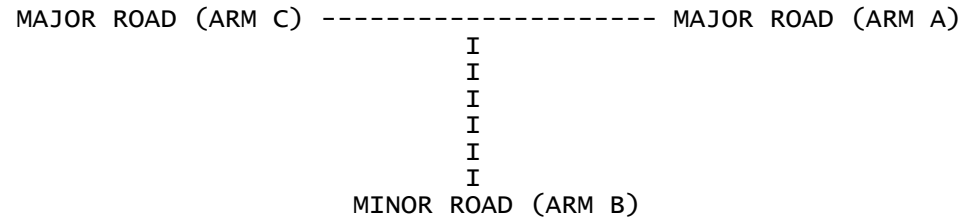
.RUN INFORMATION

RUN TITLE	: A259 Lydd Rd / B2075 Romney Rd
LOCATION	: Lydd / New Romney
DATE	: 17/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Lydd Rd_Romney Rd 2010 Base 01_001.vpo



ARM A IS A259 Lydd Rd (east)
 ARM B IS B2075 Romney Rd
 ARM C IS A259 Lydd Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 80.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 80.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 80.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	8.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.50 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	620.29	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

Lydd Rd_Romney Rd 2010 Base 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I				
			I	I	I	I		I	I	I					
I	I	I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	I	BEFORE	AT TOP	AFTER	I					
I	I	I	TO RISE	IS REACHED	FALLING	I	PEAK	OF PEAK	PEAK	I					
I	I	I	I	I	I	I	I	I	I	I					
I	ARM	A	I	15.00	I	45.00	I	75.00	I	6.86	I	10.29	I	6.86	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	3.83	I	5.74	I	3.83	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	4.88	I	7.31	I	4.88	I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2010 Base AM

I I I I I	TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)											

		I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.45 - 08.00	I		I		I		I		I		I	
I		I	ARM A	I	0.000	I	0.372	I	0.628	I		I	
I		I		I	0.0	I	204.0	I	345.0	I		I	
I		I		I	(0.0)	I	(2.0)	I	(2.0)	I		I	
I		I		I		I		I		I		I	
I		I	ARM B	I	0.510	I	0.000	I	0.490	I		I	
I		I		I	156.0	I	0.0	I	150.0	I		I	
I		I		I	(2.0)	I	(0.0)	I	(8.0)	I		I	
I		I		I		I		I		I		I	
I		I	ARM C	I	0.597	I	0.403	I	0.000	I		I	
I		I		I	233.0	I	157.0	I	0.0	I		I	
I		I		I	(1.0)	I	(8.0)	I	(0.0)	I		I	
I		I		I		I		I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A259 Lydd Rd / B2075 Romney Rd 2010 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

Lydd Rd_Romney Rd 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	2.75	7.18	0.384		0.37	0.61	8.7		0.22
B-A	2.86	5.43	0.527		0.58	1.06	14.7		0.38
C-AB	2.88	7.48	0.385		0.47	0.74	11.1		0.22
A-B	3.74								
A-C	6.33								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	2.75	7.13	0.386		0.61	0.62	9.2		0.23
B-A	2.86	5.42	0.528		1.06	1.09	16.2		0.39
C-AB	2.88	7.48	0.385		0.74	0.75	11.4		0.22
A-B	3.74								
A-C	6.33								

Lydd Rd_Romney Rd 2010 Base 01_001.vpo

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00									
I	B-C	2.25	8.20	0.274		0.62	0.38	6.0		0.17
I	B-A	2.34	6.26	0.373		1.09	0.61	9.7		0.26
I	C-AB	2.35	7.87	0.299		0.75	0.49	7.5		0.18
I	A-B	3.06								
I	A-C	5.17								

.

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15									
I	B-C	1.88	8.79	0.214		0.38	0.28	4.3		0.15
I	B-A	1.96	6.82	0.287		0.61	0.41	6.4		0.21
I	C-AB	1.97	8.14	0.242		0.49	0.35	5.3		0.16
I	A-B	2.56								
I	A-C	4.33								

I

I
I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	1.1	*
08.45	1.1	*
09.00	0.6	*
09.15	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.7	*
08.45	0.8	*
09.00	0.5	
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I

Lydd Rd_Romney Rd 2010 Base 01_001.vpo

		I	I	I	I	I	I	I	I	I
		(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)			
I B-C	I	206.5	I 137.6	I 37.4	I 0.18	I 37.4	I 0.18	I		I
I B-A	I	214.7	I 143.1	I 60.9	I 0.28	I 60.9	I 0.28	I		I
I C-AB	I	216.1	I 144.1	I 47.4	I 0.22	I 47.4	I 0.22	I		I
I A-B	I	280.8	I 187.2	I	I	I	I	I		I
I A-C	I	474.9	I 316.6	I	I	I	I	I		I
I ALL	I	1713.7	I 1142.4	I 145.7	I 0.08	I 145.7	I 0.09	I		I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For	Slope For	Opposing	Slope For	Opposing	I
I STREAM B-C	STREAM	A-C	STREAM	A-B	I
I 0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I 0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing	I
I STREAM C-B	STREAM	A-C	STREAM	A-B	I

I 620.29 0.22 0.22 I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.36	I	8.04	I	5.36	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.76	I	7.14	I	4.76	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.66	I	9.99	I	6.66	I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2010 Base PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.380	I	0.620	I		I	
I		I		I	0.0	I	163.0	I	266.0	I		I	
I		I	(0.0)	I	(2.0)	I	(1.0)	I		I		I	

				Lydd Rd_Romney Rd 2010 Base 01_001.vpo	
I	I	I	I	I	I
I	I	ARM B	I	0.556	I 0.000 I 0.444 I
I	I		I	212.0	I 0.0 I 169.0 I
I	I		I	(1.0)	I (0.0) I (4.0) I
I	I		I		I I I
I	I	ARM C	I	0.762	I 0.238 I 0.000 I
I	I		I	406.0	I 127.0 I 0.0 I
I	I		I	(0.0)	I (2.0) I (0.0) I
I	I		I		I I I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A259 Lydd Rd / B2075 Romney Rd 2010 Base PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.12	8.84	0.240		0.00	0.31	4.5		0.15
B-A	2.66	7.15	0.372		0.00	0.58	8.1		0.22
C-AB	1.59	8.96	0.178		0.00	0.23	3.5		0.14
A-B	2.05								
A-C	3.34								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING

Lydd Rd_Romney Rd 2010 Base 01_001.vpo

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.00-17.15							
I B-C	2.53	8.03	0.315	0.31	0.45	6.5	0.18
I B-A	3.18	6.56	0.484	0.58	0.91	12.8	0.29
I C-AB	1.90	8.73	0.218	0.23	0.32	4.7	0.15
I A-B	2.44						
I A-C	3.99						
I							
I							

--

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I B-C	3.10	6.33	0.490		0.45	0.92	12.9		0.30
I B-A	3.89	5.62	0.692		0.91	2.02	26.6		0.53
I C-AB	2.33	8.42	0.277		0.32	0.47	7.0		0.16
I A-B	2.99								
I A-C	4.88								
I									
I									

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Lydd Rd_Romney Rd 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	2.12	8.79	0.241		0.48	0.32	5.0		0.15
B-A	2.66	7.13	0.373		0.98	0.61	9.6		0.23
C-AB	1.59	8.96	0.178		0.33	0.24	3.6		0.14
A-B	2.05								
A-C	3.34								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.5	
17.30	0.9	*
17.45	1.0	*
18.00	0.5	
18.15	0.3	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	2.0	**

17.45	2.1	**
18.00	1.0	*
18.15	0.6	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	232.6	I	155.1	I	50.9	I
I	B-A	I	291.8	I	194.5	I	104.7	I
I	C-AB	I	174.8	I	116.5	I	30.9	I
I	A-B	I	224.4	I	149.6	I		I
I	A-C	I	366.1	I	244.1	I		I
I	ALL	I	1848.5	I	1232.4	I	186.4	I
							0.10	
							186.5	
							0.10	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

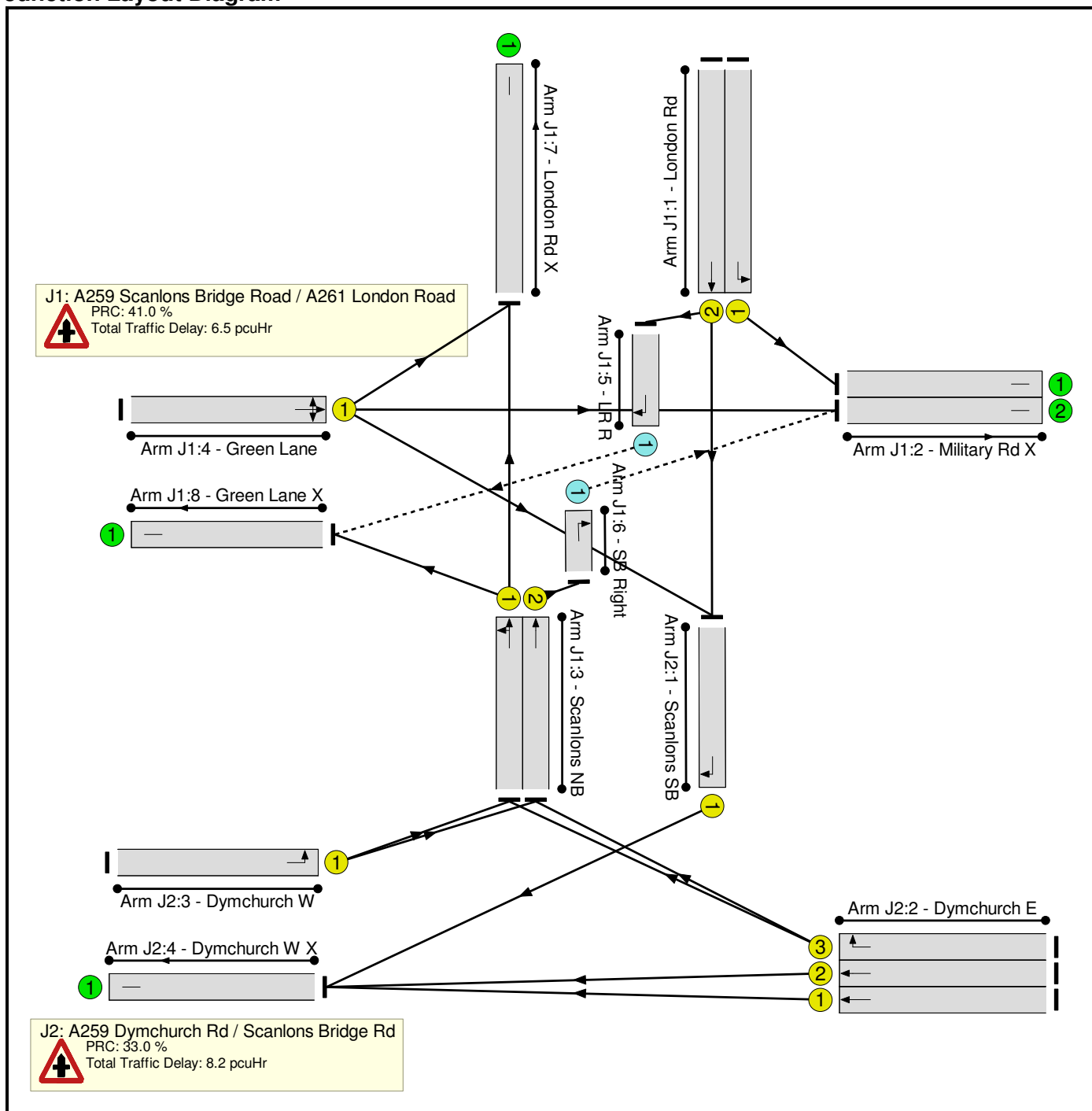
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	Hythe One Way 01_002.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base PM' (FG1: '2010 Base PM', Plan 1: 'Network Control Plan 1')

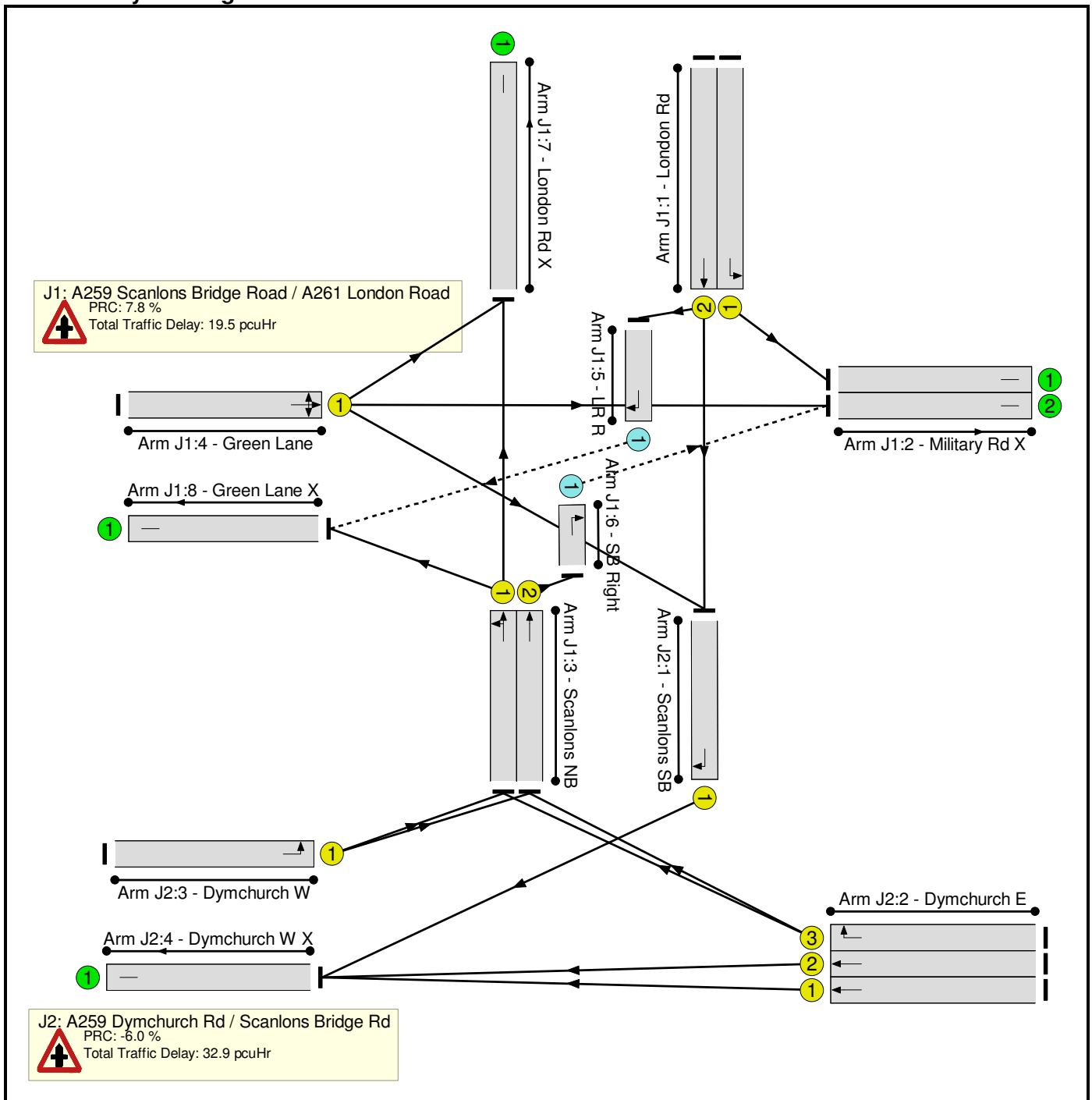
Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalled Lanes (%)	41.0	Total Delay for Signalled Lanes (pcuHr):	5.77		
C1	Stream: 2 PRC for Signalled Lanes (%)	33.0	Total Delay for Signalled Lanes (pcuHr):	8.21		
	PRC Over All Lanes (%)	33.0	Total Delay Over All Lanes (pcuHr):	14.73	Cycle Time (s):	60

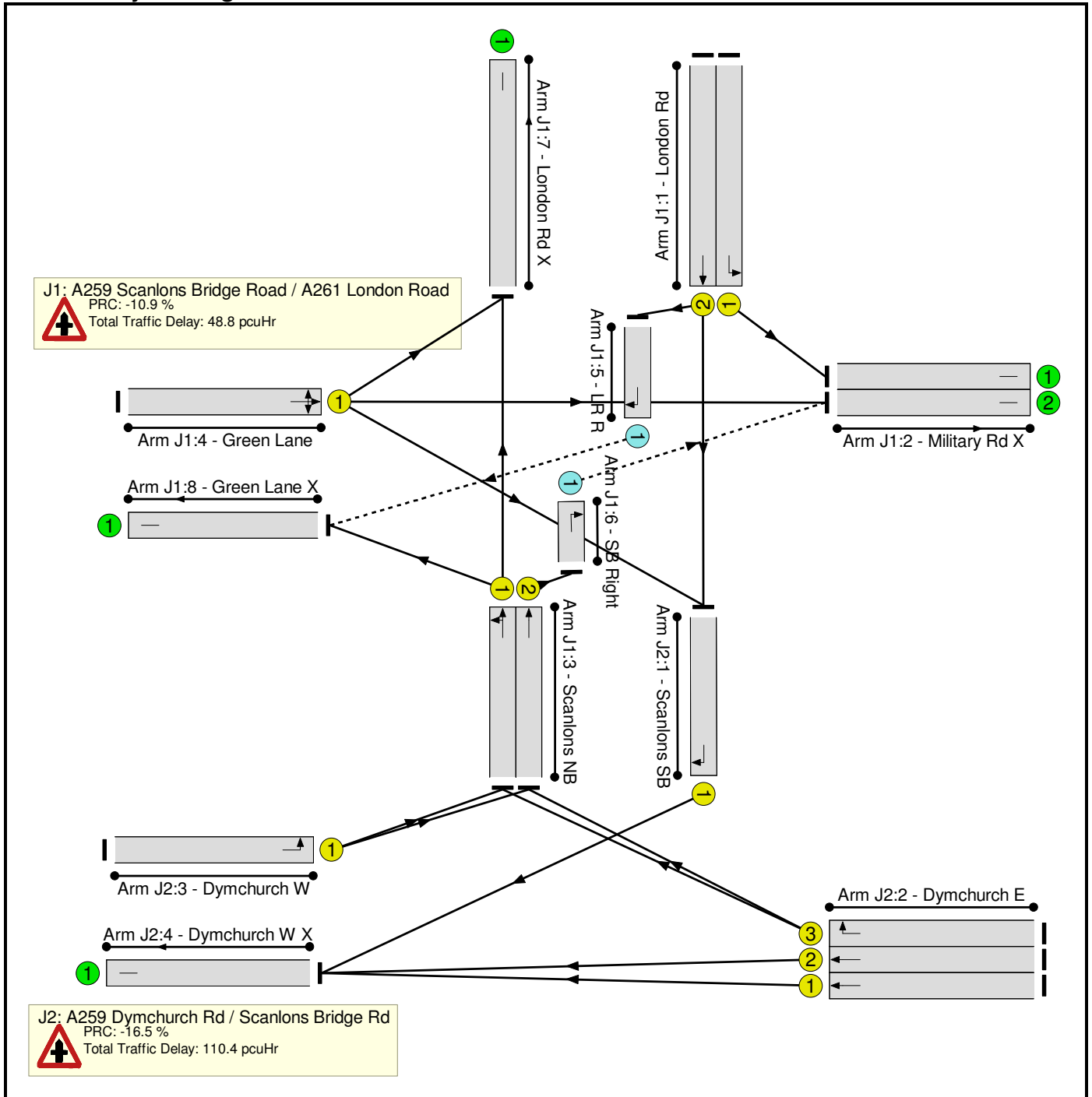
Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalised Lanes (%):	13.0	Total Delay for Signalised Lanes (pcuHr):	14.12	
C1	Stream: 2 PRC for Signalised Lanes (%):	-6.0	Total Delay for Signalised Lanes (pcuHr):	32.89	
	PRC Over All Lanes (%):	-6.0	Total Delay Over All Lanes (pcuHr):	52.35	Cycle Time (s): 119

Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalled Lanes (%)	2.5	Total Delay for Signalled Lanes (pcuHr)	24.43	
C1	Stream: 2 PRC for Signalled Lanes (%)	-16.5	Total Delay for Signalled Lanes (pcuHr)	110.41	
	PRC Over All Lanes (%)	-16.5	Total Delay Over All Lanes (pcuHr)	159.17	Cycle Time (s): 240

Harbour Street_The Tram Road 2010 Base 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Harbour Street_Tram Road\
Harbour Street_The Tram Road 2010 Base 01_001.vpi"
(drive-on-the-left) at 15:39:29 on Tuesday, 9 November 2010

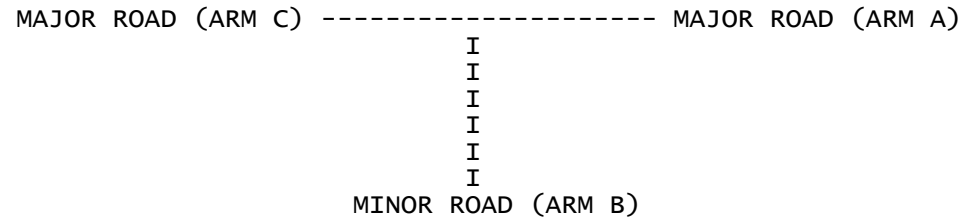
.RUN INFORMATION

RUN TITLE	: Harbour Street / Tram Road
LOCATION	: Folkestone
DATE	: 24/08/10
CLIENT	: Shepway DC
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Harbour Street_The Tram Road 2010 Base 01_001.vpo



ARM A IS Harbour Street (north)
 ARM B IS The Tram Road
 ARM C IS Harbour Street (south)

.STREAM LABELLING CONVENTION

 STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 40.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 3.50 M.	I

.SLOPES AND INTERCEPT

 (NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B

Harbour Street_The Tram Road 2010 Base 01_001.vpo

I	721.27	0.28	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	566.97	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	631.87	0.24	0.24	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Harbour Street / Tram Road 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TOP OF PEAK	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	AFTER	I
I		I	TO RISE	I	PEAK	I

Harbour Street_The Tram Road 2010 Base 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	10.68	I	16.01	I	10.68	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	2.08	I	3.11	I	2.08	I

.Demand set: Harbour Street / Tram Road 2010 Base AM

I		I		TURNING PROPORTIONS	I								
I		I		TURNING COUNTS	I								
I		I		(PERCENTAGE OF H.V.S)	I								
I		I			I								
I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.45 - 08.00	I		I		I		I		I		I	
I		I	ARM	A	I	0.000	I	0.000	I	0.000	I		I
I		I		I	I	0.0	I	0.0	I	0.0	I		I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I		I
I		I		I	I		I		I		I		I
I		I	ARM	B	I	0.527	I	0.000	I	0.473	I		I
I		I		I	I	450.0	I	0.0	I	404.0	I		I
I		I		I	I	(1.0)	I	(0.0)	I	(2.0)	I		I
I		I		I	I		I		I		I		I
I		I	ARM	C	I	1.000	I	0.000	I	0.000	I		I
I		I		I	I	166.0	I	0.0	I	0.0	I		I
I		I		I	I	(8.0)	I	(0.0)	I	(0.0)	I		I
I		I		I	I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Harbour Street / Tram Road 2010 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-C	5.07	9.94	0.510		0.00	1.01	14.2		0.20
I	B-A	5.65	8.99	0.628		0.00	1.61	21.7		0.28

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I	C-A	2.08								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.00-08.15									
I										
I	B-C	6.05	9.52	0.636		1.01	1.66	23.2		0.28
I										
I	B-A	6.74	8.92	0.756		1.61	2.80	37.6		0.43
I										
I	C-A	2.49								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

Harbour Street_The Tram Road 2010 Base 01_001.vpo
(RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT)

TIME SEGMENT)	VEHICLE (MIN)
08.15-08.30	
B-C 7.41 8.97 0.827 1.66 3.98 50.4	0.54
B-A 8.26 8.82 0.936 2.80 7.62 88.0	0.90
C-A 3.05	
C-B 0.00 9.57 0.000 0.00 0.00 0.0	0.00
A-B 0.00	
A-C 0.00	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C 7.41 8.86 0.837 3.98 4.50 64.3									0.65
B-A 8.26 8.82 0.936 7.62 9.29 128.2									1.20
C-A 3.05									
C-B 0.00 9.57 0.000 0.00 0.00 0.0									0.00
A-B 0.00									
A-C 0.00									

Harbour Street_The Tram Road 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	6.05	9.35	0.647		4.50	1.93	32.8		0.34
B-A	6.74	8.92	0.756		9.29	3.47	67.6		0.64
C-A	2.49								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	5.07	9.86	0.514		1.93	1.09	17.3		0.21
B-A	5.65	8.99	0.628		3.47	1.77	29.1		0.32
C-A	2.08								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								

Harbour Street_The Tram Road 2010 Base 01_001.vpo

I
I A-C 0.00
I
I
I

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.7	**
08.30	4.0	****
08.45	4.5	****
09.00	1.9	**
09.15	1.1	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.6	**
08.15	2.8	***
08.30	7.6	*****
08.45	9.3	*****
09.00	3.5	***
09.15	1.8	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

Harbour Street_The Tram Road 2010 Base 01_001.vpo

I		I		I		I		I		I	
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I		I		I							

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	721.27		0.28		0.11	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	566.97		0.26		0.10		0.16		0.37	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I

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I	631.87	0.24	0.24	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Harbour Street / Tram Road 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.41	I	11.12	I	7.41	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	3.25	I	4.88	I	3.25	I

.Demand set: Harbour Street / Tram Road 2010 Base PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.000	I	0.000	I	0.000	I	
I		I		I	0.0	I	0.0	I	0.0	I	0.0	I	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	4.48	9.64	0.464		0.84	0.86	12.8		0.19
B-A	6.40	8.66	0.740		2.59	2.70	39.8		0.44
C-A	4.77								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

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I									
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0	0.00
I									
I	A-B	0.00							
I									
I	A-C	0.00							
I									
I									
I									

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	3.06	10.41	0.294		0.58	0.42	6.5		0.14
B-A	4.38	8.91	0.492		1.53	0.99	15.7		0.22
C-A	3.26								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

Harbour Street_The Tram Road 2010 Base 01_001.vpo

17.45	0.9	*
18.00	0.6	*
18.15	0.4	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.4	*
17.30	2.6	***
17.45	2.7	***
18.00	1.5	**
18.15	1.0	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I			I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I		I			I			I	(MIN/VEH)
I	B-C	I	335.8	I 223.9	I	54.4	I 0.16	I	54.4
I	B-A	I	480.4	I 320.2	I	147.9	I 0.31	I	147.9
I	C-A	I	357.9	I 238.6	I		I	I	
I	C-B	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0
I	A-B	I	0.0	I 0.0	I		I	I	
I	A-C	I	0.0	I 0.0	I		I	I	
I	ALL	I	1174.1	I 782.7	I	202.3	I 0.17	I	202.3
									0.17

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

Harbour Street_The Tram Road 2010 Base 01_001.vpo
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.
*****END OF RUN*****

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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RG40 3GA, UK	

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Foresters Way_Grace Hill\
foresters way_grace hill_2010 Base PM 01_001.vai"
(drive-on-the-left) at 11:22:39 on Friday, 3 September 2010

.FILE PROPERTIES

RUN TITLE: Foresters way / Grace Hill
LOCATION: Folkestone
DATE: 18/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

foresters way_grace hill_2010 Base PM 01_001.vao

ARM A - Foord Rd
 ARM B - Grace Hill
 ARM C - Foresters way (westbound)
 ARM D - Foresters way (eastbound)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM C IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	3.50	I	6.00	I	8.00	I	21.00	I	35.50	I	32.0	I	0.595	I	23.877
I	ARM D	I	3.50	I	3.50	I	0.00	I	22.50	I	35.50	I	59.0	I	0.472	I	15.992
I		I															

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I
I C	I	100		I
I D	I	100		I

foresters way_grace hill_2010 Base PM 01_001.vao

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Foresters way / Grace Hill 2010 Base PM

I I I	ARM	I I I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I I I					
			I I	I I	I I	I I	I I	I I						
										FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS IFALLING	BEFORE PEAK	AT TOP OF PEAK
I I	ARM B	I I	15.00	I I	45.00	I I	75.00	I I	5.86	I I	8.79	I I	5.86	I I
I I	ARM D	I I	15.00	I I	45.00	I I	75.00	I I	10.00	I I	15.00	I I	10.00	I I

DEMAND SET TITLE: Foresters way / Grace Hill 2010 Base PM

I I I I I	I I I I I	TURNING PROPORTIONS								I I I I I
		TURNING COUNTS (VEH/HR)								
		(PERCENTAGE OF H.V.S)								
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D				
I	16.45 - 18.15	I	I	I	I	I	I	I	I	
I		I	ARM B	I	0.277	I	0.000	I	0.000	
I		I		I	130.0	I	0.0	I	339.0	
I		I		I	(0.0)	I	(0.0)	I	(0.0)	
I		I		I		I		I		
I		I	ARM D	I	0.939	I	0.000	I	0.061	
I		I		I	751.0	I	0.0	I	49.0	
I		I		I	(0.0)	I	(0.0)	I	(0.0)	
I		I		I		I		I		

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I I	I I	I I	I I	I I	I I	I I	I I	I I	I I	I I
	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING

foresters way_grace hill_2010 Base PM 01_001.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 16.45-17.00							
I ARM B	5.86	23.52	0.249	0.0	0.3	4.9	0.06
I ARM D	10.00	15.23	0.657	0.0	1.8	25.5	0.18

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.00-17.15									
I ARM B	7.00	23.45	0.299		0.3	0.4	6.2		0.06
I ARM D	11.94	15.08	0.792		1.8	3.5	47.0		0.30

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I ARM B	8.57	23.37	0.367		0.4	0.6	8.5		0.07
I ARM D	14.62	14.87	0.983		3.5	13.1	140.3		0.80

foresters way_grace hill_2010 Base PM 01_001.vao

I
I

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM B	8.57	23.35	0.367		0.6	0.6	8.7		0.07
I										
I	ARM D	14.62	14.87	0.983		13.1	17.4	231.1		1.23
I										
I										
I										

-										
.										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM B	7.00	23.41	0.299		0.6	0.4	6.6		0.06
I										
I	ARM D	11.94	15.08	0.792		17.4	4.2	104.4		0.56
I										
I										
I										

-										
.										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

foresters way_grace hill_2010 Base PM 01_001.vao									
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I									
I									
I									
I	18.00-18.15								
I									
I	ARM B	5.86	23.51	0.249		0.4	0.3	5.1	0.06
I									
I	ARM D	10.00	15.23	0.657		4.2	2.0	32.3	0.20
I									
I									
I									

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.6 *
17.45	0.6 *
18.00	0.4
18.15	0.3

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.8 **
17.15	3.5 ***
17.30	13.1 *****
17.45	17.4 *****
18.00	4.2 *****
18.15	2.0 **

foresters way_grace hill_2010 Base PM 01_001.vao
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH) (VEH/H)	I	(MIN) (MIN/VEH)	I	(MIN) (MIN/VEH)	I
I	B	I	643.1 I 428.7	I	39.9 I 0.06	I	39.9 I 0.06	I
I	D	I	1097.0 I 731.3	I	580.6 I 0.53	I	580.7 I 0.53	I
I	ALL	I	1740.1 I 1160.0	I	620.5 I 0.36	I	620.6 I 0.36	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Foresters Way_Grace Hill\
foresters way_grace hill_2010 Base AM 01_001.vai"
(drive-on-the-left) at 11:20:22 on Friday, 3 September 2010

.FILE PROPERTIES

RUN TITLE: Foresters way / Grace Hill
LOCATION: Folkestone
DATE: 18/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

foresters way_grace hill_2010 Base AM 01_001.vao

ARM A - Foord Rd
 ARM B - Grace Hill
 ARM C - Foresters way (westbound)
 ARM D - Foresters way (eastbound)

.GEOMETRIC DATA -----

ARM A IS JUNCTION EXIT ONLY

ARM C IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	B	I	3.50	I	6.00	I	8.00	I	21.00	I	35.50	I	32.0	I	0.595	I	23.877
I	ARM	D	I	3.50	I	3.50	I	0.00	I	22.50	I	35.50	I	59.0	I	0.472	I	15.992
I		I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA -----

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I
I C	I	100		I
I D	I	100		I

foresters way_grace hill_2010 Base AM 01_001.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Foresters way / Grace Hill 2010 Base AM

I I I	ARM	I I I	NUMBER OF MINUTES FROM START WHEN			I I I	RATE OF FLOW (VEH/MIN)			I I I				
			FLOW STARTS	TOP OF PEAK	FLOW STOPS		BEFORE	AT TOP	AFTER					
											TO RISE	IS REACHED	IFALLING	PEAK
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.74	I	14.61	I	9.74	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.01	I	9.02	I	6.01	I

DEMAND SET TITLE: Foresters way / Grace Hill 2010 Base AM

		TURNING PROPORTIONS									
		TURNING COUNTS (VEH/HR)									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D					
07.45 - 09.15											
		ARM B	0.225	0.000	0.775	0.000					
			175.0	0.0	604.0	0.0					
			(2.0)	(0.0)	(2.0)	(0.0)					
		ARM D	0.859	0.000	0.141	0.000					
			413.0	0.0	68.0	0.0					
			(2.0)	(0.0)	(1.0)	(0.0)					

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/	AVERAGE DELAY PER ARRIVING

foresters way_grace hill_2010 Base AM 01_001.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 07.45-08.00							
I ARM B	9.74	22.91	0.425	0.0	0.7	10.6	0.08
I ARM D	6.01	14.67	0.410	0.0	0.7	9.9	0.11
I							
I							
I							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 08.00-08.15									
I ARM B	11.63	22.81	0.510		0.7	1.0	15.0		0.09
I ARM D	7.18	14.47	0.496		0.7	1.0	14.0		0.14
I									
I									
I									

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 08.15-08.30									
I ARM B	14.24	22.68	0.628		1.0	1.7	23.7		0.12
I ARM D	8.79	14.19	0.619		1.0	1.6	22.4		0.18
I									

foresters way_grace hill_2010 Base AM 01_001.vao

I
I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM B	14.24	22.68	0.628		1.7	1.7	25.0		0.12
I										
I	ARM D	8.79	14.19	0.620		1.6	1.6	23.9		0.19
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM B	11.63	22.81	0.510		1.7	1.1	16.3		0.09
I										
I	ARM D	7.18	14.46	0.496		1.6	1.0	15.7		0.14
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

	(VEH/MIN)	(VEH/MIN)	foresters way_grace hill_2010 Base AM 01_001.vao CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I									
I									
I									
I	09.00-09.15								
I									
I	ARM B	9.74	22.91	0.425	1.1	0.7	11.5		0.08
I									
I	ARM D	6.01	14.67	0.410	1.0	0.7	10.9		0.12
I									
I									
I									

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.7	**
08.45	1.7	**
09.00	1.1	*
09.15	0.7	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.6	**
08.45	1.6	**
09.00	1.0	*
09.15	0.7	*

foresters way_grace hill_2010 Base AM 01_001.vao
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B	I	1068.2	I	712.1	I	102.1	I
I	D	I	659.6	I	439.7	I	96.8	I
I	ALL	I	1727.7	I	1151.8	I	198.9	I
		I		I		I	199.0	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Foord Rd_New Street 2010 Base AM only 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Foord Rd_New Street\
Foord Rd_New Street 2010 Base AM only 01_001.vpi"
(drive-on-the-left) at 11:31:59 on Friday, 3 September 2010

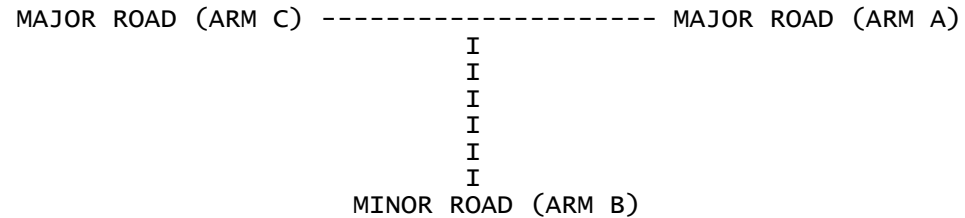
.RUN INFORMATION

RUN TITLE	: Foord Rd_New Street
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Foord Rd_New Street 2010 Base AM only 01_001.vpo



ARM A IS Grace Hill
 ARM B IS Foord Rd north
 ARM C IS New Street

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

 I Intercept For Slope For Opposing Slope For Opposing I

Foord Rd_New Street 2010 Base AM only 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.03	0.28	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	574.06	0.26	0.10	0.17	0.38	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Foord Rd_New Street 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Foord Rd_New Street 2010 Base AM only 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	5.84	I	8.76	I	5.84	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.41	I	8.12	I	5.41	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Foord Rd_New Street 2010 Base AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I		I	A
I	07.45 - 08.00	I		I	0.000
I		I	ARM	I	0.000
I		I		I	0.0
I		I	(	I	(0.0)
I		I		I	(9.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	0.0
I		I	(	I	(0.0)
I		I		I	(1.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	0.0
I		I	(	I	(0.0)
I		I		I	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

I	TIME	I	DEMAND	I	CAPACITY	I	DEMAND/	I	PEDESTRIAN	I	START	I	END	I	DELAY	I	GEOMETRIC DELAY	I	AVERAGE DELAY
I		I	(VEH/MIN)	I	(VEH/MIN)	I	CAPACITY	I	FLOW	I	QUEUE	I	QUEUE	I	(VEH.MIN/	I	(VEH.MIN/	I	PER ARRIVING
I		I		I		I	(RFC)	I	(PEDS/MIN)	I	(VEHS)	I	(VEHS)	I	TIME SEGMENT)	I	TIME SEGMENT)	I	VEHICLE (MIN)
I	07.45-08.00	I		I		I		I		I		I		I		I		I	
I	B-AC	I	5.43	I	10.13	I	0.536	I		I	0.00	I	1.12	I	15.6	I		I	0.21

Foord Rd_New Street 2010 Base AM only 01_001.vpo

I	C-A	0.00								
I	C-B	0.00	7.41	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	5.86								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	B-AC	6.49	9.79	0.663		1.12	1.86	25.9		0.29
I	C-A	0.00								
I	C-B	0.00	7.15	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	7.00								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									

I								
I	B-AC	7.95	9.31	0.853	1.86	4.62	57.6	0.58
I	C-A	0.00						
I	C-B	0.00	6.81	0.000	0.00	0.00	0.0	0.00
I	A-B	0.00						
I	A-C	8.57						
I								
I								
.								
--								

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	08.30-08.45									
	B-AC	7.95	9.31	0.853		4.62	5.08	73.3		0.68
	C-A	0.00								
	C-B	0.00	6.81	0.000		0.00	0.00	0.0		0.00
	A-B	0.00								
	A-C	8.57								

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH. MIN/	GEOMETRIC DELAY (VEH. MIN/	AVERAGE DELAY PER ARRIVING

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME	SEGMENT)	TIME	SEGMENT)	VEHICLE (MIN)

I
I I
I I
I I
I I
I I
I I
I I
I I
I I
I I

08.45-09.00

B-AC	6.49	9.79	0.663	5.08	2.08	35.7	0.34
C-A	0.00						
C-B	0.00	7.15	0.000	0.00	0.00	0.0	0.00
A-B	0.00						
A-C	7.00						

—

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 09.00-09.15

I	B-AC	5.43	10.13	0.536	2.08	1.19	19.0	0.22
I								
I	C-A	0.00						
I								
I	C-B	0.00	7.41	0.000	0.00	0.00	0.0	0.00
I								
I	A-B	0.00						
I								
I	A-C	5.86						

I I I

QUEUE FOR STREAM B-AC

TIME	NO. OF

Foord Rd_New Street 2010 Base AM only 01_001.vpo

SEGMENT ENDING	VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.9	**
08.30	4.6	*****
08.45	5.1	*****
09.00	2.1	**
09.15	1.2	*

QUEUE FOR STREAM	C-B
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I	I			I			I	(MIN/VEH)
I	B-AC	I	596.0	I	397.3	I	227.0	I
I	C-A	I	0.0	I	0.0	I	0.38	I
I	C-B	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I	0.0	I
I	A-C	I	642.8	I	428.5	I	0.00	I
I	ALL	I	1238.8	I	825.9	I	227.0	I
I		I		I		I	0.18	I
I		I		I		I	227.1	I
I		I		I		I	0.18	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Dover Rd_Tontine St 2010 Base 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Dover Rd_Tontine Street\
Dover Rd_Tontine St 2010 Base 01_001.vpi"
(drive-on-the-left) at 16:48:15 on Monday, 20 September 2010

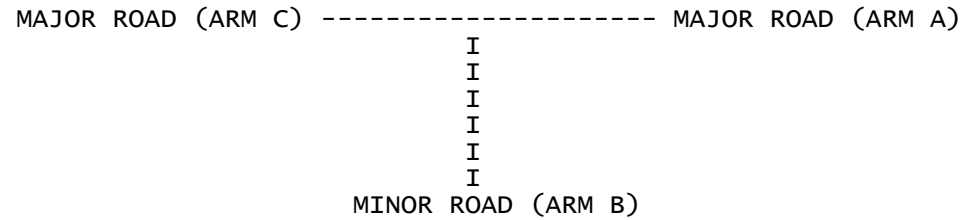
.RUN INFORMATION

RUN TITLE	: Dover Rd / Tontine Street
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Dover Rd_Tontine St 2010 Base 01_001.vpo



ARM A IS Dover Rd (north)
 ARM B IS Tontine Stret
 ARM C IS Dover Rd (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 40.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Dover Rd_Tontine St 2010 Base 01_001.vpo			
I	STREAM B-C	STREAM A-C	STREAM A-B
I	779.09	0.30	0.12

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	620.29	0.29	0.11	0.18	0.41	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Dover Rd / Tontine Street 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Dover Rd_Tontine St 2010 Base 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	4.71	I	7.07	I	4.71	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.18	I	7.76	I	5.18	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Dover Rd / Tontine Street 2010 Base AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I		I	A
I	07.45 - 08.00	I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	377.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	2.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	414.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	1.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Dover Rd / Tontine Street 2010 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-AC	5.19	11.41	0.455		0.00	0.82	11.6		0.16

Dover Rd_Tontine St 2010 Base 01_001.vpo

I C-A 0.00
I
I C-B 0.00 7.72 0.000
I
I A-B 0.00
I
I A-C 4.73
I
I
I

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--
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I 08.00-08.15
I
I B-AC 6.20 11.13 0.557 0.82 1.22 17.4 0.20
I
I C-A 0.00
I
I C-B 0.00 7.53 0.000 0.00 0.00 0.0 0.00
I
I A-B 0.00
I
I A-C 5.65
I
I
I

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I 08.15-08.30

Dover Rd_Tontine St 2010 Base 01_001.vpo

I										
I	B-AC	7.60	10.75	0.707		1.22	2.26	31.0		0.30
I	C-A	0.00								
I	C-B	0.00	7.27	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	6.92								
I										
I										

I										
I										
I										
I										
I										
I										
I										
I										
I	08.30-08.45									
I	B-AC	7.60	10.75	0.707		2.26	2.33	34.6		0.32
I	C-A	0.00								
I	C-B	0.00	7.27	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	6.92								
I										
I										
I										

I										
I										
I										
I										
I										
I										
I										
I										
I										
I										

Dover Rd_Tontine St 2010 Base 01_001.vpo

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.45-09.00							
I B-AC	6.20	11.13	0.557	2.33	1.29	20.7	0.21
I C-A	0.00						
I C-B	0.00	7.53	0.000	0.00	0.00	0.0	0.00
I A-B	0.00						
I A-C	5.65						
I							
I							
I							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 09.00-09.15									
I B-AC	5.19	11.41	0.455		1.29	0.85	13.3		0.16
I C-A	0.00								
I C-B	0.00	7.72	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	4.73								
I									
I									
I									

QUEUE FOR STREAM	B-AC
TIME	NO. OF

Dover Rd_Tontine St 2010 Base 01_001.vpo

SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	0.8	*
08.15	1.2	*
08.30	2.3	**
08.45	2.3	**
09.00	1.3	*
09.15	0.9	*

QUEUE FOR STREAM C-B

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	569.8	I	379.9	I	128.6	I	0.23	I
I	C-A	I	0.0	I	0.0	I		I		I
I	C-B	I	0.0	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I		I		I
I	A-C	I	518.9	I	345.9	I		I		I
I	ALL	I	1088.8	I	725.8	I	128.6	I	0.12	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	779.09	0.30	0.12	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	620.29	0.29	0.11	0.18	0.41	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Dover Rd / Tontine Street 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

Dover Rd_Tontine St 2010 Base 01_001.vpo

I	I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I
			I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	
I	ARM	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I
I	ARM	A	I 15.00	I 45.00	I 75.00	I 2.96	I 4.44	I 2.96	I
I	ARM	B	I 15.00	I 45.00	I 75.00	I 3.26	I 4.89	I 3.26	I
I	ARM	C	I 15.00	I 45.00	I 75.00	I 0.00	I 0.00	I 0.00	I

.Demand set: Dover Rd / Tontine Street 2010 Base PM

			TURNING PROPORTIONS						
			TURNING COUNTS						
			(PERCENTAGE OF H.V.S)						
	TIME		FROM/TO	ARM	A	ARM	B	ARM	C
	16.45 - 17.00								
		ARM	A	0.000		0.000		1.000	
				0.0		0.0		237.0	
				(0.0)		(0.0)		(0.0)	
		ARM	B	0.000		0.000		1.000	
				0.0		0.0		261.0	
				(0.0)		(0.0)		(0.0)	
		ARM	C	0.000		0.000		0.000	
				0.0		0.0		0.0	
				(0.0)		(0.0)		(0.0)	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Dover Rd / Tontine Street 2010 Base PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

16.45-17.00

B-AC	3.27	12.09	0.271	0.00	0.37	5.3	0.11
C-A	0.00						
C-B	0.00	8.10	0.000	0.00	0.00	0.0	0.00
A-B	0.00						
A-C	2.97						

—

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.00-17.15

I	B-AC	3.91	11.91	0.328	0.37	0.48	7.1	0.12
I								
I	C-A	0.00						
I								
I	C-B	0.00	7.98	0.000	0.00	0.00	0.0	0.00
I								
I	A-B	0.00						
I								
I	A-C	3.55						

—

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC	DELAY	AVERAGE	DELAY

Dover Rd_Tontine St 2010 Base 01_001.vpo

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.15-17.30									
I B-AC	4.79	11.67	0.410		0.48	0.69	9.9		0.14
I C-A	0.00								
I C-B	0.00	7.82	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	4.35								
I									
I									
I									
.									
--									

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.30-17.45									
I B-AC	4.79	11.67	0.410		0.69	0.69	10.3		0.15
I C-A	0.00								
I C-B	0.00	7.82	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	4.35								
I									
I									
I									
.									
--									

Dover Rd_Tontine St 2010 Base 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	3.91	11.91	0.328		0.69	0.49	7.6		0.13
C-A	0.00								
C-B	0.00	7.98	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.55								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	3.27	12.09	0.271		0.49	0.38	5.8		0.11
C-A	0.00								
C-B	0.00	8.10	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	2.97								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.7	*
17.45	0.7	*
18.00	0.5	
18.15	0.4	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	359.2	I	239.5	I	46.1	I	46.1	I
I	C-A	I	0.0	I	0.0	I		I		I
I	C-B	I	0.0	I	0.0	I	0.0	I	0.0	I
I	A-B	I	0.0	I	0.0	I		I		I
I	A-C	I	326.2	I	217.5	I		I		I
I	ALL	I	685.5	I	457.0	I	46.1	I	46.1	I
							0.07		0.07	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

Dover Rd_Tontine St 2010 Base 01_001.vpo

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Cheriton Rd_Radnor Park Rd\
cheriton rd_radnor park rd_2010 BASE PM.vai"
(drive-on-the-left) at 15:31:47 on Thursday, 2 September 2010

.FILE PROPERTIES

RUN TITLE: Cheriton Rd_Radnor Park Rd
LOCATION: Folkestone
DATE: 17/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

cheriton rd_radnor park rd_2010 BASE PM.vao

ARM A - Radnor Park Rd
ARM B - Cheriton Rd (south)
ARM C - Cheriton Rd (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN) I																	

I	ARM A	I	5.00	I	7.50	I	3.00	I	61.00	I	34.00	I	34.0	I	0.670	I	29.238
I	ARM B	I	5.00	I	8.00	I	22.00	I	57.00	I	34.00	I	41.0	I	0.739	I	35.567
I	ARM C	I	5.00 *	I	5.00	I	0.00	I	42.50	I	34.00	I	17.0	I	0.659	I	27.043
I		I		I		I		I		I		I		I		I	

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

WARNING ARM C - INPUT VALUE OF V (6.50) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%) I

I	A	I	100 I
I	B	I	100 I
I	C	I	100 I

cheriton rd_radnor park rd_2010 BASE PM.vao

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2010 Base PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK
I	I	I	I	I	IFALLING	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	6.04	I	9.06
I	ARM B	I	15.00	I	45.00	I	10.23	I	15.34
I	ARM C	I	15.00	I	45.00	I	9.00	I	13.50
I		I		I		I		I	

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2010 Base PM

I	TURNING PROPORTIONS			I
I	TURNING COUNTS (VEH/HR)			I
I	(PERCENTAGE OF H.V.S)			I
I				I
I	TIME	I	FROM/TO	I
I	I	I	ARM A	I
I	I	I	ARM B	I
I	I	I	ARM C	I
I	16.45 - 18.15	I		I
I		I	ARM A	I
I		I	0.000	I
I		I	0.0	I
I		I	(0.0)	I
I		I		I
I		I	ARM B	I
I		I	0.578	I
I		I	473.0	I
I		I	(0.0)	I
I		I		I
I		I	ARM C	I
I		I	0.425	I
I		I	306.0	I
I		I	(0.0)	I
I		I		I

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

cheriton rd_radnor park rd_2010 BASE PM.vao

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
16.45-17.00									
ARM A	6.04	25.68	0.235		0.0	0.3	4.5		0.05
ARM B	10.23	34.09	0.300		0.0	0.4	6.3		0.04
ARM C	9.00	23.02	0.391		0.0	0.6	9.3		0.07

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
17.00-17.15									
ARM A	7.21	24.99	0.288		0.3	0.4	6.0		0.06
ARM B	12.21	33.83	0.361		0.4	0.6	8.3		0.05
ARM C	10.75	22.26	0.483		0.6	0.9	13.5		0.09

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			

```

cheriton rd_radnor park rd_2010 BASE PM.vao
(RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I
I 17.15-17.30
I
I ARM A 8.83 24.06 0.367 0.4 0.6 8.5 0.07
I
I ARM B 14.95 33.48 0.447 0.6 0.8 11.8 0.05
I
I ARM C 13.16 21.23 0.620 0.9 1.6 22.9 0.12
I
I
I

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I 17.30-17.45
I
I ARM A 8.83 24.05 0.367 0.6 0.6 8.7 0.07
I
I ARM B 14.95 33.47 0.447 0.8 0.8 12.1 0.05
I
I ARM C 13.16 21.22 0.620 1.6 1.6 24.1 0.12
I
I
I

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I 17.45-18.00
I
I ARM A 7.21 24.97 0.289 0.6 0.4 6.2 0.06

```

cheriton rd_radnor park rd_2010 BASE PM.vao

I										
I	ARM B	12.21	33.83	0.361		0.8	0.6	8.7		0.05
I										
I	ARM C	10.75	22.25	0.483		1.6	0.9	14.6		0.09
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I										
I	ARM A	6.04	25.65	0.235		0.4	0.3	4.7		0.05
I										
I	ARM B	10.23	34.09	0.300		0.6	0.4	6.5		0.04
I										
I	ARM C	9.00	23.01	0.391		0.9	0.6	9.9		0.07
I										
I										
I										

-										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.6	**
17.45	1.6	**
18.00	0.9	*
18.15	0.6	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	A	I	662.3	I	441.5	I	38.5	I
							0.06	
I	B	I	1121.7	I	747.8	I	53.7	I
							0.05	
I	C	I	987.3	I	658.2	I	94.4	I
							0.10	
I	ALL	I	2771.2	I	1847.5	I	186.5	I
							0.07	

cheriton rd_radnor park rd_2010 BASE PM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Cheriton Rd_Radnor Park Rd\
cheriton rd_radnor park rd_2010 BASE AM.vai"
(drive-on-the-left) at 15:30:00 on Thursday, 2 September 2010

.FILE PROPERTIES

RUN TITLE: Cheriton Rd_Radnor Park Rd
LOCATION: Folkestone
DATE: 17/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Radnor Park Rd
 ARM B - Cheriton Rd (south)
 ARM C - Cheriton Rd (west)

.GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I															
I ARM A	I	5.00	I	7.50	I	3.00	I	61.00	I	34.00	I	34.0	I	0.670	I	29.238
I ARM B	I	5.00	I	8.00	I	22.00	I	57.00	I	34.00	I	41.0	I	0.739	I	35.567
I ARM C	I	5.00 *	I	5.00	I	0.00	I	42.50	I	34.00	I	17.0	I	0.659	I	27.043

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM C - INPUT VALUE OF V (6.50) OUTSIDE ACCEPTABLE RANGE -
 HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I
I A	I	100		I
I B	I	100		I
I C	I	100		I

cheriton rd_radnor park rd_2010 BASE AM.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2010 Base AM

I I I	I I I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I I I
		I I	I I	I I	I I	I I	I I	
		TO RISE	IS REACHED	IF FALLING	PEAK	OF PEAK	PEAK	
I ARM A	I	15.00	I 45.00	I 75.00	I 7.47	I 11.21	I 7.47	I
I ARM B	I	15.00	I 45.00	I 75.00	I 6.99	I 10.48	I 6.99	I
I ARM C	I	15.00	I 45.00	I 75.00	I 9.77	I 14.66	I 9.77	I

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2010 Base AM

		TURNING PROPORTIONS						
		TURNING COUNTS (VEH/HR)						
		(PERCENTAGE OF H.V.S)						

	TIME	FROM/TO	ARM A	ARM B	ARM C			
	07.45 - 09.15							
		ARM A	0.000	0.754	0.246			
			0.0	451.0	147.0			
			(0.0)	(0.0)	(1.0)			
		ARM B	0.576	0.000	0.424			
			322.0	0.0	237.0			
			(2.0)	(0.0)	(3.0)			
		ARM C	0.312	0.688	0.000			
			244.0	538.0	0.0			
			(2.0)	(1.0)	(0.0)			

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

cheriton rd_radnor park rd_2010 BASE AM.vao

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
07.45-08.00									
ARM A	7.47	24.65	0.303		0.0	0.4	6.3		0.06
ARM B	6.99	33.39	0.209		0.0	0.3	3.9		0.04
ARM C	9.77	24.03	0.407		0.0	0.7	9.9		0.07

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
08.00-08.15									
ARM A	8.93	23.76	0.376		0.4	0.6	8.8		0.07
ARM B	8.34	33.13	0.252		0.3	0.3	5.0		0.04
ARM C	11.67	23.50	0.497		0.7	1.0	14.2		0.08

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			

cheriton rd_radnor park rd_2010 BASE AM.vao										
	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I										
I	08.15-08.30									
I										
I	ARM A	10.93	22.55	0.485		0.6	0.9	13.6		0.09
I										
I	ARM B	10.22	32.77	0.312		0.3	0.5	6.7		0.04
I										
I	ARM C	14.30	22.79	0.627		1.0	1.6	23.7		0.12
I										
I										
I										

-										
.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM A	10.93	22.53	0.485		0.9	0.9	14.0		0.09
I										
I	ARM B	10.22	32.77	0.312		0.5	0.5	6.8		0.04
I										
I	ARM C	14.30	22.79	0.627		1.6	1.7	24.9		0.12
I										
I										
I										

-										
.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM A	8.93	23.73	0.376		0.9	0.6	9.3		0.07

cheriton rd_radnor park rd_2010 BASE AM.vao

I	ARM B	8.34	33.12	0.252	0.5	0.3	5.1	0.04
I	ARM C	11.67	23.50	0.497	1.7	1.0	15.5	0.09

I
I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	7.47	24.62	0.304		0.6	0.4	6.7		0.06
ARM B	6.99	33.38	0.209		0.3	0.3	4.0		0.04
ARM C	9.77	24.02	0.407		1.0	0.7	10.6		0.07

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.4

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.0 *
08.30	1.6 **
08.45	1.7 **
09.00	1.0 *
09.15	0.7 *

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	820.0	I	546.7	I	58.7	I
I	B	I	766.5	I	511.0	I	31.5	I
I	C	I	1072.3	I	714.9	I	98.8	I
I	ALL	I	2658.8	I	1772.5	I	189.0	I

cheriton rd_radnor park rd_2010 BASE AM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

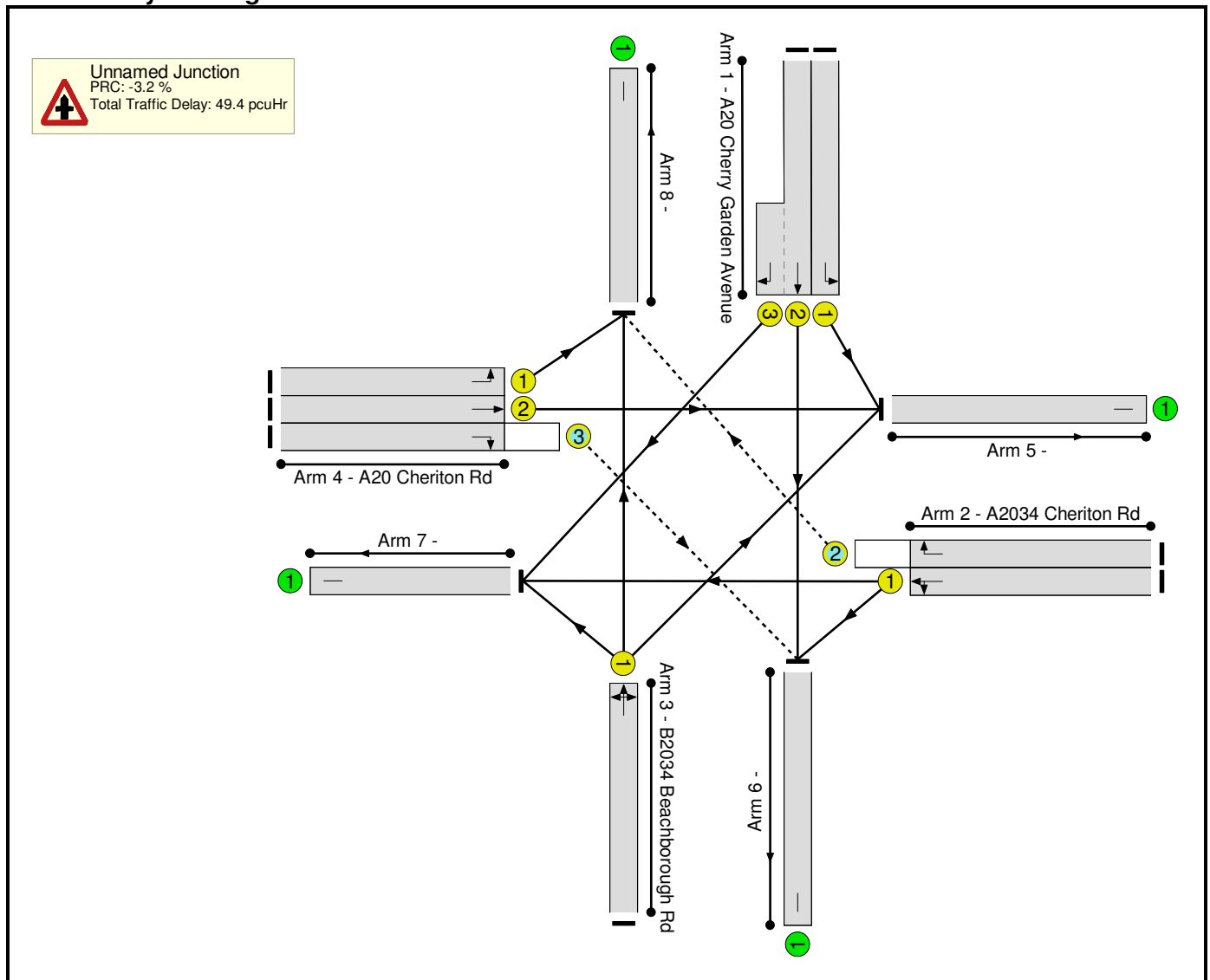
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	Cheriton Rd_Cherry Gdn Ave 01_001.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base AM' (FG1: '2010 Base AM', Plan 1: 'Network Control Plan 1')

Junction Layout Diagram



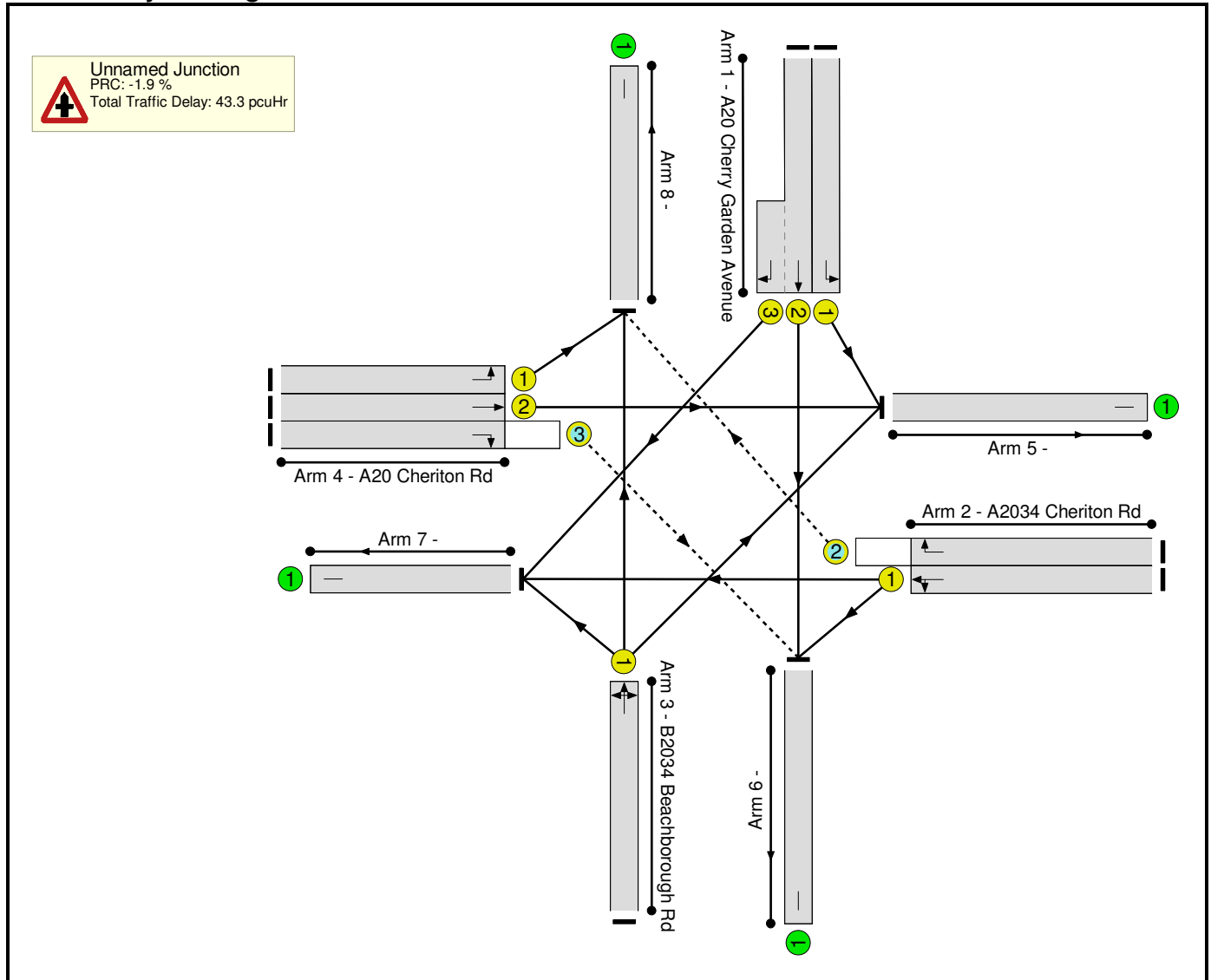
Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	92.9%	49.4	-	-
Unnamed Junction	-	-	-	-	92.9%	49.4	-	-
1/1	A20 Cherry Garden Avenue Left	323	1687	443	72.9%	4.9	55.1	11.4
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	525	2080:1891	570	92.1%	11.0	75.2	20.9
2/1	A2034 Cheriton Rd Left Ahead	284	1857	325	87.4%	7.9	100.2	15.7
2/2	A2034 Cheriton Rd Right	115	1808	127	90.5%	5.5	170.9	7.6
3/1	B2034 Beachborough Rd Right Left Ahead	478	1871	515	92.9%	10.7	80.9	20.9
4/1	A20 Cheriton Rd Left	187	1717	680	27.5%	1.5	29.0	5.1
4/2	A20 Cheriton Rd Ahead	349	2055	445	78.4%	6.2	63.7	14.5
4/3	A20 Cheriton Rd Right	117	1731	298	39.3%	1.7	52.1	4.1
C1		PRC for Signalled Lanes (%):	-3.2	Total Delay for Signalled Lanes (pcuHr):		49.39	Cycle Time (s): 240	
		PRC Over All Lanes (%):	-3.2	Total Delay Over All Lanes(pcuHr):		49.39		

Basic Results Summary

Scenario 2: '2010 Base PM' (FG2: '2010 Base PM', Plan 1: 'Network Control Plan 1')

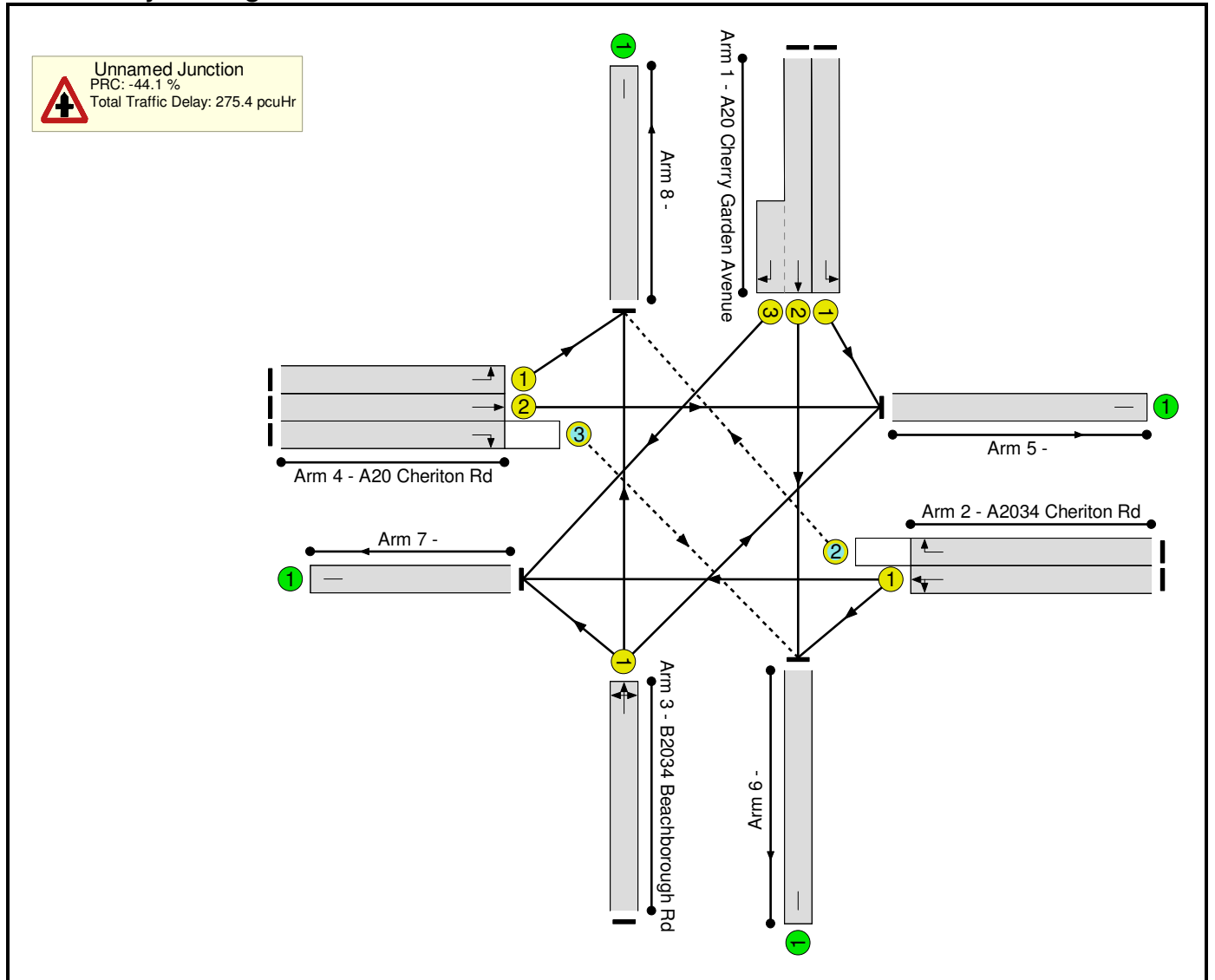
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	91.7%	43.3	-	-
Unnamed Junction	-	-	-	-	91.7%	43.3	-	-
1/1	A20 Cherry Garden Avenue Left	191	1687	330	57.8%	3.0	56.7	6.8
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	402	2080:1891	443	90.8%	9.3	83.1	16.3
2/1	A2034 Cheriton Rd Left Ahead	340	1854	371	91.7%	8.8	93.3	16.7
2/2	A2034 Cheriton Rd Right	140	1808	162	86.5%	4.8	123.3	7.7
3/1	B2034 Beachborough Rd Right Left Ahead	541	1876	594	91.1%	10.3	68.7	22.9
4/1	A20 Cheriton Rd Left	166	1717	608	27.3%	1.5	32.2	4.6
4/2	A20 Cheriton Rd Ahead	322	2055	497	64.8%	4.6	51.7	11.6
4/3	A20 Cheriton Rd Right	78	1731	312	25.0%	1.0	45.3	2.5
C1		PRC for Signalled Lanes (%):	-1.9	Total Delay for Signalled Lanes (pcuHr):		43.32	Cycle Time (s): 240	
		PRC Over All Lanes (%):	-1.9	Total Delay Over All Lanes(pcuHr):		43.32		

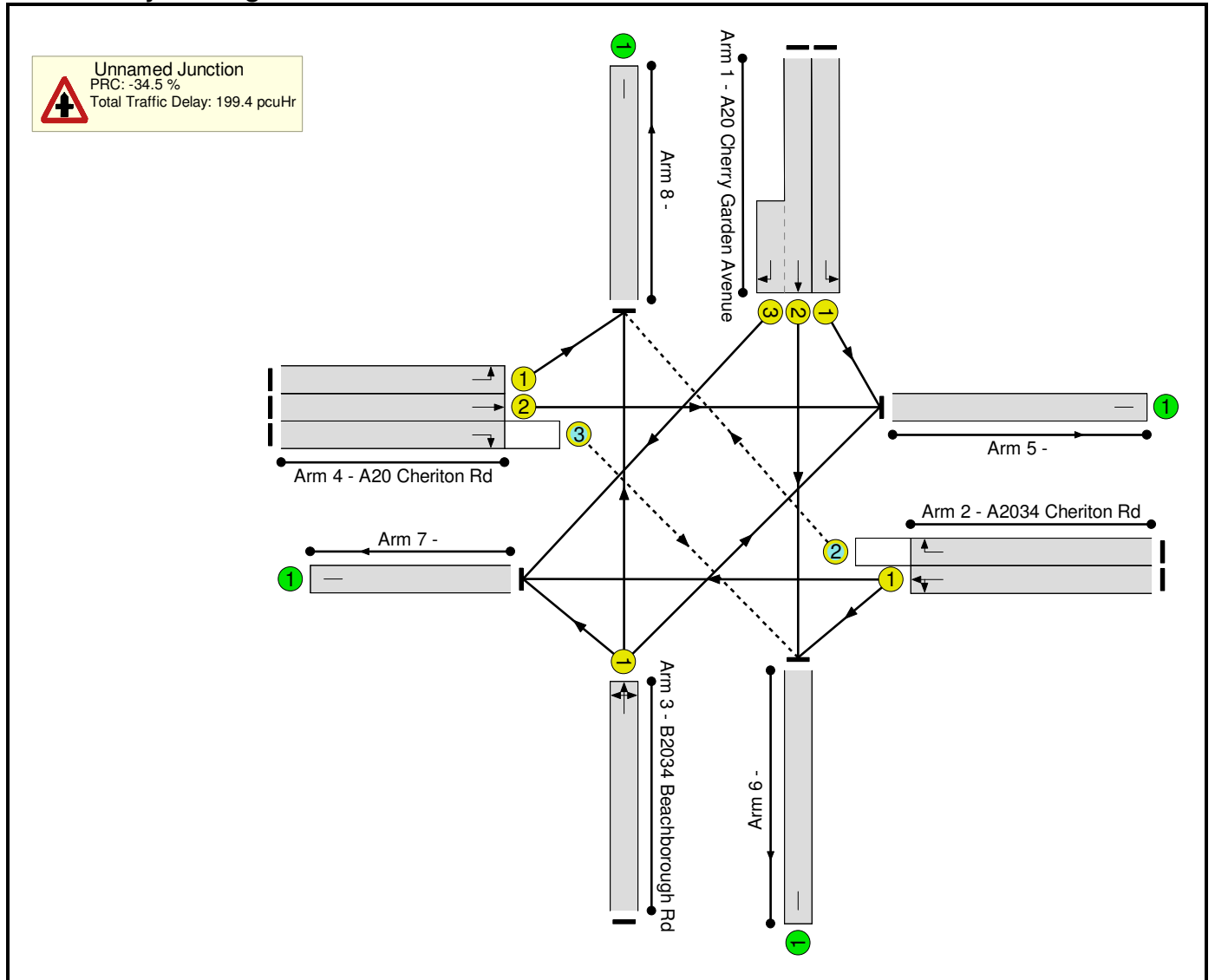
Junction Layout Diagram



Link Results

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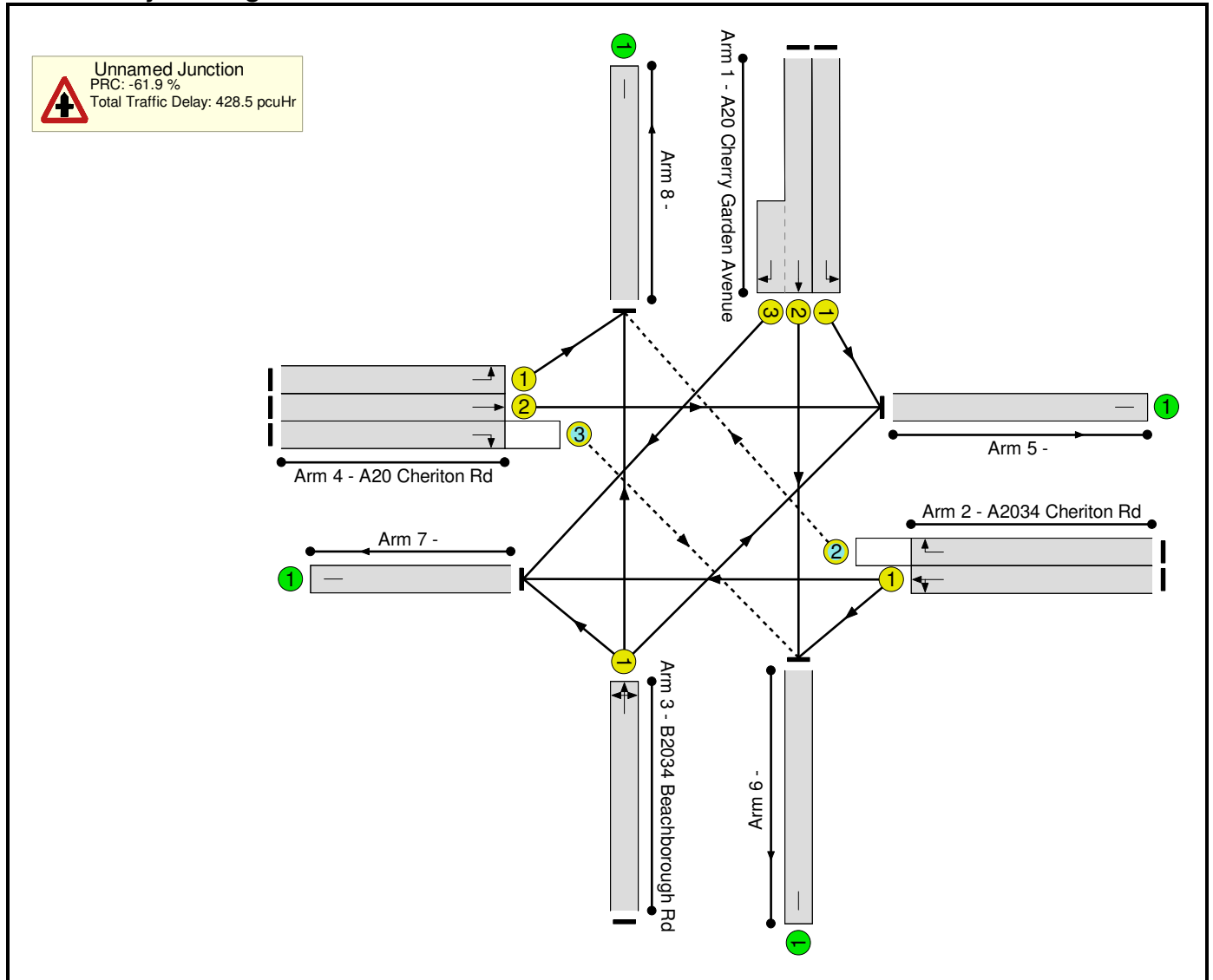
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	121.1%	199.4	-	-
Unnamed Junction	-	-	-	-	121.1%	199.4	-	-
1/1	A20 Cherry Garden Avenue Left	269	1687	316	85.0%	6.2	82.6	12.6
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	504	2080:1891	425	118.7%	61.9	442.2	71.5
2/1	A2034 Cheriton Rd Left Ahead	418	1854	425	98.4%	14.4	124.0	26.3
2/2	A2034 Cheriton Rd Right	180	1808	149	121.1%	26.5	529.1	30.0
3/1	B2034 Beachborough Rd Right Left Ahead	665	1876	555	119.8%	81.5	441.2	97.0
4/1	A20 Cheriton Rd Left	203	1717	644	31.5%	1.9	33.2	6.5
4/2	A20 Cheriton Rd Ahead	396	2055	557	71.2%	5.9	53.9	16.5
4/3	A20 Cheriton Rd Right	96	1731	365	26.3%	1.2	44.5	3.4
C1 PRC for Signalled Lanes (%): -34.5 Total Delay for Signalled Lanes (pcuHr): 199.43 PRC Over All Lanes (%): -34.5 Total Delay Over All Lanes(pcuHr): 199.43 Cycle Time (s): 240								

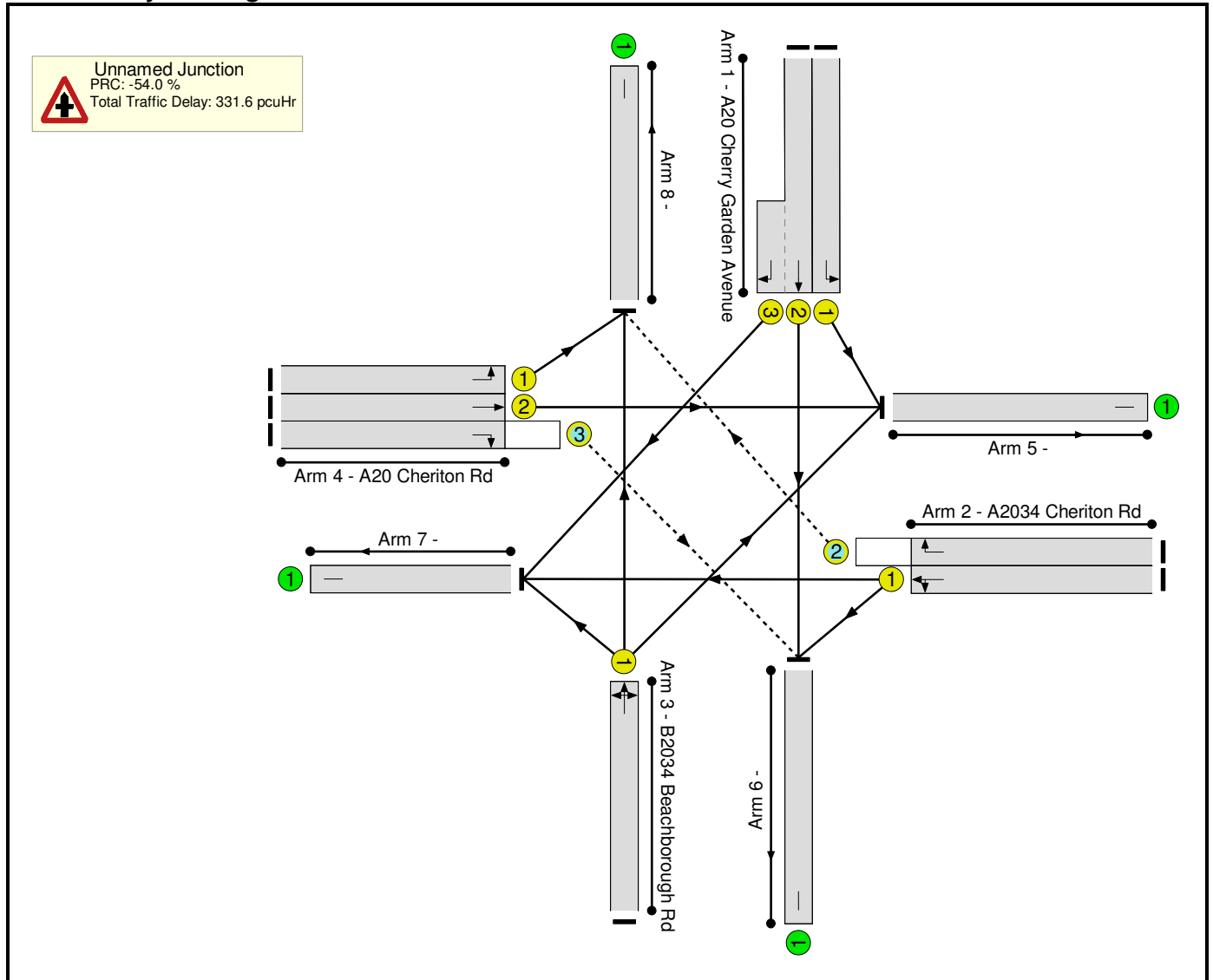
Junction Layout Diagram



Link Results

[illegible]

Junction Layout Diagram



Link Results

[illegible]

Cheriton Interchange_2010 BASE 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Cheriton Interchange\
Cheriton Interchange_2010 BASE 01_001.vpi"
(drive-on-the-left) at 14:43:53 on Thursday, 2 September 2010

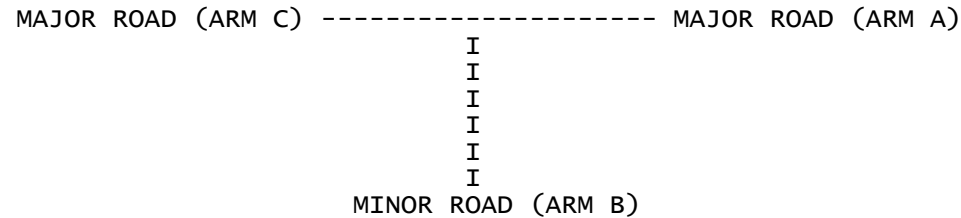
.RUN INFORMATION

RUN TITLE	: Cheriton Interchange
LOCATION	: Cheriton, Folkestone
DATE	: 17/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Cheriton Interchange_2010 BASE 01_001.vpo



ARM A IS A20 Cheriton High Street (south)
 ARM B IS Cheriton High Street (west)
 ARM C IS A20 Cheriton High Street (north)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 14.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 5.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.50 M.	I
I	- VISIBILITY	I	(VC-B) 90.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Cheriton Interchange_2010 BASE 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.18	0.07	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	654.56	0.18	0.07	0.11	0.25	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	714.66	0.18	0.18	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Cheriton Interchange 2010 BASE AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Cheriton Interchange_2010 BASE 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	10.51	I	15.77	I	10.51	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	7.82	I	11.74	I	7.82	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	16.55	I	24.82	I	16.55	I

.Demand set: Cheriton Interchange 2010 BASE AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	A
I		I		I	0.000
I		I		I	0.346
I		I		I	0.654
I		I		I	0.0
I		I		I	291.0
I		I		I	550.0
I		I		I	(0.0)
I		I		I	(2.0)
I		I		I	(5.0)
I		I		I	
I		I	ARM	I	B
I		I		I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	0.0
I		I		I	0.0
I		I		I	626.0
I		I		I	(0.0)
I		I		I	(0.0)
I		I		I	(2.0)
I		I		I	
I		I	ARM	I	C
I		I		I	0.477
I		I		I	0.523
I		I		I	0.000
I		I		I	632.0
I		I		I	692.0
I		I		I	0.0
I		I		I	(4.0)
I		I		I	(2.0)
I		I		I	(0.0)
I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Cheriton Interchange 2010 BASE AM
AND FOR TIME PERIOD 1

I	TIME	I	DEMAND	I	CAPACITY	I	DEMAND/	I	PEDESTRIAN	I	START	I	END	I	DELAY	I	GEOMETRIC DELAY	I	AVERAGE DELAY
I		I	(VEH/MIN)	I	(VEH/MIN)	I	CAPACITY	I	FLOW	I	QUEUE	I	QUEUE	I	(VEH.MIN/	I	(VEH.MIN/	I	PER ARRIVING
I		I		I		I	(RFC)	I	(PEDS/MIN)	I	(VEHS)	I	(VEHS)	I	TIME SEGMENT)	I	TIME SEGMENT)	I	VEHICLE (MIN)
I	07.45-08.00	I		I		I		I		I		I		I		I		I	
I	B-AC	I	7.85	I	10.23	I	0.768	I		I	0.00	I	2.98	I	38.1	I		I	0.37

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I	C-A	7.93								
I	C-B	8.68	9.74	0.892		0.00	5.77	65.9		0.59
I	A-B	3.65								
I	A-C	6.90								
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	B-AC	9.38	9.93	0.945		2.98	8.41	96.2		0.86
I	C-A	9.47								
I	C-B	10.37	9.36	1.108		5.77	24.07	231.0		1.96
I	A-B	4.36								
I	A-C	8.24								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30									

I
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I
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I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	11.49	9.51	1.208		39.45	69.39	816.6		5.88
C-A	11.60								
C-B	12.70	8.84	1.437		82.17	140.11	1667.1		12.42
A-B	5.34								
A-C	10.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/	AVERAGE DELAY PER ARRIVING

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

08.45-09.00

B-AC	9.38	9.93	0.945	69.39	63.31	995.2	6.75
C-A	9.47						
C-B	10.37	9.36	1.108	140.11	155.31	2215.6	15.90
A-B	4.36						
A-C	8.24						

—

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	7.85	10.23	0.768		63.31	30.09	700.5		4.70
C-A	7.93								
C-B	8.68	9.74	0.892		155.31	140.45	2218.2		15.29
A-B	3.65								
A-C	6.90								

■ —

QUEUE FOR STREAM B-AC

TIME	NO. OF

Cheriton Interchange_2010 BASE 01_001.vpo

SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	3.0	***
08.15	8.4	*****
08.30	39.4	*****
08.45	69.4	*****
09.00	63.3	*****
09.15	30.1	*****

QUEUE FOR STREAM C-B

TIME	NO. OF	
SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	5.8	*****
08.15	24.1	*****
08.30	82.2	*****
08.45	140.1	*****
09.00	155.3	*****
09.15	140.4	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	D	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I		I			I			I	(MIN/VEH)
I	B-AC	I	861.6	I 574.4	I	3009.3	I 3.49	I	3053.6
I	C-A	I	869.9	I 579.9	I		I	I	3.54
I	C-B	I	952.5	I 635.0	I	7195.2	I 7.55	I	8208.2
I	A-B	I	400.5	I 267.0	I		I	I	8.62
I	A-C	I	757.0	I 504.7	I		I	I	
I	ALL	I	3841.6	I 2561.1	I	10204.5	I 2.66	I	11261.8
									2.93

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Cheriton Interchange_2010 BASE 01_001.vpo

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.18	0.07	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	654.56	0.18	0.07	0.11	0.25	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	714.66	0.18	0.18	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Cheriton Interchange 2010 BASE PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)			I					
			I	I	I	I	I	I	I						
											I	I	I		
														I	I
I	I	I	I	I	I	I	I	I	I						
I	I	I	I	I	I	I	I	I	I	I					
I	ARM	A	I	15.00	I	45.00	I	75.00	I	9.56	I	14.34	I	9.56	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	9.25	I	13.88	I	9.25	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	16.95	I	25.43	I	16.95	I

		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)									
TIME		FROM/TO		ARM	A	ARM	B	ARM	C		
16.45 - 17.00											
		ARM	A	0.000	0.382	0.618					
				(0.0)	(0.0)	(1.0)					
		ARM	B	0.000	0.000	1.000					
				0.0	0.0	740.0					
				(0.0)	(0.0)	(1.0)					
		ARM	C	0.551	0.449	0.000					
				747.0	609.0	0.0					
				(3.0)	(2.0)	(0.0)					

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

Cheriton Interchange_2010 BASE 01_001.vpo

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 16.45-17.00									
I B-AC	9.29	10.56	0.879		0.00	5.45	63.5		0.53
I C-A	9.37								
I C-B	7.64	9.97	0.767		0.00	2.95	37.7		0.37
I A-B	3.66								
I A-C	5.93								
I									
I									
I									
.									
--									

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.00-17.15									
I B-AC	11.09	10.30	1.077		5.45	21.53	210.9		1.65
I C-A	11.19								
I C-B	9.12	9.64	0.947		2.95	8.43	96.1		0.89
I A-B	4.38								
I A-C	7.09								
I									
I									
I									
.									
--									

Cheriton Interchange_2010 BASE 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	13.58	9.94	1.366		21.53	76.42	735.4		5.16
C-A	13.71								
C-B	11.18	9.18	1.218		8.43	39.66	364.4		2.94
A-B	5.36								
A-C	8.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	13.58	9.94	1.366		76.42	131.08	1556.3		10.45
C-A	13.71								
C-B	11.18	9.18	1.218		39.66	69.85	821.7		6.12
A-B	5.36								
A-C	8.68								

Cheriton Interchange_2010 BASE 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	11.09	10.30	1.077		131.08	143.01	2055.7		13.31
C-A	11.19								
C-B	9.12	9.64	0.947		69.85	64.22	1005.6		7.01
A-B	4.38								
A-C	7.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	9.29	10.56	0.879		143.01	124.99	2010.0		12.79
C-A	9.37								
C-B	7.64	9.97	0.767		64.22	31.61	718.7		4.95
A-B	3.66								
A-C	5.93								

Cheriton Interchange_2010 BASE 01_001.vpo

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QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	5.4	*****
17.15	21.5	*****
17.30	76.4	*****
17.45	131.1	*****
18.00	143.0	*****
18.15	125.0	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	3.0	***
17.15	8.4	*****
17.30	39.7	*****
17.45	69.9	*****
18.00	64.2	*****
18.15	31.6	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-AC	I	1018.6	I 679.0	I	6631.9	I 6.51	I 7371.7	I 7.24
I	C-A	I	1028.2	I 685.5	I		I	I	I
I	C-B	I	838.2	I 558.8	I	3044.1	I 3.63	I 3094.2	I 3.69
I	A-B	I	401.9	I 267.9	I		I	I	I
I	A-C	I	651.0	I 434.0	I		I	I	I

Cheriton Interchange_2010 BASE 01_001.vpo
I ALL I 3938.0 I 2625.3 I 9676.0 I 2.46 I 10466.0 I 2.66 I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Canterbury Rd_Alkhams Valley Rd 2010 Base.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Canterbury_Alkhams Valley\
Canterbury Rd_Alkhams Valley Rd 2010 Base.vpi"
(drive-on-the-left) at 15:23:47 on Monday, 8 November 2010

.RUN INFORMATION

RUN TITLE	: Canterbury Rd / Alkhams Valley Rd
LOCATION	:
DATE	: 08/11/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	: Geometries taken from Hawkinge mixed use development TA (downloaded from SDC planning)

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

Canterbury Rd_Alkhams Valley Rd 2010 Base.vpo

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
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MINOR ROAD (ARM B)

ARM A IS A260 Canterbury Rd north
ARM B IS Alkhams Valley Rd
ARM C IS A260 Canterbury Rd south

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.60 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 30.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 49.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.10 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.20 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.40 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

Canterbury Rd_Alkhams Valley Rd 2010 Base.vpo

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM A-B	I
I	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM A-B	I
I	728.15		0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Canterbury Rd / Alkhams Valley Rd 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

I	ARM	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I					
			I	I	I	I	I	I						
										I	I	I		
													I	I
I	I	I	I	I	I	I	I	I						
I	I	I	I	I	I	I	I	I						
I	ARM	A	I	15.00	I	45.00	I	75.00	I	20.44	I	30.66	I	20.44
I	ARM	B	I	15.00	I	45.00	I	75.00	I	3.22	I	4.84	I	3.22
I	ARM	C	I	15.00	I	45.00	I	75.00	I	6.28	I	9.41	I	6.28

				TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	TIME	FROM/TO	ARM	A	B	C	D	E	F	
	07.45 - 08.00									
		ARM A		0.000	0.507	0.493				
				(0.0)	(13.0)	(11.0)				
		ARM B		0.202	0.000	0.798				
				52.0	0.0	206.0				
				(23.0)	(0.0)	(10.0)				
		ARM C		0.781	0.219	0.000				
				392.0	110.0	0.0				
				(13.0)	(14.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

Canterbury Rd_Alkhaym Valley Rd 2010 Base.vpo

		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	07.45-08.00								
I	I	B-C	2.58	6.95	0.372	0.00	0.58	8.1		0.23
I	I	B-A	0.65	2.81	0.232	0.00	0.29	4.0		0.46
I	I	C-A	4.92							
I	I	C-B	1.38	5.58	0.247	0.00	0.32	4.5		0.24
I	I	A-B	10.40							
I	I	A-C	10.11							
I	I									
I	I									

	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	08.00-08.15								
I	I	B-C	3.09	5.80	0.532	0.58	1.08	15.0		0.36
I	I	B-A	0.78	2.05	0.380	0.29	0.57	7.7		0.76
I	I	C-A	5.87							
I	I	C-B	1.65	4.59	0.359	0.32	0.54	7.6		0.34
I	I	A-B	12.42							
I	I	A-C	12.08							
I	I									
I	I									

Canterbury Rd_Alkhay Valley Rd 2010 Base.vpo

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.78	3.34	1.131		1.08	11.10	100.5		2.53
B-A	0.95	0.86	1.109		0.57	4.14	39.3		4.56
C-A	7.19								
C-B	2.02	3.23	0.624		0.54	1.47	19.0		0.75
A-B	15.21								
A-C	14.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.78	3.14	1.203		11.10	21.33	244.0		5.32
B-A	0.95	0.86	1.116		4.14	6.52	80.5		7.22
C-A	7.19								

Canterbury Rd_Alkhay Valley Rd 2010 Base.vpo

I C-B 2.02 3.23 0.624 1.47 1.56 22.8 0.81

I A-B 15.21

I A-C 14.79

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)

I 08.45-09.00

I B-C 3.09 4.57 0.675 21.33 3.05 176.1 2.98

I B-A 0.78 1.25 0.621 6.52 2.41 63.6 4.34

I C-A 5.87

I C-B 1.65 4.59 0.359 1.56 0.58 9.6 0.35

I A-B 12.42

I A-C 12.08

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)

I 09.00-09.15

Canterbury Rd_Alkhram Valley Rd 2010 Base.vpo

I								
I	B-C	2.58	6.75	0.383		3.05	0.64	11.2
I								0.26
I	B-A	0.65	2.78	0.235		2.41	0.32	6.8
I								0.53
I	C-A	4.92						
I								
I	C-B	1.38	5.58	0.247		0.58	0.34	5.3
I								0.24
I	A-B	10.40						
I								
I	A-C	10.11						
I								
I								

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 QUEUE FOR STREAM B-C

TIME	NO. OF	
SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	0.6	*
08.15	1.1	*
08.30	11.1	*****
08.45	21.3	*****
09.00	3.0	***
09.15	0.6	*

QUEUE FOR STREAM B-A

TIME	NO. OF	
SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	0.3	
08.15	0.6	*
08.30	4.1	****
08.45	6.5	*****
09.00	2.4	**
09.15	0.3	

QUEUE FOR STREAM C-B

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE

Canterbury Rd_Alkhram Valley Rd 2010 Base.vpo

08.00	0.3	
08.15	0.5	*
08.30	1.5	*
08.45	1.6	**
09.00	0.6	*
09.15	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-C	I	283.5	I	189.0	I	555.0	I	1.96
I	B-A	I	71.6	I	47.7	I	201.9	I	2.82
I	C-A	I	539.6	I	359.7	I		I	
I	C-B	I	151.4	I	100.9	I	68.9	I	0.46
I	A-B	I	1141.1	I	760.7	I		I	
I	A-C	I	1109.4	I	739.6	I		I	
I	ALL	I	3296.5	I	2197.7	I	825.8	I	0.25

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM	B-C	STREAM A-C	STREAM A-B	I
I		0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

Canterbury Rd_Alkhams Valley Rd 2010 Base.vpo

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A		STREAM	A-C		STREAM	A-B		STREAM	C-A		STREAM	C-B	I
I		0.00			0.00			0.00			0.00			0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B		STREAM	A-C		STREAM	A-B	I
I		728.15			0.25			0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Canterbury Rd / Alkhams Valley Rd 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I		I	FLOW STARTS	I	BEFORE	I								
I		I	TO RISE	I	AT TOP	I								
I		I	IS REACHED	I	OF PEAK	I								
I		I	FALLING	I	PEAK	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	17.35	I	26.03	I	17.35	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.96	I	4.44	I	2.96	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.31	I	15.47	I	10.31	I

Canterbury Rd_Alkhams Valley Rd 2010 Base.vpo

.Demand set: Canterbury Rd / Alkhams Valley Rd 2010 Base PM

	TIME	TURNING PROPORTIONS											
		TURNING COUNTS											
		(PERCENTAGE OF H.V.S)											
		FROM/TO	ARM	A	ARM	B	ARM	C					
16.45 - 17.00													
		ARM	A	0.000	0.543	0.457							
				0.0	753.0	635.0							
				(0.0)	(11.0)	(12.0)							
		ARM	B	0.342	0.000	0.658							
				81.0	0.0	156.0							
				(10.0)	(0.0)	(10.0)							
		ARM	C	0.772	0.228	0.000							
				637.0	188.0	0.0							
				(8.0)	(12.0)	(0.0)							

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Canterbury Rd / Alkhams Valley Rd 2010 Base PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	B-C	1.96	7.13	0.275		0.00	0.37	5.3		0.19
I	B-A	1.02	3.23	0.315		0.00	0.44	6.0		0.44
I	C-A	7.99								
I	C-B	2.36	6.48	0.364		0.00	0.56	7.8		0.24

Canterbury Rd_Alkhram Valley Rd 2010 Base.vpo

I
I A-B 9.45
I
I A-C 7.97
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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.34	5.82	0.402		0.37	0.65	9.2		0.28
B-A	1.21	2.34	0.518		0.44	0.97	12.8		0.84
C-A	9.54								
C-B	2.82	5.63	0.500		0.56	0.96	13.4		0.35
A-B	11.28								
A-C	9.51								

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									

Canterbury Rd_Alkhay Valley Rd 2010 Base.vpo

I	B-C	2.86	2.24	1.278	0.65	12.16	103.5	3.74
I	B-A	1.49	1.20	1.243	0.97	7.06	64.3	4.80
I	C-A	11.69						
I	C-B	3.45	4.46	0.773	0.96	2.76	34.2	0.81
I	A-B	13.82						
I	A-C	11.65						
I								
I								

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45									
I	B-C	2.86	2.20	1.300		12.16	22.39	259.5		7.55
I	B-A	1.49	1.17	1.266		7.06	12.21	145.0		8.33
I	C-A	11.69								
I	C-B	3.45	4.46	0.773		2.76	3.02	43.7		0.94
I	A-B	13.82								
I	A-C	11.65								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

Canterbury Rd_Alkhay Valley Rd 2010 Base.vpo

		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	17.45-18.00								
I	I	B-C	2.34	3.42	0.683	22.39	8.31	230.3		4.73
I	I	B-A	1.21	1.81	0.670	12.21	5.30	131.3		5.33
I	I	C-A	9.54							
I	I	C-B	2.82	5.63	0.500	3.02	1.05	18.1		0.39
I	I	A-B	11.28							
I	I	A-C	9.51							
I	I									
I	I									

	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	18.00-18.15								
I	I	B-C	1.96	6.73	0.291	8.31	0.42	14.3		0.27
I	I	B-A	1.02	3.10	0.328	5.30	0.51	15.5		0.66
I	I	C-A	7.99							
I	I	C-B	2.36	6.48	0.364	1.05	0.59	9.3		0.25
I	I	A-B	9.45							
I	I	A-C	7.97							
I	I									

I

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.7	*
17.30	12.2	*****
17.45	22.4	*****
18.00	8.3	*****
18.15	0.4	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	1.0	*
17.30	7.1	*****
17.45	12.2	*****
18.00	5.3	*****
18.15	0.5	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	1.0	*
17.30	2.8	***
17.45	3.0	***
18.00	1.0	*
18.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
			(VEH/H)		(MIN/VEH)		(MIN/VEH)	

Canterbury Rd_Alkhams Valley Rd 2010 Base.vpo

I	B-C	I	214.7	I	143.1	I	622.0	I	2.90	I	622.0	I	2.90	I
I	B-A	I	111.5	I	74.3	I	374.8	I	3.36	I	374.9	I	3.36	I
I	C-A	I	876.8	I	584.5	I		I		I		I		I
I	C-B	I	258.8	I	172.5	I	126.5	I	0.49	I	126.5	I	0.49	I
I	A-B	I	1036.4	I	691.0	I		I		I		I		I
I	A-C	I	874.0	I	582.7	I		I		I		I		I
I	ALL	I	3372.2	I	2248.2	I	1123.3	I	0.33	I	1123.4	I	0.33	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\
Bouverie Rd west_Middleburg Square\Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpi"
(drive-on-the-left) at 15:45:03 on Thursday, 2 September 2010

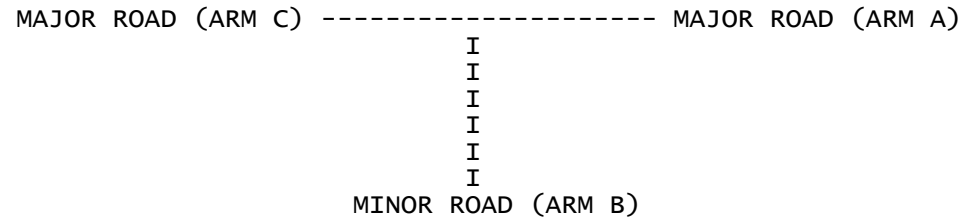
.RUN INFORMATION

RUN TITLE	: Bouverie Rd west / Middleburg Square
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo



ARM A IS Middleburg Square
 ARM B IS Bouverie Rd west
 ARM C IS Cheriton Gardens

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 9.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 80.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 80.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	809.32	0.27	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	652.52	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Bouverie Rd West / Middleburg Square 2010 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	11.40	I	17.10	I	11.40	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.15	I	0.23	I	0.15	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Bouverie Rd west / Middleburg Square 2010 Base AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	A
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.325
I		I		I	296.0
I		I	(	I	1.0)
I		I		I	0.675
I		I		I	616.0
I		I	(	I	2.0)
I		I		I	
I		I	ARM	I	B
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	1.000
I		I		I	12.0
I		I	(	I	0.0)
I		I		I	
I		I	ARM	I	C
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Bouverie Rd west / Middleburg Square 2010 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-AC	0.15	10.93	0.014		0.00	0.01	0.2		0.09

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I	C-A	0.00								
I										
I	C-B	0.00	6.65	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	3.71								
I										
I	A-C	7.73								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I										
I	B-AC	0.18	10.44	0.017		0.01	0.02	0.3		0.10
I										
I	C-A	0.00								
I										
I	C-B	0.00	6.25	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	4.43								
I										
I	A-C	9.23								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

I										
I	B-AC	0.22	9.75	0.023		0.02	0.02	0.3		0.10
I										
I	C-A	0.00								
I										
I	C-B	0.00	5.71	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	5.43								
I										
I	A-C	11.30								
I										
I										
I										

.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	B-AC	0.22	9.75	0.023		0.02	0.02	0.3		0.10
I										
I	C-A	0.00								
I										
I	C-B	0.00	5.71	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	5.43								
I										
I	A-C	11.30								
I										
I										
I										
.	-----									
--										

.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

		(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I								
I								
I	08.45-09.00							
I								
I	B-AC	0.18	10.44	0.017	0.02	0.02	0.3	0.10
I								
I	C-A	0.00						
I								
I	C-B	0.00	6.25	0.000	0.00	0.00	0.0	0.00
I								
I	A-B	4.43						
I								
I	A-C	9.23						
I								
I								
I								

 .
 --

	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I										
I	B-AC	0.15	10.93	0.014		0.02	0.01	0.2		0.09
I										
I	C-A	0.00								
I										
I	C-B	0.00	6.65	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	3.71								
I										
I	A-C	7.73								
I										
I										
I										

 .
 --

QUEUE FOR STREAM	B-AC
TIME	NO. OF

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	D	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I		I		I	I	* DELAY *	I	* DELAY *	I		
I		I		I			I		I		
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	16.5	I 11.0	I	1.6	I 0.10	I	1.6	I 0.10	I
I	C-A	I	0.0	I 0.0	I		I	I		I	I
I	C-B	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
I	A-B	I	407.4	I 271.6	I		I	I		I	I
I	A-C	I	847.9	I 565.3	I		I	I		I	I
I	ALL	I	1271.8	I 847.9	I	1.6	I 0.00	I	1.6	I 0.00	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	809.32	0.27	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	652.52	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Bouverie Rd West / Middleburg Square 2010 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

I	I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I
			I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	
I	ARM	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I
I		I		I	I	I	I	I	I
I	ARM A	I	15.00	I 45.00	I 75.00	I 13.38	I 20.06	I 13.38	I
I	ARM B	I	15.00	I 45.00	I 75.00	I 0.04	I 0.06	I 0.04	I
I	ARM C	I	15.00	I 45.00	I 75.00	I 0.00	I 0.00	I 0.00	I

.Demand set: Bouverie Rd west / Middleburg Square 2010 Base PM

I I I I I	TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)									

		I FROM/TO	I ARM	A	I ARM	B	I ARM	C	I		
I	16.45 - 17.00	I		I		I		I		I	
I		I	ARM	A	I	0.000	I	0.305	I	0.695	I
I		I			I	0.0	I	326.0	I	744.0	I
I		I			I	(0.0)	I	(0.0)	I	(0.0)	I
I		I			I		I		I		I
I		I	ARM	B	I	0.000	I	0.000	I	1.000	I
I		I			I	0.0	I	0.0	I	3.0	I
I		I			I	(0.0)	I	(0.0)	I	(0.0)	I
I		I			I		I		I		I
I		I	ARM	C	I	0.000	I	0.000	I	0.000	I
I		I			I	0.0	I	0.0	I	0.0	I
I		I			I	(0.0)	I	(0.0)	I	(0.0)	I
I		I			I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Bouverie Rd west / Middleburg Square 2010 Base PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I I 16.45-17.00							
I I B-AC	0.04	10.50	0.004	0.00	0.00	0.1	0.10
I I C-A	0.00						
I I C-B	0.00	6.34	0.000	0.00	0.00	0.0	0.00
I I A-B	4.09						
I I A-C	9.34						
I I .							
--							

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT')	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT')	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I I I I I I I I I I I . --	17.00-17.15									
I I I I I I I I I I I . --	B-AC	0.04	9.92	0.005		0.00	0.00	0.1		0.10
I I I I I I I I I I I . --	C-A	0.00								
I I I I I I I I I I I . --	C-B	0.00	5.88	0.000		0.00	0.00	0.0		0.00
I I I I I I I I I I I . --	A-B	4.88								
I I I I I I I I I I I . --	A-C	11.15								

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	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
17.15-17.30									
B-AC	0.06	9.12	0.006		0.00	0.01	0.1		0.11
C-A	0.00								
C-B	0.00	5.24	0.000		0.00	0.00	0.0		0.00
A-B	5.98								
A-C	13.65								

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.04	9.92	0.005		0.01	0.00	0.1		0.10
C-A	0.00								
C-B	0.00	5.88	0.000		0.00	0.00	0.0		0.00
A-B	4.88								
A-C	11.15								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	0.04	10.50	0.004		0.00	0.00	0.1		0.10
C-A	0.00								
C-B	0.00	6.34	0.000		0.00	0.00	0.0		0.00
A-B	4.09								
A-C	9.34								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I
I	B-AC	I	4.1	I	2.8	I	0.4	I
I	C-A	I	0.0	I	0.0	I		I
I	C-B	I	0.0	I	0.0	I	0.0	I
I	A-B	I	448.7	I	299.1	I		I
I	A-C	I	1024.1	I	682.7	I		I
I	ALL	I	1476.9	I	984.6	I	0.4	I
							0.00	
							0.4	
							0.00	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

Bouverie Rd west_Middleburg Square_2010 Base AM 01_001.vpo

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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RG40 3GA, UK	

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\
A260 Spitfire Way_A20_A260 Canterbury Rd\A260 Spitfire Way_A20_A260 2010 Base PM.vai"
(drive-on-the-left) at 08:36:29 on Tuesday, 9 November 2010

.FILE PROPERTIES

RUN TITLE: A260 Spitfire way / A260 Canterbury Rd / A20
LOCATION:
DATE: 09/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries taken from Hawkinge mixed use TA (downloaded
from SDC website)

A260 Spitfire Way_A20_A260 2010 Base PM.vao

.INPUT DATA

ARM A - A260 Canterbury Rd south
 ARM B - A260 Spitfire way
 ARM C - A260 Canterbury Rd north
 ARM D - A20

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I																

I	ARM A	I	4.60	I	6.60	I	19.10	I	13.70	I	41.70	I	21.0	I	0.673	I	31.064
I	ARM B	I	4.00	I	6.80	I	5.30	I	16.20	I	41.70	I	36.0	I	0.584	I	24.633
I	ARM C	I	3.90	I	6.70	I	21.10	I	20.30	I	41.70	I	45.0	I	0.619	I	28.100
I	ARM D	I	7.10	I	8.40	I	2.70	I	14.90	I	41.70	I	44.0	I	0.708	I	35.928

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW	SCALE(%)	I

I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)									
		FLOW STARTS	TOP OF PEAK IS REACHED	IFLOW STOPS FALLING	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK							
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.00	I	13.50	I	9.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.75	I	10.13	I	6.75	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.16	I	7.74	I	5.16	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	12.95	I	19.42	I	12.95	I

I	I	TURNING PROPORTIONS								I
		TURNING COUNTS (VEH/HR)								
I	I	(PERCENTAGE OF H.V.S)								I
		FROM/TO	ARM A	ARM B	ARM C	ARM D				
TIME										
16.45 - 18.15										
	ARM A	0.000	0.625	0.306	0.069					
		0.0	450.0	220.0	50.0					
		(0.0)	(8.0)	(8.0)	(8.0)					
	ARM B	0.933	0.000	0.009	0.057					
		504.0	0.0	5.0	31.0					
		(11.0)	(0.0)	(60.0)	(13.0)					
	ARM C	0.952	0.007	0.000	0.041					
		393.0	3.0	0.0	17.0					
		(10.0)	(0.0)	(0.0)	(29.0)					
	ARM D	0.475	0.357	0.168	0.000					
		492.0	370.0	174.0	0.0					
		(9.0)	(11.0)	(14.0)	(0.0)					

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. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	9.00	24.02	0.375		0.0	0.6	8.7		0.07
I	ARM B	6.75	18.89	0.357		0.0	0.6	8.0		0.08
I	ARM C	5.16	20.87	0.247		0.0	0.3	4.8		0.06
I	ARM D	12.95	24.57	0.527		0.0	1.1	15.9		0.08
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	10.75	23.09	0.465		0.6	0.9	12.6		0.08
I	ARM B	8.06	18.26	0.441		0.6	0.8	11.4		0.10
I	ARM C	6.16	19.98	0.309		0.3	0.4	6.5		0.07
I	ARM D	15.46	23.00	0.672		1.1	2.0	28.4		0.13
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	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	17.15-17.30									
	ARM A	13.16	21.94	0.600		0.9	1.5	21.2		0.11
	ARM B	9.87	17.44	0.566		0.8	1.3	18.4		0.13
	ARM C	7.55	18.77	0.402		0.4	0.7	9.7		0.09
	ARM D	18.94	20.88	0.907		2.0	7.6	91.9		0.38

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.16	21.82	0.603		1.5	1.5	22.4		0.12
ARM B	9.87	17.40	0.567		1.3	1.3	19.4		0.13
ARM C	7.55	18.75	0.403		0.7	0.7	10.0		0.09
ARM D	18.94	20.85	0.908		7.6	8.5	121.7		0.48

A260 Spitfire Way_A20_A260 2010 Base PM.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I	ARM A	10.75	22.92	0.469		1.5	0.9	13.8		0.08
I	ARM B	8.06	18.20	0.443		1.3	0.8	12.5		0.10
I	ARM C	6.16	19.94	0.309		0.7	0.5	6.9		0.07
I	ARM D	15.46	22.95	0.674		8.5	2.1	37.4		0.15
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I	ARM A	9.00	23.97	0.375		0.9	0.6	9.3		0.07
I	ARM B	6.75	18.86	0.358		0.8	0.6	8.6		0.08
I	ARM C	5.16	20.84	0.248		0.5	0.3	5.1		0.06
I	ARM D	12.95	24.51	0.528		2.1	1.1	17.6		0.09
I										
I										
I										

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.5	*
17.45	1.5	**
18.00	0.9	*
18.15	0.6	*

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.8	*
17.30	1.3	*
17.45	1.3	*
18.00	0.8	*
18.15	0.6	*

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.7	*
17.45	0.7	*
18.00	0.5	
18.15	0.3	

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	1.1 *
17.15	2.0 **
17.30	7.6 *****
17.45	8.5 *****
18.00	2.1 **
18.15	1.1 *

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	A	I	987.3	I	658.2	I	87.9	I
							0.09	I
I	B	I	740.5	I	493.6	I	78.3	I
							0.11	I
I	C	I	566.3	I	377.5	I	43.1	I
							0.08	I
I	D	I	1420.6	I	947.0	I	313.0	I
							0.22	I
I	ALL	I	3714.6	I	2476.4	I	522.2	I
							0.14	I
								I
								I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\
A260 Spitfire Way_A20_A260 Canterbury Rd\A260 Spitfire Way_A20_A260 2010 Base AM.vai"
(drive-on-the-left) at 08:31:45 on Tuesday, 9 November 2010

.FILE PROPERTIES

RUN TITLE: A260 Spitfire way / A260 Canterbury Rd / A20
LOCATION:
DATE: 09/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries taken from Hawkinge mixed use TA (downloaded
from SDC website)

A260 Spitfire Way_A20_A260 2010 Base AM.vao

.INPUT DATA

ARM A - A260 Canterbury Rd south

ARM B - A260 Spitfire way

ARM C - A260 Canterbury Rd north

ARM D - A20

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	4.60	I	6.60	I	19.10	I	13.70	I	41.70	I	21.0	I	0.673	I	31.064
I	ARM B	I	4.00	I	6.80	I	5.30	I	16.20	I	41.70	I	36.0	I	0.584	I	24.633
I	ARM C	I	3.90	I	6.70	I	21.10	I	20.30	I	41.70	I	45.0	I	0.619	I	28.100
I	ARM D	I	7.10	I	8.40	I	2.70	I	14.90	I	41.70	I	44.0	I	0.708	I	35.928

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)									
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER							
I	I	I	I	I	I	I	I							
		TO RISE	IS REACHED	IF FALLING	PEAK	OF PEAK	PEAK							
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.36	I	8.04	I	5.36	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	12.29	I	18.43	I	12.29	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.11	I	9.17	I	6.11	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	7.22	I	10.84	I	7.22	I

I	I	TURNING PROPORTIONS								I
		TURNING COUNTS (VEH/HR)								
I	I	(PERCENTAGE OF H.V.S)								I
I	I									I
I	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				I
I	07.45 - 09.15									I
I		ARM A	0.000	0.576	0.282	0.142				I
I			0.0	247.0	121.0	61.0				I
I			(0.0)	(12.0)	(18.0)	(10.0)				I
I										I
I		ARM B	0.907	0.000	0.002	0.091				I
I			892.0	0.0	2.0	89.0				I
I			(10.0)	(0.0)	(0.0)	(12.0)				I
I										I
I		ARM C	0.916	0.002	0.000	0.082				I
I			448.0	1.0	0.0	40.0				I
I			(10.0)	(0.0)	(0.0)	(8.0)				I
I										I
I		ARM D	0.529	0.336	0.135	0.000				I
I			306.0	194.0	78.0	0.0				I
I			(15.0)	(18.0)	(27.0)	(0.0)				I

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. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	5.36	24.97	0.215		0.0	0.3	4.0		0.05
ARM B	12.29	20.32	0.605		0.0	1.5	21.2		0.12
ARM C	6.11	17.56	0.348		0.0	0.5	7.7		0.09
ARM D	7.22	19.52	0.370		0.0	0.6	8.5		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	6.40	24.49	0.261		0.3	0.4	5.2		0.06
ARM B	14.67	19.92	0.737		1.5	2.7	37.3		0.19
ARM C	7.30	15.97	0.457		0.5	0.8	12.0		0.11
ARM D	8.63	17.34	0.497		0.6	1.0	14.1		0.11

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	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	08.15-08.30									
	ARM A	7.84	23.86	0.329		0.4	0.5	7.2		0.06
	ARM B	17.97	19.38	0.927		2.7	8.8	104.4		0.47
	ARM C	8.94	14.01	0.638		0.8	1.7	23.9		0.19
	ARM D	10.57	14.60	0.724		1.0	2.5	33.9		0.24

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	08.30-08.45									
	ARM A	7.84	23.83	0.329		0.5	0.5	7.3		0.06
	ARM B	17.97	19.37	0.928		8.8	10.2	143.9		0.61
	ARM C	8.94	13.81	0.648		1.7	1.8	26.4		0.20
	ARM D	10.57	14.36	0.736		2.5	2.7	39.1		0.26

A260 Spitfire Way_A20_A260 2010 Base AM.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM A	6.40	24.44	0.262		0.5	0.4	5.4		0.06
I										
I	ARM B	14.67	19.91	0.737		10.2	2.9	54.2		0.23
I										
I	ARM C	7.30	15.62	0.467		1.8	0.9	14.0		0.12
I										
I	ARM D	8.63	16.96	0.509		2.7	1.1	16.7		0.12
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I	ARM A	5.36	24.94	0.215		0.4	0.3	4.2		0.05
I	ARM B	12.29	20.31	0.605		2.9	1.6	24.7		0.13
I	ARM C	6.11	17.44	0.351		0.9	0.5	8.4		0.09
I	ARM D	7.22	19.37	0.373		1.1	0.6	9.3		0.08
I										
I										
I										

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.5
08.45	0.5
09.00	0.4
09.15	0.3

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.5	*
08.15	2.7	***
08.30	8.8	*****
08.45	10.2	*****
09.00	2.9	***
09.15	1.6	**

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.7	**
08.45	1.8	**
09.00	0.9	*
09.15	0.5	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	1.0	*
08.30	2.5	**
08.45	2.7	***
09.00	1.1	*
09.15	0.6	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	588.2	I	33.3	I	0.06	I
I	B	I	1347.9	I	385.7	I	0.29	I
I	C	I	670.5	I	92.4	I	0.14	I
I	D	I	792.6	I	121.5	I	0.15	I
I	ALL	I	3399.2	I	633.0	I	0.19	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Southern Rb\M20 Junction 13 southern RB_2010 BASE PM 01_001.vai"
(drive-on-the-left) at 15:17:09 on Tuesday, 21 September 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 southern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

ARM A - M20 westbound exit slip
 ARM B - Churchill Avenue
 ARM C - Cherry Garden Lane
 ARM D - M20 westbound entry slip
 ARM E - A20 north

.GEOMETRIC DATA

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	8.00	I	11.00	I	17.00	I	13.50	I	61.00	I	47.0	I	0.711	I	45.949
	I																
I	ARM B	I	5.00	I	11.00	I	33.00	I	57.00	I	61.00	I	34.0	I	0.730	I	45.198
	I																
I	ARM C	I	6.00	I	8.00	I	15.00	I	61.00	I	61.00	I	51.0	I	0.619	I	35.884
	I																
I	ARM E	I	7.00	I	8.50	I	9.00	I	32.00	I	61.00	I	44.0	I	0.654	I	39.072
	I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM B: Effective flare length is outside normal range.
 Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 southern Rb 2010 BASE PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IF FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.65	I	6.98	I	4.65	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	13.11	I	19.67	I	13.11	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.79	I	14.68	I	9.79	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	10.13	I	15.19	I	10.13	I

DEMAND SET TITLE: M20 Junction 13 southern Rb 2010 BASE PM

I	TURNING PROPORTIONS										I			
I	TURNING COUNTS (VEH/HR)										I			
I	(PERCENTAGE OF H.V.S)										I			
I	-----										I			
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	16.45 - 18.15	I		I		I		I		I		I		I
I		I	ARM A	I	0.000	I	0.172	I	0.806	I	0.000	I	0.022	I
I		I		I	0.0	I	64.0	I	300.0	I	0.0	I	8.0	I
I		I		I	(0.0)	I	(3.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.382	I	0.480	I	0.138	I
I		I		I	0.0	I	0.0	I	401.0	I	503.0	I	145.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.000	I	0.458	I	0.000	I	0.000	I	0.542	I
I		I		I	0.0	I	359.0	I	0.0	I	0.0	I	424.0	I

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	(1.0)	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	ARM E	I	0.000	I	0.636	I	0.356	I	0.009	I	0.000	I
I	I	I	I	0.0	I	515.0	I	288.0	I	7.0	I	0.0	I
I	I	I	I	(0.0)	I	(0.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.65	35.09	0.133		0.0	0.2	2.3		0.03
ARM B	13.11	39.28	0.334		0.0	0.5	7.4		0.04
ARM C	9.79	30.53	0.321		0.0	0.5	6.9		0.05
ARM E	10.13	36.02	0.281		0.0	0.4	5.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	5.55	33.08	0.168		0.2	0.2	3.0		0.04
ARM B	15.66	38.20	0.410		0.5	0.7	10.2		0.04

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

I										
I	ARM C	11.69	29.51	0.396		0.5	0.7	9.6		0.06
I										
I	ARM E	12.09	35.44	0.341		0.4	0.5	7.6		0.04
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.15-17.30									
I										
I	ARM A	6.80	30.33	0.224		0.2	0.3	4.3		0.04
I										
I	ARM B	19.18	36.73	0.522		0.7	1.1	15.9		0.06
I										
I	ARM C	14.31	28.13	0.509		0.7	1.0	15.0		0.07
I										
I	ARM E	14.81	34.66	0.427		0.5	0.7	10.9		0.05
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM A	6.80	30.31	0.224		0.3	0.3	4.3		0.04
I										
I	ARM B	19.18	36.72	0.522		1.1	1.1	16.3		0.06
I										

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

I	ARM C	14.31	28.12	0.509	1.0	1.0	15.4	0.07
I	ARM E	14.81	34.66	0.427	0.7	0.7	11.1	0.05

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.45-18.00

I	ARM A	5.55	33.05	0.168		0.3	0.2	3.1		0.04
I	ARM B	15.66	38.19	0.410		1.1	0.7	10.7		0.04
I	ARM C	11.69	29.50	0.396		1.0	0.7	10.1		0.06
I	ARM E	12.09	35.43	0.341		0.7	0.5	7.9		0.04

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 18.00-18.15

I	ARM A	4.65	35.06	0.133		0.2	0.2	2.3		0.03
I	ARM B	13.11	39.26	0.334		0.7	0.5	7.7		0.04
I	ARM C	9.79	30.51	0.321		0.7	0.5	7.2		0.05

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

I	I ARM E	10.13	36.00	0.281	0.5	0.4	6.0	0.04
I								
I								
I								

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5

M20 Junction 13 southern RB_2010 BASE PM 01_001.vao

17.15	0.7	*
17.30	1.0	*
17.45	1.0	*
18.00	0.7	*
18.15	0.5	

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.7 *
17.45	0.7 *
18.00	0.5 *
18.15	0.4

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	I	I	I	I	I	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	510.1	I	340.1	I	19.2	I	0.04	I
I	B	I	1438.4	I	958.9	I	68.1	I	0.05	I
I	C	I	1073.7	I	715.8	I	64.3	I	0.06	I
I	E	I	1110.7	I	740.5	I	49.3	I	0.04	I
I	ALL	I	4132.8	I	2755.2	I	200.9	I	0.05	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Southern Rb\M20 Junction 13 southern RB_2026 Do Min AM 01_001.vai"
(drive-on-the-left) at 10:22:09 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 southern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

ARM A - M20 westbound exit slip
 ARM B - Churchill Avenue
 ARM C - Cherry Garden Lane
 ARM D - M20 westbound entry slip
 ARM E - A20 north

.GEOMETRIC DATA

ARM D IS JUNCTION EXIT ONLY

I ARM (PCU/MIN)	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
I ARM A	I	8.00	I	11.00	I	17.00	I	13.50	I	61.00	I	47.0	I	0.711	I	45.949
I ARM B	I	5.00	I	11.00	I	33.00	I	57.00	I	61.00	I	34.0	I	0.730	I	45.198
I ARM C	I	6.00	I	8.00	I	15.00	I	61.00	I	61.00	I	51.0	I	0.619	I	35.884
I ARM E	I	7.00	I	8.50	I	9.00	I	32.00	I	61.00	I	44.0	I	0.654	I	39.072

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM B: Effective flare length is outside normal range.
 Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM I FLOW SCALE(%) I

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 AM Do Min

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I				
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP	I	AFTER	I	
I		I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK	I	PEAK	I	
I	ARM A	I	15.00	I	45.00	I	75.00	I	8.76	I	13.14	I	8.76
I	ARM B	I	15.00	I	45.00	I	75.00	I	13.75	I	20.63	I	13.75
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.70	I	14.55	I	9.70
I	ARM E	I	15.00	I	45.00	I	75.00	I	14.45	I	21.67	I	14.45

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 AM Do Min

I	TURNING PROPORTIONS										I			
I	TURNING COUNTS (VEH/HR)										I			
I	(PERCENTAGE OF H.V.S)										I			
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	07.45 - 09.15	I		I		I		I		I		I		I
I		I	ARM A	I	0.000	I	0.157	I	0.799	I	0.000	I	0.044	I
I		I		I	0.0	I	110.0	I	560.0	I	0.0	I	31.0	I
I		I		I	(0.0)	I	(2.0)	I	(1.0)	I	(0.0)	I	(8.0)	I
I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.384	I	0.561	I	0.055	I
I		I		I	0.0	I	0.0	I	422.0	I	617.0	I	61.0	I
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I	(5.0)	I	(10.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.000	I	0.476	I	0.000	I	0.000	I	0.524	I
I		I		I	0.0	I	369.0	I	0.0	I	0.0	I	407.0	I

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

I	I	I	(0.0)	I	(2.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	ARM E	I	0.000	I	0.417	I	0.582	I	0.001	I	0.000	I
I	I	I	I	0.0	I	482.0	I	673.0	I	1.0	I	0.0	I
I	I	I	I	(0.0)	I	(3.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	8.76	31.71	0.276		0.0	0.4	5.6		0.04
ARM B	13.75	32.35	0.425		0.0	0.7	10.8		0.05
ARM C	9.70	29.52	0.329		0.0	0.5	7.2		0.05
ARM E	14.45	35.36	0.409		0.0	0.7	10.1		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	10.46	29.05	0.360		0.4	0.6	8.3		0.05
ARM B	16.42	30.15	0.545		0.7	1.2	17.3		0.07

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

I										
I	ARM C	11.58	28.41	0.408		0.5	0.7	10.1		0.06
I										
I	ARM E	17.25	34.76	0.496		0.7	1.0	14.4		0.06
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.15-08.30									
I										
I	ARM A	12.81	25.41	0.504		0.6	1.0	14.7		0.08
I										
I	ARM B	20.11	27.15	0.741		1.2	2.8	38.6		0.14
I										
I	ARM C	14.19	26.91	0.527		0.7	1.1	16.1		0.08
I										
I	ARM E	21.13	33.96	0.622		1.0	1.6	23.6		0.08
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM A	12.81	25.38	0.505		1.0	1.0	15.2		0.08
I										
I	ARM B	20.11	27.11	0.742		2.8	2.8	41.9		0.14
I										

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

I	ARM C	14.19	26.87	0.528	1.1	1.1	16.6	0.08
I	ARM E	21.13	33.95	0.622	1.6	1.6	24.5	0.08

I
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 08.45-09.00

I	ARM A	10.46	28.99	0.361		1.0	0.6	8.7		0.05
I	ARM B	16.42	30.10	0.546		2.8	1.2	18.9		0.07
I	ARM C	11.58	28.35	0.409		1.1	0.7	10.7		0.06
I	ARM E	17.25	34.75	0.497		1.6	1.0	15.3		0.06

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 09.00-09.15

I	ARM A	8.76	31.65	0.277		0.6	0.4	5.9		0.04
I	ARM B	13.75	32.30	0.426		1.2	0.7	11.4		0.05
I	ARM C	9.70	29.48	0.329		0.7	0.5	7.5		0.05

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

I
I ARM E 14.45 35.34 0.409 1.0 0.7 10.6 0.05
I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	1.0 *
08.45	1.0 *
09.00	0.6 *
09.15	0.4

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.2 *
08.30	2.8 ***
08.45	2.8 ***
09.00	1.2 *
09.15	0.7 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5

M20 Junction 13 southern RB_2026 Do Min AM 01_001.vao

08.15	0.7	*
08.30	1.1	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.6	**
08.45	1.6	**
09.00	1.0	*
09.15	0.7	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL	D	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I	A	I	961.2	I 640.8	I	58.2	I 0.06	I	58.2
I	B	I	1508.3	I 1005.6	I	138.9	I 0.09	I	138.9
I	C	I	1064.1	I 709.4	I	68.1	I 0.06	I	68.1
I	E	I	1585.1	I 1056.7	I	98.4	I 0.06	I	98.4
I	ALL	I	5118.7	I 3412.5	I	363.6	I 0.07	I	363.7

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2026 Do Min PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 12\
M20 junction 12_2026 Do Min PM 01_001.vai"
(drive-on-the-left) at 10:09:28 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 12
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 junction 12_2026 Do Min PM 01_001.vao

ARM A - M20 eastbound entry slip
 ARM B - M20 westbound exit slip
 ARM C - A20 (south)
 ARM D - M20 westbound entry slip
 ARM E - M20 eastbound exit slip
 ARM F - A20 (north)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I																

I	ARM B	I	7.00	I	7.00	I	0.00	I	113.00	I	125.00	I	7.0	I	0.565	I	39.594
I	ARM C	I	7.00	I	10.00	I	13.00	I	41.00	I	125.00	I	43.0	I	0.565	I	43.181
I	ARM E	I	7.00	I	7.00	I	0.00	I	32.00	I	125.00	I	22.0	I	0.528	I	36.980
I	ARM F	I	5.50	I	8.00	I	13.00	I	57.00	I	125.00	I	37.0	I	0.510	I	35.856

V = approach half-width				L = effective flare length				D = inscribed circle diameter							
E = entry width				R = entry radius				PHI = entry angle							

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 junction 12_2026 Do Min PM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I
I F	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15

.LENGTH OF TIME PERIOD - 90 MINUTES.

.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 12 2026 Do Min PM

I	I	NUMBER OF MINUTES FROM START WHEN					I	RATE OF FLOW (VEH/MIN)			I			
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I	I	I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	12.44	I	18.66	I	12.44	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	18.58	I	27.86	I	18.58	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	9.00	I	13.50	I	9.00	I
I	ARM F	I	15.00	I	45.00	I	75.00	I	6.35	I	9.52	I	6.35	I

DEMAND SET TITLE: M20 Junction 12 2026 Do Min PM

I	TURNING PROPORTIONS														I	
I	TURNING COUNTS (VEH/HR)														I	
I	(PERCENTAGE OF H.V.S)														I	
I															I	
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I
I	16.45 - 18.15	I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.653	I	0.000	I	0.000	I	0.347	I
I		I		I	0.0	I	0.0	I	650.0	I	0.0	I	0.0	I	345.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I		I		I		I
I		I	ARM C	I	0.556	I	0.000	I	0.000	I	0.350	I	0.000	I	0.094	I
I		I		I	826.0	I	0.0	I	0.0	I	520.0	I	0.0	I	140.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I		I

M20 junction 12_2026 Do Min PM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.949	I	0.000	I	0.000	I	0.051	I
I	I		I	0.0	I	0.0	I	683.0	I	0.0	I	0.0	I	37.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(4.0)	I
I	I		I		I		I		I		I		I		I
I	I	ARM F	I	0.327	I	0.000	I	0.596	I	0.077	I	0.000	I	0.000	I
I	I		I	166.0	I	0.0	I	303.0	I	39.0	I	0.0	I	0.0	I
I	I		I	(4.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM B	12.44	32.27	0.385		0.0	0.6	9.1		0.05
I	ARM C	18.58	40.45	0.459		0.0	0.8	12.4		0.05
I	ARM E	9.00	28.28	0.318		0.0	0.5	6.8		0.05
I	ARM F	6.35	25.93	0.245		0.0	0.3	4.7		0.05

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	ARM B	14.85	30.85	0.481		0.6	0.9	13.5		0.06

M20 junction 12_2026 Do Min PM 01_001.vao

I									
I	ARM C	22.18	39.92	0.556		0.8	1.2	18.2	0.06
I									
I	ARM E	10.75	26.59	0.404		0.5	0.7	9.9	0.06
I									
I	ARM F	7.58	24.06	0.315		0.3	0.5	6.7	0.06
I									
I									
I									

-										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.15-17.30									
I										
I	ARM B	18.19	28.93	0.629		0.9	1.7	24.0		0.09
I										
I	ARM C	27.17	39.19	0.693		1.2	2.2	31.9		0.08
I										
I	ARM E	13.16	24.28	0.542		0.7	1.2	16.9		0.09
I										
I	ARM F	9.29	21.54	0.431		0.5	0.8	11.0		0.08
I										
I										
I										

-										
.										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM B	18.19	28.91	0.629		1.7	1.7	25.1		0.09
I										

M20 junction 12_2026 Do Min PM 01_001.vao

I	ARM C	27.17	39.18	0.693	2.2	2.2	33.5	0.08
I								
I	ARM E	13.16	24.25	0.543	1.2	1.2	17.6	0.09
I								
I	ARM F	9.29	21.50	0.432	0.8	0.8	11.3	0.08
I								
I								
I								

.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM B	14.85	30.82	0.482		1.7	0.9	14.5		0.06
I										
I	ARM C	22.18	39.90	0.556		2.2	1.3	19.5		0.06
I										
I	ARM E	10.75	26.54	0.405		1.2	0.7	10.5		0.06
I										
I	ARM F	7.58	24.02	0.316		0.8	0.5	7.1		0.06
I										
I										
I										

.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I										
I	ARM B	12.44	32.23	0.386		0.9	0.6	9.7		0.05
I										
I	ARM C	18.58	40.44	0.459		1.3	0.9	13.1		0.05

M20 junction 12_2026 Do Min PM 01_001.vao

I							
I	ARM E	9.00	28.24	0.319	0.7	0.5	7.2
I							0.05
I	ARM F	6.35	25.88	0.245	0.5	0.3	5.0
I							0.05
I							
I							

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.7	**
17.45	1.7	**
18.00	0.9	*
18.15	0.6	*

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	*
17.30	2.2	**
17.45	2.2	**
18.00	1.3	*
18.15	0.9	*

 .QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

M20 junction 12_2026 Do Min PM 01_001.vao

17.00	0.5	
17.15	0.7	*
17.30	1.2	*
17.45	1.2	*
18.00	0.7	*
18.15	0.5	

.QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.5	
17.30	0.8	*
17.45	0.8	*
18.00	0.5	
18.15	0.3	

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	B	I	1364.4	I	909.6	I	95.9	I
							0.07	
I	C	I	2037.6	I	1358.4	I	128.5	I
							0.06	
I	E	I	987.3	I	658.2	I	69.0	I
							0.07	
I	F	I	696.6	I	464.4	I	45.9	I
							0.07	
I	ALL	I	5085.8	I	3390.5	I	339.3	I
							0.07	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2026 Do Min PM 01_001.vao

M20 junction 12_2026 Do Min AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 12\
M20 junction 12_2026 Do Min AM 01_001.vai"
(drive-on-the-left) at 10:07:24 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 12
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 junction 12_2026 Do Min AM 01_001.vao

ARM A - M20 eastbound entry slip
 ARM B - M20 westbound exit slip
 ARM C - A20 (south)
 ARM D - M20 westbound entry slip
 ARM E - M20 eastbound exit slip
 ARM F - A20 (north)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	7.00	I	7.00	I	0.00	I	113.00	I	125.00	I	7.0	I	0.565	I	39.594
I	ARM C	I	7.00	I	10.00	I	13.00	I	41.00	I	125.00	I	43.0	I	0.565	I	43.181
I	ARM E	I	7.00	I	7.00	I	0.00	I	32.00	I	125.00	I	22.0	I	0.528	I	36.980
I	ARM F	I	5.50	I	8.00	I	13.00	I	57.00	I	125.00	I	37.0	I	0.510	I	35.856

V = approach half-width				L = effective flare length				D = inscribed circle diameter							
E = entry width				R = entry radius				PHI = entry angle							

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 junction 12_2026 Do Min AM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I
I F	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 12 2026 Do Min AM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
		I	I	I		I	I	I	
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK
I	I	I	I	I	IF FALLING	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	ARM B	I	15.00	I	45.00	I	14.50	I	21.75
I	ARM C	I	15.00	I	45.00	I	19.45	I	29.18
I	ARM E	I	15.00	I	45.00	I	8.31	I	12.47
I	ARM F	I	15.00	I	45.00	I	9.60	I	14.40

DEMAND SET TITLE: M20 Junction 12 2026 Do Min AM

I I I I I	TIME	TURNING PROPORTIONS										I
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
		FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E	ARM F				
07.45 - 09.15	ARM B	0.000	0.000	0.655	0.000	0.000	0.345					
		0.0	0.0	760.0	0.0	0.0	400.0					
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(2.0)					
	ARM C	0.407	0.000	0.000	0.434	0.000	0.159					
		633.0	0.0	0.0	675.0	0.0	248.0					
		(2.0)	(0.0)	(0.0)	(1.0)	(0.0)	(1.0)					

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I	I	ARM E	I	0.000	I	0.000	I	0.892	I	0.000	I	0.000	I	0.108	I
I	I		I	0.0	I	0.0	I	593.0	I	0.0	I	0.0	I	72.0	I
I	I		I	(0.0)	I	(0.0)	I	(3.0)	I	(0.0)	I	(0.0)	I	(2.0)	I
I	I		I		I		I		I		I		I		I
I	I	ARM F	I	0.482	I	0.000	I	0.499	I	0.020	I	0.000	I	0.000	I
I	I		I	370.0	I	0.0	I	383.0	I	15.0	I	0.0	I	0.0	I
I	I		I	(2.0)	I	(0.0)	I	(0.0)	I	(10.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	ARM B	14.50	32.26	0.449		0.0	0.8	11.8		0.06
I	ARM C	19.45	39.63	0.491		0.0	1.0	14.0		0.05
I	ARM E	8.31	27.61	0.301		0.0	0.4	6.3		0.05
I	ARM F	9.60	27.55	0.348		0.0	0.5	7.8		0.06

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	ARM B	17.31	30.87	0.561		0.8	1.3	18.4		0.07

M20 junction 12_2026 Do Min AM 01_001.vao

I									
I	ARM C	23.23	39.06	0.595		1.0	1.5	21.2	0.06
I									
I	ARM E	9.93	25.97	0.382		0.4	0.6	9.0	0.06
I									
I	ARM F	11.46	26.00	0.441		0.5	0.8	11.5	0.07
I									
I									
I									

I										
I										
I										
I										
I										
I										
I	08.15-08.30									
I										
I	ARM B	21.21	28.99	0.732		1.3	2.6	37.2		0.13
I										
I	ARM C	28.44	38.27	0.743		1.5	2.8	40.1		0.10
I										
I	ARM E	12.16	23.76	0.512		0.6	1.0	15.1		0.09
I										
I	ARM F	14.04	23.89	0.588		0.8	1.4	20.2		0.10
I										
I										
I										

I										
I										
I										
I										
I										
I										
I	08.30-08.45									
I										
I	ARM B	21.21	28.96	0.732		2.6	2.7	40.1		0.13
I										

M20 junction 12_2026 Do Min AM 01_001.vao

I	ARM C	28.44	38.26	0.744	2.8	2.9	42.7	0.10
I	ARM E	12.16	23.72	0.513	1.0	1.0	15.6	0.09
I	ARM F	14.04	23.86	0.588	1.4	1.4	21.2	0.10
I								
I								
I								

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.45-09.00									
I	ARM B	17.31	30.84	0.562		2.7	1.3	20.2		0.08
I	ARM C	23.23	39.03	0.595		2.9	1.5	23.0		0.06
I	ARM E	9.93	25.91	0.383		1.0	0.6	9.6		0.06
I	ARM F	11.46	25.96	0.442		1.4	0.8	12.3		0.07
I										
I										
I										

.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	09.00-09.15									
I	ARM B	14.50	32.23	0.450		1.3	0.8	12.6		0.06
I	ARM C	19.45	39.62	0.491		1.5	1.0	14.9		0.05

M20 junction 12_2026 Do Min AM 01_001.vao

I							
I	ARM E	8.31	27.56	0.302	0.6	0.4	6.6
I							0.05
I	ARM F	9.60	27.51	0.349	0.8	0.5	8.2
I							0.06
I							
I							

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	2.6	***
08.45	2.7	***
09.00	1.3	*
09.15	0.8	*

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	*
08.30	2.8	***
08.45	2.9	***
09.00	1.5	*
09.15	1.0	*

 .QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

M20 junction 12_2026 Do Min AM 01_001.vao

08.00	0.4	
08.15	0.6	*
08.30	1.0	*
08.45	1.0	*
09.00	0.6	*
09.15	0.4	

.QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	

08.00	0.5	*
08.15	0.8	*
08.30	1.4	*
08.45	1.4	*
09.00	0.8	*
09.15	0.5	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	B	I	1590.6	I	1060.4	I	140.4	I
							0.09	I
I	C	I	2133.6	I	1422.4	I	155.9	I
							0.07	I
I	E	I	911.9	I	607.9	I	62.2	I
							0.07	I
I	F	I	1053.1	I	702.1	I	81.2	I
							0.08	I
I	ALL	I	5689.2	I	3792.8	I	439.7	I
							0.08	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2026 Do Min AM 01_001.vao

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 11\
M20 Junction 11_2026 Do Min PM 01_001.vai"
(drive-on-the-left) at 10:01:06 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 11

LOCATION:

DATE: 24/08/2010

CLIENT: Shepway DC

ENUMERATOR: 35090pw [UK1004395D]

JOB NUMBER:

STATUS:

DESCRIPTION:

.INPUT DATA

M20 Junction 11_2026 Do Min PM 01_001.vao

ARM A - B2068
 ARM B - M20 (eastbound exit)
 ARM C - M20 (westbound entry)
 ARM D - A20
 ARM E - Services
 ARM F - M20 (westbound exit)
 ARM G - M20 (eastbound entry)

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

ARM F IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	3.50	I	8.00	I	20.00	I	48.00	I	172.00	I	21.0	I	0.495	I	32.733
I	ARM C	I	8.00	I	8.00	I	0.00	I	102.00	I	172.00	I	16.0	I	0.594	I	43.951
I	ARM D	I	8.00	I	8.00	I	0.00	I	30.00	I	172.00	I	22.0	I	0.570	I	42.180
I	ARM E	I	4.00	I	4.00	I	0.00	I	46.00	I	172.00	I	41.0	I	0.374	I	19.987
I	ARM G	I	6.50	I	6.50	I	0.00	I	84.00	I	172.00	I	9.0	I	0.536	I	36.440
I		I															

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

M20 Junction 11_2026 Do Min PM 01_001.vao

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I
I	G	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 11 2026 Do Min PM

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.47	I	6.71	I	4.47	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.81	I	8.72	I	5.81	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	10.91	I	16.37	I	10.91	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	1.50	I	2.25	I	1.50	I
I	ARM G	I	15.00	I	45.00	I	75.00	I	5.84	I	8.76	I	5.84	I

DEMAND SET TITLE: M20 Junction 11 2026 Do Min PM

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I	ARM G	I
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.251	I	0.000	I	0.506	I	0.084	I	0.159	I	0.000	I
I		I		I	0.0	I	90.0	I	0.0	I	181.0	I	30.0	I	57.0	I	0.0	I
I		I		I	(0.0)	I	(2.0)	I	(0.0)	I	(1.0)	I	(5.0)	I	(2.0)	I	(0.0)	I

M20 Junction 11_2026 Do Min PM 01_001.vao

ARM C	0.200	0.000	0.000	0.735	0.065	0.000	0.000
	93.0	0.0	0.0	342.0	30.0	0.0	0.0
	(1.0)	(0.0)	(0.0)	(3.0)	(5.0)	(0.0)	(0.0)
ARM D	0.370	0.298	0.000	0.000	0.034	0.298	0.000
	323.0	260.0	0.0	0.0	30.0	260.0	0.0
	(2.0)	(7.0)	(0.0)	(0.0)	(5.0)	(6.0)	(0.0)
ARM E	0.250	0.250	0.000	0.250	0.000	0.250	0.000
	30.0	30.0	0.0	30.0	0.0	30.0	0.0
	(5.0)	(5.0)	(0.0)	(5.0)	(0.0)	(5.0)	(0.0)
ARM G	0.120	0.000	0.000	0.816	0.064	0.000	0.000
	56.0	0.0	0.0	381.0	30.0	0.0	0.0
	(6.0)	(0.0)	(0.0)	(4.0)	(5.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.47	27.51	0.163		0.0	0.2	2.9		0.04
ARM C	5.81	37.51	0.155		0.0	0.2	2.7		0.03
ARM D	10.91	38.58	0.283		0.0	0.4	5.8		0.04
ARM E	1.50	14.44	0.104		0.0	0.1	1.7		0.08
ARM G	5.84	29.83	0.196		0.0	0.2	3.6		0.04

M20 Junction 11_2026 Do Min PM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	5.34	26.59	0.201		0.2	0.3	3.7		0.05
ARM C	6.94	36.47	0.190		0.2	0.2	3.5		0.03
ARM D	13.03	38.25	0.341		0.4	0.5	7.6		0.04
ARM E	1.79	13.53	0.132		0.1	0.2	2.2		0.09
ARM G	6.97	28.83	0.242		0.2	0.3	4.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	6.54	25.34	0.258		0.3	0.3	5.1		0.05
ARM C	8.50	35.06	0.242		0.2	0.3	4.7		0.04
ARM D	15.96	37.80	0.422		0.5	0.7	10.7		0.05
ARM E	2.19	12.30	0.178		0.2	0.2	3.2		0.10
ARM G	8.54	27.46	0.311		0.3	0.4	6.6		0.05

M20 Junction 11_2026 Do Min PM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	6.54	25.34	0.258		0.3	0.3	5.2		0.05
ARM C	8.50	35.05	0.243		0.3	0.3	4.8		0.04
ARM D	15.96	37.80	0.422		0.7	0.7	10.9		0.05
ARM E	2.19	12.29	0.178		0.2	0.2	3.2		0.10
ARM G	8.54	27.45	0.311		0.4	0.5	6.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	5.34	26.58	0.201		0.3	0.3	3.8		0.05
ARM C	6.94	36.46	0.190		0.3	0.2	3.6		0.03
ARM D	13.03	38.25	0.341		0.7	0.5	7.9		0.04
ARM E	1.79	13.52	0.132		0.2	0.2	2.4		0.09
ARM G	6.97	28.82	0.242		0.5	0.3	4.9		0.05

M20 Junction 11_2026 Do Min PM 01_001.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I	ARM A	4.47	27.49	0.163		0.3	0.2	3.0		0.04
I	ARM C	5.81	37.49	0.155		0.2	0.2	2.8		0.03
I	ARM D	10.91	38.58	0.283		0.5	0.4	6.0		0.04
I	ARM E	1.50	14.42	0.104		0.2	0.1	1.8		0.08
I	ARM G	5.84	29.82	0.196		0.3	0.2	3.7		0.04
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.3
17.45	0.3
18.00	0.3
18.15	0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.7 *
17.45	0.7 *
18.00	0.5 *
18.15	0.4

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

.QUEUE AT ARM G

M20 Junction 11_2026 Do Min PM 01_001.vao

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.5
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	490.9	I	327.3	I	23.7	I
I		I		I		I	0.05	I
I	C	I	637.6	I	425.1	I	22.1	I
I		I		I		I	0.03	I
I	D	I	1197.1	I	798.0	I	49.0	I
I		I		I		I	0.04	I
I	E	I	164.5	I	109.7	I	14.5	I
I		I		I		I	0.09	I
I	G	I	640.4	I	426.9	I	30.2	I
I		I		I		I	0.05	I
I	ALL	I	3130.5	I	2087.0	I	139.4	I
I		I		I		I	0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 11\
M20 Junction 11_2026 Do Min AM 01_001.vai"
(drive-on-the-left) at 10:01:52 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 11
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 11_2026 Do Min AM 01_001.vao

ARM A - B2068
 ARM B - M20 (eastbound exit)
 ARM C - M20 (westbound entry)
 ARM D - A20
 ARM E - Services
 ARM F - M20 (westbound exit)
 ARM G - M20 (eastbound entry)

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

ARM F IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I																

I	ARM A	I	3.50	I	8.00	I	20.00	I	48.00	I	172.00	I	21.0	I	0.495	I	32.733
I	ARM C	I	8.00	I	8.00	I	0.00	I	102.00	I	172.00	I	16.0	I	0.594	I	43.951
I	ARM D	I	8.00	I	8.00	I	0.00	I	30.00	I	172.00	I	22.0	I	0.570	I	42.180
I	ARM E	I	4.00	I	4.00	I	0.00	I	46.00	I	172.00	I	41.0	I	0.374	I	19.987
I	ARM G	I	6.50	I	6.50	I	0.00	I	84.00	I	172.00	I	9.0	I	0.536	I	36.440
I	ARM I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

M20 Junction 11_2026 Do Min AM 01_001.vao

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I
I	G	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 11 2026 AM Do Minimum

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.69	I	8.53	I	5.69	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.43	I	9.64	I	6.43	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	13.59	I	20.38	I	13.59	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	1.50	I	2.25	I	1.50	I
I	ARM G	I	15.00	I	45.00	I	75.00	I	3.84	I	5.76	I	3.84	I

DEMAND SET TITLE: M20 Junction 11 2026 AM Do Minimum

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I	ARM G	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.499	I	0.000	I	0.242	I	0.066	I	0.193	I	0.000	I
I		I		I	0.0	I	227.0	I	0.0	I	110.0	I	30.0	I	88.0	I	0.0	I
I		I		I	(0.0)	I	(4.0)	I	(0.0)	I	(13.0)	I	(5.0)	I	(5.0)	I	(0.0)	I

M20 Junction 11_2026 Do Min AM 01_001.vao

I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.169	I	0.000	I	0.000	I	0.772	I	0.058	I	0.000
I	I		I	87.0	I	0.0	I	0.0	I	397.0	I	30.0	I	0.0
I	I		I	(3.0)	I	(0.0)	I	(0.0)	I	(6.0)	I	(5.0)	I	(0.0)
I	I		I		I		I		I		I		I	
I	I	ARM D	I	0.220	I	0.289	I	0.000	I	0.000	I	0.028	I	0.464
I	I		I	239.0	I	314.0	I	0.0	I	0.0	I	30.0	I	504.0
I	I		I	(3.0)	I	(12.0)	I	(0.0)	I	(0.0)	I	(5.0)	I	(6.0)
I	I		I		I		I		I		I		I	
I	I	ARM E	I	0.250	I	0.250	I	0.000	I	0.250	I	0.000	I	0.250
I	I		I	30.0	I	30.0	I	0.0	I	30.0	I	0.0	I	30.0
I	I		I	(5.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I	(5.0)
I	I		I		I		I		I		I		I	
I	I	ARM G	I	0.195	I	0.000	I	0.000	I	0.707	I	0.098	I	0.000
I	I		I	60.0	I	0.0	I	0.0	I	217.0	I	30.0	I	0.0
I	I		I	(7.0)	I	(0.0)	I	(0.0)	I	(14.0)	I	(5.0)	I	(0.0)
I	I		I		I		I		I		I		I	

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	5.69	26.74	0.213		0.0	0.3	4.0		0.05
I	ARM C	6.43	37.76	0.170		0.0	0.2	3.0		0.03
I	ARM D	13.59	37.57	0.362		0.0	0.6	8.3		0.04
I	ARM E	1.50	13.20	0.114		0.0	0.1	1.9		0.09
I	ARM G	3.84	27.93	0.137		0.0	0.2	2.3		0.04

M20 Junction 11_2026 Do Min AM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	6.79	25.95	0.262		0.3	0.4	5.2		0.05
ARM C	7.67	36.99	0.207		0.2	0.3	3.9		0.03
ARM D	16.22	37.21	0.436		0.6	0.8	11.3		0.05
ARM E	1.79	12.05	0.149		0.1	0.2	2.5		0.10
ARM G	4.58	27.01	0.170		0.2	0.2	3.0		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	8.32	24.87	0.334		0.4	0.5	7.4		0.06
ARM C	9.40	35.94	0.261		0.3	0.4	5.2		0.04
ARM D	19.87	36.71	0.541		0.8	1.2	17.1		0.06
ARM E	2.19	10.49	0.209		0.2	0.3	3.8		0.12
ARM G	5.61	25.76	0.218		0.2	0.3	4.1		0.05

M20 Junction 11_2026 Do Min AM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	8.32	24.86	0.335		0.5	0.5	7.5		0.06
ARM C	9.40	35.93	0.261		0.4	0.4	5.3		0.04
ARM D	19.87	36.71	0.541		1.2	1.2	17.6		0.06
ARM E	2.19	10.48	0.209		0.3	0.3	3.9		0.12
ARM G	5.61	25.75	0.218		0.3	0.3	4.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	6.79	25.93	0.262		0.5	0.4	5.4		0.05
ARM C	7.67	36.98	0.207		0.4	0.3	4.0		0.03
ARM D	16.22	37.20	0.436		1.2	0.8	11.9		0.05
ARM E	1.79	12.04	0.149		0.3	0.2	2.7		0.10
ARM G	4.58	27.00	0.170		0.3	0.2	3.1		0.04

M20 Junction 11_2026 Do Min AM 01_001.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I										
I	ARM A	5.69	26.72	0.213		0.4	0.3	4.1		0.05
I										
I	ARM C	6.43	37.75	0.170		0.3	0.2	3.1		0.03
I										
I	ARM D	13.59	37.56	0.362		0.8	0.6	8.7		0.04
I										
I	ARM E	1.50	13.18	0.114		0.2	0.1	2.0		0.09
I										
I	ARM G	3.84	27.91	0.137		0.2	0.2	2.4		0.04
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.5	
08.45	0.5	*
09.00	0.4	
09.15	0.3	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.6 *
08.15	0.8 *
08.30	1.2 *
08.45	1.2 *
09.00	0.8 *
09.15	0.6 *

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.1

.QUEUE AT ARM G

M20 Junction 11_2026 Do Min AM 01_001.vao

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	623.9	I	415.9	I	33.6	I
I		I		I		I	0.05	I
I	C	I	704.8	I	469.9	I	24.5	I
I		I		I		I	0.03	I
I	D	I	1490.5	I	993.7	I	74.9	I
I		I		I		I	0.05	I
I	E	I	164.5	I	109.7	I	16.9	I
I		I		I		I	0.10	I
I	G	I	421.0	I	280.6	I	19.2	I
I		I		I		I	0.05	I
I	ALL	I	3404.7	I	2269.8	I	169.1	I
I		I		I		I	0.05	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 J13 northern rb_2026 Do Min PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Northern Rb\M20 J13 northern rb_2026 Do Min PM 01_001.vai"
(drive-on-the-left) at 15:18:06 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 northern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Castle Hill
 ARM B - M20 eastbound exit
 ARM C - A20
 ARM D - M20 Eastbound entry
 ARM E - Channel Tunnel access

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	3.50	I	8.50	I	26.00	I	23.00	I	40.00	I	39.0	I	0.684	I	32.478
I	ARM C	I	3.50	I	4.50	I	4.50	I	22.00	I	40.00	I	23.0	I	0.565	I	21.219
I	ARM D	I	10.00	I	10.00	I	0.00	I	10.00	I	40.00	I	51.0	I	0.797	I	44.351
I	ARM E	I	3.00	I	3.00	I	0.00	I	8.00	I	40.00	I	52.0	I	0.412	I	12.882

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE (%)	I

I A	I	100		I
I B	I	100		I

M20 J13 northern rb_2026 Do Min PM 01_001.vao

I C I 100 I
I D I 100 I
I E I 100 I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 northern Rb 2026 Do Min PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IF FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.23	I	13.84	I	9.23	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	12.55	I	18.83	I	12.55	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

DEMAND SET TITLE: M20 Junction 13 northern Rb 2026 Do Min PM

I	TURNING PROPORTIONS										I			
I	TURNING COUNTS (VEH/HR)										I			
I	(PERCENTAGE OF H.V.S)										I			
I	-----										I			
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	16.45 - 18.15	I		I		I		I		I		I		I
I		I	ARM A	I	0.000	I	0.000	I	0.000	I	0.000	I	0.000	I
I		I		I	0.0	I	0.0	I	0.0	I	0.0	I	0.0	I
I		I	(	I	0.0)	I	(	I	0.0)	I	(	I	0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.000	I	1.000	I	0.000	I	0.000	I	0.000	I
I		I		I	0.0	I	738.0	I	0.0	I	0.0	I	0.0	I
I		I	(	I	0.0)	I	(	I	1.0)	I	(	I	0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM D	I	0.000	I	0.000	I	1.000	I	0.000	I	0.000	I
I		I		I	0.0	I	0.0	I	1004.0	I	0.0	I	0.0	I
I		I	(	I	0.0)	I	(	I	0.0)	I	(	I	0.0)	I
I		I		I		I		I		I		I		I

M20 J13 northern rb_2026 Do Min PM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.000	I	0.000	I	0.000	I
I	I		I	0.0	I	0.0	I	0.0	I	0.0	I	0.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	0.00	17.49	0.000		0.0	0.0	0.0		0.00
ARM C	9.23	21.01	0.439		0.0	0.8	11.2		0.08
ARM D	12.55	36.60	0.343		0.0	0.5	7.7		0.04
ARM E	0.00	3.87	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	0.00	14.54	0.000		0.0	0.0	0.0		0.00
ARM C	11.02	21.01	0.524		0.8	1.1	15.8		0.10
ARM D	14.99	35.15	0.426		0.5	0.7	10.9		0.05

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M20 J13 northern rb_2026 Do Min PM 01_001.vao										
I	ARM E	0.00	0.00	***		0.0	0.0	0.0		0.00
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.45-18.00									
I	ARM A	0.00	14.46	0.000		0.0	0.0	0.0		0.00
I	ARM C	11.02	21.01	0.524		1.8	1.1	17.4		0.10
I	ARM D	14.99	35.10	0.427		1.2	0.7	11.5		0.05
I	ARM E	0.00	2.04	0.000		0.0	0.0	0.0		0.00
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I	ARM A	0.00	17.41	0.000		0.0	0.0	0.0		0.00
I	ARM C	9.23	21.01	0.439		1.1	0.8	12.2		0.09
I	ARM D	12.55	36.54	0.343		0.7	0.5	8.0		0.04
I	ARM E	0.00	3.82	0.000		0.0	0.0	0.0		0.00

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.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.1	*
17.30	1.8	**
17.45	1.8	**
18.00	1.1	*
18.15	0.8	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.2	*

17.45	1.2	*
18.00	0.7	*
18.15	0.5	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	0.0	I	0.0	I	0.0	I
I	C	I	1012.0	I	674.6	I	108.2	I
I	D	I	1376.7	I	917.8	I	74.3	I
I	E	I	0.0	I	0.0	I	0.0	I
I	ALL	I	2388.6	I	1592.4	I	182.5	I

WARNING The entry capacity of at least one arm has become zero during the period modelled

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 J13 northern rb_2026 Do Min AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Northern Rb\M20 J13 northern rb_2026 Do Min AM 01_001.vai"
(drive-on-the-left) at 10:15:35 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 northern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Castle Hill
 ARM B - M20 eastbound exit
 ARM C - A20
 ARM D - M20 Eastbound entry
 ARM E - Channel Tunnel access

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	3.50	I	8.50	I	26.00	I	23.00	I	40.00	I	39.0	I	0.684	I	32.478
	I																	
I	ARM	C	I	3.50	I	4.50	I	4.50	I	22.00	I	40.00	I	23.0	I	0.565	I	21.219
	I																	
I	ARM	D	I	10.00	I	10.00	I	0.00	I	10.00	I	40.00	I	51.0	I	0.797	I	44.351
	I																	
I	ARM	E	I	3.00	I	3.00	I	0.00	I	8.00	I	40.00	I	52.0	I	0.412	I	12.882
	I																	

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE (%)	I

I A	I	100		I
I B	I	100		I

M20 J13 northern rb_2026 Do Min AM 01_001.vao

I C I 100 I
I D I 100 I
I E I 100 I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 northern Rb 2026 Do Min AM

I	I	I	NUMBER OF MINUTES FROM START WHEN	I	I	RATE OF FLOW (VEH/MIN)	I	I	I	I
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I	BEFORE I AT TOP I AFTER I	I	I	I	I
I	I	I	TO RISE I IS REACHED IFALLING I	I	I	PEAK I OF PEAK I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	I	0.00 I 0.00 I 0.00	I	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	I	6.24 I 9.36 I 6.24	I	I	I	I
I	ARM D	I	15.00 I 45.00 I 75.00	I	I	14.45 I 21.67 I 14.45	I	I	I	I
I	ARM E	I	15.00 I 45.00 I 75.00	I	I	0.00 I 0.00 I 0.00	I	I	I	I

DEMAND SET TITLE: M20 Junction 13 northern Rb 2026 Do Min AM

I	I	I	TURNING PROPORTIONS					I	
I	I	I	TURNING COUNTS (VEH/HR)					I	
I	I	I	(PERCENTAGE OF H.V.S)					I	
I	I	I	-----					I	
I	TIME	I	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E	I
I	07.45 - 09.15	I							I
I		I	ARM A	0.000	0.000	0.000	0.000	0.000	I
I		I		0.0	0.0	0.0	0.0	0.0	I
I		I	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	I
I		I							I
I		I	ARM C	0.000	1.000	0.000	0.000	0.000	I
I		I		0.0	499.0	0.0	0.0	0.0	I
I		I	(0.0)	(20.0)	(0.0)	(0.0)	(0.0)	(0.0)	I
I		I							I
I		I	ARM D	0.000	0.000	1.000	0.000	0.000	I
I		I		0.0	0.0	1156.0	0.0	0.0	I
I		I	(0.0)	(0.0)	(20.0)	(0.0)	(0.0)	(0.0)	I
I		I							I

M20 J13 northern rb_2026 Do Min AM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.000	I	0.000	I	0.000	I
I	I		I	0.0	I	0.0	I	0.0	I	0.0	I	0.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	0.00	15.57	0.000		0.0	0.0	0.0		0.00
ARM C	6.24	17.68	0.353		0.0	0.5	7.8		0.09
ARM D	14.45	32.02	0.451		0.0	0.8	11.9		0.06
ARM E	0.00	2.71	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	0.00	12.23	0.000		0.0	0.0	0.0		0.00
ARM C	7.45	17.68	0.421		0.5	0.7	10.5		0.10
ARM D	17.25	31.03	0.556		0.8	1.2	18.1		0.07

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M20 J13 northern rb_2026 Do Min AM 01_001.vao										
I	ARM E	0.00	0.00	***		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM A	0.00	12.12	0.000		0.0	0.0	0.0		0.00
I										
I	ARM C	7.45	17.68	0.421		1.1	0.7	11.4		0.10
I										
I	ARM D	17.25	31.01	0.556		2.4	1.3	19.7		0.07
I										
I	ARM E	0.00	0.63	0.000		0.0	0.0	0.0		0.00
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I										
I	ARM A	0.00	15.46	0.000		0.0	0.0	0.0		0.00
I										
I	ARM C	6.24	17.68	0.353		0.7	0.5	8.4		0.09
I										
I	ARM D	14.45	31.98	0.452		1.3	0.8	12.7		0.06
I										
I	ARM E	0.00	2.65	0.000		0.0	0.0	0.0		0.00

I
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.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.0 *
08.45	1.1 *
09.00	0.7 *
09.15	0.5 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.2 *
08.30	2.4 **

08.45	2.4	**
09.00	1.3	*
09.15	0.8	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	0.0	I	0.0	I	0.0	I
I	C	I	684.2	I	456.2	I	69.2	I
I	D	I	1585.1	I	1056.7	I	132.9	I
I	E	I	0.0	I	0.0	I	0.0	I
I	ALL	I	2269.4	I	1512.9	I	202.1	I

WARNING The entry capacity of at least one arm has become zero during the period modelled

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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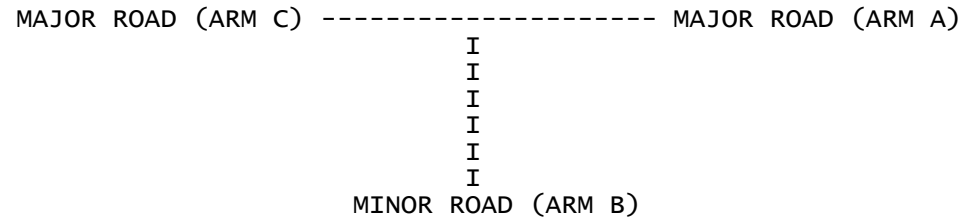
Run with file:-
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Lydd Rd_Romney Rd\
Lydd Rd_Romney Rd 2026 Do Min 01_001.vpi"
(drive-on-the-left) at 12:58:14 on Tuesday, 2 November 2010

.RUN INFORMATION

RUN TITLE	: A259 Lydd Rd / B2075 Romney Rd
LOCATION	: Lydd / New Romney
DATE	: 17/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS A259 Lydd Rd (east)
 ARM B IS B2075 Romney Rd
 ARM C IS A259 Lydd Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 80.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 80.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 80.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	8.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.50 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	620.29	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)				I																
			I	FLOW STARTS	I	TOP OF PEAK		I	FLOW STOPS	I	BEFORE		I	AT TOP	I	AFTER												
																	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	8.68	I	13.01	I	8.68	I													
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.24	I	7.86	I	5.24	I													
I	ARM	C	I	15.00	I	45.00	I	75.00	I	6.59	I	9.88	I	6.59	I													

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Min AM

		I	TURNING PROPORTIONS										I	
		I	TURNING COUNTS										I	
		I	(PERCENTAGE OF H.V.S)										I	

	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	

I	07.45 - 08.00	I		I			I			I			I	
I		I	ARM	A	I	0.000	I	0.386	I	0.614	I		I	
I		I			I	0.0	I	268.0	I	426.0	I		I	
I		I			I	(0.0)	I	(2.0)	I	(2.0)	I		I	
I		I			I		I		I		I		I	
I		I	ARM	B	I	0.525	I	0.000	I	0.475	I		I	
I		I			I	220.0	I	0.0	I	199.0	I		I	
I		I			I	(2.0)	I	(0.0)	I	(8.0)	I		I	
I		I			I		I		I		I		I	
I		I	ARM	C	I	0.558	I	0.442	I	0.000	I		I	
I		I			I	294.0	I	233.0	I	0.0	I		I	
I		I			I	(1.0)	I	(8.0)	I	(0.0)	I		I	
I		I			I		I		I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A259 Lydd Rd / B2075 Romney Rd 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo									
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00								
I	B-C	2.50	7.69	0.325	0.00	0.47	6.7		0.19
I	B-A	2.76	5.93	0.465	0.00	0.84	11.5		0.30
I	C-AB	2.92	7.77	0.376	0.00	0.69	10.1		0.20
I	A-B	3.36							
I	A-C	5.35							
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Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.65	3.35	1.091		0.89	9.59	88.6		2.25
B-A	4.04	3.74	1.078		1.73	10.11	96.9		2.22
C-AB	4.28	6.93	0.617		1.09	2.21	32.6		0.37
A-B	4.92								
A-C	7.82								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.65	3.34	1.094		9.59	15.58	189.8		4.27
B-A	4.04	3.66	1.102		10.11	16.95	204.0		4.17
C-AB	4.28	6.93	0.617		2.21	2.29	35.3		0.39
A-B	4.92								
A-C	7.82								

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	2.98	3.88	0.769		15.58	5.42	158.9		3.09
B-A	3.30	4.27	0.772		16.95	5.64	171.4		3.03
C-AB	3.49	7.42	0.471		2.29	1.19	18.3		0.27
A-B	4.02								
A-C	6.38								

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	2.50	7.28	0.343		5.42	0.53	11.7		0.24
B-A	2.76	5.77	0.479		5.64	0.96	20.5		0.41
C-AB	2.92	7.77	0.376		1.19	0.73	11.2		0.21
A-B	3.36								
A-C	5.35								

I
I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.9	*
08.30	9.6	*****
08.45	15.6	*****
09.00	5.4	*****
09.15	0.5	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.7	**
08.30	10.1	*****
08.45	16.9	*****
09.00	5.6	*****
09.15	1.0	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.2	**
08.45	2.3	**
09.00	1.2	*
09.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

		I	I	I	I	I	I	I	I	I	I
		(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	273.9	I	182.6	I	468.1	I	1.71	I	468.1
I	B-A	I	302.8	I	201.9	I	527.3	I	1.74	I	527.4
I	C-AB	I	320.7	I	213.8	I	123.9	I	0.39	I	123.9
I	A-B	I	368.9	I	245.9	I		I		I	
I	A-C	I	586.4	I	390.9	I		I		I	
I	ALL	I	2257.3	I	1504.9	I	1119.3	I	0.50	I	1119.4

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	I
I		0.00		0.00		0.00		0.00		0.00		I

* Due to the presence of a flare, data is not available

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I

I 620.29 0.22 0.22 I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.05	I	10.58	I	7.05	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.46	I	9.69	I	6.46	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.27	I	12.41	I	8.27	I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Min PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.402	I	0.598	I		I	
I		I		I	0.0	I	227.0	I	337.0	I		I	
I		I	(0.0)	I	(2.0)	I	(1.0)	I		I		I	

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

I	I	I	I	I	I	I
I	I	ARM	B	I	0.528	I 0.000 I 0.472 I
I	I			I	273.0	I 0.0 I 244.0 I
I	I			I	(1.0)	I (0.0) I (4.0) I
I	I			I		I
I	I	ARM	C	I	0.755	I 0.245 I 0.000 I
I	I			I	500.0	I 162.0 I 0.0 I
I	I			I	(0.0)	I (2.0) I (0.0) I
I	I			I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A259 Lydd Rd / B2075 Romney Rd 2026 Do Min PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	3.06	7.71	0.397		0.00	0.64	9.0		0.21
B-A	3.43	6.15	0.557		0.00	1.19	16.0		0.35
C-AB	2.03	8.59	0.237		0.00	0.36	5.3		0.15
A-B	2.85								
A-C	4.23								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.00-17.15							
I B-C	3.66	5.63	0.649	0.64	1.70	22.6	0.47
I B-A	4.09	5.13	0.798	1.19	3.16	39.1	0.78
I C-AB	2.43	8.29	0.293	0.36	0.51	7.6	0.17
I A-B	3.40						
I A-C	5.05						
I							
I							

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I B-C	4.48	3.63	1.234		1.70	16.65	144.7		3.15
I B-A	5.01	4.12	1.215		3.16	18.32	166.3		3.20
I C-AB	2.97	7.88	0.377		0.51	0.84	12.6		0.20
I A-B	4.17								
I A-C	6.18								
I									
I									

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TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo PEDESTRIAN START END DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)		FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING		
			(RFC)	(PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)		
17.30-17.45						
B-C	4.48	3.67	1.220	16.65 29.16 344.0		6.57
B-A	5.01	4.09	1.224	18.32 32.44 381.2		6.49
C-AB	2.97	7.88	0.377	0.84 0.85 13.1		0.20
A-B	4.17					
A-C	6.18					

TABLE 1. SUMMARY OF TRAFFIC DATA FOR THE STUDY										
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE	(MIN)
17.45-18.00										
B-C	3.66	4.07	0.897		29.16	24.91	405.5			6.78
B-A	4.09	4.55	0.899		32.44	27.59	450.2			6.71
C-AB	2.43	8.29	0.293		0.85	0.54	8.2			0.17
A-B	3.40									
A-C	5.05									

Lydd Rd_Romney Rd 2026 Do Min 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	3.06	4.47	0.685		24.91	6.38	234.6		3.87
B-A	3.43	4.98	0.687		27.59	6.84	258.2		3.79
C-AB	2.03	8.59	0.237		0.54	0.37	5.6		0.15
A-B	2.85								
A-C	4.23								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	1.7	**
17.30	16.7	*****
17.45	29.2	*****
18.00	24.9	*****
18.15	6.4	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	3.2	***
17.30	18.3	*****

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17.45      32.4      *****
18.00      27.6      *****
18.15       6.8      *****

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TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	0.8	*
17.45	0.9	*
18.00	0.5	*
18.15	0.4	

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I					
I		I			I	* DELAY *	I	* DELAY *	I					
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I			
I	B-C	I	335.8	I	223.9	I	1160.5	I	3.46	I	1165.0	I	3.47	I
I	B-A	I	375.8	I	250.5	I	1311.2	I	3.49	I	1315.9	I	3.50	I
I	C-AB	I	223.0	I	148.7	I	52.3	I	0.23	I	52.3	I	0.23	I
I	A-B	I	312.4	I	208.3	I		I		I		I		I
I	A-C	I	463.9	I	309.2	I		I		I		I		I
I	ALL	I	2399.1	I	1599.4	I	2524.0	I	1.05	I	2533.2	I	1.06	I

*****END OF RUN*****

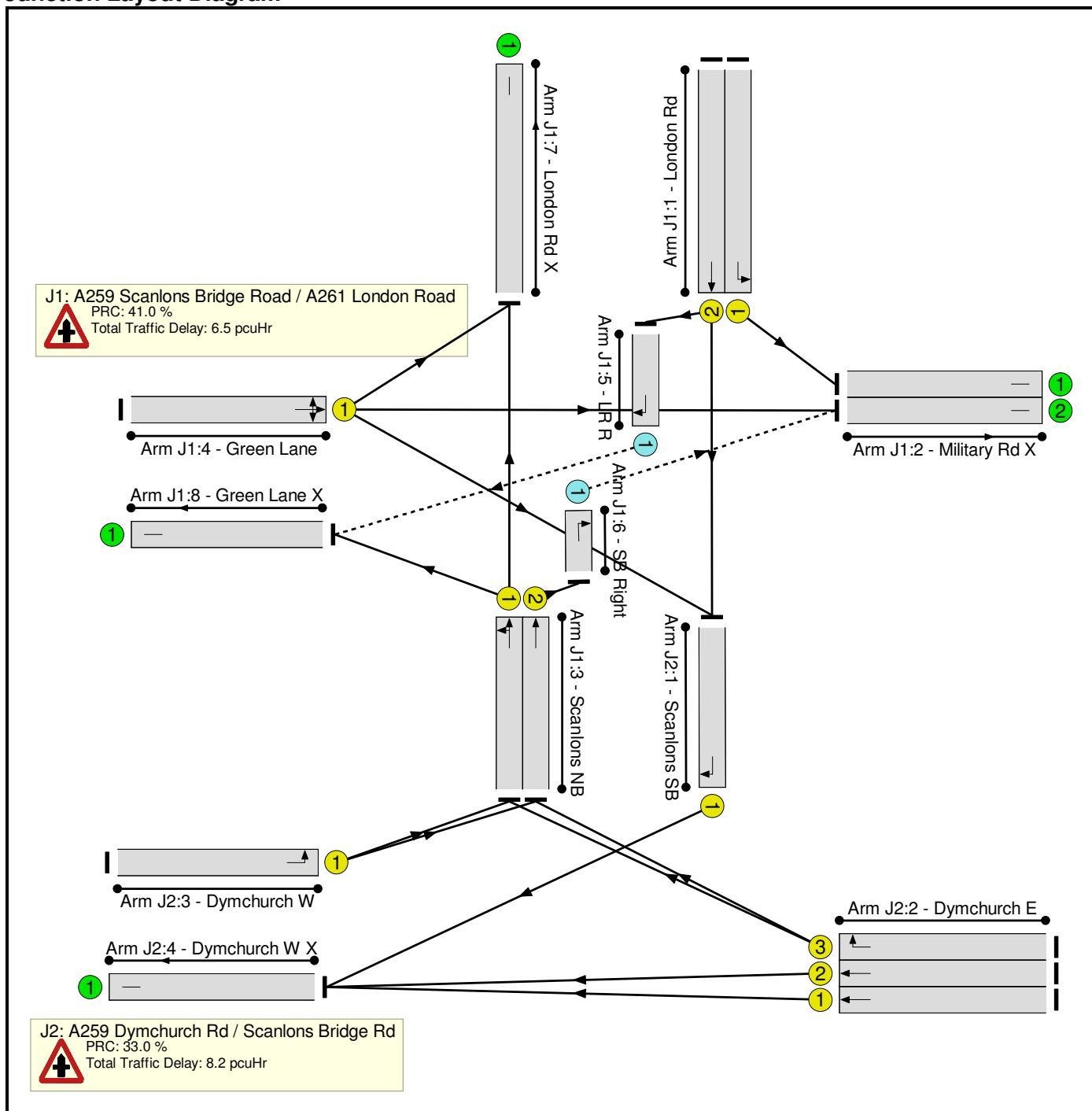
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	Hythe One Way 01_002.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base PM' (FG1: '2010 Base PM', Plan 1: 'Network Control Plan 1')

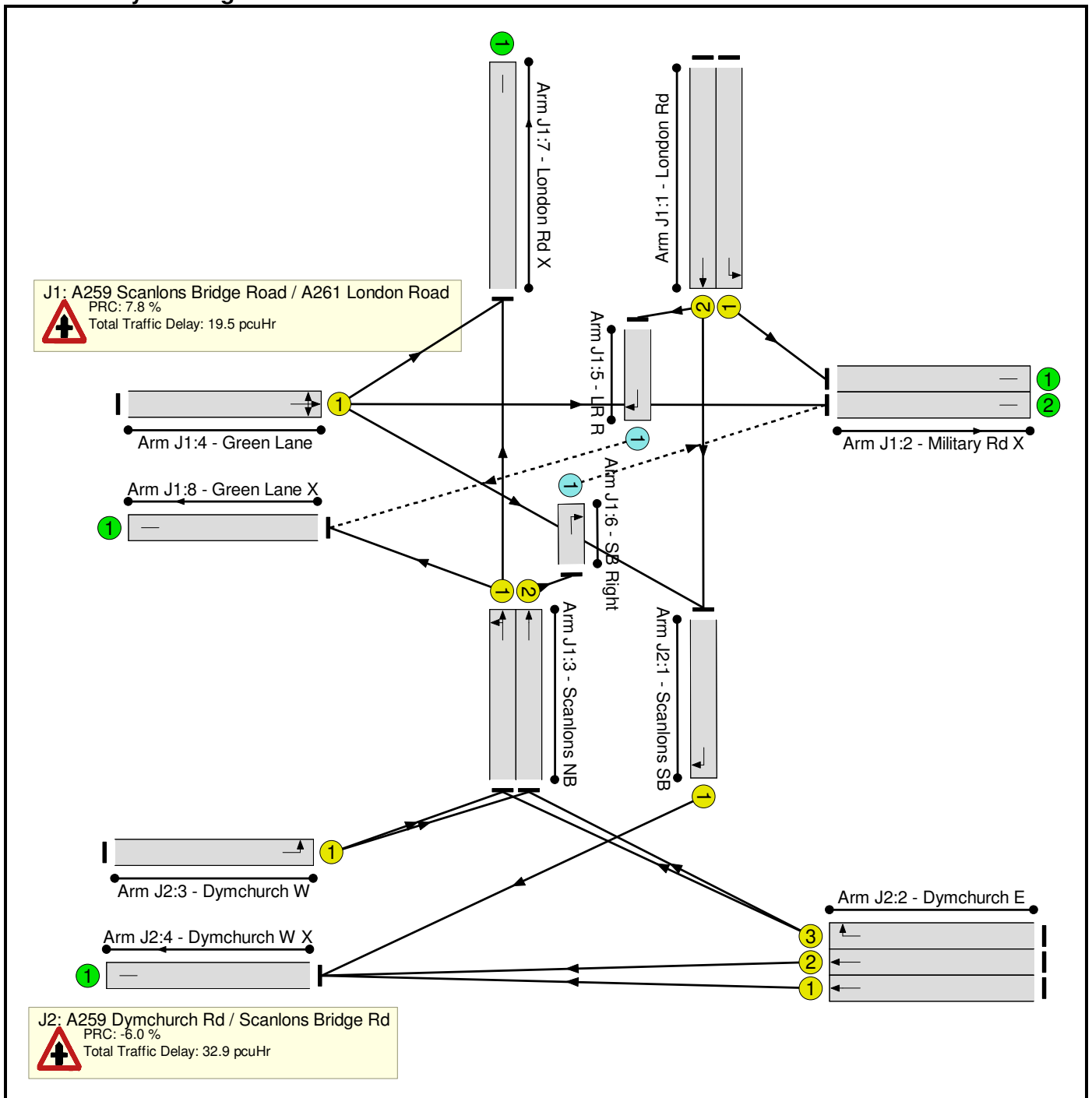
Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalised Lanes (%):	41.0	Total Delay for Signalised Lanes (pcuHr):	5.77		
C1	Stream: 2 PRC for Signalised Lanes (%):	33.0	Total Delay for Signalised Lanes (pcuHr):	8.21		
	PRC Over All Lanes (%):	33.0	Total Delay Over All Lanes (pcuHr):	14.73	Cycle Time (s):	60

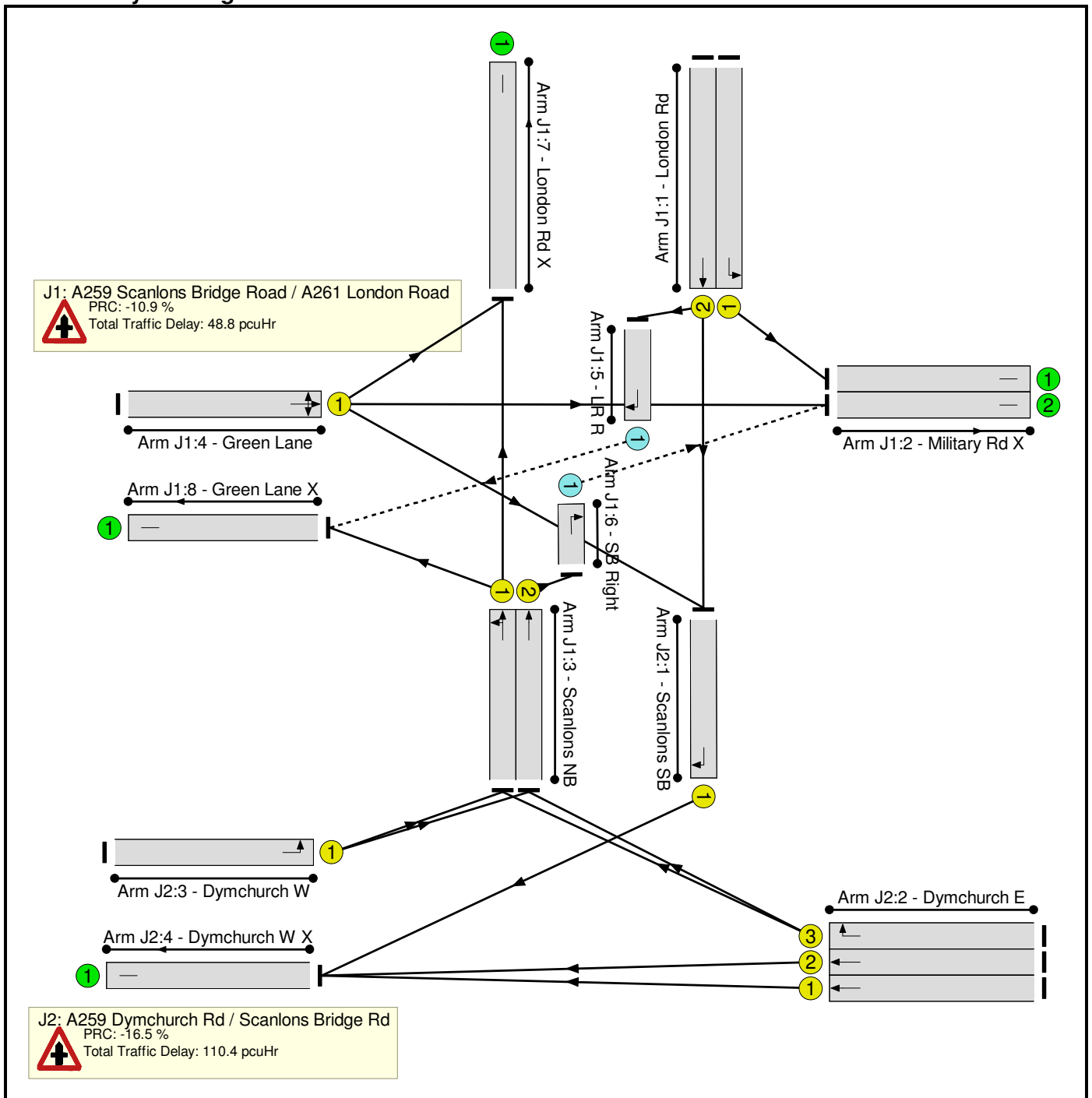
Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalised Lanes (%):	13.0	Total Delay for Signalised Lanes (pcuHr):	14.12	
C1	Stream: 2 PRC for Signalised Lanes (%):	-6.0	Total Delay for Signalised Lanes (pcuHr):	32.89	
	PRC Over All Lanes (%):	-6.0	Total Delay Over All Lanes (pcuHr):	52.35	Cycle Time (s): 119

Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalled Lanes (%)	2.5	Total Delay for Signalled Lanes (pcuHr)	24.43	
C1	Stream: 2 PRC for Signalled Lanes (%)	-16.5	Total Delay for Signalled Lanes (pcuHr)	110.41	
	PRC Over All Lanes (%)	-16.5	Total Delay Over All Lanes (pcuHr)	159.17	Cycle Time (s): 240

Harbour Street_The Tram Road 2026 Do Min 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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TRL SOFTWARE BUREAU
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IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Harbour Street_Tram Road\
Harbour Street_The Tram Road 2026 Do Min 01_001.vpi"
(drive-on-the-left) at 15:39:51 on Tuesday, 9 November 2010

.RUN INFORMATION

RUN TITLE	: Harbour Street / Tram Road
LOCATION	: Folkestone
DATE	: 24/08/10
CLIENT	: Shepway DC
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Harbour Street_The Tram Road 2026 Do Min 01_001.vpo

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS Harbour Street (north)

ARM B IS The Tram Road

ARM C IS Harbour Street (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 40.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 3.50 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For Slope For Opposing	Slope For Opposing	I	
I	STREAM B-C	STREAM A-C	STREAM A-B	I

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I	721.27	0.28	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	566.97	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	631.87	0.24	0.24	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Harbour Street / Tram Road 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TOP OF PEAK	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	AFTER	I
I		I	TO RISE	I	PEAK	I

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I	ARM	A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	13.25	I	19.88	I	13.25	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	2.56	I	3.84	I	2.56	I

Demand set: Harbour Street / Tram Road 2026 Do Min AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I		I	A
I	07.45 - 08.00	I		I	
I		I	ARM	I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	
I		I	ARM	I	0.532
I		I		I	564.0
I		I	(	I	1.0)
I		I		I	
I		I	ARM	I	1.000
I		I		I	205.0
I		I	(	I	8.0)
I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Harbour Street / Tram Road 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-C	6.22	9.44	0.659		0.00	1.83	24.5		0.29
I	B-A	7.08	8.90	0.795		0.00	3.34	41.6		0.45

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I										
I	C-A	2.57								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.00-08.15									
I										
I	B-C	7.43	8.89	0.836		1.83	4.18	52.9		0.57
I										
I	B-A	8.45	8.82	0.958		3.34	8.91	101.1		1.01
I										
I	C-A	3.07								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	9.10	8.84	1.030		14.35	21.22	268.5		2.33
B-A	10.35	8.70	1.190		35.09	60.21	715.1		5.70
C-A	3.76								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	7.43	8.84	0.841		21.22	7.39	204.4		1.79
B-A	8.45	8.82	0.958		60.21	56.88	878.1		6.74
C-A	3.07								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	6.22	8.84	0.704		7.39	2.58	48.5		0.48
B-A	7.08	8.90	0.795		56.88	31.77	664.9		5.13
C-A	2.57								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								

I
I A-C 0.00
I
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QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.8	**
08.15	4.2	****
08.30	14.4	*****
08.45	21.2	*****
09.00	7.4	*****
09.15	2.6	***

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	3.3	***
08.15	8.9	*****
08.30	35.1	*****
08.45	60.2	*****
09.00	56.9	*****
09.15	31.8	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I		I		I		I	
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I		I		I		I		I		I	
I		I		I		I		I		I	
I		I		I							

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.28	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	566.97	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I

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I	631.87	0.24	0.24	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

.Demand set: Harbour Street / Tram Road 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.13	I	13.69	I	9.13	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	3.99	I	5.98	I	3.99	I

.Demand set: Harbour Street / Tram Road 2026 Do Min PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.000	I	0.000	I	0.000	I	I
I		I		I	0.0	I	0.0	I	0.0	I	0.0	I	I

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I	I	I	(0.0)	I	(0.0)	I	(0.0)	I		
I	I	I	I	I	I	I	I	I		
I	I	I	ARM B	I	0.589	I	0.000	I	0.411	I
I	I	I	I	I	430.0	I	0.0	I	300.0	I
I	I	I	I	I	(0.0)	I	(0.0)	I	(1.0)	I
I	I	I	I	I	I	I	I	I	I	I
I	I	I	ARM C	I	1.000	I	0.000	I	0.000	I
I	I	I	I	I	319.0	I	0.0	I	0.0	I
I	I	I	I	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I	I	I	I	I	I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Harbour Street / Tram Road 2026 Do Min PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	3.76	10.07	0.374		0.00	0.59	8.4		0.16
B-A	5.40	8.79	0.614		0.00	1.52	20.5		0.28
C-A	4.00								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

Harbour Street_The Tram Road 2026 Do Min 01_001.vpo										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	B-C	4.49	9.65	0.466		0.59	0.85	12.2		0.19
I	B-A	6.44	8.66	0.744		1.52	2.64	35.6		0.42
I	C-A	4.78								
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	0.00								
I										
I										

.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I	B-C	5.51	9.07	0.607		0.85	1.48	20.6		0.27
I	B-A	7.89	8.48	0.931		2.64	7.25	83.9		0.90
I	C-A	5.85								
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	0.00								
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.30-17.45

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.45-18.00

I

I

I

I

Harbour Street_The Tram Road 2026 Do Min 01_001.vpo

I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I										
I	B-C	3.76	10.00	0.376		0.92	0.61	9.6		0.16
I										
I	B-A	5.40	8.79	0.614		3.24	1.67	27.3		0.31
I										
I	C-A	4.00								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
.										
--										
.										
	QUEUE FOR STREAM		B-C							
	TIME		NO. OF							
	SEGMENT		VEHICLES							
	ENDING		IN QUEUE							
	17.00		0.6	*						
	17.15		0.9	*						
	17.30		1.5	*						

Harbour Street_The Tram Road 2026 Do Min 01_001.vpo

17.45	1.5	**
18.00	0.9	*
18.15	0.6	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.5	**
17.15	2.6	***
17.30	7.3	*****
17.45	8.8	*****
18.00	3.2	***
18.15	1.7	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I		I			I			I	(MIN/VEH)
I	B-C	I	412.9	I 275.3	I	88.2	I 0.21	I	88.3
I	B-A	I	591.9	I 394.6	I	351.7	I 0.59	I	351.8
I	C-A	I	439.1	I 292.7	I		I	I	
I	C-B	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0
I	A-B	I	0.0	I 0.0	I		I	I	
I	A-C	I	0.0	I 0.0	I		I	I	
I	ALL	I	1443.9	I 962.6	I	439.9	I 0.30	I	440.1
									0.30

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

Harbour Street_The Tram Road 2026 Do Min 01_001.vpo
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.
*****END OF RUN*****

foresters way_grace hill_2026 Do Min PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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RG40 3GA, UK	

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Foresters Way_Grace Hill\
foresters way_grace hill_2026 Do Min PM 01_001.vai"
(drive-on-the-left) at 12:44:55 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: Foresters way / Grace Hill
LOCATION: Folkestone
DATE: 18/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

foresters way_grace hill_2026 Do Min PM 01_001.vao

ARM A - Foord Rd
 ARM B - Grace Hill
 ARM C - Foresters way (westbound)
 ARM D - Foresters way (eastbound)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM C IS JUNCTION EXIT ONLY

I ARM (PCU/MIN)	I V (M)	I E (M)	I L (M)	I R (M)	I D (M)	I PHI (DEG)	I SLOPE	I INTERCEPT

I ARM B I	I 3.50	I 6.00	I 8.00	I 21.00	I 35.50	I 32.0	I 0.595	I 23.877
I ARM D I	I 3.50	I 3.50	I 0.00	I 22.50	I 35.50	I 59.0	I 0.472	I 15.992

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I FLOW	I SCALE(%)
I A	I 100	I
I B	I 100	I
I C	I 100	I
I D	I 100	I

foresters way_grace hill_2026 Do Min PM 01_001.vao

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Min PM

I I I	I I I	NUMBER OF MINUTES FROM START WHEN			I RATE OF FLOW (VEH/MIN) I		
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
		I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I ARM B	I	15.00	I 45.00	I 75.00	I 7.21	I 10.82	I 7.21
I ARM D	I	15.00	I 45.00	I 75.00	I 12.40	I 18.60	I 12.40

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Min PM

		TURNING PROPORTIONS								
		TURNING COUNTS (VEH/HR)								
		(PERCENTAGE OF H.V.S)								
	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
	16.45 - 18.15									
		ARM B	0.276	0.000	0.724	0.000				
			159.0	0.0	418.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)				
		ARM D	0.940	0.000	0.060	0.000				
			932.0	0.0	60.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)				

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING

foresters way_grace hill_2026 Do Min PM 01_001.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 16.45-17.00							
I ARM B	7.21	23.44	0.308	0.0	0.4	6.5	0.06
I ARM D	12.40	15.06	0.823	0.0	4.1	52.4	0.32
I							
I							
I							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.00-17.15									
I ARM B	8.61	23.37	0.369		0.4	0.6	8.5		0.07
I ARM D	14.81	14.87	0.995		4.1	14.6	155.2		0.88
I									
I									
I									

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I ARM B	10.55	23.35	0.452		0.6	0.8	12.0		0.08
I ARM D	18.13	14.62	1.240		14.6	68.1	622.4		3.04
I									

foresters way_grace hill_2026 Do Min PM 01_001.vao

I
I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM B	10.55	23.35	0.452		0.8	0.8	12.3		0.08
I										
I	ARM D	18.13	14.62	1.240		68.1	120.9	1417.1		6.57
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM B	8.61	23.34	0.369		0.8	0.6	9.0		0.07
I										
I	ARM D	14.81	14.87	0.996		120.9	121.2	1815.2		8.20
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

```

I          (VEH/MIN) (VEH/MIN) foresters way_grace hill_2026 Do Min PM 01_001.vao
I          CAPACITY      FLOW      QUEUE  QUEUE      (VEH.MIN/      (VEH.MIN/      PER ARRIVING
I          (RFC)      (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 18.00-18.15
I
I ARM B      7.21      23.34      0.309      0.6      0.4      6.9      0.06
I
I ARM D      12.40      15.05      0.824      121.2      83.2      1532.7      6.87
I
I
I

```

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	0.8 *
17.45	0.8 *
18.00	0.6 *
18.15	0.4

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	4.1 *****
17.15	14.6 *****
17.30	68.1 *****
17.45	120.9 *****
18.00	121.2 *****
18.15	83.2 *****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B	I	791.2	I	55.1	I	55.1	I
I	D	I	1360.2	I	5595.0	I	5824.9	I
I	ALL	I	2151.4	I	5650.1	I	5880.1	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

foresters way_grace hill_2026 Do Min AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Foresters Way_Grace Hill\
foresters way_grace hill_2026 Do Min AM 01_001.vai"
(drive-on-the-left) at 12:43:39 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: Foresters way / Grace Hill
LOCATION: Folkestone
DATE: 18/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

foresters way_grace hill_2026 Do Min AM 01_001.vao

ARM A - Foord Rd
 ARM B - Grace Hill
 ARM C - Foresters way (westbound)
 ARM D - Foresters way (eastbound)

.GEOMETRIC DATA -----

ARM A IS JUNCTION EXIT ONLY

ARM C IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	3.50	I	6.00	I	8.00	I	21.00	I	35.50	I	32.0	I	0.595	I	23.877
	I																
I	ARM D	I	3.50	I	3.50	I	0.00	I	22.50	I	35.50	I	59.0	I	0.472	I	15.992
	I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA -----

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I
I C	I	100		I
I D	I	100		I

foresters way_grace hill_2026 Do Min AM 01_001.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Min AM

I I I	ARM	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I							
			I	FLOW STARTS	I		TOP OF PEAK	I	FLOW STOPS		I	BEFORE	I	AT TOP	I	AFTER	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	12.10	I	18.15	I	12.10	I			
I	ARM D	I	15.00	I	45.00	I	75.00	I	7.41	I	11.12	I	7.41	I			

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Min AM

	TIME	TURNING PROPORTIONS							
		TURNING COUNTS (VEH/HR)							
		(PERCENTAGE OF H.V.S)							
		FROM/TO	ARM A	ARM B	ARM C	ARM D			
07.45 - 09.15		ARM B	0.222	0.000	0.778	0.000			
			215.0	0.0	753.0	0.0			
			(2.0)	(0.0)	(2.0)	(0.0)			
		ARM D	0.860	0.000	0.140	0.000			
			510.0	0.0	83.0	0.0			
			(2.0)	(0.0)	(1.0)	(0.0)			

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING

foresters way_grace hill_2026 Do Min AM 01_001.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 07.45-08.00							
I ARM B	12.10	22.80	0.531	0.0	1.1	16.0	0.09
I ARM D	7.41	14.44	0.513	0.0	1.0	14.7	0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 08.00-08.15									
I ARM B	14.45	22.68	0.637		1.1	1.7	24.7		0.12
I ARM D	8.85	14.19	0.624		1.0	1.6	22.8		0.18

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 08.15-08.30									
I ARM B	17.70	22.52	0.786		1.7	3.5	47.4		0.20
I ARM D	10.84	13.86	0.782		1.6	3.3	44.2		0.31

foresters way_grace hill_2026 Do Min AM 01_001.vao

I
I

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.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM B	17.70	22.52	0.786		3.5	3.6	52.8		0.21
I										
I	ARM D	10.84	13.84	0.783		3.3	3.4	50.7		0.33
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM B	14.45	22.67	0.637		3.6	1.8	28.5		0.13
I										
I	ARM D	8.85	14.17	0.625		3.4	1.7	27.7		0.20
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

foresters way_grace hill_2026 Do Min AM 01_001.vao									
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I									
I									
I									
I									
I	09.00-09.15								
I									
I	ARM B	12.10	22.79	0.531		1.8	1.1	17.8	0.09
I									
I	ARM D	7.41	14.43	0.514		1.7	1.1	16.9	0.14
I									
I									
I									

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.7	**
08.30	3.5	***
08.45	3.6	****
09.00	1.8	**
09.15	1.1	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.6	**
08.30	3.3	***
08.45	3.4	***
09.00	1.7	**
09.15	1.1	*

foresters way_grace hill_2026 Do Min AM 01_001.vao
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH) (VEH/H)	I	(MIN) (MIN/VEH)	I	(MIN) (MIN/VEH)	I
I	B	I	1327.3 I 884.9	I	187.2 I 0.14	I	187.2 I 0.14	I
I	D	I	813.1 I 542.1	I	177.0 I 0.22	I	177.0 I 0.22	I
I	ALL	I	2140.5 I 1427.0	I	364.2 I 0.17	I	364.3 I 0.17	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Foord Rd_New Street\
Foord Rd_New Street 2026 Do Min AM only 01_001.vpi"
(drive-on-the-left) at 12:47:05 on Tuesday, 2 November 2010

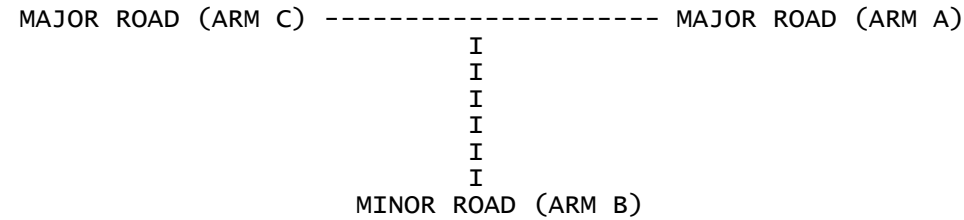
.RUN INFORMATION

RUN TITLE	: Foord Rd_New Street
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo



ARM A IS Grace Hill
 ARM B IS Foord Rd north
 ARM C IS New Street

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.03	0.28	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	574.06	0.26	0.10	0.17	0.38	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Foord Rd_New Street 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.21	I	10.82	I	7.21	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.64	I	9.96	I	6.64	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Foord Rd_New Street 2026 Do Min AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	577.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	9.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	531.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	1.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Foord Rd_New Street 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	I	DEMAND	I	CAPACITY	I	DEMAND/	I	PEDESTRIAN	I	START	I	END	I	DELAY	I	GEOMETRIC DELAY	I	AVERAGE DELAY
I		I	(VEH/MIN)	I	(VEH/MIN)	I	CAPACITY	I	FLOW	I	QUEUE	I	QUEUE	I	(VEH.MIN/	I	(VEH.MIN/	I	PER ARRIVING
I		I		I		I	(RFC)	I	(PEDS/MIN)	I	(VEHS)	I	(VEHS)	I	TIME SEGMENT)	I	TIME SEGMENT)	I	VEHICLE (MIN)
I	07.45-08.00	I		I		I		I		I		I		I		I		I	
I	B-AC	I	6.66	I	9.72	I	0.686	I		I	0.00	I	2.05	I	27.2	I		I	0.30

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo

I	C-A	0.00								
I										
I	C-B	0.00	7.10	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	7.24								
I										
I										
I										

.	-----									
--										
.	-----									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.00-08.15									
I										
I	B-AC	7.96	9.29	0.856		2.05	4.71	59.0		0.60
I										
I	C-A	0.00								
I										
I	C-B	0.00	6.79	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	8.65								
I										
I										
I										

.	-----									
--										
.	-----									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.15-08.30									

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo

I										
I	B-AC	9.74	8.71	1.119		4.71	23.47	219.3		1.98
I										
I	C-A	0.00								
I										
I	C-B	0.00	6.36	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	10.59								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	B-AC	9.74	8.71	1.119		23.47	39.84	475.7		3.88
I										
I	C-A	0.00								
I										
I	C-B	0.00	6.36	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	10.59								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME	SEGMENT)	TIME	SEGMENT)	VEHICLE (MIN)

08.45-09.00

B-AC	7.96	9.29	0.856	39.84	23.21	472.9	3.53
C-A	0.00						
C-B	0.00	6.79	0.000	0.00	0.00	0.0	0.00
A-B	0.00						
A-C	8.65						

—

QUEUE FOR STREAM B-AC

TIME	NO. OF

Foord Rd_New Street 2026 Do Min AM only 01_001.vpo

SEGMENT ENDING	VEHICLES IN QUEUE	
08.00	2.0	**
08.15	4.7	*****
08.30	23.5	*****
08.45	39.8	*****
09.00	23.2	*****
09.15	2.4	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I		I		I		I		I
I		I		I		I		I
I	B-AC	I	730.9	I	487.3	I	1373.6	I
I	C-A	I	0.0	I	0.0	I	1.88	I
I	C-B	I	0.0	I	0.0	I	1373.9	I
I	A-B	I	0.0	I	0.0	I	1.88	I
I	A-C	I	0.0	I	0.0	I	0.00	I
I	A-C	I	794.2	I	529.5	I	0.00	I
I	ALL	I	1525.1	I	1016.7	I	0.90	I
I		I		I		I	1373.9	I
I		I		I		I	0.90	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Dover Rd_Tontine St 2026 Do Min 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Dover Rd_Tontine Street\
Dover Rd_Tontine St 2026 Do Min 01_001.vpi"
(drive-on-the-left) at 12:52:15 on Tuesday, 2 November 2010

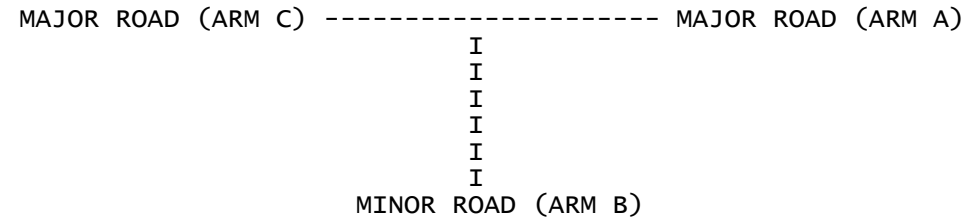
.RUN INFORMATION

RUN TITLE	: Dover Rd / Tontine Street
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Dover Rd_Tontine St 2026 Do Min 01_001.vpo



ARM A IS Dover Rd (north)
 ARM B IS Tontine Stret
 ARM C IS Dover Rd (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 40.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

 I Intercept For Slope For Opposing Slope For Opposing I

Dover Rd_Tontine St 2026 Do Min 01_001.vpo				
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	779.09	0.30	0.12	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	620.29	0.29	0.11	0.18	0.41	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Dover Rd / Tontine Street 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Dover Rd_Tontine St 2026 Do Min 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	5.79	I	8.68	I	5.79	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.49	I	9.73	I	6.49	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Dover Rd / Tontine Street 2026 Do Min AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	A
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.0
I		I		I	0.0
I		I	ARM	I	B
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.0
I		I		I	0.0
I		I	ARM	I	C
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.0

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Dover Rd / Tontine Street 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-AC	6.51	11.09	0.587		0.00	1.38	19.0		0.21

Dover Rd_Tontine St 2026 Do Min 01_001.vpo

I	C-A	0.00								
I										
I	C-B	0.00	7.50	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	5.81								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I										
I	B-AC	7.78	10.74	0.724		1.38	2.44	33.4		0.32
I										
I	C-A	0.00								
I										
I	C-B	0.00	7.27	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	6.94								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									

Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration
1	B-AC	9.52	10.27	0.928	2.44	7.50	86.6	0.76
2	C-A	0.00						
3	C-B	0.00	6.94	0.000	0.00	0.00	0.0	0.00
4	A-B	0.00						
5	A-C	8.50						
6								
7								
8								
9								
10								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	9.52	10.27	0.928		7.50	8.96	124.8		1.01
C-A	0.00								
C-B	0.00	6.94	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	8.50								

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Dover Rd_Tontine St 2026 Do Min 01_001.vpo

SEGMENT	VEHICLES	
ENDING	IN QUEUE	
08.00	1.4	*
08.15	2.4	**
08.30	7.5	*****
08.45	9.0	*****
09.00	2.8	***
09.15	1.5	*

QUEUE FOR STREAM C-B

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE *	I	QUEUEING *
I		I		I		I	* DELAY *	I	* DELAY *	I	
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I	(MIN/VEH)
I		I		I		I		I		I	
I	B-AC	I	714.4	I	476.2	I	342.5	I	0.48	I	342.6
I	C-A	I	0.0	I	0.0	I		I		I	0.48
I	C-B	I	0.0	I	0.0	I	0.0	I	0.00	I	0.00
I	A-B	I	0.0	I	0.0	I		I		I	
I	A-C	I	637.3	I	424.9	I		I		I	
I	ALL	I	1351.7	I	901.1	I	342.5	I	0.25	I	342.6
											0.25

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	779.09	0.30	0.12	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	620.29	0.29	0.11	0.18	0.41	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Dover Rd / Tontine Street 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

Dover Rd_Tontine St 2026 Do Min 01_001.vpo

I	I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I
			I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	
I	ARM	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I
I	I	I	I	I	I	I	I	I	I
I	ARM A	I	15.00	I 45.00	I 75.00	I 3.64	I 5.46	I 3.64	I
I	ARM B	I	15.00	I 45.00	I 75.00	I 4.04	I 6.06	I 4.04	I
I	ARM C	I	15.00	I 45.00	I 75.00	I 0.00	I 0.00	I 0.00	I

.Demand set: Dover Rd / Tontine Street 2026 Do Min PM

		TURNING PROPORTIONS										
		TURNING COUNTS										
		(PERCENTAGE OF H.V.S)										
	TIME	FROM/TO	ARM	A	ARM	B	ARM	C				
	16.45 - 17.00											
		ARM	A	0.000	0.000	1.000						
				0.0	0.0	291.0						
				(0.0)	(0.0)	(0.0)						
		ARM	B	0.000	0.000	1.000						
				0.0	0.0	323.0						
				(0.0)	(0.0)	(0.0)						
		ARM	C	0.000	0.000	0.000						
				0.0	0.0	0.0						
				(0.0)	(0.0)	(0.0)						

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET		Dover Rd / Tontine Street 2026 Do Min PM								
AND FOR TIME PERIOD		2								
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

Dover Rd_Tontine St 2026 Do Min 01_001.vpo

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.15-17.30									
I B-AC	5.93	11.37	0.521		0.70	1.06	15.2		0.18
I C-A	0.00								
I C-B	0.00	7.62	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	5.34								
I									
I									
I									
.									
--									

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.30-17.45									
I B-AC	5.93	11.37	0.521		1.06	1.07	16.1		0.18
I C-A	0.00								
I C-B	0.00	7.62	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	5.34								
I									
I									
I									
.									
--									

Dover Rd_Tontine St 2026 Do Min 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	4.84	11.67	0.415		1.07	0.72	11.2		0.15
C-A	0.00								
C-B	0.00	7.81	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.36								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	4.05	11.88	0.341		0.72	0.52	8.1		0.13
C-A	0.00								
C-B	0.00	7.96	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.65								

 .
 --
 .
 QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	*

 .
 --
 .
 QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

 .
 --
 .
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I		I		I		I		I
I		I		I		I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	B-AC	I	444.6	I	296.4	I	68.1	I
I	C-A	I	0.0	I	0.0	I	0.15	I
I	C-B	I	0.0	I	0.0	I	68.1	I
I	A-B	I	0.0	I	0.0	I	0.15	I
I	A-C	I	400.5	I	267.0	I	0.00	I
I		I		I		I	0.00	I
I		I		I		I		I
I		I		I		I		I
I	ALL	I	845.1	I	563.4	I	68.1	I
I		I		I		I	0.08	I
I		I		I		I	68.1	I
I		I		I		I	0.08	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

Dover Rd_Tontine St 2026 Do Min 01_001.vpo

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

cheriton rd_radnor park rd_2026 Do Min PM.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Cheriton Rd_Radnor Park Rd\
cheriton rd_radnor park rd_2026 Do Min PM.vai"
(drive-on-the-left) at 11:57:03 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: Cheriton Rd_Radnor Park Rd
LOCATION: Folkestone
DATE: 17/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Radnor Park Rd
 ARM B - Cheriton Rd (south)
 ARM C - Cheriton Rd (west)

.GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I INTERCEPT
(PCU/MIN)	I														

I ARM A	I	5.00	I	7.50	I	3.00	I	61.00	I	34.00	I	34.0	I	0.670	I 29.238
I															
I ARM B	I	5.00	I	8.00	I	22.00	I	57.00	I	34.00	I	41.0	I	0.739	I 35.567
I															
I ARM C	I	5.00 *	I	5.00	I	0.00	I	42.50	I	34.00	I	17.0	I	0.659	I 27.043
I															

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM C - INPUT VALUE OF V (6.50) OUTSIDE ACCEPTABLE RANGE -
 HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I
I C	I	100		I

cheriton rd_radnor park rd_2026 Do Min PM.vao

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Min PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK
I	I	I	I	I	IF FALLING	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	8.35	I	12.53
I	ARM B	I	15.00	I	45.00	I	12.84	I	19.26
I	ARM C	I	15.00	I	45.00	I	11.49	I	17.23
I		I		I		I		I	

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Min PM

I	TURNING PROPORTIONS			I
I	TURNING COUNTS (VEH/HR)			I
I	(PERCENTAGE OF H.V.S)			I
I				I
I	TIME	I	FROM/TO	I
I	I	I	ARM A	I
I	I	I	ARM B	I
I	I	I	ARM C	I
I	16.45 - 18.15	I		I
I		I	ARM A	I
I		I	0.000	I
I		I	0.0	I
I		I	(0.0)	I
I		I		I
I		I	ARM B	I
I		I	0.580	I
I		I	596.0	I
I		I	(0.0)	I
I		I		I
I		I	ARM C	I
I		I	0.409	I
I		I	376.0	I
I		I	(0.0)	I
I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

cheriton rd_radnor park rd_2026 Do Min PM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	8.35	24.61	0.339		0.0	0.5	7.5		0.06
ARM B	12.84	33.80	0.380		0.0	0.6	8.9		0.05
ARM C	11.49	22.02	0.522		0.0	1.1	15.5		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	9.97	23.71	0.420		0.5	0.7	10.6		0.07
ARM B	15.33	33.48	0.458		0.6	0.8	12.3		0.06
ARM C	13.72	21.06	0.651		1.1	1.8	26.0		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

	cheriton rd_radnor park rd_2026 Do Min PM.vao								
	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I									
I									
I	17.15-17.30								
I									
I	ARM A	12.21	22.55	0.542	0.7	1.2	16.9		0.10
I									
I	ARM B	18.77	33.05	0.568	0.8	1.3	19.0		0.07
I									
I	ARM C	16.80	19.76	0.850	1.8	5.0	65.0		0.30
I									
I									
I									

-									
.									
--									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
I									AVERAGE DELAY
I									PER ARRIVING
I									VEHICLE (MIN)
I	17.30-17.45								
I									
I	ARM A	12.21	22.47	0.543		1.2	1.2	17.6	0.10
I									
I	ARM B	18.77	33.04	0.568		1.3	1.3	19.6	0.07
I									
I	ARM C	16.80	19.74	0.851		5.0	5.3	78.0	0.33
I									
I									
I									

-									
.									
--									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
I									AVERAGE DELAY
I									PER ARRIVING
I									VEHICLE (MIN)
I	17.45-18.00								
I									
I	ARM A	9.97	23.60	0.422		1.2	0.7	11.4	0.07

cheriton rd_radnor park rd_2026 Do Min PM.vao

I	ARM B	15.33	33.47	0.458	1.3	0.9	13.0	0.06
I	ARM C	13.72	21.04	0.652	5.3	1.9	31.6	0.15

I
I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	8.35	24.56	0.340		0.7	0.5	7.9		0.06
ARM B	12.84	33.79	0.380		0.9	0.6	9.4		0.05
ARM C	11.49	22.00	0.522		1.9	1.1	17.3		0.10

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.2 *
17.45	1.2 *
18.00	0.7 *
18.15	0.5 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.8	*
17.30	1.3	*
17.45	1.3	*
18.00	0.9	*
18.15	0.6	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	1.8	**
17.30	5.0	*****
17.45	5.3	*****
18.00	1.9	**
18.15	1.1	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	916.0	I	610.6	I	71.8	I
I	B	I	1408.2	I	938.8	I	82.3	I
I	C	I	1260.1	I	840.1	I	233.4	I
I	ALL	I	3584.3	I	2389.6	I	387.5	I
							0.11	
							387.6	
							0.11	

cheriton rd_radnor park rd_2026 Do Min PM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

cheriton rd_radnor park rd_2026 Do Min AM.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Cheriton Rd_Radnor Park Rd\
cheriton rd_radnor park rd_2026 Do Min AM.vai"
(drive-on-the-left) at 11:55:20 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: Cheriton Rd_Radnor Park Rd
LOCATION: Folkestone
DATE: 17/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

cheriton rd_radnor park rd_2026 Do Min AM.vao

ARM A - Radnor Park Rd
ARM B - Cheriton Rd (south)
ARM C - Cheriton Rd (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN) I																	

I	ARM A	I	5.00	I	7.50	I	3.00	I	61.00	I	34.00	I	34.0	I	0.670	I	29.238
I	ARM B	I	5.00	I	8.00	I	22.00	I	57.00	I	34.00	I	41.0	I	0.739	I	35.567
I	ARM C	I	5.00 *	I	5.00	I	0.00	I	42.50	I	34.00	I	17.0	I	0.659	I	27.043
I		I		I		I		I		I		I		I		I	

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

WARNING ARM C - INPUT VALUE OF V (6.50) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW	SCALE(%)	I

I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

cheriton rd_radnor park rd_2026 Do Min AM.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Min AM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK
I	I	I	I	I	IF FALLING	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	9.52	I	14.29
I	ARM B	I	15.00	I	45.00	I	9.71	I	14.57
I	ARM C	I	15.00	I	45.00	I	12.14	I	18.21
I		I		I		I		I	

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Min AM

I	I	TURNING PROPORTIONS			I
I	I	TURNING COUNTS (VEH/HR)			I
I	I	(PERCENTAGE OF H.V.S)			I
I	I				I
I	TIME	I	FROM/TO	I	ARM A
I	I	I	I	I	ARM B
I	I	I	I	I	ARM C
I	07.45 - 09.15	I		I	
I		I	ARM A	I	0.000
I		I		I	0.764
I		I		I	0.236
I		I		I	0.0
I		I	(0.0)	I	582.0
I		I		I	180.0
I		I		I	(1.0)
I		I		I	
I		I	ARM B	I	0.565
I		I		I	0.000
I		I		I	0.435
I		I		I	439.0
I		I		I	0.0
I		I	(2.0)	I	338.0
I		I		I	(3.0)
I		I		I	
I		I	ARM C	I	0.309
I		I		I	0.691
I		I		I	0.000
I		I		I	300.0
I		I		I	671.0
I		I	(2.0)	I	0.0
I		I		I	(1.0)
I		I		I	(0.0)
I		I		I	

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

cheriton rd_radnor park rd_2026 Do Min AM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	9.52	23.54	0.405		0.0	0.7	9.8		0.07
ARM B	9.71	33.09	0.294		0.0	0.4	6.1		0.04
ARM C	12.14	23.06	0.526		0.0	1.1	15.8		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	11.37	22.43	0.507		0.7	1.0	14.8		0.09
ARM B	11.60	32.77	0.354		0.4	0.5	8.1		0.05
ARM C	14.49	22.35	0.649		1.1	1.8	25.8		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

cheriton rd_radnor park rd_2026 Do Min AM.vao										
	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I										
I	08.15-08.30									
I										
I	ARM A	13.93	20.97	0.664		1.0	1.9	27.3		0.14
I										
I	ARM B	14.20	32.33	0.439		0.5	0.8	11.5		0.06
I										
I	ARM C	17.75	21.37	0.831		1.8	4.5	59.2		0.25
I										
I										
I										

-										
.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM A	13.93	20.90	0.667		1.9	2.0	29.3		0.14
I										
I	ARM B	14.20	32.32	0.439		0.8	0.8	11.7		0.06
I										
I	ARM C	17.75	21.37	0.831		4.5	4.7	68.8		0.27
I										
I										
I										

-										
.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM A	11.37	22.32	0.510		2.0	1.1	16.4		0.09

cheriton rd_radnor park rd_2026 Do Min AM.vao

I	ARM B	11.60	32.75	0.354	0.8	0.6	8.4	0.05
I	ARM C	14.49	22.34	0.649	4.7	1.9	30.6	0.13

I
I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	9.52	23.48	0.406		1.1	0.7	10.6		0.07
ARM B	9.71	33.08	0.294		0.6	0.4	6.3		0.04
ARM C	12.14	23.05	0.527		1.9	1.1	17.5		0.09

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.0 *
08.30	1.9 **
08.45	2.0 **
09.00	1.1 *
09.15	0.7 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	*
08.30	0.8	*
08.45	0.8	*
09.00	0.6	*
09.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	4.5	*****
08.45	4.7	*****
09.00	1.9	**
09.15	1.1	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	A	I	1044.9	I	696.6	I	108.2	I
I	B	I	1065.4	I	710.3	I	52.1	I
I	C	I	1331.4	I	887.6	I	217.6	I
I	ALL	I	3441.7	I	2294.5	I	377.8	I
							0.11	
							377.9	
							0.11	

cheriton rd_radnor park rd_2026 Do Min AM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

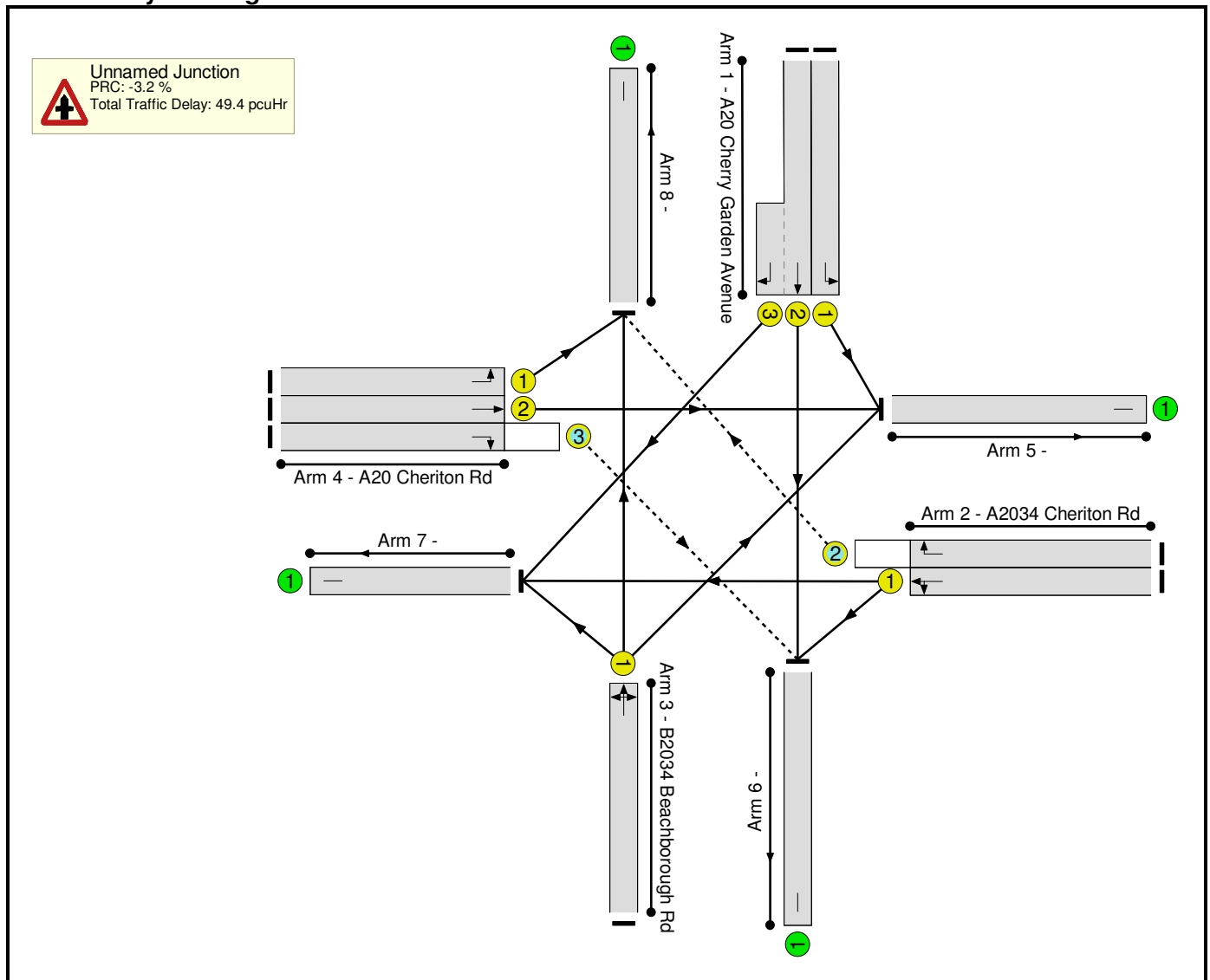
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	Cheriton Rd_Cherry Gdn Ave 01_001.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base AM' (FG1: '2010 Base AM', Plan 1: 'Network Control Plan 1')

Junction Layout Diagram

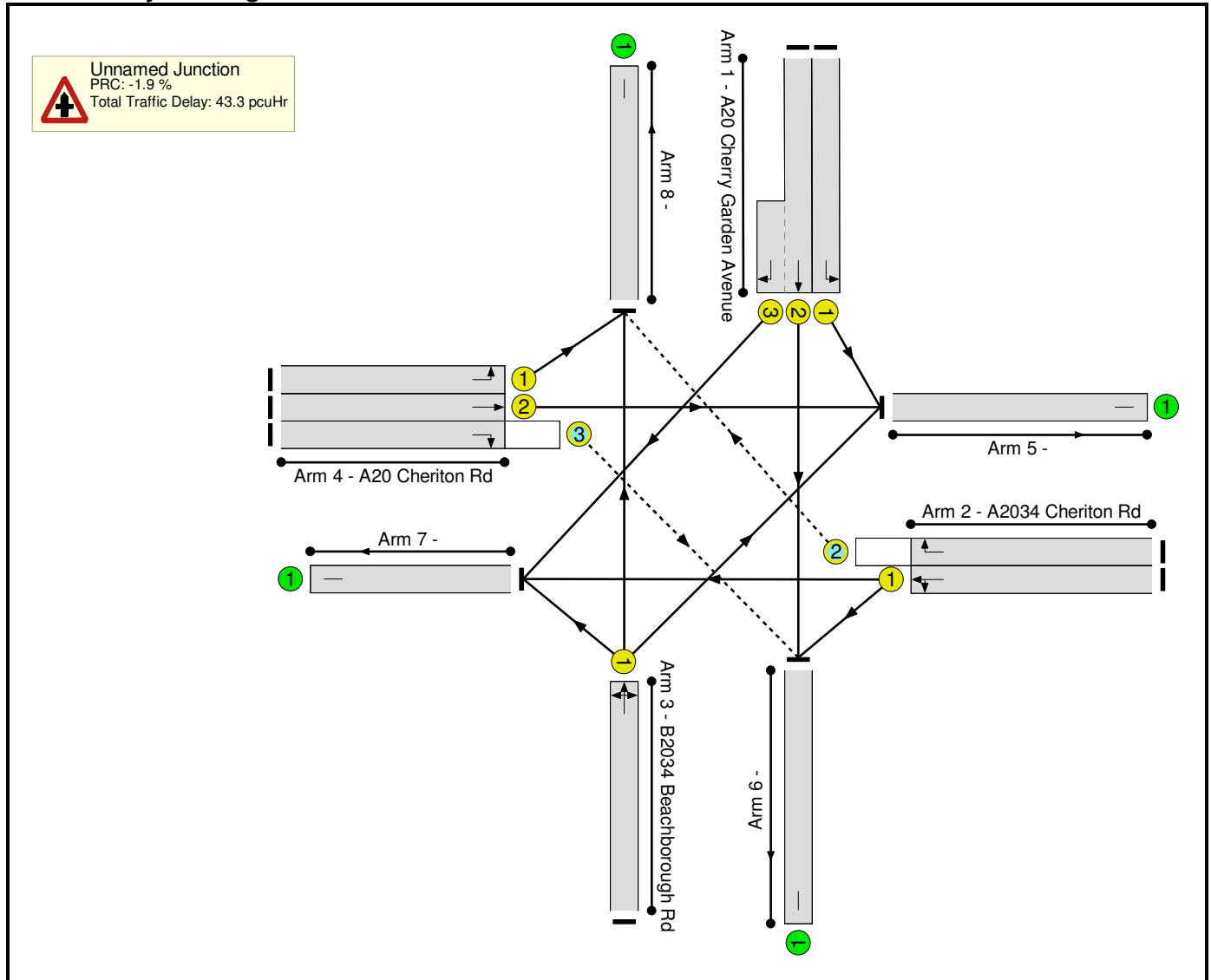


Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	92.9%	49.4	-	-
Unnamed Junction	-	-	-	-	92.9%	49.4	-	-
1/1	A20 Cherry Garden Avenue Left	323	1687	443	72.9%	4.9	55.1	11.4
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	525	2080:1891	570	92.1%	11.0	75.2	20.9
2/1	A2034 Cheriton Rd Left Ahead	284	1857	325	87.4%	7.9	100.2	15.7
2/2	A2034 Cheriton Rd Right	115	1808	127	90.5%	5.5	170.9	7.6
3/1	B2034 Beachborough Rd Right Left Ahead	478	1871	515	92.9%	10.7	80.9	20.9
4/1	A20 Cheriton Rd Left	187	1717	680	27.5%	1.5	29.0	5.1
4/2	A20 Cheriton Rd Ahead	349	2055	445	78.4%	6.2	63.7	14.5
4/3	A20 Cheriton Rd Right	117	1731	298	39.3%	1.7	52.1	4.1
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):	-3.2 -3.2	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):	49.39 49.39	Cycle Time (s): 240			

Scenario 2: '2010 Base PM' (FG2: '2010 Base PM', Plan 1: 'Network Control Plan 1')

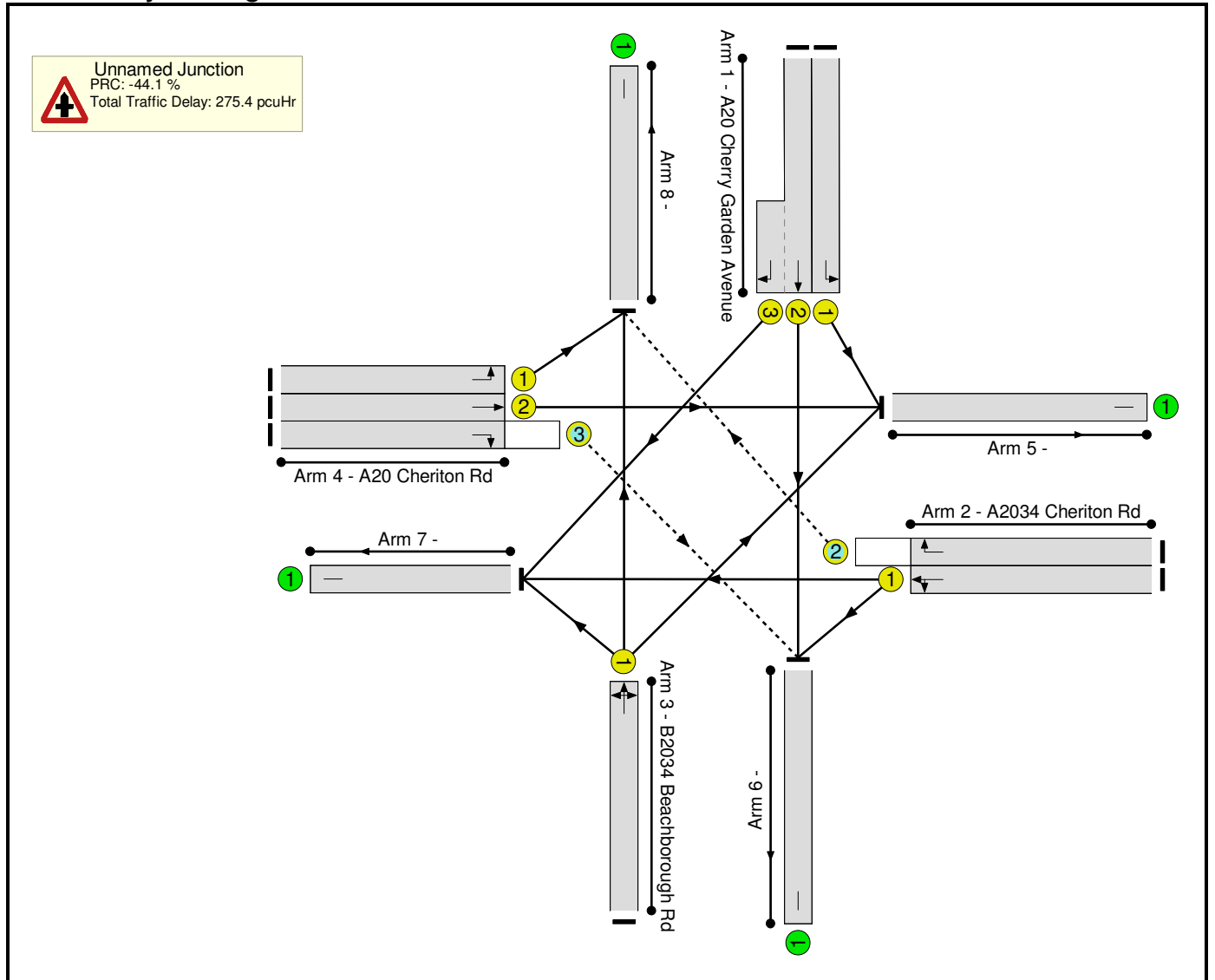
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	91.7%	43.3	-	-
Unnamed Junction	-	-	-	-	91.7%	43.3	-	-
1/1	A20 Cherry Garden Avenue Left	191	1687	330	57.8%	3.0	56.7	6.8
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	402	2080:1891	443	90.8%	9.3	83.1	16.3
2/1	A2034 Cheriton Rd Left Ahead	340	1854	371	91.7%	8.8	93.3	16.7
2/2	A2034 Cheriton Rd Right	140	1808	162	86.5%	4.8	123.3	7.7
3/1	B2034 Beachborough Rd Right Left Ahead	541	1876	594	91.1%	10.3	68.7	22.9
4/1	A20 Cheriton Rd Left	166	1717	608	27.3%	1.5	32.2	4.6
4/2	A20 Cheriton Rd Ahead	322	2055	497	64.8%	4.6	51.7	11.6
4/3	A20 Cheriton Rd Right	78	1731	312	25.0%	1.0	45.3	2.5
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):	-1.9 -1.9	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			43.32 43.32	Cycle Time (s): 240	

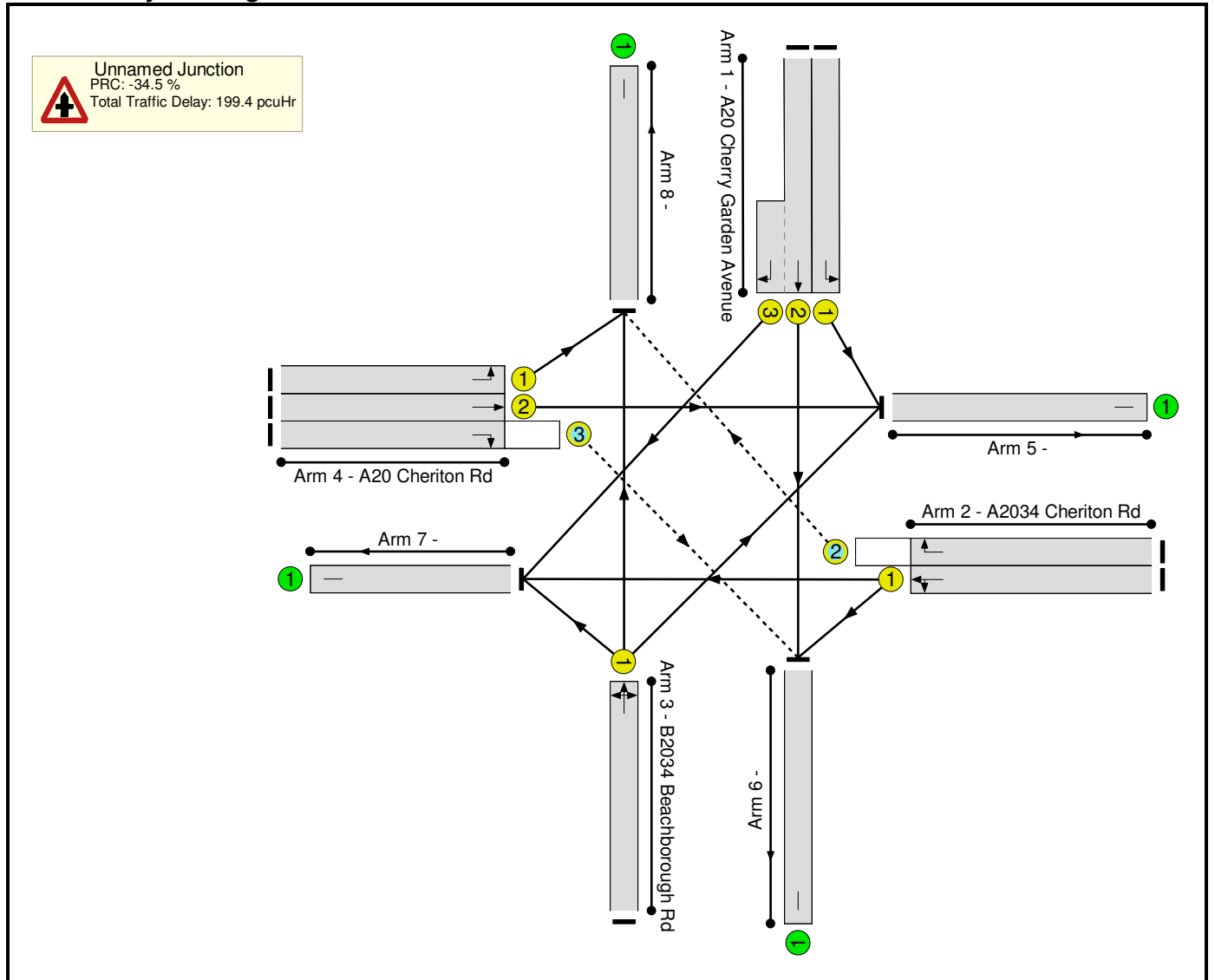
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	129.7%	275.4	-	-
Unnamed Junction	-	-	-	-	129.7%	275.4	-	-
1/1	A20 Cherry Garden Avenue Left	406	1687	387	105.0%	24.9	220.9	34.5
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	648	2080:1891	502	129.2%	104.0	577.9	116.1
2/1	A2034 Cheriton Rd Left Ahead	350	1858	441	79.3%	7.2	73.6	17.0
2/2	A2034 Cheriton Rd Right	186	1808	143	129.7%	32.9	636.5	36.9
3/1	B2034 Beachborough Rd Right Left Ahead	597	1873	460	129.7%	96.4	581.5	110.3
4/1	A20 Cheriton Rd Left	229	1717	730	31.4%	1.7	27.1	6.1
4/2	A20 Cheriton Rd Ahead	430	2055	574	75.0%	6.4	53.9	17.2
4/3	A20 Cheriton Rd Right	143	1731	369	38.8%	1.8	45.0	4.9
C1	PRC for Signalled Lanes (%): -44.1		-44.1	Total Delay for Signalled Lanes (pcuHr): 275.36		275.36	Cycle Time (s): 240	
	PRC Over All Lanes (%): -44.1		-44.1	Total Delay Over All Lanes(pcuHr): 275.36		275.36		

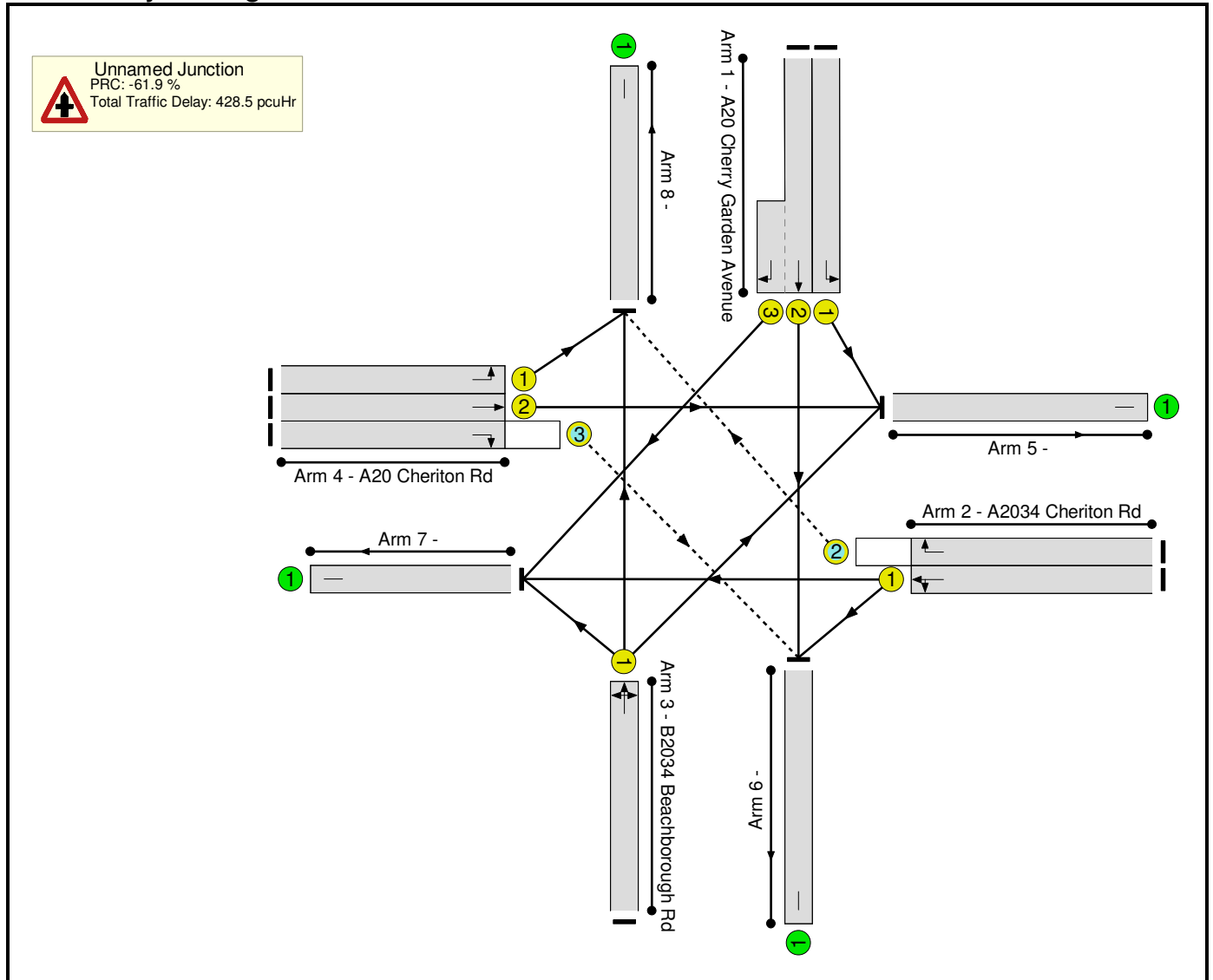
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	121.1%	199.4	-	-
Unnamed Junction	-	-	-	-	121.1%	199.4	-	-
1/1	A20 Cherry Garden Avenue Left	269	1687	316	85.0%	6.2	82.6	12.6
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	504	2080:1891	425	118.7%	61.9	442.2	71.5
2/1	A2034 Cheriton Rd Left Ahead	418	1854	425	98.4%	14.4	124.0	26.3
2/2	A2034 Cheriton Rd Right	180	1808	149	121.1%	26.5	529.1	30.0
3/1	B2034 Beachborough Rd Right Left Ahead	665	1876	555	119.8%	81.5	441.2	97.0
4/1	A20 Cheriton Rd Left	203	1717	644	31.5%	1.9	33.2	6.5
4/2	A20 Cheriton Rd Ahead	396	2055	557	71.2%	5.9	53.9	16.5
4/3	A20 Cheriton Rd Right	96	1731	365	26.3%	1.2	44.5	3.4
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):	-34.5 -34.5	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):		199.43 199.43	Cycle Time (s): 240		

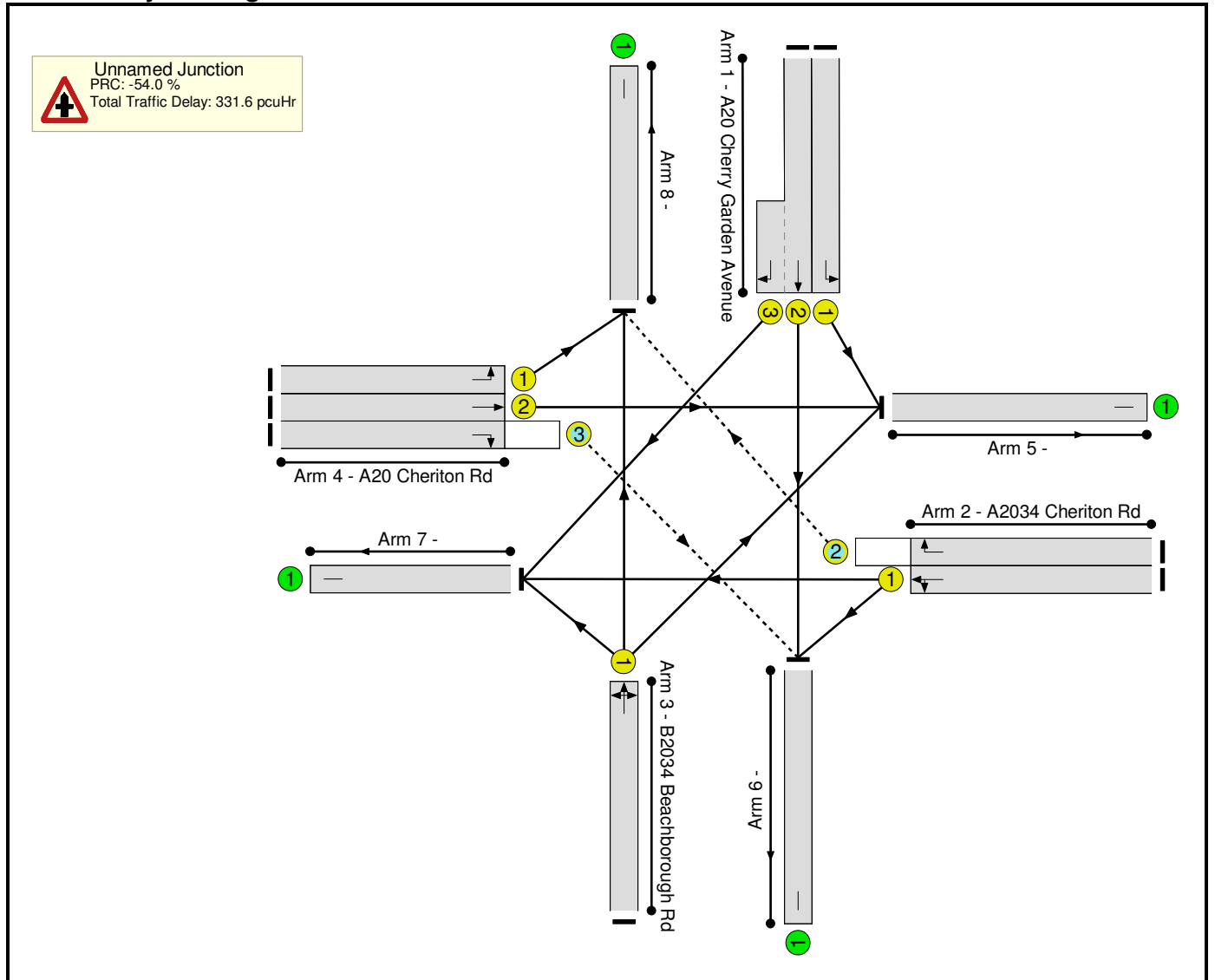
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	145.7%	428.5	-	-
Unnamed Junction	-	-	-	-	145.7%	428.5	-	-
1/1	A20 Cherry Garden Avenue Left	458	1687	323	141.6%	96.7	760.1	106.5
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	617	2080:1891	424	145.5%	137.0	799.6	149.6
2/1	A2034 Cheriton Rd Left Ahead	376	1866	583	64.5%	5.1	48.9	14.2
2/2	A2034 Cheriton Rd Right	277	1808	190	145.7%	62.8	815.7	67.2
3/1	B2034 Beachborough Rd Right Left Ahead	562	1873	390	144.0%	118.7	760.6	129.5
4/1	A20 Cheriton Rd Left	212	1717	794	26.7%	1.4	24.3	5.7
4/2	A20 Cheriton Rd Ahead	470	2055	728	64.6%	5.4	41.7	17.5
4/3	A20 Cheriton Rd Right	132	1731	429	30.8%	1.3	36.3	4.1
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%) :	-61.9 -61.9	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):	428.55 428.55	Cycle Time (s): 240			

Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	138.6%	331.6	-	-
Unnamed Junction	-	-	-	-	138.6%	331.6	-	-
1/1	A20 Cherry Garden Avenue Left	301	1687	253	118.9%	39.9	477.7	47.1
1/2+1/3	A20 Cherry Garden Avenue Ahead Right	478	2080:1891	347	137.8%	96.1	723.9	105.8
2/1	A2034 Cheriton Rd Left Ahead	465	1864	590	78.8%	8.9	69.0	19.4
2/2	A2034 Cheriton Rd Right	292	1808	211	138.6%	59.5	733.7	64.4
3/1	B2034 Beachborough Rd Right Left Ahead	635	1878	462	137.5%	119.6	678.0	137.1
4/1	A20 Cheriton Rd Left	188	1717	730	25.8%	1.6	30.1	6.0
4/2	A20 Cheriton Rd Ahead	427	2055	736	58.0%	5.0	42.3	16.8
4/3	A20 Cheriton Rd Right	89	1731	403	22.1%	0.9	36.9	2.9
C1	PRC for Signalled Lanes (%): -54.0		Total Delay for Signalled Lanes (pcuHr): 331.59					
	PRC Over All Lanes (%): -54.0		Total Delay Over All Lanes(pcuHr): 331.59		Cycle Time (s): 240			

Cheriton Interchange_2026 Do Min 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Cheriton Interchange\
Cheriton Interchange_2026 Do Min 01_001.vpi"
(drive-on-the-left) at 11:24:53 on Tuesday, 2 November 2010

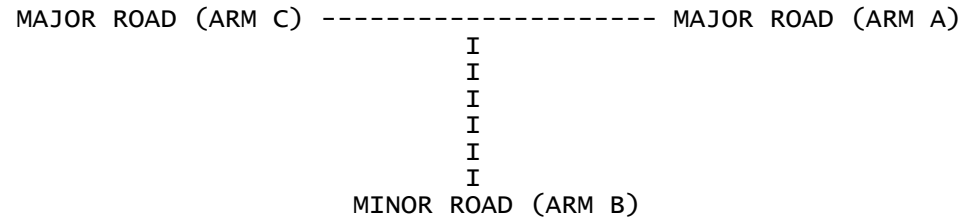
.RUN INFORMATION

RUN TITLE	: Cheriton Interchange
LOCATION	: Cheriton, Folkestone
DATE	: 17/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Cheriton Interchange_2026 Do Min 01_001.vpo



ARM A IS A20 Cheriton High Street (south)
 ARM B IS Cheriton High Street (west)
 ARM C IS A20 Cheriton High Street (north)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 14.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 5.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.50 M.	I
I	- VISIBILITY	I	(VC-B) 90.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Cheriton Interchange_2026 Do Min 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.18	0.07	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	654.56	0.18	0.07	0.11	0.25	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	714.66	0.18	0.18	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE (%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Cheriton Interchange 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Cheriton Interchange_2026 Do Min 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	13.45	I	20.17	I	13.45	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	10.05	I	15.08	I	10.05	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	20.75	I	31.13	I	20.75	I

.Demand set: Cheriton Interchange 2026 Do Min AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	0.000
I		I		I	0.358
I		I		I	0.642
I		I		I	0.0
I		I		I	385.0
I		I		I	691.0
I		I		I	(0.0)
I		I		I	(2.0)
I		I		I	(5.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	0.0
I		I		I	804.0
I		I		I	(0.0)
I		I		I	(0.0)
I		I		I	(2.0)
I		I		I	
I		I	ARM	I	0.486
I		I		I	0.514
I		I		I	0.000
I		I		I	806.0
I		I		I	854.0
I		I		I	0.0
I		I		I	(4.0)
I		I		I	(2.0)
I		I		I	(0.0)
I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Cheriton Interchange 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-AC	10.09	9.81	1.028		0.00	13.98	131.6		1.05

I	C-A	10.11							
I									
I	C-B	10.72	9.19	1.165		0.00	27.64	228.7	1.81
I									
I	A-B	4.83							
I									
I	A-C	8.67							
I									
I									
I									

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	12.05	9.43	1.278		13.98	53.86	510.5		3.93
C-A	12.08								
C-B	12.80	8.71	1.469		27.64	89.03	875.4		7.13
A-B	5.77								
A-C	10.35								

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Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration
1	B-AC	14.75	8.90	1.658	53.86	141.74	1467.1	11.17
2	C-A	14.79						
3	C-B	15.67	8.05	1.948	89.03	203.43	2193.5	18.20
4	A-B	7.06						
5	A-C	12.68						
6								
7								
8								
9								
10								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	14.75	8.90	1.658		141.74	229.58	2784.9		21.01
C-A	14.79								
C-B	15.67	8.05	1.948		203.43	317.81	3909.3		32.53
A-B	7.06								
A-C	12.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/	AVERAGE DELAY PER ARRIVING

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

08.45-09.00

B-AC	12.05	9.43	1.278	229.58	268.87	3738.4	26.12
C-A	12.08						
C-B	12.80	8.71	1.469	317.81	379.07	5226.6	38.83
A-B	5.77						
A-C	10.35						

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QUEUE FOR STREAM B-AC

TIME	NO. OF

SEGMENT ENDING	VEHICLES IN QUEUE	
08.00	14.0	*****
08.15	53.9	*****
08.30	141.7	*****

08.45	229.6	*****

09.00	268.9	*****

09.15	273.1	*****

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	27.6	*****
08.15	89.0	
08.30	203.4	*****
08.45	317.8	*****
09.00	379.1	*****
09.15	401.9	*****

[illegible]

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Cheriton Interchange_2026 Do Min 01_001.vpo

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.18	0.07	I

I	Intercept For	Slope For Opposing	Slope For Opposing	slope For Opposing	slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	654.56	0.18	0.07	0.11	0.25	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	714.66	0.18	0.18	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

Cheriton Interchange_2026 Do Min 01_001.vpo

.Demand set: Cheriton Interchange 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I						
			I	I	I	I	I	I	I	I							
												I	I	I	I	I	I
I		I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER			I						
I		I	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK			I						
I		I									I						
I	ARM	A	I	15.00	I	45.00	I	75.00	I	12.25	I	18.38	I	12.25	I		
I	ARM	B	I	15.00	I	45.00	I	75.00	I	11.85	I	17.78	I	11.85	I		
I	ARM	C	I	15.00	I	45.00	I	75.00	I	21.58	I	32.36	I	21.58	I		

.Demand set: Cheriton Interchange 2026 Do Min PM

I I I I I	I	TURNING PROPORTIONS										I	
		TURNING COUNTS											I
		(PERCENTAGE OF H.V.S)											
TIME		I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I		I		I		I		I		I	
I		I	ARM	A	I	0.000	I	0.400	I	0.600	I		I
I		I			I	0.0	I	392.0	I	588.0	I		I
I		I			I	(0.0)	I	(0.0)	I	(1.0)	I		I
I		I			I		I		I		I		I
I		I	ARM	B	I	0.000	I	0.000	I	1.000	I		I
I		I			I	0.0	I	0.0	I	948.0	I		I
I		I			I	(0.0)	I	(0.0)	I	(1.0)	I		I
I		I			I		I		I		I		I
I		I	ARM	C	I	0.564	I	0.436	I	0.000	I		I
I		I			I	974.0	I	752.0	I	0.0	I		I
I		I			I	(3.0)	I	(2.0)	I	(0.0)	I		I
I		I			I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

Cheriton Interchange_2026 Do Min 01_001.vpo

FOR DEMAND SET
AND FOR TIME PERIOD

Cheriton Interchange 2026 Do Min PM
2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	11.90	10.21	1.165		0.00	30.22	249.0		1.76
C-A	12.22								
C-B	9.44	9.49	0.994		0.00	11.04	109.0		0.92
A-B	4.92								
A-C	7.38								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	14.20	9.88	1.438		30.22	95.26	941.5		6.67
C-A	14.59								
C-B	11.27	9.06	1.243		11.04	44.98	422.6		3.44
A-B	5.87								
A-C	8.81								

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Cheriton Interchange_2026 Do Min 01_001.vpo

I A-B 7.19

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I A-C 10.79

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I

I 17.45-18.00

I

I	B-AC	14.20	9.88	1.438		334.47	399.37	5503.8		36.54

I

I C-A 14.59

I

I	C-B	11.27	9.06	1.243		204.76	237.84	3319.5		24.13

I

I A-B 5.87

I

I A-C 8.81

I

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I

I 18.00-18.15

I

I	B-AC	11.90	10.21	1.165		399.37	424.69	6180.5		40.47

I

I C-A 12.22

[illegible]

• QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	30.2	*****
17.15	95.3	

17.30	214.9	

17.45	334.5	

18.00	399.4	

18.15	424.7	

• QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	11.0	*****
17.15	45.0	*****
17.30	124.9	*****
17.45	204.8	*****
18.00	237.8	*****
18.15	237.7	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

Cheriton Interchange_2026 Do Min 01_001.vpo

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
							(MIN/VEH)		(MIN/VEH)	
I	B-AC	I	1304.9	I	869.9	I	19320.9	I	28156.3	I
I	C-A	I	1340.6	I	893.8	I		I		I
I	C-B	I	1035.1	I	690.0	I	11164.5	I	14143.1	I
I	A-B	I	539.6	I	359.7	I		I		I
I	A-C	I	809.3	I	539.6	I		I		I
I	ALL	I	5029.5	I	3353.0	I	30485.5	I	42299.5	I
							6.06		8.41	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Canterbury Rd_Alkhams Valley Rd 2026 Do Min.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Canterbury_Alkhams Valley\
Canterbury Rd_Alkhams Valley Rd 2026 Do Min.vpi"
(drive-on-the-left) at 15:29:21 on Monday, 8 November 2010

.RUN INFORMATION

RUN TITLE	: Canterbury Rd / Alkhams Valley Rd
LOCATION	:
DATE	: 08/11/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	: Geometries taken from Hawkinge mixed use development TA (downloaded from SDC planning)

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

Canterbury Rd_Alkhams Valley Rd 2026 Do Min.vpo

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
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I

MINOR ROAD (ARM B)

ARM A IS A260 Canterbury Rd north
ARM B IS Alkhams Valley Rd
ARM C IS A260 Canterbury Rd south

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.60 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 30.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 49.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.10 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.20 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.40 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

Canterbury Rd_Alkham Valley Rd 2026 Do Min.vpo

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM A-B	I
I	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM A-B	I
I	728.15		0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Canterbury Rd / Alkham Valley Rd 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I						
			I	I	I	I	I	I	I	I							
												I	I	I	I	I	I
I		I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER									
I		I	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK									
I		I															
I	ARM	A	I	15.00	I	45.00	I	75.00	I	26.08	I	39.11	I	26.08	I		
I	ARM	B	I	15.00	I	45.00	I	75.00	I	4.05	I	6.08	I	4.05	I		
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.27	I	12.41	I	8.27	I		

				TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	TIME	FROM/TO	ARM	A	B	C	D	E	F	
	07.45 - 08.00									
		ARM A		0.000	0.512	0.488				
				(0.0)	(13.0)	(11.0)				
		ARM B		0.213	0.000	0.787				
				69.0	0.0	255.0				
				(23.0)	(0.0)	(10.0)				
		ARM C		0.796	0.204	0.000				
				527.0	135.0	0.0				
				(13.0)	(14.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

Canterbury Rd_Alkham Valley Rd 2026 Do Min.vpo

		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	07.45-08.00								
I	I	B-C	3.20	5.17	0.619	0.00	1.50	19.5		0.46
I	I	B-A	0.87	1.75	0.494	0.00	0.86	10.6		1.01
I	I	C-A	6.61							
I	I	C-B	1.69	4.18	0.405	0.00	0.65	8.9		0.39
I	I	A-B	13.40							
I	I	A-C	12.77							
I	I									
I	I									

	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	08.00-08.15								
I	I	B-C	3.82	2.82	1.357	1.50	18.09	152.5		14.07
I	I	B-A	1.03	0.78	1.319	0.86	5.92	53.8		18.45
I	I	C-A	7.90							
I	I	C-B	2.02	2.92	0.692	0.65	1.87	23.4		0.95
I	I	A-B	16.00							
I	I	A-C	15.25							
I	I									
I	I									

Canterbury Rd_Alkhay Valley Rd 2026 Do Min.vpo

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	4.68	0.01	711.042		18.09	88.19	797.1		7234.42
B-A	1.27	0.00	681.905		5.92	24.88	231.0		48.02
C-A	9.67								
C-B	2.48	1.19	2.086		1.87	21.61	177.7		10.92
A-B	19.60								
A-C	18.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	4.68	0.00	***		88.19	158.38	1849.2		-999.00
B-A	1.27	0.00	***		24.88	43.87	515.7		-999.00
C-A	9.67								

		Mean	SD	Median	Mode	Range	Skewness	Kurtosis
I	C-B	2.48	1.19	2.086		21.61	40.99	469.5
I								27.38
I	A-B	19.60						
I								
I	A-C	18.68						
I								
I								
I								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	3.82	1.58	2.422		158.38	192.03	2628.0		59.25
B-A	1.03	0.43	2.381		43.87	52.87	725.6		60.26
C-A	7.90								
C-B	2.02	2.92	0.692		40.99	28.53	521.3		10.85
A-B	16.00								
A-C	15.25								

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Canterbury Rd_Alkham Valley Rd 2026 Do Min.vpo

I								
I	B-C	3.20	3.45	0.928	192.03	188.55	2854.3	55.45
I								
I	B-A	0.87	0.95	0.915	52.87	51.93	786.0	56.21
I								
I	C-A	6.61						
I								
I	C-B	1.69	4.18	0.405	28.53	0.79	176.3	3.17
I								
I	A-B	13.40						
I								
I	A-C	12.77						
I								
I								
I								

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WARNING THE ENTRY CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.
(AG23 REF. 8.4.2(i)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.5	*
08.15	18.1	*****
08.30	88.2	

08.45	158.4	

09.00	192.0	

09.15	188.6	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	5.9	*****
08.30	24.9	*****
08.45	43.9	*****
09.00	52.9	*****

Canterbury Rd_Alkham Valley Rd 2026 Do Min.vpo

09.15 51.9 *****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.9	**
08.30	21.6	*****
08.45	41.0	*****
09.00	28.5	*****
09.15	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	351.0	I 234.0	I 8300.7	I 23.65	I 13453.9	I 38.33
I	B-A	I	95.0	I 63.3	I 2322.7	I 24.46	I 3747.1	I 39.45
I	C-A	I	725.4	I 483.6	I	I	I	I
I	C-B	I	185.8	I 123.9	I 1377.1	I 7.41	I 1377.2	I 7.41
I	A-B	I	1470.0	I 980.0	I	I	I	I
I	A-C	I	1401.2	I 934.1	I	I	I	I
I	ALL	I	4228.4	I 2818.9	I 12000.5	I 2.84	I 18578.1	I 4.39

WARNING THE CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Canterbury Rd_Alkhams Valley Rd 2026 Do Min.vpo

I Intercept For Slope For Opposing I	I STREAM B-C	I STREAM A-C	I Slope For Opposing I	I STREAM A-B	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I Intercept For Slope For Opposing I	I STREAM B-A	I Slope For Opposing I	I STREAM A-C	I Slope For Opposing I	I STREAM A-B	I Slope For Opposing I	I STREAM C-A	I Slope For Opposing I	I STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I Intercept For Slope For Opposing I	I STREAM C-B	I Slope For Opposing I	I STREAM A-C	I Slope For Opposing I	I STREAM A-B	I
I	728.15	0.25	0.25	0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I	I FLOW	I SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

.Demand set: Canterbury Rd / Alkhams Valley Rd 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I NUMBER OF MINUTES FROM START WHEN	I	I RATE OF FLOW (VEH/MIN)	I

Canterbury Rd_Alkhām Valley Rd 2026 Do Min.vpo														
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I		I		I		I		I		I		I		I
I	ARM A	I	15.00	I	45.00	I	75.00	I	23.34	I	35.01	I	23.34	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.69	I	5.53	I	3.69	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.86	I	19.29	I	12.86	I

.Demand set: Canterbury Rd / Alkhām Valley Rd 2026 Do Min PM

TURNING PROPORTIONS										
TURNING COUNTS										
(PERCENTAGE OF H.V.S)										
I		I		I		I		I		I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	16.45 - 17.00	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.540	I	0.460	I
I		I		I	0.0	I	1008.0	I	859.0	I
I		I		I	(0.0)	I	(11.0)	I	(12.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.349	I	0.000	I	0.651	I
I		I		I	103.0	I	0.0	I	192.0	I
I		I		I	(10.0)	I	(0.0)	I	(10.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.776	I	0.224	I	0.000	I
I		I		I	798.0	I	231.0	I	0.0	I
I		I		I	(8.0)	I	(12.0)	I	(0.0)	I
I		I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Canterbury Rd / Alkhām Valley Rd 2026 Do Min PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									

Canterbury Rd_Alkhams Valley Rd 2026 Do Min.vpo

I									
I	B-C	2.41	4.63	0.521		0.00	1.02	13.6	0.43
I									
I	B-A	1.29	1.87	0.692		0.00	1.71	19.7	1.30
I									
I	C-A	10.01							
I									
I	C-B	2.90	4.97	0.583		0.00	1.30	17.1	0.45
I									
I	A-B	12.65							
I									
I	A-C	10.78							
I									
I									
I									

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.00-17.15									
I										
I	B-C	2.88	1.66	1.736		1.02	20.12	162.2		28.48
I										
I	B-A	1.54	0.93	1.655		1.71	11.51	101.1		31.89
I										
I	C-A	11.96								
I										
I	C-B	3.46	3.84	0.902		1.30	4.72	52.9		1.33
I										
I	A-B	15.10								
I										
I	A-C	12.87								
I										
I										

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[illegible]

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	2.88	0.00	***		125.82	168.97	2211.0		-999.00
B-A	1.54	0.00	***		68.21	91.36	1196.8		-999.00
C-A	11.96								
C-B	3.46	3.84	0.902		64.33	59.59	929.4		16.08
A-B	15.10								
A-C	12.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	2.41	1.60	1.505		168.97	181.10	2625.5		110.06
B-A	1.29	0.86	1.495		91.36	97.78	1418.5		111.19
C-A	10.01								

Canterbury Rd_Alkham Valley Rd 2026 Do Min.vpo

I								
I	C-B	2.90	4.97	0.583		59.59	29.69	669.6
I								9.23
I	A-B	12.65						
I								
I	A-C	10.78						
I								
I								
I								

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WARNING THE ENTRY CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.
(AG23 REF. 8.4.2(i)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	20.1	*****
17.30	73.0	*****
17.45	125.8	*****
18.00	169.0	*****
18.15	181.1	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.7	**
17.15	11.5	*****
17.30	39.9	*****
17.45	68.2	*****
18.00	91.4	*****
18.15	97.8	*****

QUEUE FOR STREAM C-B

TIME	NO. OF

Canterbury Rd_Alkham Valley Rd 2026 Do Min.vpo

SEGMENT ENDING	VEHICLES IN QUEUE	
17.00	1.3	*
17.15	4.7	*****
17.30	34.7	*****
17.45	64.3	*****
18.00	59.6	*****
18.15	29.7	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE *	I
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	264.3	I 176.2	I	7201.4	I 27.25	I 17443.4	I 66.00
I	B-A	I	141.8	I 94.5	I	3931.8	I 27.73	I 9462.0	I 66.74
I	C-A	I	1098.4	I 732.3	I		I	I	I
I	C-B	I	318.0	I 212.0	I	2707.9	I 8.52	I 2796.5	I 8.80
I	A-B	I	1387.4	I 925.0	I		I	I	I
I	A-C	I	1182.4	I 788.2	I		I	I	I
I	ALL	I	4392.2	I 2928.1	I	13841.1	I 3.15	I 29701.9	I 6.76

WARNING THE CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\
Bouverie Rd west_Middleburg Square\Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpi"
(drive-on-the-left) at 12:02:01 on Tuesday, 2 November 2010

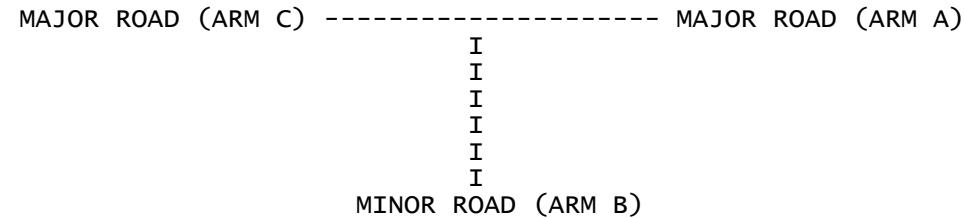
.RUN INFORMATION

RUN TITLE	: Bouverie Rd west / Middleburg Square
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo



ARM A IS Middleburg Square
 ARM B IS Bouverie Rd west
 ARM C IS Cheriton Gardens

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 9.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 80.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 80.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

 I Intercept For Slope For Opposing Slope For Opposing I

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	809.32	0.27	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	652.52	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Bouverie Rd West / Middleburg Square 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

I ARM A	I	15.00	I	45.00	I	75.00	I	13.99	I	20.98	I	13.99	I
I ARM B	I	15.00	I	45.00	I	75.00	I	0.19	I	0.28	I	0.19	I
I ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Bouverie Rd West / Middleburg Square 2026 Do Min AM

	I	TURNING PROPORTIONS	I
	I	TURNING COUNTS	I
	I	(PERCENTAGE OF H.V.S)	I
	I	-----	I
TIME	I FROM/TO I ARM A I ARM B I ARM C I	I	I
	I	-----	I
07.45 - 08.00	I	I	I
	I ARM A	I 0.000 I 0.324 I 0.676 I	I
	I	I 0.0 I 363.0 I 756.0 I	I
	I	I (0.0)I (1.0)I (2.0)I	I
	I	I	I
	I ARM B	I 0.000 I 0.000 I 1.000 I	I
	I	I 0.0 I 0.0 I 15.0 I	I
	I	I (0.0)I (0.0)I (0.0)I	I
	I	I	I
	I ARM C	I 0.000 I 0.000 I 0.000 I	I
	I	I 0.0 I 0.0 I 0.0 I	I
	I	I (0.0)I (0.0)I (0.0)I	I
	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Bouverie Rd West / Middleburg Square 2026 Do Min AM
AND FOR TIME PERIOD 1

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	07.45-08.00									
	B-AC	0.19	10.35	0.018		0.00	0.02	0.3		0.10

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

I	C-A	0.00								
I										
I	C-B	0.00	6.19	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	4.55								
I										
I	A-C	9.49								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I										
I	B-AC	0.22	9.75	0.023		0.02	0.02	0.3		0.10
I										
I	C-A	0.00								
I										
I	C-B	0.00	5.70	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	5.44								
I										
I	A-C	11.33								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30									

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

I										
I	B-AC	0.28	8.90	0.031		0.02	0.03	0.5		0.12
I										
I	C-A	0.00								
I										
I	C-B	0.00	5.03	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	6.66								
I										
I	A-C	13.87								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	B-AC	0.28	8.90	0.031		0.03	0.03	0.5		0.12
I										
I	C-A	0.00								
I										
I	C-B	0.00	5.03	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	6.66								
I										
I	A-C	13.87								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

SEGMENT ENDING	VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	B-AC	I	20.6	I	13.8	I	2.2	I	0.11
I	C-A	I	0.0	I	0.0	I		I	
I	C-B	I	0.0	I	0.0	I	0.0	I	0.00
I	A-B	I	499.6	I	333.1	I		I	
I	A-C	I	1040.6	I	693.7	I		I	
I	ALL	I	1560.9	I	1040.6	I	2.2	I	0.00

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	809.32	0.27	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	652.52	0.26	0.10	0.16	0.37	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Bouverie Rd West / Middleburg Square 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

I	I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I
			I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	
I	ARM	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I
I	I	I	I	I	I	I	I	I	I
I	ARM A	I	15.00	I 45.00	I 75.00	I 16.40	I 24.60	I 16.40	I
I	ARM B	I	15.00	I 45.00	I 75.00	I 0.05	I 0.08	I 0.05	I
I	ARM C	I	15.00	I 45.00	I 75.00	I 0.00	I 0.00	I 0.00	I

.Demand set: Bouverie Rd west / Middleburg Square 2026 Do Min PM

		TURNING PROPORTIONS										
		TURNING COUNTS										
		(PERCENTAGE OF H.V.S)										

	TIME	FROM/TO	ARM	A	ARM	B	ARM	C				
	16.45 - 17.00											
		ARM	A	0.000	0.305	0.695						
				0.0	400.0	912.0						
				(0.0)	(0.0)	(0.0)						
		ARM	B	0.000	0.000	1.000						
				0.0	0.0	4.0						
				(0.0)	(0.0)	(0.0)						
		ARM	C	0.000	0.000	0.000						
				0.0	0.0	0.0						
				(0.0)	(0.0)	(0.0)						

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Bouverie Rd west / Middleburg Square 2026 Do Min PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I I I 16.45-17.00							
I I B-A C	0.05	9.83	0.005	0.00	0.01	0.1	0.10
I I C-A	0.00						
I I C-B	0.00	5.80	0.000	0.00	0.00	0.0	0.00
I I A-B	5.02						
I I A-C	11.44						
I I I I .----- --							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.06	9.12	0.007		0.01	0.01	0.1		0.11
C-A	0.00								
C-B	0.00	5.24	0.000		0.00	0.00	0.0		0.00
A-B	5.99								
A-C	13.66								

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC	DELAY	AVERAGE	DELAY

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
17.15-17.30									
B-AC	0.07	8.13	0.009		0.01	0.01	0.1		0.12
C-A	0.00								
C-B	0.00	4.46	0.000		0.00	0.00	0.0		0.00
A-B	7.34								
A-C	16.74								

Page 12

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
17.45-18.00									
B-AC	0.06	9.12	0.007		0.01	0.01	0.1		0.11
C-A	0.00								
C-B	0.00	5.24	0.000		0.00	0.00	0.0		0.00
A-B	5.99								
A-C	13.66								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
18.00-18.15									
B-AC	0.05	9.83	0.005		0.01	0.01	0.1		0.10
C-A	0.00								
C-B	0.00	5.80	0.000		0.00	0.00	0.0		0.00
A-B	5.02								
A-C	11.44								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I
I	B-AC	I	5.5	I	3.7	I	0.6	I
I	C-A	I	0.0	I	0.0	I	0.11	I
I	C-B	I	0.0	I	0.0	I	0.0	I
I	A-B	I	550.6	I	367.0	I	0.00	I
I	A-C	I	1255.3	I	836.9	I	0.0	I
I	ALL	I	1811.4	I	1207.6	I	0.6	I
							0.00	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

Bouverie Rd west_Middleburg Square_2026 Do Min 01_001.vpo

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\
A260 Spitfire Way_A20_A260 Canterbury Rd\A260 Spitfire Way_A20_A260 2026 Do Min PM.vai"
(drive-on-the-left) at 08:52:57 on Tuesday, 9 November 2010

.FILE PROPERTIES

RUN TITLE: A260 Spitfire way / A260 Canterbury Rd / A20
LOCATION:
DATE: 09/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries taken from Hawkinge mixed use TA (downloaded
from SDC website)

A260 Spitfire Way_A20_A260 2026 Do Min PM.vao

.INPUT DATA

ARM A - A260 Canterbury Rd south

ARM B - A260 Spitfire way

ARM C - A260 Canterbury Rd north

ARM D - A20

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	4.60	I	6.60	I	19.10	I	13.70	I	41.70	I	21.0	I	0.673	I	31.064
I	ARM B	I	4.00	I	6.80	I	5.30	I	16.20	I	41.70	I	36.0	I	0.584	I	24.633
I	ARM C	I	3.90	I	6.70	I	21.10	I	20.30	I	41.70	I	45.0	I	0.619	I	28.100
I	ARM D	I	7.10	I	8.40	I	2.70	I	14.90	I	41.70	I	44.0	I	0.708	I	35.928

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

A260 Spitfire Way_A20_A260 2026 Do Min PM.vao

 .TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Min PM

I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I				
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.29	I	16.93	I	11.29	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	10.57	I	15.86	I	10.57	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.34	I	9.51	I	6.34	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	16.30	I	24.45	I	16.30	I

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Min PM

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D						
16.45 - 18.15												
		ARM A	0.000	0.633	0.299	0.068						
			0.0	572.0	270.0	61.0						
			(0.0)	(8.0)	(8.0)	(8.0)						
		ARM B	0.928	0.000	0.007	0.065						
			785.0	0.0	6.0	55.0						
			(11.0)	(0.0)	(60.0)	(13.0)						
		ARM C	0.951	0.008	0.000	0.041						
			482.0	4.0	0.0	21.0						
			(10.0)	(0.0)	(0.0)	(29.0)						
		ARM D	0.462	0.373	0.164	0.000						
			603.0	487.0	214.0	0.0						
			(9.0)	(11.0)	(14.0)	(0.0)						

I I I I I I I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

 --
 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 16.45-17.00
 I
 I ARM A 11.29 22.70 0.497 0.0 1.0 14.1 0.09
 I
 I ARM B 10.57 18.19 0.581 0.0 1.4 19.3 0.13
 I
 I ARM C 6.34 18.45 0.343 0.0 0.5 7.5 0.08
 I
 I ARM D 16.30 21.32 0.765 0.0 3.1 41.6 0.19
 I
 I
 I

 --
 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 17.00-17.15
 I
 I ARM A 13.48 21.85 0.617 1.0 1.6 22.7 0.12
 I
 I ARM B 12.63 17.51 0.721 1.4 2.5 34.4 0.20
 I
 I ARM C 7.57 17.08 0.443 0.5 0.8 11.4 0.10
 I
 I ARM D 19.46 19.11 1.018 3.1 19.8 194.5 0.83
 I

A260 Spitfire Way_A20_A260 2026 Do Min PM.vao

I
I

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.15-17.30									
I										
I	ARM A	16.51	22.62	0.730		1.6	2.6	36.6		0.16
I										
I	ARM B	15.47	17.09	0.905		2.5	7.2	87.6		0.46
I										
I	ARM C	9.27	15.36	0.604		0.8	1.5	21.0		0.16
I										
I	ARM D	23.84	16.27	1.465		19.8	133.5	1150.9		4.88
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM A	16.51	22.69	0.727		2.6	2.6	39.2		0.16
I										
I	ARM B	15.47	17.10	0.904		7.2	8.0	115.2		0.55
I										
I	ARM C	9.27	15.19	0.610		1.5	1.5	22.8		0.17
I										
I	ARM D	23.84	16.07	1.483		133.5	250.0	2876.5		11.23
I										
I										

A260 Spitfire Way_A20_A260 2026 Do Min PM.vao

I

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM A	13.48	21.69	0.622		2.6	1.7	26.4		0.12
I										
I	ARM B	12.63	17.45	0.724		8.0	2.7	48.4		0.24
I										
I	ARM C	7.57	16.82	0.450		1.5	0.8	12.9		0.11
I										
I	ARM D	19.46	18.79	1.036		250.0	260.2	3826.8		12.96
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I										
I	ARM A	11.29	20.83	0.542		1.7	1.2	18.6		0.11
I										
I	ARM B	10.57	17.68	0.598		2.7	1.5	24.1		0.14
I										
I	ARM C	6.34	18.34	0.346		0.8	0.5	8.2		0.08
I										
I	ARM D	16.30	21.17	0.770		260.2	188.4	3364.6		10.65
I										
I										
I										

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	2.6	***
17.45	2.6	***
18.00	1.7	**
18.15	1.2	*

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	2.5	**
17.30	7.2	*****
17.45	8.0	*****
18.00	2.7	***
18.15	1.5	**

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.8	*
17.30	1.5	*
17.45	1.5	**
18.00	0.8	*
18.15	0.5	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	3.1 ***
17.15	19.8 *****
17.30	133.5 *****
17.45	250.0 *****
18.00	260.2 *****
18.15	188.4 *****

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1238.2	825.5	157.6
B	1160.0	773.4	329.0
C	695.2	463.5	83.9
D	1788.1	1192.0	11454.9
ALL	4881.5	3254.3	12025.4

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\
A260 Spitfire Way_A20_A260 Canterbury Rd\A260 Spitfire Way_A20_A260 2026 Do Min AM.vai"
(drive-on-the-left) at 08:40:36 on Tuesday, 9 November 2010

.FILE PROPERTIES

RUN TITLE: A260 Spitfire way / A260 Canterbury Rd / A20
LOCATION:
DATE: 09/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries taken from Hawkinge mixed use TA (downloaded
from SDC website)

A260 Spitfire Way_A20_A260 2026 Do Min AM.vao

.INPUT DATA

ARM A - A260 Canterbury Rd south

ARM B - A260 Spitfire way

ARM C - A260 Canterbury Rd north

ARM D - A20

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	4.60	I	6.60	I	19.10	I	13.70	I	41.70	I	21.0	I	0.673	I	31.064
I	ARM B	I	4.00	I	6.80	I	5.30	I	16.20	I	41.70	I	36.0	I	0.584	I	24.633
I	ARM C	I	3.90	I	6.70	I	21.10	I	20.30	I	41.70	I	45.0	I	0.619	I	28.100
I	ARM D	I	7.10	I	8.40	I	2.70	I	14.90	I	41.70	I	44.0	I	0.708	I	35.928

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

A260 Spitfire Way_A20_A260 2026 Do Min AM.vao

 .TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Min AM

I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I				
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IF FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.25	I	10.88	I	7.25	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	16.16	I	24.24	I	16.16	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.51	I	11.27	I	7.51	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	9.39	I	14.08	I	9.39	I

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Min AM

		TURNING PROPORTIONS									
		TURNING COUNTS (VEH/HR)									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D					
07.45 - 09.15		ARM A	0.000 0.0 (0.0)	0.610 354.0 (12.0)	0.257 149.0 (18.0)	0.133 77.0 (10.0)					
		ARM B	0.909 1175.0 (10.0)	0.000 0.0 (0.0)	0.002 2.0 (0.0)	0.090 116.0 (12.0)					
		ARM C	0.917 551.0 (10.0)	0.002 1.0 (0.0)	0.000 0.0 (0.0)	0.082 49.0 (8.0)					
		ARM D	0.501 376.0 (15.0)	0.372 279.0 (18.0)	0.128 96.0 (27.0)	0.000 0.0 (0.0)					

I I I I I I I

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	7.25	24.10	0.301		0.0	0.4	6.3		0.06
I	ARM B	16.16	19.84	0.815		0.0	4.0	52.5		0.24
I	ARM C	7.51	15.13	0.497		0.0	1.0	13.8		0.13
I	ARM D	9.39	16.44	0.571		0.0	1.3	18.4		0.14
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	8.66	23.47	0.369		0.4	0.6	8.5		0.07
I	ARM B	19.30	19.35	0.997		4.0	16.7	174.8		0.75
I	ARM C	8.97	13.43	0.668		1.0	1.9	26.9		0.22
I	ARM D	11.21	14.02	0.800		1.3	3.6	47.4		0.32
I										

A260 Spitfire Way_A20_A260 2026 Do Min AM.vao

I
I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.15-08.30									
I	ARM A	10.60	23.01	0.461		0.6	0.8	12.4		0.08
I	ARM B	23.64	18.78	1.259		16.7	90.3	804.7		3.02
I	ARM C	10.99	13.09	0.839		1.9	4.5	57.7		0.41
I	ARM D	13.73	12.68	1.083		3.6	24.6	225.6		1.41
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM A	10.60	22.95	0.462		0.8	0.9	12.8		0.08
I										
I	ARM B	23.64	18.76	1.260		90.3	163.5	1903.3		6.83
I										
I	ARM C	10.99	13.08	0.840		4.5	4.8	70.2		0.46
I										
I	ARM D	13.73	12.58	1.091		24.6	43.0	508.4		2.89
I										
I										

A260 Spitfire Way_A20_A260 2026 Do Min AM.vao

I

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM A	8.66	22.71	0.381		0.9	0.6	9.5		0.07
I										
I	ARM B	19.30	19.16	1.007		163.5	166.1	2472.0		8.61
I										
I	ARM C	8.97	13.00	0.690		4.8	2.3	38.6		0.27
I										
I	ARM D	11.21	13.47	0.832		43.0	13.7	425.6		2.25
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I	ARM A	7.25	23.79	0.305		0.6	0.4	6.7		0.06
I	ARM B	16.16	19.76	0.818		166.1	114.0	2100.5		7.14
I	ARM C	7.51	12.80	0.587		2.3	1.5	23.2		0.19
I	ARM D	9.39	14.11	0.665		13.7	2.1	51.0		0.30
I										
I										
I										

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	0.8 *
08.45	0.9 *
09.00	0.6 *
09.15	0.4

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	4.0 ****
08.15	16.7 *****
08.30	90.3 *****
08.45	163.5 *****
09.00	166.1 *****
09.15	114.0 *****

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.0 *
08.15	1.9 **

A260 Spitfire Way_A20_A260 2026 Do Min AM.vao

08.30	4.5	****
08.45	4.8	*****
09.00	2.3	**
09.15	1.5	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.3	*
08.15	3.6	****
08.30	24.6	*****
08.45	43.0	*****
09.00	13.7	*****
09.15	2.1	**

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	795.3	I	530.2	I	56.2	I
I	B	I	1773.0	I	1182.0	I	4.23	I
I	C	I	824.1	I	549.4	I	0.28	I
I	D	I	1029.8	I	686.5	I	1.24	I
I	ALL	I	4422.2	I	2948.1	I	2.05	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Basic Results Summary

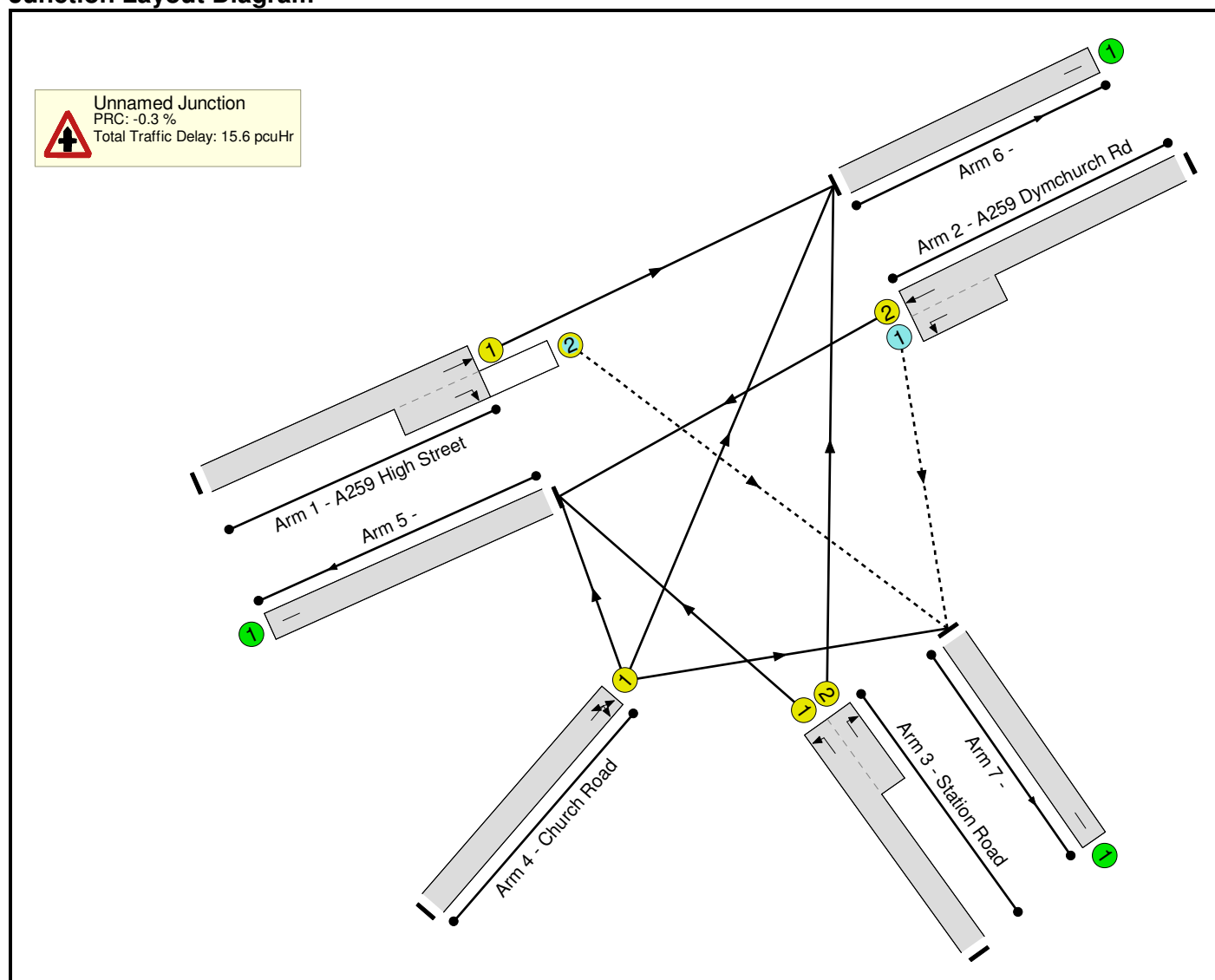
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	A259 High Street_Station Rd_stage 3 and 5 every other cycle 01_001.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base AM' (FG1: '2010 Base AM', Plan 1: 'Network Control Plan 1')

Junction Layout Diagram

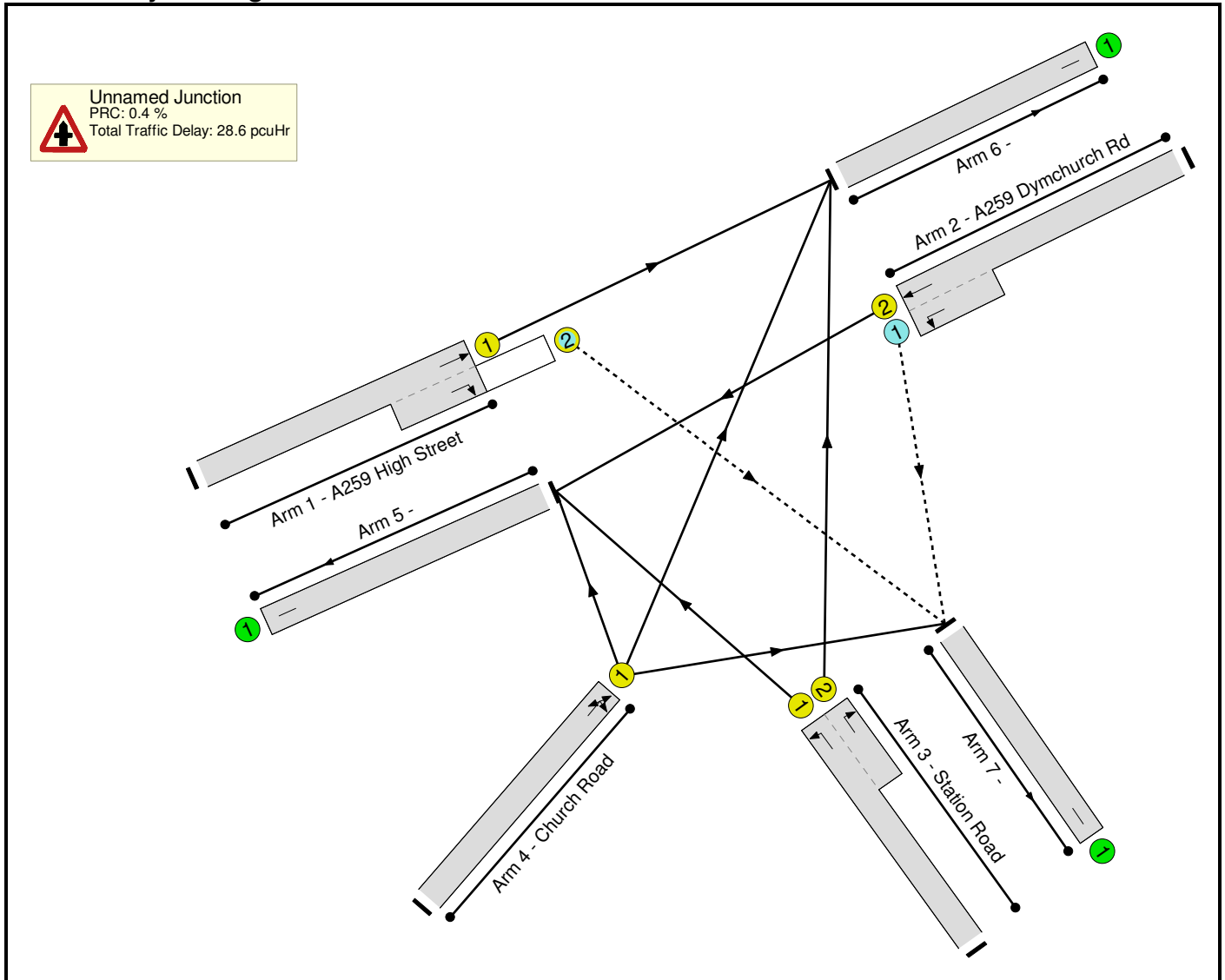


Basic Results Summary

Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	90.3%	15.6	-	-
Unnamed Junction	-	-	-	-	90.3%	15.6	-	-
1/1+1/2	A259 High Street Ahead Right	377	1940:1731	547	68.9%	3.1	29.8	5.4
2/2+2/1	A259 Dymchurch Rd Ahead Left	604	1965:1400	814	74.2%	2.9	17.2	5.3
3/1+3/2	Station Road Left Right	695	1754:1827	770	90.3%	7.8	40.2	9.8
4/1	Church Road U-Turn Ahead Right	60	1933	141	42.7%	1.2	71.0	2.1
5/1		562	1940	1940	29.0%	0.2	1.3	0.2
6/1		517	1940	1940	26.6%	0.2	1.3	0.2
7/1		657	1965	1965	33.4%	0.3	1.4	0.8
C1 PRC for Signalled Lanes (%): -0.3 PRC Over All Lanes (%): -0.3 Total Delay for Signalled Lanes (pcuHr): 14.96 Total Delay Over All Lanes(pcuHr): 15.59 Cycle Time (s): 110								

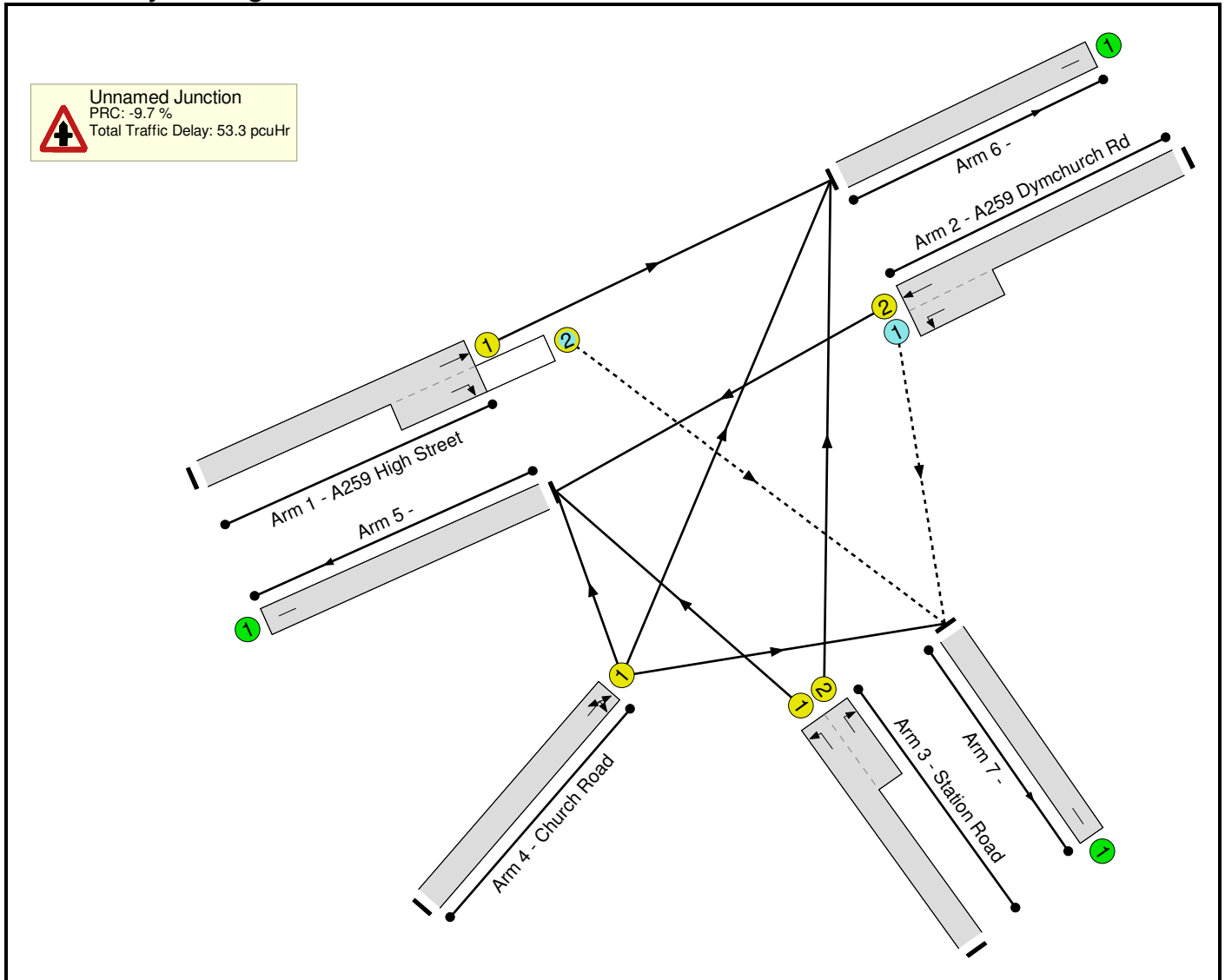
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	89.7%	28.6	-	-
Unnamed Junction	-	-	-	-	89.7%	28.6	-	-
1/1+1/2	A259 High Street Ahead Right	698	1940:1731	778	89.7%	10.4	53.8	25.5
2/2+2/1	A259 Dymchurch Rd Ahead Left	486	1965:1400	703	69.1%	3.5	25.7	6.1
3/1+3/2	Station Road Left Right	660	1754:1827	736	89.7%	10.1	55.4	21.2
4/1	Church Road U-Turn Ahead Right	60	1933	72	82.8%	3.8	225.9	5.8
5/1		422	1940	1940	21.8%	0.1	1.2	0.1
6/1		648	1940	1940	33.4%	0.3	1.4	0.3
7/1		834	1965	1965	42.4%	0.4	1.6	0.4
C1 PRC for Signalled Lanes (%): 0.4 PRC Over All Lanes (%): 0.4 Total Delay for Signalled Lanes (pcuHr): 27.81 Total Delay Over All Lanes(pcuHr): 28.57 Cycle Time (s): 240								

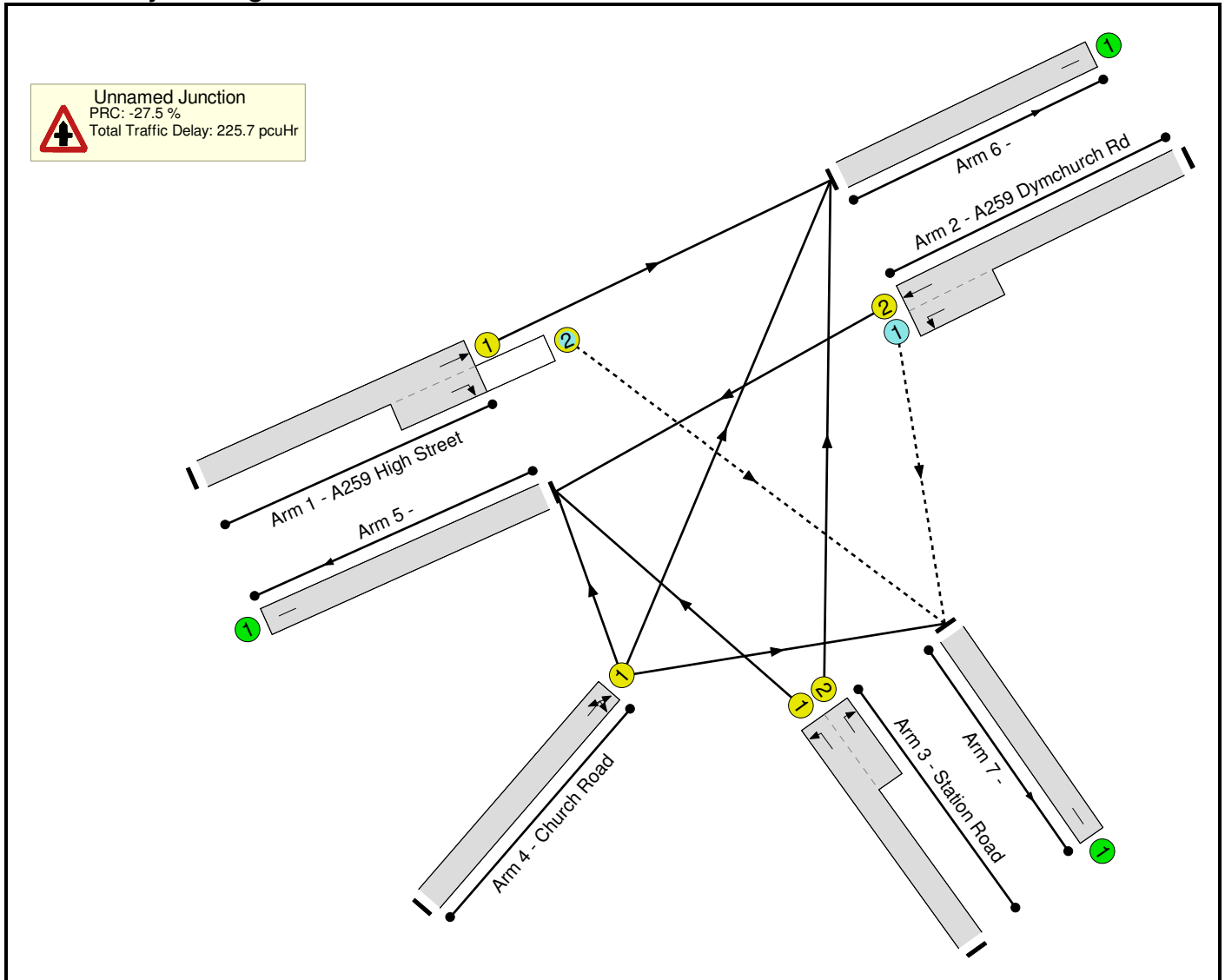
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	98.7%	53.3	-	-
Unnamed Junction	-	-	-	-	98.7%	53.3	-	-
1/1+1/2	A259 High Street Ahead Right	525	1940:1731	554	94.8%	11.6	79.8	20.3
2/2+2/1	A259 Dymchurch Rd Ahead Left	771	1965:1400	781	98.7%	17.2	80.5	42.3
3/1+3/2	Station Road Left Right	872	1754:1827	883	98.7%	20.7	85.6	35.3
4/1	Church Road U-Turn Ahead Right	60	1933	81	74.1%	2.8	167.0	4.4
5/1		713	1940	1940	36.8%	0.3	1.5	0.3
6/1		695	1940	1940	35.8%	0.3	1.4	0.3
7/1		820	1965	1965	41.7%	0.4	1.6	1.5
C1 PRC for Signalled Lanes (%): -9.7 PRC Over All Lanes (%): -9.7 Total Delay for Signalled Lanes (pcuHr): 52.39 Total Delay Over All Lanes(pcuHr): 53.32 Cycle Time (s): 191								

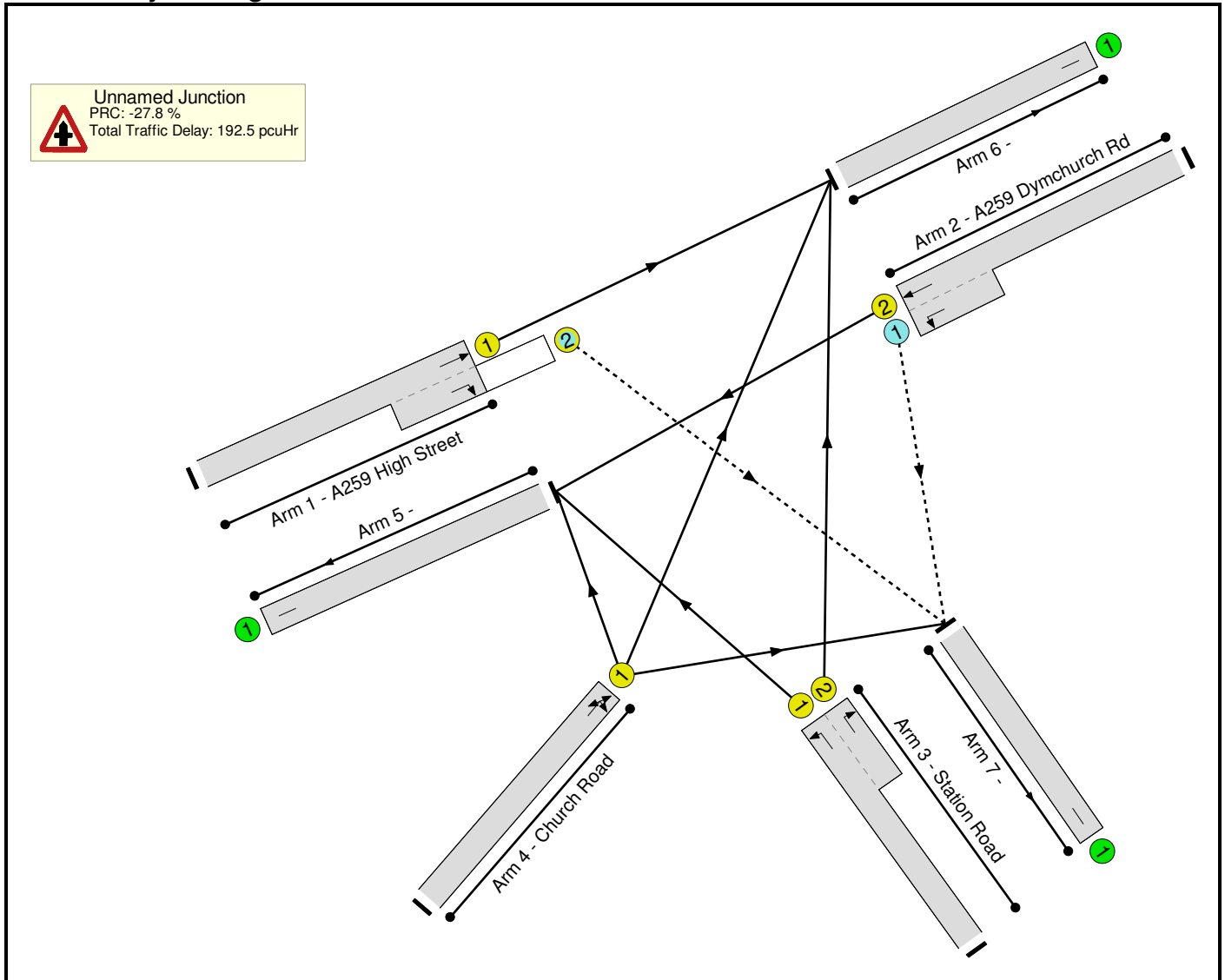
Junction Layout Diagram



Link Results

[illegible]

Junction Layout Diagram

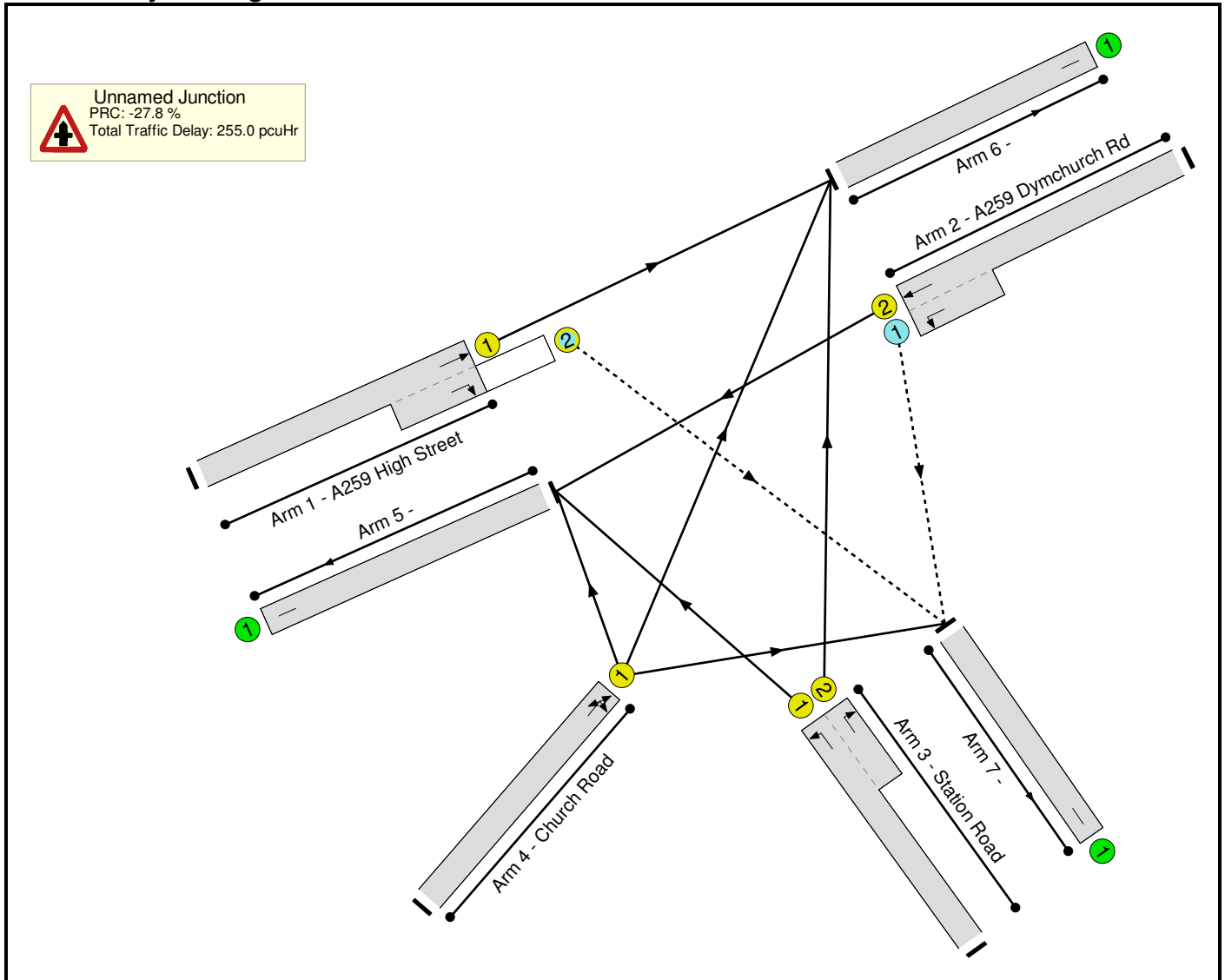


Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	115.0%	192.5	-	-
Unnamed Junction	-	-	-	-	115.0%	192.5	-	-
1/1+1/2	A259 High Street Ahead Right	589	1940:1731	590	99.8%	17.2	105.3	23.4
2/2+2/1	A259 Dymchurch Rd Ahead Left	967	1965:1400	841	115.0%	89.5	333.2	207.7
3/1+3/2	Station Road Left Right	808	1754:1827	703	114.9%	80.0	356.7	100.2
4/1	Church Road U-Turn Ahead Right	60	1933	64	93.1%	4.8	290.9	6.9
5/1		915	1940	1940	41.2%	0.3	1.4	0.3
6/1		748	1940	1940	35.7%	0.3	1.3	0.3
7/1		761	1965	1965	35.7%	0.3	1.3	3.1

C1 PRC for Signalled Lanes (%): -27.8 Total Delay for Signalled Lanes (pcuHr): 191.62
 PRC Over All Lanes (%): -27.8 Total Delay Over All Lanes(pcuHr): 192.53 Cycle Time (s): 240

Junction Layout Diagram



Basic Results Summary

Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	115.0%	255.0	-	-
Unnamed Junction	-	-	-	-	115.0%	255.0	-	-
1/1+1/2	A259 High Street Ahead Right	1063	1940:1731	925	115.0%	99.8	337.9	133.3
2/2+2/1	A259 Dymchurch Rd Ahead Left	750	1965:1400	654	114.7%	72.7	349.0	167.7
3/1+3/2	Station Road Left Right	761	1754:1827	662	115.0%	76.6	362.5	97.8
4/1	Church Road U-Turn Ahead Right	60	1933	64	93.1%	4.8	290.9	6.9
5/1		673	1940	1940	30.3%	0.2	1.2	0.2
6/1		1005	1940	1940	45.2%	0.4	1.5	0.4
7/1		956	1965	1965	42.5%	0.4	1.4	3.1
C1 PRC for Signalled Lanes (%): -27.8 PRC Over All Lanes (%): -27.8 Total Delay for Signalled Lanes (pcuHr): 253.96 Total Delay Over All Lanes(pcuHr): 254.96 Cycle Time (s): 240								

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\A20_Alkhams Valley\
A20_Alkhams Valley 2026 Do Min PM.vai"
(drive-on-the-left) at 16:14:12 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: A20 / Alkhams Valley
LOCATION:
DATE: 08/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries from Hawkings Mixed Use developmnet TA (Obtained
from SDC planning site)

A20_Alkham valley 2026 Do Min PM.vao

.INPUT DATA

ARM A - Alkham Valley Rd west

ARM B - A20 Onslip

ARM C - A20 Offslip

ARM D - Alkham Valley Rd east

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I ARM (PCU/MIN)	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I INTERCEPT

I ARM A	I	4.10	I	6.90	I	9.10	I	24.40	I	43.70	I	30.0	I	0.632	I 28.075
I ARM C	I	7.20	I	8.10	I	11.40	I	24.80	I	43.70	I	24.0	I	0.793	I 41.199
I ARM D	I	3.60	I	7.80	I	26.70	I	21.00	I	43.70	I	60.0	I	0.610	I 29.002

V = approach half-width

E = entry width

L = effective flare length

R = entry radius

D = inscribed circle diameter

PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW SCALE(%)	I

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I

A20_Alkhams valley 2026 Do Min PM.vao

 .TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Min PM

I	I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I				
			I	I	I		I	I	I					
											I	I	I	I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.56	I	23.34	I	15.56	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	1.94	I	2.91	I	1.94	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.85	I	7.27	I	4.85	I

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Min PM

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D						
	16.45 - 18.15											
		ARM A	0.000	0.451	0.000	0.549						
			0.0	561.0	0.0	684.0						
			(0.0)	(12.0)	(0.0)	(10.0)						
		ARM C	0.916	0.000	0.000	0.084						
			142.0	0.0	0.0	13.0						
			(10.0)	(0.0)	(0.0)	(18.0)						
		ARM D	0.379	0.621	0.000	0.000						
			147.0	241.0	0.0	0.0						
			(11.0)	(8.0)	(0.0)	(0.0)						

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

A20_Alkhram valley 2026 Do Min PM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	15.56	23.47	0.663		0.0	1.9	27.0		0.12
ARM C	1.94	30.55	0.063		0.0	0.1	1.0		0.03
ARM D	4.85	25.49	0.190		0.0	0.2	3.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	18.58	23.10	0.804		1.9	3.8	52.4		0.21
ARM C	2.31	29.24	0.079		0.1	0.1	1.3		0.04
ARM D	5.79	25.27	0.229		0.2	0.3	4.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

A20_Alkhram valley 2026 Do Min PM.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.15-17.30									
I ARM A	22.76	22.61	1.007		3.8	19.7	199.4		0.72
I ARM C	2.83	27.83	0.102		0.1	0.1	1.7		0.04
I ARM D	7.09	24.98	0.284		0.3	0.4	5.8		0.06
I									
I									

.									
I TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.30-17.45									
I ARM A	22.76	22.61	1.007		19.7	28.4	363.5		1.23
I ARM C	2.83	27.63	0.103		0.1	0.1	1.7		0.04
I ARM D	7.09	24.98	0.284		0.4	0.4	5.9		0.06
I									
I									

.									
I TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.45-18.00									

A20_Alkhram valley 2026 Do Min PM.vao

I	I	ARM A	18.58	23.10	0.804	28.4	4.5	147.4	0.48
I	I	ARM C	2.31	28.49	0.081	0.1	0.1	1.3	0.04
I	I	ARM D	5.79	25.27	0.229	0.4	0.3	4.5	0.05
I	I								
I	I								

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	18.00-18.15									
I	I	ARM A	15.56	23.46	0.663		4.5	2.0	32.4		0.13
I	I	ARM C	1.94	30.42	0.064		0.1	0.1	1.0		0.04
I	I	ARM D	4.85	25.48	0.190		0.3	0.2	3.6		0.05
I	I										
I	I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.9	**
17.15	3.8	*****
17.30	19.7	*****
17.45	28.4	*****
18.00	4.5	*****
18.15	2.0	**

A20_Alkham valley 2026 Do Min PM.vao

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1707.2	822.1	0.48
C	212.5	8.0	0.04
D	532.0	27.7	0.05
ALL	2451.7	857.9	0.35

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\A20_Alkhams Valley\
A20_Alkhams Valley 2026 Do Min AM.vai"
(drive-on-the-left) at 16:12:54 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: A20 / Alkhams Valley
LOCATION:
DATE: 08/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries from Hawkings Mixed Use developmnet TA (Obtained
from SDC planning site)

A20_Alkham valley 2026 Do Min AM.vao

.INPUT DATA

ARM A - Alkham Valley Rd west

ARM B - A20 Onslip

ARM C - A20 Offslip

ARM D - Alkham Valley Rd east

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	4.10	I	6.90	I	9.10	I	24.40	I	43.70	I	30.0	I	0.632	I	28.075
I	ARM C	I	7.20	I	8.10	I	11.40	I	24.80	I	43.70	I	24.0	I	0.793	I	41.199
I	ARM D	I	3.60	I	7.80	I	26.70	I	21.00	I	43.70	I	60.0	I	0.610	I	29.002
I		I															

V = approach half-width

E = entry width

L = effective flare length

R = entry radius

D = inscribed circle diameter

PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW SCALE(%)	I

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I

A20_Alkhams valley 2026 Do Min AM.vao

 .TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Min AM

I I I	I I I	NUMBER OF MINUTES FROM START WHEN			I RATE OF FLOW (VEH/MIN) I		
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
		I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I ARM A	I	15.00	I 45.00	I 75.00	I 15.11	I 22.67	I 15.11
I ARM C	I	15.00	I 45.00	I 75.00	I 1.30	I 1.95	I 1.30
I ARM D	I	15.00	I 45.00	I 75.00	I 10.06	I 15.09	I 10.06

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Min AM

		TURNING PROPORTIONS								
		TURNING COUNTS (VEH/HR)								
		(PERCENTAGE OF H.V.S)								

	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
	07.45 - 09.15									
		ARM A	0.000	0.758	0.000	0.242				
			0.0	916.0	0.0	293.0				
			(0.0)	(11.0)	(0.0)	(18.0)				
		ARM C	0.942	0.010	0.000	0.048				
			98.0	1.0	0.0	5.0				
			(19.0)	(0.0)	(0.0)	(0.0)				
		ARM D	0.294	0.706	0.000	0.000				
			237.0	568.0	0.0	0.0				
			(9.0)	(10.0)	(0.0)	(0.0)				

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

A20_Alkham valley 2026 Do Min AM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	15.11	20.55	0.736		0.0	2.7	36.3		0.17
ARM C	1.30	32.07	0.041		0.0	0.0	0.6		0.03
ARM D	10.06	25.62	0.393		0.0	0.6	9.4		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	18.05	19.68	0.917		2.7	8.1	98.1		0.44
ARM C	1.55	31.54	0.049		0.0	0.1	0.8		0.03
ARM D	12.02	25.46	0.472		0.6	0.9	13.0		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

A20_Alkhram valley 2026 Do Min AM.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.15-08.30									
I ARM A	22.10	18.52	1.194		8.1	63.7	545.3		2.14
I ARM C	1.90	31.41	0.061		0.1	0.1	1.0		0.03
I ARM D	14.72	25.24	0.583		0.9	1.4	20.0		0.09

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.30-08.45									
I ARM A	22.10	18.50	1.195		63.7	117.9	1362.1		4.97
I ARM C	1.90	31.39	0.061		0.1	0.1	1.0		0.03
I ARM D	14.72	25.24	0.583		1.4	1.4	20.8		0.10

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.45-09.00									

A20_Alkhram valley 2026 Do Min AM.vao

I										
I	ARM A	18.05	19.66	0.918		117.9	96.1	1604.9		5.47
I										
I	ARM C	1.55	31.19	0.050		0.1	0.1	0.8		0.03
I										
I	ARM D	12.02	25.46	0.472		1.4	0.9	13.9		0.07
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I										
I	ARM A	15.11	20.52	0.736		96.1	18.1	856.8		2.88
I										
I	ARM C	1.30	31.04	0.042		0.1	0.0	0.7		0.03
I										
I	ARM D	10.06	25.62	0.393		0.9	0.7	10.0		0.06
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT	NO. OF	
ENDING	VEHICLES	
	IN QUEUE	
08.00	2.7	***
08.15	8.1	*****
08.30	63.7	*****
08.45	117.9	*****
*****	*****	*****
09.00	96.1	

```
.QUEUE AT ARM C
```

08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

08.00	0.6	*
08.15	0.9	*
08.30	1.4	*
08.45	1.4	*
09.00	0.9	*
09.15	0.7	*

■

ARM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	QUEUEING (MIN)	DELAY (MIN/VEH)	INCLUSIVE QUEUEING (MIN)	DELAY (MIN/VEH)
A	1657.8	1105.2	4503.5	2.72	4511.5	2.72
C	142.6	95.1	4.8	0.03	4.8	0.03
D	1103.8	735.9	87.0	0.08	87.0	0.08

A20_Alkham valley 2026 Do Min AM.vao

I	ALL	I	2904.2	I	1936.2	I	4595.2	I	1.58	I	4603.2	I	1.59	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\A20_Stone Street\
A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpi"
(drive-on-the-left) at 10:40:33 on Tuesday, 2 November 2010

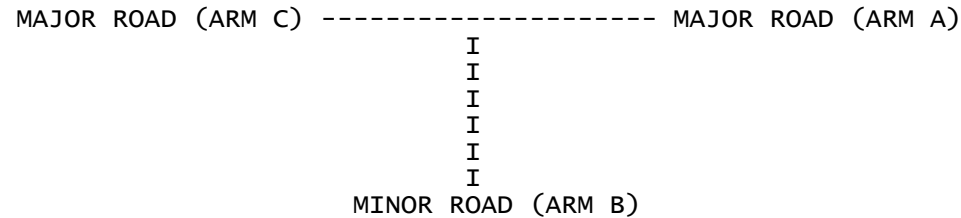
.RUN INFORMATION

RUN TITLE	: A20 Ashford Rd / Stone Street
LOCATION	:
DATE	: 24/09/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo



ARM A IS A20 Ashford Rd (north)
 ARM B IS Stone Street
 ARM C IS A20 Ashford Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 2 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	608.71	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I														
			I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE		I	AT TOP	I	AFTER										
																I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	9.55	I	14.33	I	9.55	I										
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.15	I	9.23	I	6.15	I										
I	ARM	C	I	15.00	I	45.00	I	75.00	I	6.03	I	9.04	I	6.03	I										

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Min AM

		I	TURNING PROPORTIONS								I		
		I	TURNING COUNTS								I		
		I	(PERCENTAGE OF H.V.S)								I		

	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I

I	07.45 - 08.00	I		I			I		I				I
I		I	ARM	A	I	0.000	I	0.165	I	0.835	I		I
I		I			I	0.0	I	126.0	I	638.0	I		I
I		I			I	(0.0)	I	(2.0)	I	(4.0)	I		I
I		I			I		I		I				I
I		I	ARM	B	I	0.951	I	0.000	I	0.049	I		I
I		I			I	468.0	I	0.0	I	24.0	I		I
I		I			I	(4.0)	I	(0.0)	I	(0.0)	I		I
I		I			I		I		I				I
I		I	ARM	C	I	0.992	I	0.008	I	0.000	I		I
I		I			I	478.0	I	4.0	I	0.0	I		I
I		I			I	(8.0)	I	(0.0)	I	(0.0)	I		I
I		I			I		I		I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Rd / Stone Street 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
	07.45-08.00									
	B-C	0.30	3.91	0.077		0.00	0.08	1.2		0.28
	B-A	5.87	7.09	0.829		0.00	3.82	45.4		0.61
	C-AB	0.05	8.21	0.006		0.00	0.01	0.1		0.12
	A-B	1.58								
	A-C	8.01								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	0.36	0.33	1.101		0.08	2.11	19.1		7.14
B-A	7.01	6.50	1.079		3.82	15.47	152.3		1.96
C-AB	0.06	7.83	0.008		0.01	0.01	0.1		0.13
A-B	1.89								
A-C	9.56								

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A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
08.15-08.30									
B-C	0.44	0.34	1.282		2.11	4.12	47.3		13.31
B-A	8.59	5.69	1.510		15.47	59.20	560.7		6.91
C-AB	0.07	7.31	0.010		0.01	0.01	0.2		0.14
A-B	2.31								
A-C	11.71								

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
08.30-08.45									
B-C	0.44	0.32	1.357		4.12	6.13	77.1		19.86
B-A	8.59	5.69	1.510		59.20	102.75	1214.7		13.57
C-AB	0.07	7.31	0.010		0.01	0.01	0.2		0.14
A-B	2.31								
A-C	11.71								

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00									
I	B-C	0.36	0.36	0.998		6.13	6.52	94.9		20.37
I	B-A	7.01	6.50	1.079		102.75	110.54	1599.6		16.49
I	C-AB	0.06	7.83	0.008		0.01	0.01	0.1		0.13
I	A-B	1.89								
I	A-C	9.56								

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15									
I	B-C	0.30	0.39	0.765		6.52	5.28	86.0		18.56
I	B-A	5.87	7.09	0.829		110.54	93.28	1528.6		14.52
I	C-AB	0.05	8.21	0.006		0.01	0.01	0.1		0.12
I	A-B	1.58								
I	A-C	8.01								

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

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WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.1	
08.15	2.1	**
08.30	4.1	****
08.45	6.1	*****
09.00	6.5	*****
09.15	5.3	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	3.8	****
08.15	15.5	*****
08.30	59.2	*****
08.45	102.7	*****
09.00	110.5	*****
09.15	93.3	*****

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

I		STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I		
I			I			I	* DELAY *		I	* DELAY *		I		
I			I			I			I			I		
I			I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I		
I	B-C	I	33.0	I	22.0	I	325.5	I	9.85	I	360.9	I	10.92	I
I	B-A	I	644.2	I	429.4	I	5101.3	I	7.92	I	5715.4	I	8.87	I
I	C-AB	I	5.5	I	3.7	I	0.7	I	0.13	I	0.7	I	0.13	I
I	A-B	I	173.4	I	115.6	I		I		I		I		I
I	A-C	I	878.2	I	585.4	I		I		I		I		I
I	ALL	I	2392.2	I	1594.8	I	5427.6	I	2.27	I	6077.0	I	2.54	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I

I 608.71 0.19 0.19 I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.43	I	14.14	I	9.43	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.10	I	3.15	I	2.10	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.48	I	15.71	I	10.48	I

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Min PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I		I		I		I		I		I	

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I          A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo
I      I ARM  A  I  0.000 I  0.450 I  0.550 I
I      I      I  0.0 I  339.0 I  415.0 I
I      I      I ( 0.0)I ( 1.0)I ( 7.0)I
I      I      I      I      I      I
I      I ARM  B  I  0.851 I  0.000 I  0.149 I
I      I      I  143.0 I  0.0 I  25.0 I
I      I      I ( 4.0)I ( 0.0)I ( 5.0)I
I      I      I      I      I      I
I      I ARM  C  I  0.959 I  0.041 I  0.000 I
I      I      I  804.0 I  34.0 I  0.0 I
I      I      I ( 2.0)I ( 0.0)I ( 0.0)I
I      I      I      I      I      I

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TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET AND FOR TIME PERIOD				A20 Ashford Rd / Stone Street 2026 Do Min PM 2						
TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
16.45-17.00										
B-C	0.31	8.35	0.038		0.00	0.04	0.6		0.12	
B-A	1.79	6.74	0.266		0.00	0.36	5.1		0.20	
C-AB	0.43	8.22	0.052		0.00	0.05	0.8		0.13	
A-B	4.25									
A-C	5.21									

[illegible]

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	0.46	6.82	0.067		0.05	0.07	1.0		0.16
B-A	2.62	5.22	0.503		0.53	0.96	13.4		0.38
C-AB	0.62	7.33	0.085		0.07	0.09	1.4		0.15
A-B	6.22								
A-C	7.62								

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.46	6.79	0.068		0.07	0.07	1.1		0.16
B-A	2.62	5.22	0.503		0.96	0.99	14.7		0.38
C-AB	0.62	7.33	0.085		0.09	0.09	1.4		0.15
A-B	6.22								
A-C	7.62								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	0.37	7.80	0.048		0.07	0.05	0.8		0.13
B-A	2.14	6.10	0.351		0.99	0.55	8.8		0.26
C-AB	0.51	7.85	0.065		0.09	0.07	1.1		0.14
A-B	5.08								
A-C	6.22								

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I	B-C	0.31	8.34	0.038		0.05	0.04	0.6		0.12
I	B-A	1.79	6.74	0.266		0.55	0.37	5.8		0.20
I	C-AB	0.43	8.22	0.052		0.07	0.06	0.8		0.13
I	A-B	4.25								
I	A-C	5.21								
I										
I										
I										

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

A20 Ashford Rd_Stone Street 2026 Do Min 01_001.vpo

17.00	0.4	
17.15	0.5	*
17.30	1.0	*
17.45	1.0	*
18.00	0.6	*
18.15	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	34.4	I 22.9	I 4.8	I 0.14	I 4.8	I 0.14
I	B-A	I	196.8	I 131.2	I 55.3	I 0.28	I 55.3	I 0.28
I	C-AB	I	46.8	I 31.2	I 6.5	I 0.14	I 6.5	I 0.14
I	A-B	I	466.6	I 311.1	I	I	I	I
I	A-C	I	571.2	I 380.8	I	I	I	I
I	ALL	I	2422.5	I 1615.0	I 66.6	I 0.03	I 66.6	I 0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

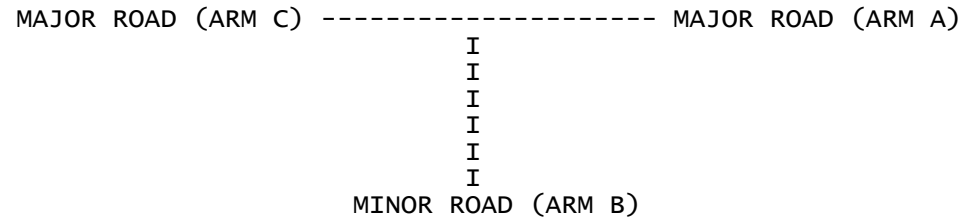
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\
A20 Ashford Rd_A261 Hythe Rd\A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpi"
(drive-on-the-left) at 10:34:06 on Tuesday, 2 November 2010

.RUN INFORMATION

RUN TITLE	: A20 Ashford Road / A261 Hythe Rd
LOCATION	:
DATE	: 24/09/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS A20 Ashford Rd (north)
 ARM B IS A261 Hythe Rd
 ARM C IS A20 Ashford Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 5.50 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 5.00 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 70.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 60.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	6.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	794.21	0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Min AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)			I						
			I	I	I	I	I	I	I							
											I	I	I	I	I	I
I		I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER	I							
I		I	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK	I							
I		I							I							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	10.59	I	15.88	I	10.59	I	
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.53	I	8.29	I	5.53	I	
I	ARM	C	I	15.00	I	45.00	I	75.00	I	11.84	I	17.76	I	11.84	I	

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Min AM

		TURNING PROPORTIONS									
		TURNING COUNTS									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM	A	ARM	B	ARM	C			
07.45 - 08.00											
		ARM A		0.000	0.314	0.686					
				0.0	266.0	581.0					
				(0.0)	(7.0)	(7.0)					
		ARM B		0.586	0.000	0.414					
				259.0	0.0	183.0					
				(12.0)	(0.0)	(0.0)					
		ARM C		0.806	0.194	0.000					
				763.0	184.0	0.0					
				(8.0)	(8.0)	(0.0)					

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Road / A261 Hythe Rd 2026 Do Min AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo										
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I	07.45-08.00									
I	B-C	2.30	6.35	0.362	0.00	0.55	7.7		0.24	
I	B-A	3.25	5.48	0.593	0.00	1.36	18.0		0.42	
I	C-A	9.57								
I	C-B	2.31	9.65	0.239	0.00	0.31	4.5		0.14	
I	A-B	3.34								
I	A-C	7.29								
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	B-C	2.74	3.82	0.717		0.55	2.14	26.6		0.78
I	B-A	3.88	4.44	0.875		1.36	4.36	50.5		1.11
I	C-A	11.43								
I	C-B	2.76	9.14	0.301		0.31	0.43	6.2		0.16
I	A-B	3.99								
I	A-C	8.71								
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A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.36	2.46	1.364		2.14	16.83	146.3		4.64
B-A	4.75	3.55	1.340		4.36	23.42	211.3		4.53
C-A	14.00								
C-B	3.38	8.45	0.400		0.43	0.65	9.4		0.20
A-B	4.88								
A-C	10.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.36	2.50	1.342		16.83	29.89	350.7		9.39
B-A	4.75	3.53	1.348		23.42	41.99	490.8		9.16
C-A	14.00								
C-B	3.38	8.45	0.400		0.65	0.66	9.8		0.20

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

I
I A-B 4.88
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I A-C 10.66
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.45-09.00									
I	B-C	2.74	2.96	0.925		29.89	28.01	434.3		9.80
I	B-A	3.88	4.18	0.928		41.99	38.95	607.1		9.63
I	C-A	11.43								
I	C-B	2.76	9.14	0.301		0.66	0.44	6.8		0.16
I	A-B	3.99								
I	A-C	8.71								
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TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I 09.00-09.15										
I										

		A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo							
I	B-C	2.30	3.29	0.697	28.01	14.75	320.7		6.88
I									
I	B-A	3.25	4.62	0.703	38.95	20.06	442.6		6.66
I									
I	C-A	9.57							
I									
I	C-B	2.31	9.65	0.239	0.44	0.32	4.9		0.14
I									
I	A-B	3.34							
I									
I	A-C	7.29							
I									
I									

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	2.1	**
08.30	16.8	*****
08.45	29.9	*****
09.00	28.0	*****
09.15	14.8	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.4	*
08.15	4.4	****
08.30	23.4	*****
08.45	42.0	*****
09.00	38.9	*****
09.15	20.1	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

08.15	0.4	
08.30	0.7	*
08.45	0.7	*
09.00	0.4	
09.15	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE *	I	QUEUEING *
I		I		I		I	* DELAY *	I	* DELAY *	I	
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I	(MIN/VEH)
I	B-C	I	251.9	I	167.9	I	1286.3	I	5.11	I	1319.3
I	B-A	I	356.5	I	237.7	I	1820.2	I	5.11	I	1863.7
I	C-A	I	1050.2	I	700.1	I		I		I	5.23
I	C-B	I	253.3	I	168.8	I	41.6	I	0.16	I	41.6
I	A-B	I	366.1	I	244.1	I		I		I	0.16
I	A-C	I	799.7	I	533.1	I		I		I	
I	ALL	I	3077.7	I	2051.8	I	3148.1	I	1.02	I	3224.6
I		I		I		I		I		I	1.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	I	Slope	I	For Opposing	I	Slope	I	For Opposing
I	STREAM	I	B-C	I	STREAM	I	A-C	I	STREAM
I		I		I		I		I	
I		I	0.00	I		I	0.00	I	
I		I		I		I		I	
I		I		I		I		I	

* Due to the presence of a flare, data is not available

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

I Intercept For I STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	I
I 0.00	I 0.00	I 0.00	I 0.00	I 0.00	I

* Due to the presence of a flare, data is not available

I Intercept For I STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
I 794.21	I 0.25	I 0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM	I FLOW	SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Min PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM	I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	RATE OF FLOW (VEH/MIN) I BEFORE I AT TOP I AFTER	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I ARM A	I	I 15.00 I 45.00 I 75.00	I	I 12.09 I 18.13 I 12.09	I
I ARM B	I	I 15.00 I 45.00 I 75.00	I	I 5.29 I 7.93 I 5.29	I
I ARM C	I	I 15.00 I 45.00 I 75.00	I	I 11.84 I 17.76 I 11.84	I

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Min PM

I	I	TURNING PROPORTIONS										I			
		TURNING COUNTS											I		
		(PERCENTAGE OF H.V.S)												I	
															I
TIME		I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C			
I	16.45 - 17.00	I		I		I		I		I		I			
I		I	ARM	A	I	0.000	I	0.402	I	0.598	I		I		
I		I			I	0.0	I	389.0	I	578.0	I		I		
I		I			I	(0.0)	I	(3.0)	I	(7.0)	I		I		
I		I			I		I		I		I		I		
I		I	ARM	B	I	0.582	I	0.000	I	0.418	I		I		
I		I			I	246.0	I	0.0	I	177.0	I		I		
I		I			I	(5.0)	I	(0.0)	I	(0.0)	I		I		
I		I			I		I		I		I		I		
I		I	ARM	C	I	0.653	I	0.347	I	0.000	I		I		
I		I			I	618.0	I	329.0	I	0.0	I		I		
I		I			I	(4.0)	I	(1.0)	I	(0.0)	I		I		
I		I			I		I		I		I		I		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Road / A261 Hythe Rd 2026 Do Min PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	B-C	2.22	6.56	0.339		0.00	0.50	7.0		0.23
I	B-A	3.09	5.58	0.553		0.00	1.17	15.6		0.38
I	C-A	7.75								
I	C-B	4.13	9.97	0.414		0.00	0.69	9.8		0.17

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo

I A-B 4.88

I

I A-C 7.25

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I

I 17.00-17.15

I

I	B-C	2.65	4.23	0.627		0.50	1.52	19.9		0.59

I

I	B-A	3.69	4.47	0.824		1.17	3.45	41.6		0.94

I

I	C-A	9.26								

I

I	C-B	4.93	9.36	0.526		0.69	1.08	15.3		0.22

I

I	A-B	5.83								

I

I	A-C	8.66								

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

I

I 17.15-17.30

I

I	B-C	3.25	2.40	1.353		1.52	15.70	134.2		4.39

Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration	Iteration
1	B-A	4.51	3.40	1.327	3.45	21.32	189.4	4.29
2	C-A	11.34						
3	C-B	6.04	8.52	0.708	1.08	2.24	30.2	0.38
4	A-B	7.14						
5	A-C	10.61						
6								
7								
8								
9								
10								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.25	2.44	1.333		15.70	28.11	328.9		9.01
B-A	4.51	3.37	1.341		21.32	38.71	450.5		8.78
C-A	11.34								
C-B	6.04	8.52	0.708		2.24	2.33	34.4		0.40
A-B	7.14								
A-C	10.61								

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I	(VEH/MIN)	(VEH/MIN)	A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.45-18.00									
I	B-C	2.65	2.97	0.893		28.11	24.90	397.6		8.95
I	B-A	3.69	4.11	0.897		38.71	33.91	544.7		8.79
I	C-A	9.26								
I	C-B	4.93	9.36	0.526		2.33	1.15	18.5		0.23
I	A-B	5.83								
I	A-C	8.66								
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 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	1.5	**
17.30	15.7	*****
17.45	28.1	*****
18.00	24.9	*****
18.15	9.5	*****

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 QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	3.5	***
17.30	21.3	*****
17.45	38.7	*****
18.00	33.9	*****
18.15	12.4	*****

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 QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.1	*
17.30	2.2	**
17.45	2.3	**
18.00	1.1	*
18.15	0.7	*

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 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	

A20 Ashford Rd_A261 Hythe Rd 2026 Do Min 01_001.vpo														
I	B-C	I	243.6	I	162.4	I	1145.6	I	4.70	I	1158.9	I	4.76	I
I	B-A	I	338.6	I	225.7	I	1588.9	I	4.69	I	1605.3	I	4.74	I
I	C-A	I	850.6	I	567.1	I		I		I		I		I
I	C-B	I	452.8	I	301.9	I	119.5	I	0.26	I	119.5	I	0.26	I
I	A-B	I	535.4	I	357.0	I		I		I		I		I
I	A-C	I	795.6	I	530.4	I		I		I		I		I

I	ALL	I	3216.7	I	2144.5	I	2853.9	I	0.89	I	2883.7	I	0.90	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Southern Rb\M20 Junction 13 southern RB_2026 Do Min PM 01_001.vai"
(drive-on-the-left) at 10:24:31 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 southern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

ARM A - M20 westbound exit slip
 ARM B - Churchill Avenue
 ARM C - Cherry Garden Lane
 ARM D - M20 westbound entry slip
 ARM E - A20 north

.GEOMETRIC DATA

ARM D IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	8.00	I	11.00	I	17.00	I	13.50	I	61.00	I	47.0	I	0.711	I	45.949
I	ARM B	I	5.00	I	11.00	I	33.00	I	57.00	I	61.00	I	34.0	I	0.730	I	45.198
I	ARM C	I	6.00	I	8.00	I	15.00	I	61.00	I	61.00	I	51.0	I	0.619	I	35.884
I	ARM E	I	7.00	I	8.50	I	9.00	I	32.00	I	61.00	I	44.0	I	0.654	I	39.072
I																	

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM B: Effective flare length is outside normal range.
 Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

 I ARM I FLOW SCALE(%) I

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 Do Min PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IF FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.84	I	8.76	I	5.84	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	16.10	I	24.15	I	16.10	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.50	I	18.75	I	12.50	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	12.55	I	18.83	I	12.55	I

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 Do Min PM

I	TURNING PROPORTIONS										I			
I	TURNING COUNTS (VEH/HR)										I			
I	(PERCENTAGE OF H.V.S)										I			
I											I			
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	16.45 - 18.15	I		I		I		I		I		I		I
I		I	ARM A	I	0.000	I	0.169	I	0.809	I	0.000	I	0.021	I
I		I		I	0.0	I	79.0	I	378.0	I	0.0	I	10.0	I
I		I		I	(0.0)	I	(3.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.383	I	0.479	I	0.138	I
I		I		I	0.0	I	0.0	I	493.0	I	617.0	I	178.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.000	I	0.449	I	0.000	I	0.000	I	0.551	I
I		I		I	0.0	I	449.0	I	0.0	I	0.0	I	551.0	I

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	(1.0)	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	ARM E	I	0.000	I	0.629	I	0.363	I	0.008	I	0.000	I
I	I	I	I	0.0	I	632.0	I	364.0	I	8.0	I	0.0	I
I	I	I	I	(0.0)	I	(0.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	5.84	32.61	0.179		0.0	0.2	3.2		0.04
ARM B	16.10	37.85	0.425		0.0	0.7	10.8		0.05
ARM C	12.50	29.36	0.426		0.0	0.7	10.8		0.06
ARM E	12.55	35.29	0.356		0.0	0.5	8.1		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	6.97	30.10	0.232		0.2	0.3	4.4		0.04
ARM B	19.22	36.50	0.527		0.7	1.1	16.2		0.06

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

I										
I	ARM C	14.93	28.12	0.531		0.7	1.1	16.3		0.08
I										
I	ARM E	14.99	34.57	0.433		0.5	0.8	11.2		0.05
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.15-17.30									
I										
I	ARM A	8.54	26.70	0.320		0.3	0.5	6.9		0.06
I										
I	ARM B	23.55	34.64	0.680		1.1	2.1	29.9		0.09
I										
I	ARM C	18.28	26.43	0.692		1.1	2.2	31.1		0.12
I										
I	ARM E	18.35	33.60	0.546		0.8	1.2	17.4		0.07
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM A	8.54	26.66	0.320		0.5	0.5	7.0		0.06
I										
I	ARM B	23.55	34.63	0.680		2.1	2.1	31.4		0.09
I										

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

I	ARM C	18.28	26.40	0.692	2.2	2.2	33.1	0.12
I	ARM E	18.35	33.58	0.547	1.2	1.2	17.9	0.07

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.45-18.00

I	ARM A	6.97	30.04	0.232		0.5	0.3	4.6		0.04
I	ARM B	19.22	36.48	0.527		2.1	1.1	17.3		0.06
I	ARM C	14.93	28.08	0.532		2.2	1.1	17.8		0.08
I	ARM E	14.99	34.54	0.434		1.2	0.8	11.8		0.05

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 18.00-18.15

I	ARM A	5.84	32.55	0.179		0.3	0.2	3.3		0.04
I	ARM B	16.10	37.83	0.426		1.1	0.7	11.4		0.05
I	ARM C	12.50	29.33	0.426		1.1	0.7	11.5		0.06

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

I
I ARM E 12.55 35.26 0.356 0.8 0.6 8.5 0.04
I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.1 *
17.30	2.1 **
17.45	2.1 **
18.00	1.1 *
18.15	0.7 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *

M20 Junction 13 southern RB_2026 Do Min PM 01_001.vao

17.15	1.1	*
17.30	2.2	**
17.45	2.2	**
18.00	1.1	*
18.15	0.7	*

.QUEUE AT ARM E

TIME SEGMENT
ENDING

NO. OF
VEHICLES
IN QUEUE

17.00	0.5	*
17.15	0.8	*
17.30	1.2	*
17.45	1.2	*
18.00	0.8	*
18.15	0.6	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	640.4	I	426.9	I	29.5	I	0.05
I	B	I	1766.1	I	1177.4	I	117.1	I	0.07
I	C	I	1371.2	I	914.1	I	120.5	I	0.09
I	E	I	1376.7	I	917.8	I	74.9	I	0.05
I	ALL	I	5154.4	I	3436.3	I	342.1	I	0.07

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Southern Rb\M20 Junction 13 southern RB_2026 Do Something PM 01_001.vai"
(drive-on-the-left) at 15:23:25 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 southern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

ARM A - M20 westbound exit slip
 ARM B - Churchill Avenue
 ARM C - Cherry Garden Lane
 ARM D - M20 westbound entry slip
 ARM E - A20 north

.GEOMETRIC DATA

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	8.00	I	11.00	I	17.00	I	13.50	I	61.00	I	47.0	I	0.711	I	45.949
	I																	
I	ARM	B	I	5.00	I	11.00	I	33.00	I	57.00	I	61.00	I	34.0	I	0.730	I	45.198
	I																	
I	ARM	C	I	6.00	I	8.00	I	15.00	I	61.00	I	61.00	I	51.0	I	0.619	I	35.884
	I																	
I	ARM	E	I	7.00	I	8.50	I	9.00	I	32.00	I	61.00	I	44.0	I	0.654	I	39.072
	I																	

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM B: Effective flare length is outside normal range.
 Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

 I ARM I FLOW SCALE(%) I

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I
I E	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 Do Something PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP	I	AFTER	I		
I		I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK	I	PEAK	I		
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.44	I	8.16	I	5.44	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	14.98	I	22.46	I	14.98	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.65	I	17.47	I	11.65	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	13.23	I	19.84	I	13.23	I

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 Do Something PM

I	TURNING PROPORTIONS										I			
I	TURNING COUNTS (VEH/HR)										I			
I	(PERCENTAGE OF H.V.S)										I			
I	-----										I			
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I
I	16.45 - 18.15	I		I		I		I		I		I		I
I		I	ARM A	I	0.000	I	0.168	I	0.811	I	0.000	I	0.021	I
I		I		I	0.0	I	73.0	I	353.0	I	0.0	I	9.0	I
I		I		I	(0.0)	I	(3.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.381	I	0.482	I	0.137	I
I		I		I	0.0	I	0.0	I	457.0	I	577.0	I	164.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	(0.0)	I
I		I		I		I		I		I		I		I
I		I	ARM C	I	0.000	I	0.446	I	0.000	I	0.000	I	0.554	I
I		I		I	0.0	I	416.0	I	0.0	I	0.0	I	516.0	I

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	(1.0)	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	ARM E	I	0.000	I	0.619	I	0.373	I	0.008	I	0.000	I
I	I	I	I	0.0	I	655.0	I	395.0	I	8.0	I	0.0	I
I	I	I	I	(0.0)	I	(0.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	5.44	32.42	0.168		0.0	0.2	3.0		0.04
ARM B	14.98	37.81	0.396		0.0	0.7	9.6		0.04
ARM C	11.65	29.78	0.391		0.0	0.6	9.4		0.05
ARM E	13.23	35.55	0.372		0.0	0.6	8.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	6.49	29.88	0.217		0.2	0.3	4.1		0.04
ARM B	17.88	36.44	0.491		0.7	1.0	14.1		0.05

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

I	ARM C	13.91	28.63	0.486		0.6	0.9	13.7		0.07
I	ARM E	15.79	34.89	0.453		0.6	0.8	12.1		0.05
I										
I										
I										

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.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	7.95	26.42	0.301		0.3	0.4	6.3		0.05
I	ARM B	21.90	34.58	0.633		1.0	1.7	24.6		0.08
I	ARM C	17.04	27.05	0.630		0.9	1.7	24.1		0.10
I	ARM E	19.34	33.98	0.569		0.8	1.3	19.1		0.07
I										
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	7.95	26.38	0.301		0.4	0.4	6.4		0.05
I	ARM B	21.90	34.56	0.634		1.7	1.7	25.7		0.08
I										

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

I	ARM C	17.04	27.03	0.630	1.7	1.7	25.2	0.10
I	ARM E	19.34	33.97	0.569	1.3	1.3	19.7	0.07

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.45-18.00

I	ARM A	6.49	29.83	0.218		0.4	0.3	4.3		0.04
I	ARM B	17.88	36.42	0.491		1.7	1.0	14.9		0.05
I	ARM C	13.91	28.60	0.486		1.7	1.0	14.8		0.07
I	ARM E	15.79	34.87	0.453		1.3	0.8	12.8		0.05

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 18.00-18.15

I	ARM A	5.44	32.36	0.168		0.3	0.2	3.1		0.04
I	ARM B	14.98	37.78	0.396		1.0	0.7	10.1		0.04
I	ARM C	11.65	29.76	0.391		1.0	0.6	9.9		0.06

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

I
I ARM E 13.23 35.53 0.372 0.8 0.6 9.1 0.04
I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 *
17.30	1.7 **
17.45	1.7 **
18.00	1.0 *
18.15	0.7 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *

M20 Junction 13 southern RB_2026 Do Something PM 01_001.vao

17.15	0.9	*
17.30	1.7	**
17.45	1.7	**
18.00	1.0	*
18.15	0.6	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	0.6	*
17.15	0.8	*
17.30	1.3	*
17.45	1.3	*
18.00	0.8	*
18.15	0.6	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	I	I	I	I	I	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	596.5	I	397.7	I	27.2	I	0.05	I
I	B	I	1642.7	I	1095.1	I	99.0	I	0.06	I
I	C	I	1278.0	I	852.0	I	97.0	I	0.08	I
I	E	I	1450.7	I	967.2	I	81.4	I	0.06	I
I	ALL	I	4967.9	I	3311.9	I	304.6	I	0.06	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Southern Rb\M20 Junction 13 southern RB_2026 Do Something AM 01_001.vai"
(drive-on-the-left) at 15:21:05 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 southern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

ARM A - M20 westbound exit slip
 ARM B - Churchill Avenue
 ARM C - Cherry Garden Lane
 ARM D - M20 westbound entry slip
 ARM E - A20 north

.GEOMETRIC DATA

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	8.00	I	11.00	I	17.00	I	13.50	I	61.00	I	47.0	I	0.711	I	45.949
	I																
I	ARM B	I	5.00	I	11.00	I	33.00	I	57.00	I	61.00	I	34.0	I	0.730	I	45.198
	I																
I	ARM C	I	6.00	I	8.00	I	15.00	I	61.00	I	61.00	I	51.0	I	0.619	I	35.884
	I																
I	ARM E	I	7.00	I	8.50	I	9.00	I	32.00	I	61.00	I	44.0	I	0.654	I	39.072
	I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

WARNING ARM B: Effective flare length is outside normal range.
 Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 AM Do Something

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	BEFORE	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK
I	I	I	I	I	IFALLING	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	8.19	I	12.28
I	ARM B	I	15.00	I	45.00	I	12.75	I	19.13
I	ARM C	I	15.00	I	45.00	I	8.99	I	13.48
I	ARM E	I	15.00	I	45.00	I	15.05	I	22.58

DEMAND SET TITLE: M20 Junction 13 southern Rb 2026 AM Do Something

I	I	TURNING PROPORTIONS								I
I	I	TURNING COUNTS (VEH/HR)								I
I	I	(PERCENTAGE OF H.V.S)								I
I	I	-----								I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	I	I	I	I	I	I	I	I	I	I
I	07.45 - 09.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.156	I	0.800	I
I		I		I	0.0	I	102.0	I	0.0	I
I		I		I	(0.0)	I	(2.0)	I	(1.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.383	I
I		I		I	0.0	I	0.0	I	391.0	I
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.000	I	0.474	I	0.000	I
I		I		I	0.0	I	341.0	I	0.0	I

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

I	I	I	(0.0)	I	(2.0)	I	(0.0)	I	(0.0)	I	(2.0)	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	ARM E	I	0.000	I	0.399	I	0.600	I	0.001	I	0.000	I
I	I	I	I	0.0	I	480.0	I	723.0	I	1.0	I	0.0	I
I	I	I	I	(0.0)	I	(3.0)	I	(1.0)	I	(0.0)	I	(0.0)	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	8.19	31.54	0.260		0.0	0.3	5.1		0.04
ARM B	12.75	32.25	0.395		0.0	0.7	9.5		0.05
ARM C	8.99	29.92	0.300		0.0	0.4	6.3		0.05
ARM E	15.05	35.60	0.423		0.0	0.7	10.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	9.78	28.84	0.339		0.3	0.5	7.5		0.05
ARM B	15.22	30.02	0.507		0.7	1.0	14.9		0.07

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I	ARM C	10.73	28.89	0.371	0.4	0.6	8.7	0.05
I	ARM E	17.97	35.05	0.513	0.7	1.0	15.3	0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	11.97	25.16	0.476		0.5	0.9	13.1		0.08
ARM B	18.65	26.99	0.691		1.0	2.2	30.9		0.12
ARM C	13.14	27.50	0.478		0.6	0.9	13.3		0.07
ARM E	22.01	34.30	0.642		1.0	1.8	25.5		0.08

I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	11.97	25.12	0.477		0.9	0.9	13.6		0.08
ARM B	18.65	26.96	0.692		2.2	2.2	33.0		0.12

I

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

I	ARM C	13.14	27.47	0.479	0.9	0.9	13.7	0.07
I								
I	ARM E	22.01	34.30	0.642	1.8	1.8	26.6	0.08
I								
I								

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
I									AVERAGE DELAY
I									PER ARRIVING
I									VEHICLE (MIN)
I	08.45-09.00								
I									
I	ARM A	9.78	28.78	0.340		0.9	0.5	7.9	0.05
I									
I	ARM B	15.22	29.97	0.508		2.2	1.0	16.2	0.07
I									
I	ARM C	10.73	28.85	0.372		0.9	0.6	9.1	0.06
I									
I	ARM E	17.97	35.04	0.513		1.8	1.1	16.3	0.06
I									
I									
I									

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
I									AVERAGE DELAY
I									PER ARRIVING
I									VEHICLE (MIN)
I	09.00-09.15								
I									
I	ARM A	8.19	31.48	0.260		0.5	0.4	5.4	0.04
I									
I	ARM B	12.75	32.19	0.396		1.0	0.7	10.1	0.05
I									
I	ARM C	8.99	29.90	0.301		0.6	0.4	6.6	0.05

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

I
I ARM E 15.05 35.58 0.423 1.1 0.7 11.3 0.05
I
I
I

.QUEUE AT ARM A

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

08.00	0.3	
08.15	0.5	*
08.30	0.9	*
08.45	0.9	*
09.00	0.5	*
09.15	0.4	

.QUEUE AT ARM B

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

08.00	0.7	*
08.15	1.0	*
08.30	2.2	**
08.45	2.2	**
09.00	1.0	*
09.15	0.7	*

.QUEUE AT ARM C

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

08.00	0.4	

M20 Junction 13 southern RB_2026 Do Something AM 01_001.vao

08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.4	

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.8	**
08.45	1.8	**
09.00	1.1	*
09.15	0.7	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	I	I	I	I	I	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	898.1	I	598.8	I	52.6	I	0.06	I
I	B	I	1398.6	I	932.4	I	114.6	I	0.08	I
I	C	I	985.9	I	657.3	I	57.6	I	0.06	I
I	E	I	1650.9	I	1100.6	I	105.7	I	0.06	I
I	ALL	I	4933.6	I	3289.1	I	330.5	I	0.07	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2026 Do Something PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 12\
M20 junction 12_2026 Do Something PM 01_001.vai"
(drive-on-the-left) at 15:07:22 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 12
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 junction 12_2026 Do Something PM 01_001.vao

ARM A - M20 eastbound entry slip
 ARM B - M20 westbound exit slip
 ARM C - A20 (south)
 ARM D - M20 westbound entry slip
 ARM E - M20 eastbound exit slip
 ARM F - A20 (north)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)																	

I	ARM B	I	7.00	I	7.00	I	0.00	I	113.00	I	125.00	I	7.0	I	0.565	I	39.594
I	ARM C	I	7.00	I	10.00	I	13.00	I	41.00	I	125.00	I	43.0	I	0.565	I	43.181
I	ARM E	I	7.00	I	7.00	I	0.00	I	32.00	I	125.00	I	22.0	I	0.528	I	36.980
I	ARM F	I	5.50	I	8.00	I	13.00	I	57.00	I	125.00	I	37.0	I	0.510	I	35.856

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

.-----
 I ARM I FLOW SCALE(%) I

M20 junction 12_2026 Do Something PM 01_001.vao

I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 12 2026 Do Something PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I	I	I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	12.24	I	18.36	I	12.24	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	19.09	I	28.63	I	19.09	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	9.49	I	14.23	I	9.49	I
I	ARM F	I	15.00	I	45.00	I	75.00	I	5.96	I	8.94	I	5.96	I

DEMAND SET TITLE: M20 Junction 12 2026 Do Something PM

I	TURNING PROPORTIONS														I	
I	TURNING COUNTS (VEH/HR)														I	
I	(PERCENTAGE OF H.V.S)														I	
I															I	
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I
I	16.45 - 18.15	I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.670	I	0.000	I	0.000	I	0.330	I
I		I		I	0.0	I	0.0	I	656.0	I	0.0	I	0.0	I	323.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I		I		I		I
I		I	ARM C	I	0.525	I	0.000	I	0.000	I	0.390	I	0.000	I	0.085	I
I		I		I	801.0	I	0.0	I	0.0	I	596.0	I	0.0	I	130.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I		I		I

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I	I	ARM E	I	0.000	I	0.000	I	0.954	I	0.000	I	0.000	I	0.046	I
I	I		I	0.0	I	0.0	I	724.0	I	0.0	I	0.0	I	35.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(4.0)	I
I	I		I		I		I		I		I		I		I
I	I	ARM F	I	0.335	I	0.000	I	0.589	I	0.075	I	0.000	I	0.000	I
I	I		I	160.0	I	0.0	I	281.0	I	36.0	I	0.0	I	0.0	I
I	I		I	(4.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM B	12.24	32.16	0.380		0.0	0.6	9.0		0.05
I	ARM C	19.09	40.63	0.470		0.0	0.9	12.9		0.05
I	ARM E	9.49	28.66	0.331		0.0	0.5	7.2		0.05
I	ARM F	5.96	25.82	0.231		0.0	0.3	4.4		0.05

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	ARM B	14.61	30.73	0.476		0.6	0.9	13.2		0.06

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I
I ARM C      22.79    40.13    0.568          0.9    1.3    19.1          0.06
I
I ARM E      11.33    27.04    0.419          0.5    0.7    10.5          0.06
I
I ARM F       7.12    23.94    0.297          0.3    0.4     6.2          0.06
I
I
I

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I  TIME          DEMAND  CAPACITY  DEMAND/  PEDESTRIAN  START  END      DELAY      GEOMETRIC DELAY  AVERAGE DELAY
I          (VEH/MIN) (VEH/MIN) CAPACITY  FLOW      QUEUE  QUEUE    (VEH.MIN/  (VEH.MIN/  PER ARRIVING
I          (RFC)      (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 17.15-17.30
I
I ARM B      17.90    28.77    0.622          0.9    1.6    23.4          0.09
I
I ARM C      27.91    39.45    0.708          1.3    2.4    34.1          0.09
I
I ARM E      13.88    24.84    0.559          0.7    1.2    18.1          0.09
I
I ARM F       8.72    21.38    0.408          0.4    0.7    10.0          0.08
I
I
I

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I  TIME          DEMAND  CAPACITY  DEMAND/  PEDESTRIAN  START  END      DELAY      GEOMETRIC DELAY  AVERAGE DELAY
I          (VEH/MIN) (VEH/MIN) CAPACITY  FLOW      QUEUE  QUEUE    (VEH.MIN/  (VEH.MIN/  PER ARRIVING
I          (RFC)      (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT)  VEHICLE (MIN)
I
I 17.30-17.45
I
I ARM B      17.90    28.75    0.623          1.6    1.6    24.4          0.09
I
I

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M20 junction 12_2026 Do Something PM 01_001.vao

I	ARM C	27.91	39.44	0.708	2.4	2.4	35.8	0.09
I								
I	ARM E	13.88	24.81	0.559	1.2	1.3	18.8	0.09
I								
I	ARM F	8.72	21.35	0.408	0.7	0.7	10.3	0.08
I								
I								
I								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM B	14.61	30.69	0.476		1.6	0.9	14.1		0.06
ARM C	22.79	40.11	0.568		2.4	1.3	20.5		0.06
ARM E	11.33	27.00	0.420		1.3	0.7	11.2		0.06
ARM F	7.12	23.89	0.298		0.7	0.4	6.5		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM B	12.24	32.13	0.381		0.9	0.6	9.5		0.05
ARM C	19.09	40.62	0.470		1.3	0.9	13.6		0.05

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I							
I	ARM E	9.49	28.62	0.331	0.7	0.5	7.6
I							0.05
I	ARM F	5.96	25.77	0.231	0.4	0.3	4.6
I							0.05
I							
I							

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.6	**
17.45	1.6	**
18.00	0.9	*
18.15	0.6	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.4	**
17.45	2.4	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

M20 junction 12_2026 Do Something PM 01_001.vao

17.00	0.5
17.15	0.7 *
17.30	1.2 *
17.45	1.3 *
18.00	0.7 *
18.15	0.5

.QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.7 *
18.00	0.4
18.15	0.3

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	B	I	1342.4	I	894.9	I	93.5	I
							0.07	
I	C	I	2093.8	I	1395.9	I	136.1	I
							0.06	
I	E	I	1040.7	I	693.8	I	73.5	I
							0.07	
I	F	I	654.1	I	436.0	I	42.0	I
							0.06	
I	ALL	I	5131.1	I	3420.7	I	345.1	I
							0.07	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 12\
M20 junction 12_2026 Do Something AM 01_001.vai"
(drive-on-the-left) at 15:05:44 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 12
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 junction 12_2026 Do Something AM 01_001.vao

ARM A - M20 eastbound entry slip
 ARM B - M20 westbound exit slip
 ARM C - A20 (south)
 ARM D - M20 westbound entry slip
 ARM E - M20 eastbound exit slip
 ARM F - A20 (north)

.GEOMETRIC DATA

ARM A IS JUNCTION EXIT ONLY

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	7.00	I	7.00	I	0.00	I	113.00	I	125.00	I	7.0	I	0.565	I	39.594
I	ARM C	I	7.00	I	10.00	I	13.00	I	41.00	I	125.00	I	43.0	I	0.565	I	43.181
I	ARM E	I	7.00	I	7.00	I	0.00	I	32.00	I	125.00	I	22.0	I	0.528	I	36.980
I	ARM F	I	5.50	I	8.00	I	13.00	I	57.00	I	125.00	I	37.0	I	0.510	I	35.856

V = approach half-width				L = effective flare length				D = inscribed circle diameter							
E = entry width				R = entry radius				PHI = entry angle							

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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 I ARM I FLOW SCALE(%) I

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I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
.LENGTH OF TIME PERIOD - 90 MINUTES.
.LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 12 2026 Do Something AM

I	I	NUMBER OF MINUTES FROM START WHEN					I	RATE OF FLOW (VEH/MIN)			I			
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	13.85	I	20.78	I	13.85	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	19.65	I	29.47	I	19.65	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	8.69	I	13.03	I	8.69	I
I	ARM F	I	15.00	I	45.00	I	75.00	I	8.91	I	13.37	I	8.91	I

DEMAND SET TITLE: M20 Junction 12 2026 Do Something AM

I	TURNING PROPORTIONS														I	
I	TURNING COUNTS (VEH/HR)														I	
I	(PERCENTAGE OF H.V.S)														I	
I															I	
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I
I	07.45 - 09.15	I		I		I		I		I		I		I		I
I		I	ARM B	I	0.000	I	0.000	I	0.661	I	0.000	I	0.000	I	0.339	I
I		I		I	0.0	I	0.0	I	732.0	I	0.0	I	0.0	I	376.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)	I
I		I		I		I		I		I		I		I		I
I		I	ARM C	I	0.405	I	0.000	I	0.000	I	0.450	I	0.000	I	0.146	I
I		I		I	636.0	I	0.0	I	0.0	I	707.0	I	0.0	I	229.0	I
I		I		I	(2.0)	I	(0.0)	I	(0.0)	I	(1.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I		I		I		I

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I	I	ARM E	I	0.000	I	0.000	I	0.904	I	0.000	I	0.000	I	0.096	I
I	I		I	0.0	I	0.0	I	628.0	I	0.0	I	0.0	I	67.0	I
I	I		I	(0.0)	I	(0.0)	I	(3.0)	I	(0.0)	I	(0.0)	I	(2.0)	I
I	I		I		I		I		I		I		I		I
I	I	ARM F	I	0.484	I	0.000	I	0.496	I	0.020	I	0.000	I	0.000	I
I	I		I	345.0	I	0.0	I	354.0	I	14.0	I	0.0	I	0.0	I
I	I		I	(2.0)	I	(0.0)	I	(0.0)	I	(10.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	ARM B	13.85	32.22	0.430		0.0	0.7	11.0		0.05
I	ARM C	19.65	39.81	0.494		0.0	1.0	14.2		0.05
I	ARM E	8.69	27.87	0.312		0.0	0.5	6.6		0.05
I	ARM F	8.91	27.30	0.326		0.0	0.5	7.1		0.05

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	ARM B	16.54	30.83	0.536		0.7	1.1	16.7		0.07

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I	I	ARM C	23.46	39.27	0.598	1.0	1.5	21.5		0.06
I	I	ARM E	10.37	26.28	0.395	0.5	0.6	9.5		0.06
I	I	ARM F	10.64	25.70	0.414	0.5	0.7	10.3		0.07
I	I									
I	I									

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	08.15-08.30									
I	I	ARM B	20.26	28.93	0.700		1.1	2.3	32.4		0.11
I	I	ARM C	28.74	38.53	0.746		1.5	2.9	40.6		0.10
I	I	ARM E	12.71	24.13	0.526		0.6	1.1	16.0		0.09
I	I	ARM F	13.03	23.53	0.554		0.7	1.2	17.7		0.09
I	I										
I	I										

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	08.30-08.45									
I	I	ARM B	20.26	28.90	0.701		2.3	2.3	34.5		0.12
I	I										

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I	ARM C	28.74	38.52	0.746	2.9	2.9	43.3	0.10
I								
I	ARM E	12.71	24.09	0.527	1.1	1.1	16.6	0.09
I								
I	ARM F	13.03	23.50	0.555	1.2	1.2	18.5	0.10
I								
I								
I								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM B	16.54	30.79	0.537		2.3	1.2	18.2		0.07
ARM C	23.46	39.25	0.598		2.9	1.5	23.3		0.06
ARM E	10.37	26.23	0.396		1.1	0.7	10.1		0.06
ARM F	10.64	25.66	0.415		1.2	0.7	11.0		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM B	13.85	32.19	0.430		1.2	0.8	11.6		0.05
ARM C	19.65	39.80	0.494		1.5	1.0	15.0		0.05

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I							
I	ARM E	8.69	27.82	0.312	0.7	0.5	7.0
I							0.05
I	ARM F	8.91	27.26	0.327	0.7	0.5	7.5
I							0.05
I							
I							

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.3	**
08.45	2.3	**
09.00	1.2	*
09.15	0.8	*

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	*
08.30	2.9	***
08.45	2.9	***
09.00	1.5	**
09.15	1.0	*

 .QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

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08.00	0.5	
08.15	0.6	*
08.30	1.1	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	

.QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

08.00	0.5	
08.15	0.7	*
08.30	1.2	*
08.45	1.2	*
09.00	0.7	*
09.15	0.5	

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
							(MIN/VEH)	
I	B	I	1519.3	I	1012.9	I	124.4	I
							0.08	I
I	C	I	2155.5	I	1437.0	I	157.8	I
							0.07	I
I	E	I	953.0	I	635.3	I	65.8	I
							0.07	I
I	F	I	977.7	I	651.8	I	72.0	I
							0.07	I
I	ALL	I	5605.5	I	3737.0	I	420.0	I
							0.07	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 junction 12_2026 Do Something AM 01_001.vao

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-

"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 11\
M20 Junction 11_2026 Do Something PM 01_001.vai"
(drive-on-the-left) at 15:03:36 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 11
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 11_2026 Do Something PM 01_001.vao

ARM A - B2068
 ARM B - M20 (eastbound exit)
 ARM C - M20 (westbound entry)
 ARM D - A20
 ARM E - Services
 ARM F - M20 (westbound exit)
 ARM G - M20 (eastbound entry)

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

ARM F IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM A	I	3.50	I	8.00	I	20.00	I	48.00	I	172.00	I	21.0	I	0.495	I	32.733
I	ARM C	I	8.00	I	8.00	I	0.00	I	102.00	I	172.00	I	16.0	I	0.594	I	43.951
I	ARM D	I	8.00	I	8.00	I	0.00	I	30.00	I	172.00	I	22.0	I	0.570	I	42.180
I	ARM E	I	4.00	I	4.00	I	0.00	I	46.00	I	172.00	I	41.0	I	0.374	I	19.987
I	ARM G	I	6.50	I	6.50	I	0.00	I	84.00	I	172.00	I	9.0	I	0.536	I	36.440
I	ARM I	I															

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

M20 Junction 11_2026 Do Something PM 01_001.vao

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I
I	G	I	100	I

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 11 2026 Do Something PM

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.14	I	7.71	I	5.14	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.23	I	12.34	I	8.23	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	13.11	I	19.67	I	13.11	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	1.50	I	2.25	I	1.50	I
I	ARM G	I	15.00	I	45.00	I	75.00	I	6.70	I	10.05	I	6.70	I

DEMAND SET TITLE: M20 Junction 11 2026 Do Something PM

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I	ARM G	I
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.221	I	0.000	I	0.577	I	0.073	I	0.129	I	0.000	I
I		I		I	0.0	I	91.0	I	0.0	I	237.0	I	30.0	I	53.0	I	0.0	I
I		I		I	(0.0)	I	(2.0)	I	(0.0)	I	(1.0)	I	(5.0)	I	(2.0)	I	(0.0)	I

M20 Junction 11_2026 Do Something PM 01_001.vao

I	I	I	I	I	I	I	I	I	I	I	I	I	I				
I	I	ARM C	I	0.138	I	0.000	I	0.000	I	0.816	I	0.046	I	0.000	I	0.000	I
I	I		I	91.0	I	0.0	I	0.0	I	537.0	I	30.0	I	0.0	I	0.0	I
I	I		I	(1.0)	I	(0.0)	I	(0.0)	I	(3.0)	I	(5.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM D	I	0.326	I	0.363	I	0.000	I	0.000	I	0.029	I	0.282	I	0.000	I
I	I		I	342.0	I	381.0	I	0.0	I	0.0	I	30.0	I	296.0	I	0.0	I
I	I		I	(2.0)	I	(7.0)	I	(0.0)	I	(0.0)	I	(5.0)	I	(6.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM E	I	0.250	I	0.250	I	0.000	I	0.250	I	0.000	I	0.250	I	0.000	I
I	I		I	30.0	I	30.0	I	0.0	I	30.0	I	0.0	I	30.0	I	0.0	I
I	I		I	(5.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM G	I	0.097	I	0.000	I	0.000	I	0.847	I	0.056	I	0.000	I	0.000	I
I	I		I	52.0	I	0.0	I	0.0	I	454.0	I	30.0	I	0.0	I	0.0	I
I	I		I	(6.0)	I	(0.0)	I	(0.0)	I	(4.0)	I	(5.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	5.14	26.29	0.195		0.0	0.2	3.6		0.05
I	ARM C	8.23	36.56	0.225		0.0	0.3	4.3		0.04
I	ARM D	13.11	38.53	0.340		0.0	0.5	7.6		0.04
I	ARM E	1.50	13.63	0.110		0.0	0.1	1.8		0.08
I	ARM G	6.70	28.91	0.232		0.0	0.3	4.4		0.04

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TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)				
17.00-17.15									
ARM A	6.13	25.13	0.244		0.2	0.3	4.8		0.05
ARM C	9.82	35.34	0.278		0.3	0.4	5.7		0.04
ARM D	15.66	38.21	0.410		0.5	0.7	10.2		0.04
ARM E	1.79	12.57	0.142		0.1	0.2	2.4		0.09
ARM G	8.00	27.72	0.289		0.3	0.4	6.0		0.05

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)				
17.15-17.30									
ARM A	7.51	23.54	0.319		0.3	0.5	6.9		0.06
ARM C	12.03	33.68	0.357		0.4	0.6	8.2		0.05
ARM D	19.18	37.78	0.508		0.7	1.0	15.0		0.05
ARM E	2.19	11.12	0.197		0.2	0.2	3.6		0.11
ARM G	9.80	26.10	0.375		0.4	0.6	8.8		0.06

M20 Junction 11_2026 Do Something PM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	7.51	23.53	0.319		0.5	0.5	7.0		0.06
ARM C	12.03	33.66	0.357		0.6	0.6	8.3		0.05
ARM D	19.18	37.77	0.508		1.0	1.0	15.4		0.05
ARM E	2.19	11.12	0.197		0.2	0.2	3.7		0.11
ARM G	9.80	26.09	0.376		0.6	0.6	9.0		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	6.13	25.11	0.244		0.5	0.3	5.0		0.05
ARM C	9.82	35.32	0.278		0.6	0.4	5.9		0.04
ARM D	15.66	38.21	0.410		1.0	0.7	10.7		0.04
ARM E	1.79	12.56	0.143		0.2	0.2	2.6		0.09
ARM G	8.00	27.70	0.289		0.6	0.4	6.2		0.05

M20 Junction 11_2026 Do Something PM 01_001.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I	ARM A	5.14	26.27	0.196		0.3	0.2	3.7		0.05
I	ARM C	8.23	36.53	0.225		0.4	0.3	4.4		0.04
I	ARM D	13.11	38.53	0.340		0.7	0.5	7.9		0.04
I	ARM E	1.50	13.62	0.110		0.2	0.1	1.9		0.08
I	ARM G	6.70	28.89	0.232		0.4	0.3	4.6		0.05
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.0	*
17.45	1.0	*
18.00	0.7	*
18.15	0.5	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

.QUEUE AT ARM G

M20 Junction 11_2026 Do Something PM 01_001.vao

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.6 *
17.45	0.6 *
18.00	0.4
18.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	563.6	I	375.7	I	30.8	I
I		I		I		I	0.05	I
I	C	I	902.3	I	601.5	I	36.7	I
I		I		I		I	0.04	I
I	D	I	1438.4	I	958.9	I	66.7	I
I		I		I		I	0.05	I
I	E	I	164.5	I	109.7	I	15.9	I
I		I		I		I	0.10	I
I	G	I	735.0	I	490.0	I	39.0	I
I		I		I		I	0.05	I
I	ALL	I	3803.7	I	2535.8	I	189.2	I
I		I		I		I	0.05	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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RG40 3GA, UK	

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 11\
M20 Junction 11_2026 Do Something AM 01_001.vai"
(drive-on-the-left) at 15:01:46 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 11
LOCATION:
DATE: 24/08/2010
CLIENT: Shepway DC
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 Junction 11_2026 Do Something AM 01_001.vao

ARM A - B2068
 ARM B - M20 (eastbound exit)
 ARM C - M20 (westbound entry)
 ARM D - A20
 ARM E - Services
 ARM F - M20 (westbound exit)
 ARM G - M20 (eastbound entry)

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

ARM F IS JUNCTION EXIT ONLY

I ARM		I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)	I																

I	ARM A	I	3.50	I	8.00	I	20.00	I	48.00	I	172.00	I	21.0	I	0.495	I	32.733
I	ARM C	I	8.00	I	8.00	I	0.00	I	102.00	I	172.00	I	16.0	I	0.594	I	43.951
I	ARM D	I	8.00	I	8.00	I	0.00	I	30.00	I	172.00	I	22.0	I	0.570	I	42.180
I	ARM E	I	4.00	I	4.00	I	0.00	I	46.00	I	172.00	I	41.0	I	0.374	I	19.987
I	ARM G	I	6.50	I	6.50	I	0.00	I	84.00	I	172.00	I	9.0	I	0.536	I	36.440
I	ARM I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

M20 Junction 11_2026 Do Something AM 01_001.vao

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I
I	E	I	100	I
I	F	I	100	I
I	G	I	100	I

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: M20 Junction 11 2026 AM Do Something

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.75	I	8.63	I	5.75	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.45	I	11.17	I	7.45	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	17.39	I	26.08	I	17.39	I
I	ARM E	I	15.00	I	45.00	I	75.00	I	1.50	I	2.25	I	1.50	I
I	ARM G	I	15.00	I	45.00	I	75.00	I	4.06	I	6.09	I	4.06	I

DEMAND SET TITLE: M20 Junction 11 2026 AM Do Something

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	ARM E	I	ARM F	I	ARM G	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.465	I	0.000	I	0.291	I	0.065	I	0.178	I	0.000	I
I		I		I	0.0	I	214.0	I	0.0	I	134.0	I	30.0	I	82.0	I	0.0	I
I		I		I	(0.0)	I	(4.0)	I	(0.0)	I	(13.0)	I	(5.0)	I	(5.0)	I	(0.0)	I

M20 Junction 11_2026 Do Something AM 01_001.vao

I	I	I	I	I	I	I	I	I	I	I	I	I	I				
I	I	ARM C	I	0.148	I	0.000	I	0.000	I	0.802	I	0.050	I	0.000	I	0.000	I
I	I		I	88.0	I	0.0	I	0.0	I	478.0	I	30.0	I	0.0	I	0.0	I
I	I		I	(3.0)	I	(0.0)	I	(0.0)	I	(6.0)	I	(5.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM D	I	0.208	I	0.361	I	0.000	I	0.000	I	0.022	I	0.410	I	0.000	I
I	I		I	289.0	I	502.0	I	0.0	I	0.0	I	30.0	I	570.0	I	0.0	I
I	I		I	(3.0)	I	(12.0)	I	(0.0)	I	(0.0)	I	(5.0)	I	(6.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM E	I	0.250	I	0.250	I	0.000	I	0.250	I	0.000	I	0.250	I	0.000	I
I	I		I	30.0	I	30.0	I	0.0	I	30.0	I	0.0	I	30.0	I	0.0	I
I	I		I	(5.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I	(5.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I
I	I	ARM G	I	0.169	I	0.000	I	0.000	I	0.738	I	0.092	I	0.000	I	0.000	I
I	I		I	55.0	I	0.0	I	0.0	I	240.0	I	30.0	I	0.0	I	0.0	I
I	I		I	(7.0)	I	(0.0)	I	(0.0)	I	(14.0)	I	(5.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	5.75	25.26	0.228		0.0	0.3	4.3		0.05
I	ARM C	7.45	37.41	0.199		0.0	0.2	3.7		0.03
I	ARM D	17.39	37.44	0.464		0.0	0.9	12.6		0.05
I	ARM E	1.50	11.75	0.128		0.0	0.1	2.1		0.10
I	ARM G	4.06	26.31	0.154		0.0	0.2	2.7		0.04

M20 Junction 11_2026 Do Something AM 01_001.vao

TIME	DEMAND	CAPACITY	DEMAND/ (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15											
ARM A	6.87	24.21	0.284				0.3	0.4	5.8		0.06
ARM C	8.90	36.57	0.243				0.2	0.3	4.8		0.04
ARM D	20.76	37.08	0.560				0.9	1.3	18.5		0.06
ARM E	1.79	10.32	0.174				0.1	0.2	3.0		0.12
ARM G	4.85	25.08	0.193				0.2	0.2	3.5		0.05

TIME	DEMAND	CAPACITY	DEMAND/ (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30											
ARM A	8.41	22.77	0.369				0.4	0.6	8.5		0.07
ARM C	10.90	35.43	0.307				0.3	0.4	6.5		0.04
ARM D	25.43	36.60	0.695				1.3	2.2	32.1		0.09
ARM E	2.19	8.38	0.262				0.2	0.3	5.1		0.16
ARM G	5.94	23.42	0.254				0.2	0.3	5.0		0.06

M20 Junction 11_2026 Do Something AM 01_001.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	8.41	22.76	0.370		0.6	0.6	8.7		0.07
ARM C	10.90	35.42	0.308		0.4	0.4	6.6		0.04
ARM D	25.43	36.60	0.695		2.2	2.3	33.7		0.09
ARM E	2.19	8.35	0.263		0.3	0.4	5.3		0.16
ARM G	5.94	23.39	0.254		0.3	0.3	5.1		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	6.87	24.18	0.284		0.6	0.4	6.1		0.06
ARM C	8.90	36.56	0.243		0.4	0.3	4.9		0.04
ARM D	20.76	37.08	0.560		2.3	1.3	19.8		0.06
ARM E	1.79	10.29	0.174		0.4	0.2	3.3		0.12
ARM G	4.85	25.05	0.194		0.3	0.2	3.7		0.05

M20 Junction 11_2026 Do Something AM 01_001.vao

I
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I										
I	ARM A	5.75	25.24	0.228		0.4	0.3	4.5		0.05
I										
I	ARM C	7.45	37.39	0.199		0.3	0.2	3.8		0.03
I										
I	ARM D	17.39	37.43	0.465		1.3	0.9	13.4		0.05
I										
I	ARM E	1.50	11.72	0.128		0.2	0.1	2.3		0.10
I										
I	ARM G	4.06	26.28	0.155		0.2	0.2	2.8		0.05
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.3 *
08.30	2.2 **
08.45	2.3 **
09.00	1.3 *
09.15	0.9 *

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.3
08.45	0.4
09.00	0.2
09.15	0.1

.QUEUE AT ARM G

M20 Junction 11_2026 Do Something AM 01_001.vao

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	630.8	I	420.5	I	38.0	I
I	C	I	817.2	I	544.8	I	30.3	I
I	D	I	1907.4	I	1271.6	I	130.0	I
I	E	I	164.5	I	109.7	I	21.1	I
I	G	I	445.6	I	297.1	I	22.8	I
I	ALL	I	3965.5	I	2643.7	I	242.1	I
							0.06	
							242.2	
							0.06	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Northern Rb\M20 J13 northern rb_2026 Do Something PM 01_001.vai"
(drive-on-the-left) at 15:16:42 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 northern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

M20 J13 northern rb_2026 Do Something PM 01_001.vao

ARM A - Castle Hill
 ARM B - M20 eastbound exit
 ARM C - A20
 ARM D - M20 Eastbound entry
 ARM E - Channel Tunnel access

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	3.50	I	8.50	I	26.00	I	23.00	I	40.00	I	39.0	I	0.684	I	32.478
	I																	
I	ARM	C	I	3.50	I	4.50	I	4.50	I	22.00	I	40.00	I	23.0	I	0.565	I	21.219
	I																	
I	ARM	D	I	10.00	I	10.00	I	0.00	I	10.00	I	40.00	I	51.0	I	0.797	I	44.351
	I																	
I	ARM	E	I	3.00	I	3.00	I	0.00	I	8.00	I	40.00	I	52.0	I	0.412	I	12.882
	I																	

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I

I	C	I	100	I
I	D	I	100	I
I	E	I	100	I

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER	
	TO RISE	IS REACHED	IF FALLING	PEAK	OF PEAK	PEAK	
ARM A	15.00	45.00	75.00	0.00	0.00	0.00	
ARM C	15.00	45.00	75.00	8.61	12.92	8.61	
ARM D	15.00	45.00	75.00	13.23	19.84	13.23	
ARM E	15.00	45.00	75.00	0.00	0.00	0.00	

		TURNING PROPORTIONS									
		TURNING COUNTS (VEH/HR)									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E				
16.45 - 18.15		ARM A	0.000	0.000	0.000	0.000	0.000				
			0.0	0.0	0.0	0.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				
		ARM C	0.000	1.000	0.000	0.000	0.000				
			0.0	689.0	0.0	0.0	0.0				
			(0.0)	(1.0)	(0.0)	(0.0)	(0.0)				
		ARM D	0.000	0.000	1.000	0.000	0.000				
			0.0	0.0	1058.0	0.0	0.0				
			(0.0)	(0.0)	(1.0)	(0.0)	(0.0)				

M20 J13 northern rb_2026 Do Something PM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.000	I	0.000	I	0.000	I
I	I		I	0.0	I	0.0	I	0.0	I	0.0	I	0.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	0.00	17.45	0.000		0.0	0.0	0.0		0.00
ARM C	8.61	21.01	0.410		0.0	0.7	10.0		0.08
ARM D	13.23	37.08	0.357		0.0	0.6	8.1		0.04
ARM E	0.00	3.84	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	0.00	14.49	0.000		0.0	0.0	0.0		0.00
ARM C	10.28	21.01	0.490		0.7	0.9	13.8		0.09
ARM D	15.79	35.73	0.442		0.6	0.8	11.6		0.05

M20 J13 northern rb_2026 Do Something PM 01_001.vao

I	ARM E	0.00	2.06	0.000		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	0.00	10.46	0.000		0.0	0.0	0.0		0.00
I	ARM C	12.60	21.01	0.600		0.9	1.5	21.2		0.12
I	ARM D	19.34	33.90	0.571		0.8	1.3	19.2		0.07
I	ARM E	0.00	0.00	***		0.0	0.0	0.0		0.00
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	0.00	10.42	0.000		0.0	0.0	0.0		0.00
I	ARM C	12.60	21.01	0.600		1.5	1.5	22.2		0.12
I	ARM D	19.34	33.87	0.571		1.3	1.3	19.8		0.07
I										

I ARM E 0.00 0.00 *** 0.0 0.0 0.0 0.00
I
I
I

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.
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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I 17.45-18.00
I
I ARM A 0.00 14.42 0.000 0.0 0.0 0.0 0.00
I
I ARM C 10.28 21.01 0.490 1.5 1.0 15.0 0.09
I
I ARM D 15.79 35.69 0.442 1.3 0.8 12.2 0.05
I
I ARM E 0.00 2.02 0.000 0.0 0.0 0.0 0.00
I
I
I

-
.
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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
I
I 18.00-18.15
I
I ARM A 0.00 17.37 0.000 0.0 0.0 0.0 0.00
I
I ARM C 8.61 21.01 0.410 1.0 0.7 10.8 0.08
I
I ARM D 13.23 37.03 0.357 0.8 0.6 8.5 0.04
I
I ARM E 0.00 3.79 0.000 0.0 0.0 0.0 0.00

I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	0.9 *
17.30	1.5 *
17.45	1.5 *
18.00	1.0 *
18.15	0.7 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.3 *

17.45	1.3	*
18.00	0.8	*
18.15	0.6	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	0.0	I	0.0	I	0.0	I
I	C	I	944.8	I	629.8	I	93.0	I
I	D	I	1450.7	I	967.2	I	79.4	I
I	E	I	0.0	I	0.0	I	0.0	I
I	ALL	I	2395.5	I	1597.0	I	172.4	I

WARNING The entry capacity of at least one arm has become zero during the period modelled

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

M20 J13 northern rb_2026 Do Something AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\M20 Junction 13\
Northern Rb\M20 J13 northern rb_2026 Do Something AM 01_001.vai"
(drive-on-the-left) at 15:12:43 on Tuesday, 2 November 2010

.FILE PROPERTIES

RUN TITLE: M20 Junction 13 northern Rb
LOCATION:
DATE: 24/08/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Castle Hill
 ARM B - M20 eastbound exit
 ARM C - A20
 ARM D - M20 Eastbound entry
 ARM E - Channel Tunnel access

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT	
(PCU/MIN)		I																

I	ARM	A	I	3.50	I	8.50	I	26.00	I	23.00	I	40.00	I	39.0	I	0.684	I	32.478
I	ARM	C	I	3.50	I	4.50	I	4.50	I	22.00	I	40.00	I	23.0	I	0.565	I	21.219
I	ARM	D	I	10.00	I	10.00	I	0.00	I	10.00	I	40.00	I	51.0	I	0.797	I	44.351
I	ARM	E	I	3.00	I	3.00	I	0.00	I	8.00	I	40.00	I	52.0	I	0.412	I	12.882

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE (%)	I

I A	I	100		I
I B	I	100		I

I	C	I	100	I
I	D	I	100	I
I	E	I	100	I

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER	
	TO RISE	IS REACHED	IF FALLING	PEAK	OF PEAK	PEAK	
ARM A	15.00	45.00	75.00	0.00	0.00	0.00	
ARM C	15.00	45.00	75.00	5.79	8.68	5.79	
ARM D	15.00	45.00	75.00	15.06	22.59	15.06	
ARM E	15.00	45.00	75.00	0.00	0.00	0.00	

		TURNING PROPORTIONS									
		TURNING COUNTS (VEH/HR)									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E				
07.45 - 09.15		ARM A	0.000	0.000	0.000	0.000	0.000				
			0.0	0.0	0.0	0.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				
		ARM C	0.000	1.000	0.000	0.000	0.000				
			0.0	463.0	0.0	0.0	0.0				
			(0.0)	(20.0)	(0.0)	(0.0)	(0.0)				
		ARM D	0.000	0.000	1.000	0.000	0.000				
			0.0	0.0	1205.0	0.0	0.0				
			(0.0)	(0.0)	(20.0)	(0.0)	(0.0)				

M20 J13 northern rb_2026 Do Something AM 01_001.vao

I	I	ARM E	I	0.000	I	0.000	I	0.000	I	0.000	I	0.000	I
I	I		I	0.0	I	0.0	I	0.0	I	0.0	I	0.0	I
I	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I	I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	0.00	15.44	0.000		0.0	0.0	0.0		0.00
ARM C	5.79	17.68	0.327		0.0	0.5	7.0		0.08
ARM D	15.06	32.37	0.465		0.0	0.9	12.6		0.06
ARM E	0.00	2.63	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	0.00	12.08	0.000		0.0	0.0	0.0		0.00
ARM C	6.91	17.68	0.391		0.5	0.6	9.3		0.09
ARM D	17.99	31.46	0.572		0.9	1.3	19.2		0.07

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I ARM E 0.00 0.00 *** 0.0 0.0 0.0 0.00
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 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 08.45-09.00
 I
 I ARM A 0.00 11.96 0.000 0.0 0.0 0.0 0.00
 I
 I ARM C 6.91 17.68 0.391 0.9 0.6 10.0 0.09
 I
 I ARM D 17.99 31.44 0.572 2.7 1.4 21.0 0.08
 I
 I ARM E 0.00 0.54 0.000 0.0 0.0 0.0 0.00
 I
 I
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 I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
 I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
 I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
 I
 I 09.00-09.15
 I
 I ARM A 0.00 15.33 0.000 0.0 0.0 0.0 0.00
 I
 I ARM C 5.79 17.68 0.327 0.6 0.5 7.5 0.08
 I
 I ARM D 15.06 32.34 0.466 1.4 0.9 13.5 0.06
 I
 I ARM E 0.00 2.57 0.000 0.0 0.0 0.0 0.00

I
I
I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.5

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.3 *
08.30	2.6 ***

08.45	2.7	***
09.00	1.4	*
09.15	0.9	*

.QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	0.0	I	0.0	I	0.0	I
I	C	I	634.9	I	423.2	I	60.7	I
I	D	I	1652.3	I	1101.5	I	142.8	I
I	E	I	0.0	I	0.0	I	0.0	I
I	ALL	I	2287.2	I	1524.8	I	203.5	I

WARNING The entry capacity of at least one arm has become zero during the period modelled

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

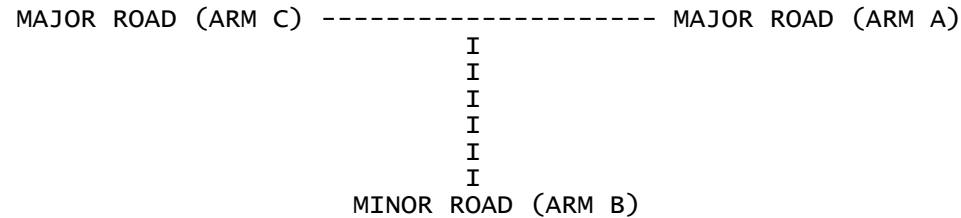
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Lydd Rd_Romney Rd\
Lydd Rd_Romney Rd 2026 Do Something 01_001.vpi"
(drive-on-the-left) at 14:27:18 on Monday, 8 November 2010

.RUN INFORMATION

RUN TITLE	: A259 Lydd Rd / B2075 Romney Rd
LOCATION	: Lydd / New Romney
DATE	: 17/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS A259 Lydd Rd (east)
 ARM B IS B2075 Romney Rd
 ARM C IS A259 Lydd Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 80.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 80.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 80.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	8.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.50 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	620.29	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				I RATE OF FLOW (VEH/MIN)				I				
			I	I	I	I	I	I	I	I					
I	I	I	I	I	I	I	I	I	I	I					
I	I	I	I	I	I	I	I	I	I	I	I				
I	I	I	I	I	I	I	I	I	I	I	I				
I	ARM	A	I	15.00	I	45.00	I	75.00	I	10.23	I	15.34	I	10.23	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.46	I	8.19	I	5.46	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	6.43	I	9.64	I	6.43	I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Something AM

			TURNING PROPORTIONS										
			TURNING COUNTS										
			(PERCENTAGE OF H.V.S)										
	TIME		FROM/TO	ARM	A	ARM	B	ARM	C				
	07.45 - 08.00												
			ARM	A	0.000	0.451	0.549						
					0.0	369.0	449.0						
					(0.0)	(2.0)	(2.0)						
			ARM	B	0.577	0.000	0.423						
					252.0	0.0	185.0						
					(2.0)	(0.0)	(8.0)						
			ARM	C	0.574	0.426	0.000						
					295.0	219.0	0.0						
					(1.0)	(8.0)	(0.0)						

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A259 Lydd Rd / B2075 Romney Rd 2026 Do Something AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.39	2.77	1.228		1.19	12.94	113.1		3.31
B-A	4.62	3.83	1.209		2.72	16.74	151.5		3.17
C-AB	4.02	6.46	0.622		1.08	2.31	33.9		0.40
A-B	6.77								
A-C	8.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.39	2.80	1.211		12.94	22.29	264.8		6.68
B-A	4.62	3.78	1.223		16.74	29.81	349.6		6.40
C-AB	4.02	6.46	0.622		2.31	2.40	37.1		0.42
A-B	6.77								
A-C	8.24								

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00									
I	B-C	2.77	3.24	0.855		22.29	17.35	297.3		6.18
I	B-A	3.78	4.39	0.861		29.81	22.80	394.5		6.10
I	C-AB	3.28	7.03	0.467		2.40	1.19	18.3		0.28
I	A-B	5.53								
I	A-C	6.73								

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15									
I	B-C	2.32	4.28	0.542		17.35	1.35	95.4		1.82
I	B-A	3.16	5.11	0.619		22.80	2.01	155.7		2.41
I	C-AB	2.75	7.45	0.369		1.19	0.71	10.9		0.22
I	A-B	4.63								
I	A-C	5.63								

I
I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	1.2	*
08.30	12.9	*****
08.45	22.3	*****
09.00	17.4	*****
09.15	1.4	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	2.7	***
08.30	16.7	*****
08.45	29.8	*****
09.00	22.8	*****
09.15	2.0	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.3	**
08.45	2.4	**
09.00	1.2	*
09.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

I	I	I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-C	I	254.6	I	169.8	I	793.7	I	3.12	I
I	B-A	I	346.9	I	231.2	I	1100.4	I	3.17	I
I	C-AB	I	301.4	I	201.0	I	126.1	I	0.42	I
I	A-B	I	507.9	I	338.6	I		I		I
I	A-C	I	618.0	I	412.0	I		I		I
I	ALL	I	2434.9	I	1623.3	I	2020.2	I	0.83	I
I		I		I		I		I		I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I

I 620.29 0.22 0.22 I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Something PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.75	I	11.63	I	7.75	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.53	I	11.29	I	7.53	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.36	I	12.54	I	8.36	I

.Demand set: A259 Lydd Rd / B2075 Romney Rd 2026 Do Something PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.447	I	0.553	I		I	
I		I		I	0.0	I	277.0	I	343.0	I		I	
I		I	(0.0)	I	(2.0)	I	(1.0)	I		I		I	

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I	I	I	I	I	I
I	I	ARM B	I	0.620	I 0.000 I 0.380 I
I	I		I	373.0	I 0.0 I 229.0 I
I	I		I	(1.0)	I (0.0) I (4.0) I
I	I		I		I I I
I	I	ARM C	I	0.774	I 0.226 I 0.000 I
I	I		I	518.0	I 151.0 I 0.0 I
I	I		I	(0.0)	I (2.0) I (0.0) I
I	I		I		I I I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A259 Lydd Rd / B2075 Romney Rd 2026 Do Something PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.87	5.60	0.513		0.00	1.01	13.6		0.35
B-A	4.68	6.18	0.758		0.00	2.69	33.2		0.55
C-AB	1.89	8.44	0.225		0.00	0.33	4.9		0.15
A-B	3.48								
A-C	4.30								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.00-17.15							
I B-C	3.43	3.15	1.090	1.01	9.21	85.8	2.37
I B-A	5.59	5.19	1.077	2.69	12.80	124.3	2.04
I C-AB	2.26	8.11	0.279	0.33	0.48	7.2	0.17
I A-B	4.15						
I A-C	5.14						
I							
I							

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I B-C	4.20	2.84	1.481		9.21	30.00	294.9		7.58
I B-A	6.84	4.54	1.509		12.80	47.68	454.3		7.09
I C-AB	2.77	7.65	0.362		0.48	0.79	11.9		0.20
I A-B	5.08								
I A-C	6.29								
I									
I									

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Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	2.87	3.41	0.841		55.08	47.87	772.1		15.40
B-A	4.68	5.54	0.844		89.19	77.16	1247.6		15.20
C-AB	1.89	8.44	0.225		0.50	0.35	5.2		0.15
A-B	3.48								
A-C	4.30								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	9.2	*****
17.30	30.0	*****
17.45	50.9	*****
18.00	55.1	*****
18.15	47.9	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.7	***
17.15	12.8	*****
17.30	47.7	*****

Lydd Rd_Romney Rd 2026 Do Something 01_001.vpo

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17.45      82.2 *****
18.00      89.2 *****
*****
18.15      77.2 *****

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QUEUE FOR STREAM C-AB

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TIME      NO. OF
SEGMENT   VEHICLES
ENDING    IN QUEUE
17.00      0.3
17.15      0.5
17.30      0.8 *
17.45      0.8 *
18.00      0.5 *
18.15      0.3

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-C	315.2	2568.5	8.15
B-A	513.4	4119.6	8.02
C-AB	207.8	49.1	0.24
A-B	381.3		
A-C	472.1		
ALL	2602.8	6737.3	2.59

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

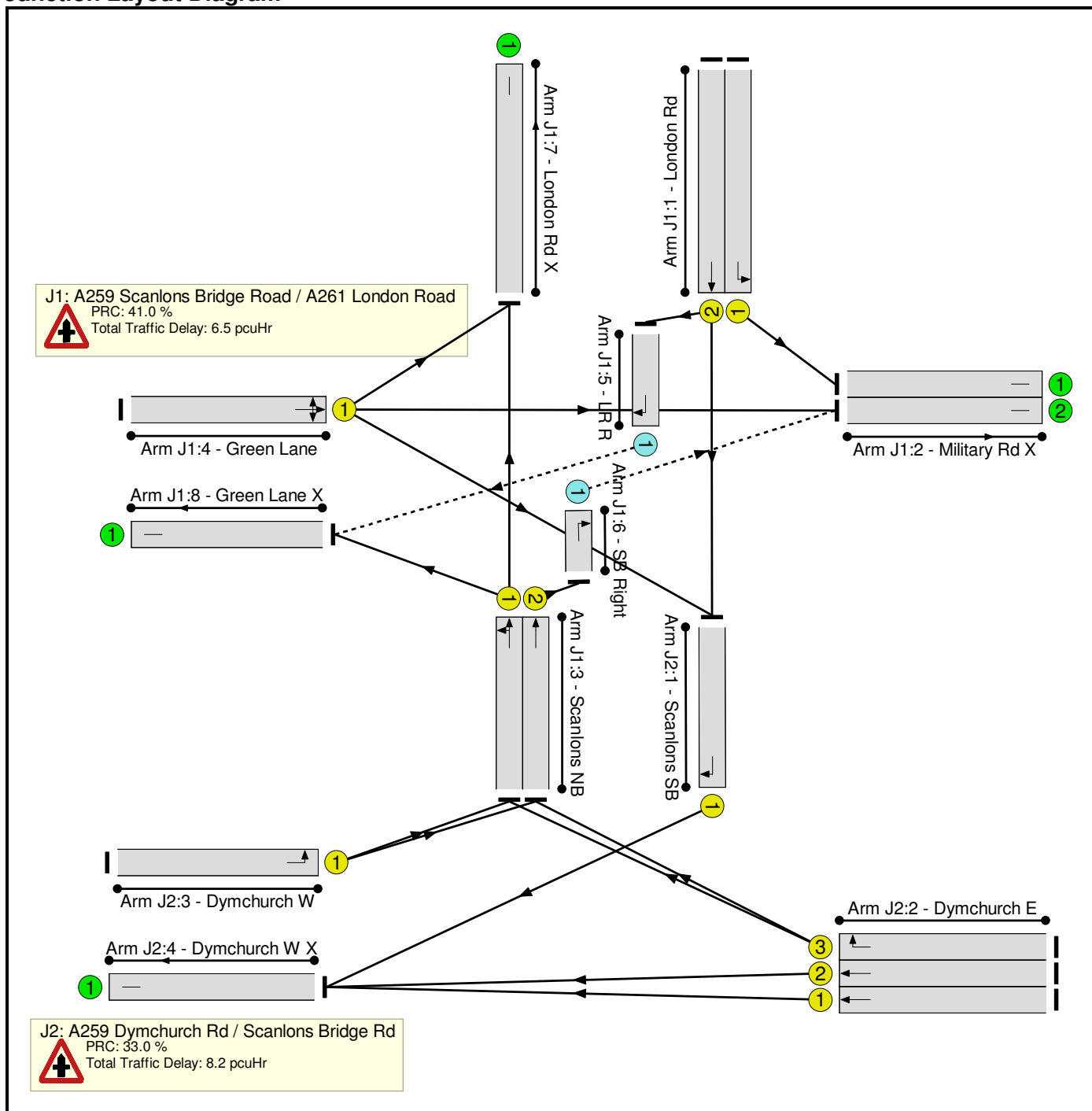
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	Hythe One Way 01_002.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base PM' (FG1: '2010 Base PM', Plan 1: 'Network Control Plan 1')

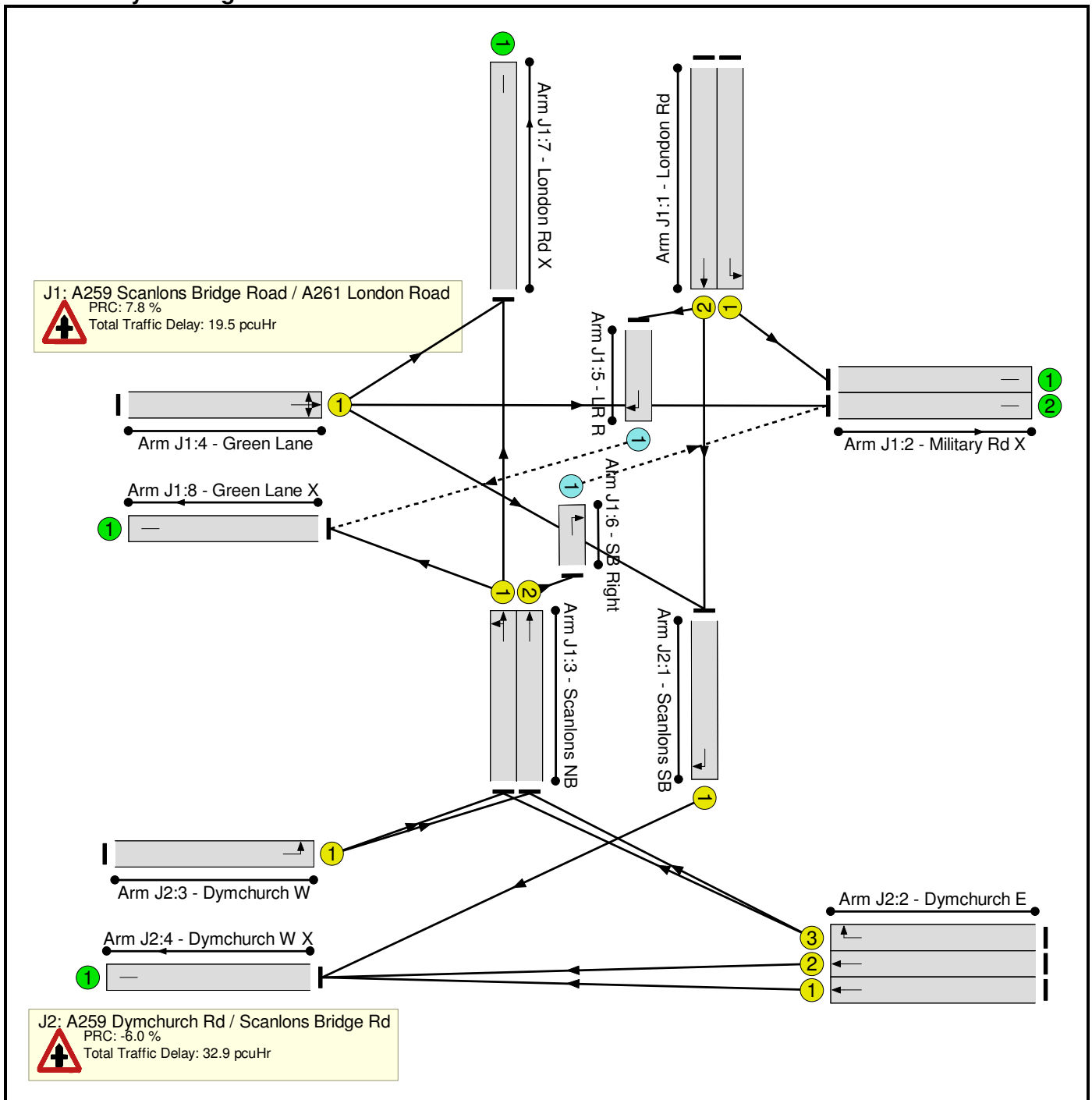
Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalised Lanes (%):	41.0	Total Delay for Signalised Lanes (pcuHr):	5.77		
C1	Stream: 2 PRC for Signalised Lanes (%):	33.0	Total Delay for Signalised Lanes (pcuHr):	8.21		
	PRC Over All Lanes (%):	33.0	Total Delay Over All Lanes (pcuHr):	14.73	Cycle Time (s):	60

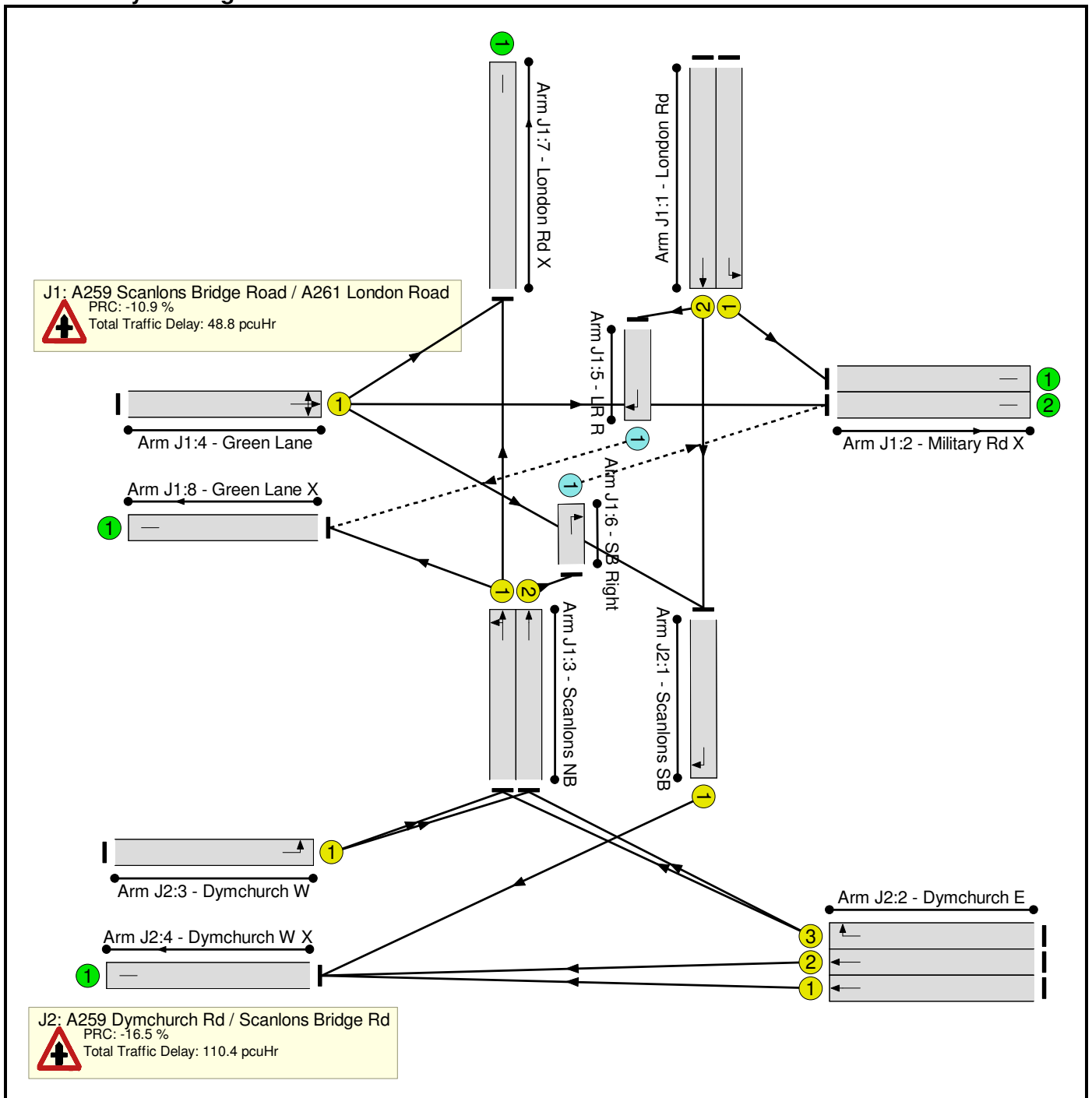
Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalised Lanes (%):	13.0	Total Delay for Signalised Lanes (pcuHr):	14.12	
C1	Stream: 2 PRC for Signalised Lanes (%):	-6.0	Total Delay for Signalised Lanes (pcuHr):	32.89	
	PRC Over All Lanes (%):	-6.0	Total Delay Over All Lanes (pcuHr):	52.35	Cycle Time (s): 119

Junction Layout Diagram



Link Results

C1	Stream: 1 PRC for Signalised Lanes (%):	2.5	Total Delay for Signalised Lanes (pcuHr):	24.43	
C1	Stream: 2 PRC for Signalised Lanes (%):	-16.5	Total Delay for Signalised Lanes (pcuHr):	110.41	
	PRC Over All Lanes (%):	-16.5	Total Delay Over All Lanes (pcuHr):	159.17	Cycle Time (s): 240

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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TRL SOFTWARE BUREAU
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EMAIL: Software@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Harbour Street_Tram Road\
Harbour Street_The Tram Road 2026 Do Something 01_001.vpi"
(drive-on-the-left) at 15:40:11 on Tuesday, 9 November 2010

.RUN INFORMATION

RUN TITLE	: Harbour Street / Tram Road
LOCATION	: Folkestone
DATE	: 24/08/10
CLIENT	: Shepway DC
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS Harbour Street (north)

ARM B IS The Tram Road

ARM C IS Harbour Street (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 40.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 3.50 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B
I			I

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I	721.27	0.28	0.11	I

I	Intercept For I STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	I
I	566.97	0.26	0.10	0.16	0.37	I

I	Intercept For I STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
I	631.87	0.24	0.24	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Harbour Street / Tram Road 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I		I	TO RISE	I		I		I		I		I		I

I ARM	A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00
I ARM	B	I	15.00	I	45.00	I	75.00	I	13.04	I	19.56	I	13.04
I ARM	C	I	15.00	I	45.00	I	75.00	I	3.03	I	4.54	I	3.03

		TURNING PROPORTIONS								
		TURNING COUNTS								
		(PERCENTAGE OF H.V.S)								
	TIME	I FROM/TO	I ARM	A	I ARM	B	I ARM	C	I	
I	07.45 - 08.00	I			I		I		I	
I		I ARM A	I	0.000	I	0.000	I	0.000	I	
I		I	I	0.0	I	0.0	I	0.0	I	
I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	
I		I	I		I		I		I	
I		I ARM B	I	0.509	I	0.000	I	0.491	I	
I		I	I	531.0	I	0.0	I	512.0	I	
I		I	I	(1.0)	I	(0.0)	I	(2.0)	I	
I		I	I		I		I		I	
I		I ARM C	I	1.000	I	0.000	I	0.000	I	
I		I	I	242.0	I	0.0	I	0.0	I	
I		I	I	(8.0)	I	(0.0)	I	(0.0)	I	
I		I	I		I		I		I	

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-C	6.42	9.56	0.672		0.00	1.93	25.7		0.30
B-A	6.66	8.82	0.755		0.00	2.76	35.2		0.40

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I										
I	C-A	3.04								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.00-08.15									
I										
I	B-C	7.67	9.03	0.849		1.93	4.50	56.4		0.59
I										
I	B-A	7.96	8.72	0.912		2.76	6.56	78.4		0.82
I										
I	C-A	3.63								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30									
I	B-C	9.40	8.84	1.063		4.50	17.61	174.7		1.62
I	B-A	9.74	8.58	1.136		6.56	26.42	252.9		2.28
I	C-A	4.44								
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	0.00								
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.30-08.45									
I	B-C	9.40	8.84	1.063		17.61	27.72	341.3		2.87
I	B-A	9.74	8.58	1.136		26.42	44.55	532.9		4.40
I	C-A	4.44								
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	0.00								
I										
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Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	7.67	8.84	0.868		27.72	14.82	319.0		2.59
B-A	7.96	8.72	0.912		44.55	35.97	603.9		4.74
C-A	3.63								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	6.42	8.84	0.727		14.82	2.99	84.8		0.80
B-A	6.66	8.82	0.755		35.97	7.15	323.4		2.67
C-A	3.04								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I
I A-C 0.00
I
I
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QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.9	**
08.15	4.5	*****
08.30	17.6	*****
08.45	27.7	*****
09.00	14.8	*****
09.15	3.0	***

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.8	***
08.15	6.6	*****
08.30	26.4	*****
08.45	44.5	*****
09.00	36.0	*****
09.15	7.1	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

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I		I		I		I		I		I	
I											

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	721.27		0.28		0.11	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	566.97		0.26		0.10		0.16		0.37	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I	631.87	0.24	0.24	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

.Demand set: Harbour Street / Tram Road 2026 Do Something PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	10.23	I	15.34	I	10.23	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.09	I	6.13	I	4.09	I

.Demand set: Harbour Street / Tram Road 2026 Do Something PM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.000	I	0.000	I	0.000	I	I
I		I		I	0.0	I	0.0	I	0.0	I	0.0	I	I

I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I
I	ARM B	I	0.511	I	0.000	I	0.489	I
I		I	418.0	I	0.0	I	400.0	I
I		I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I
I	ARM C	I	1.000	I	0.000	I	0.000	I
I		I	327.0	I	0.0	I	0.0	I
I		I	(1.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	5.02	10.12	0.496		0.00	0.96	13.4		0.19
B-A	5.24	8.77	0.598		0.00	1.42	19.4		0.27
C-A	4.10								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	B-C	5.99	9.71	0.617		0.96	1.54	21.7		0.26
I	B-A	6.26	8.64	0.725		1.42	2.42	32.9		0.40
I	C-A	4.90								
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	0.00								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I	B-C	7.34	9.15	0.803		1.54	3.51	45.4		0.49
I	B-A	7.67	8.45	0.907		2.42	6.26	74.3		0.81
I	C-A	6.00								
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	0.00								
I										

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

17.30-17.45

B-C	7.34	9.06	0.811		3.51	3.87	56.0		0.56
B-A	7.67	8.45	0.907		6.26	7.32	102.8		1.03
C-A	6.00								
C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	0.00								

17.45-18.00

B-C	5.99	9.58	0.626		3.87	1.75	29.1		0.30
B-A	6.26	8.64	0.725		7.32	2.89	53.2		0.53
C-A	4.90								

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
I										
.	-----									
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I										
I	B-C	5.02	10.06	0.499		1.75	1.02	16.2		0.20
I										
I	B-A	5.24	8.77	0.598		2.89	1.55	25.3		0.30
I										
I	C-A	4.10								
I										
I	C-B	0.00	9.57	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	0.00								
I										
I										
.	-----									
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.										
	QUEUE FOR STREAM	B-C								

	TIME	NO. OF								
	SEGMENT	VEHICLES								
	ENDING	IN QUEUE								
	17.00	1.0	*							
	17.15	1.5	**							
	17.30	3.5	****							

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo

17.45	3.9	****
18.00	1.8	**
18.15	1.0	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	2.4	**
17.30	6.3	*****
17.45	7.3	*****
18.00	2.9	***
18.15	1.6	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	550.6	I	367.0	I	181.8	I	0.33	I
I	B-A	I	575.3	I	383.6	I	307.9	I	0.54	I
I	C-A	I	450.1	I	300.1	I		I		I
I	C-B	I	0.0	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I		I		I
I	A-C	I	0.0	I	0.0	I		I		I
I	ALL	I	1576.0	I	1050.7	I	489.6	I	0.31	I
									489.8	
									0.31	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

Harbour Street_The Tram Road 2026 Do Something 01_001.vpo
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.
*****END OF RUN*****

foresters way_grace hill_2026 Do Something PM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Foresters Way_Grace Hill\
foresters way_grace hill_2026 Do Something PM 01_001.vai"
(drive-on-the-left) at 13:53:17 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: Foresters way / Grace Hill
LOCATION: Folkestone
DATE: 18/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

foresters way_grace hill_2026 Do Something PM 01_001.vao

ARM A - Foord Rd
 ARM B - Grace Hill
 ARM C - Foresters way (westbound)
 ARM D - Foresters way (eastbound)

.GEOMETRIC DATA -----

ARM A IS JUNCTION EXIT ONLY

ARM C IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	3.50	I	6.00	I	8.00	I	21.00	I	35.50	I	32.0	I	0.595	I	23.877
	I																
I	ARM D	I	3.50	I	3.50	I	0.00	I	22.50	I	35.50	I	59.0	I	0.472	I	15.992
	I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA -----

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I
I C	I	100		I
I D	I	100		I

foresters way_grace hill_2026 Do Something PM 01_001.vao

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Something PM

I I I	I I I	NUMBER OF MINUTES FROM START WHEN			I RATE OF FLOW (VEH/MIN) I		
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
		I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I ARM B	I	15.00	I 45.00	I 75.00	I 6.93	I 10.39	I 6.93
I ARM D	I	15.00	I 45.00	I 75.00	I 11.64	I 17.46	I 11.64

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Something PM

		TURNING PROPORTIONS								
		TURNING COUNTS (VEH/HR)								
		(PERCENTAGE OF H.V.S)								

	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
	16.45 - 18.15									
		ARM B	0.267	0.000	0.733	0.000				
			148.0	0.0	406.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)				
		ARM D	0.940	0.000	0.060	0.000				
			875.0	0.0	56.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)				

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING

foresters way_grace hill_2026 Do Something PM 01_001.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 16.45-17.00							
I ARM B	6.93	23.47	0.295	0.0	0.4	6.1	0.06
I ARM D	11.64	15.12	0.770	0.0	3.1	40.8	0.26

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.00-17.15									
I ARM B	8.27	23.39	0.353		0.4	0.5	8.0		0.07
I ARM D	13.90	14.95	0.929		3.1	8.5	100.2		0.59

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 17.15-17.30									
I ARM B	10.13	23.35	0.434		0.5	0.8	11.1		0.08
I ARM D	17.02	14.72	1.156		8.5	45.1	407.9		2.06

foresters way_grace hill_2026 Do Something PM 01_001.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM B	10.13	23.35	0.434		0.8	0.8	11.4		0.08
I										
I	ARM D	17.02	14.72	1.157		45.1	80.0	938.4		4.41
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM B	8.27	23.35	0.354		0.8	0.6	8.5		0.07
I										
I	ARM D	13.90	14.95	0.930		80.0	67.0	1102.1		4.99
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

foresters way_grace hill_2026 Do Something PM 01_001.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 18.00-18.15									
I ARM B	6.93	23.34	0.297		0.6	0.4	6.5		0.06
I ARM D	11.64	15.12	0.770		67.0	18.1	637.9		2.94

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.8 *
17.45	0.8 *
18.00	0.6 *
18.15	0.4

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	3.1 ***
17.15	8.5 *****
17.30	45.1 *****
17.45	80.0 *****
18.00	67.0 *****
18.15	18.1 *****

foresters way_grace hill_2026 Do Something PM 01_001.vao
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH) (VEH/H)	I	(MIN) (MIN/VEH)	I	(MIN) (MIN/VEH)	I
I	B	I	759.7 I 506.4	I	51.6 I 0.07	I	51.6 I 0.07	I
I	D	I	1276.6 I 851.1	I	3227.2 I 2.53	I	3238.0 I 2.54	I
I	ALL	I	2036.2 I 1357.5	I	3278.8 I 1.61	I	3289.6 I 1.62	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

foresters way_grace hill_2026 Do Something AM 01_001.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Foresters Way_Grace Hill\
foresters way_grace hill_2026 Do Something AM 01_001.vai"
(drive-on-the-left) at 13:45:39 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: Foresters way / Grace Hill
LOCATION: Folkestone
DATE: 18/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

foresters way_grace hill_2026 Do Something AM 01_001.vao

ARM A - Foord Rd
 ARM B - Grace Hill
 ARM C - Foresters way (westbound)
 ARM D - Foresters way (eastbound)

.GEOMETRIC DATA -----

ARM A IS JUNCTION EXIT ONLY

ARM C IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)		I															

I	ARM B	I	3.50	I	6.00	I	8.00	I	21.00	I	35.50	I	32.0	I	0.595	I	23.877
	I																
I	ARM D	I	3.50	I	3.50	I	0.00	I	22.50	I	35.50	I	59.0	I	0.472	I	15.992
	I																

V = approach half-width
 E = entry width

L = effective flare length
 R = entry radius

D = inscribed circle diameter
 PHI = entry angle

.TRAFFIC DEMAND DATA -----

(Only sets included in the current run are shown)

I ARM	I	FLOW	SCALE(%)	I

I A	I	100		I
I B	I	100		I
I C	I	100		I
I D	I	100		I

foresters way_grace hill_2026 Do Something AM 01_001.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Something AM

I I I	ARM	I I I	NUMBER OF MINUTES FROM START WHEN			I I I	RATE OF FLOW (VEH/MIN)			I I I							
			I I	FLOW STARTS	I I		TOP OF PEAK	I I	FLOW STOPS		I I	BEFORE	I I	AT TOP	I I	AFTER	I I
I	ARM B	I	15.00	I	45.00	I	75.00	I	11.32	I	16.99	I	11.32	I			
I	ARM D	I	15.00	I	45.00	I	75.00	I	7.11	I	10.67	I	7.11	I			

DEMAND SET TITLE: Foresters way / Grace Hill 2026 Do Something AM

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D						
	07.45 - 09.15											
		ARM B	0.220	0.000	0.780	0.000						
			199.0	0.0	707.0	0.0						
			(2.0)	(0.0)	(2.0)	(0.0)						
		ARM D	0.865	0.000	0.135	0.000						
			492.0	0.0	77.0	0.0						
			(2.0)	(0.0)	(1.0)	(0.0)						

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/	AVERAGE DELAY PER ARRIVING

foresters way_grace hill_2026 Do Something AM 01_001.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 07.45-08.00							
I ARM B	11.32	22.85	0.496	0.0	1.0	14.0	0.09
I ARM D	7.11	14.53	0.489	0.0	0.9	13.4	0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 08.00-08.15									
I ARM B	13.52	22.73	0.595		1.0	1.4	20.9		0.11
I ARM D	8.49	14.30	0.594		0.9	1.4	20.3		0.17

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 08.15-08.30									
I ARM B	16.56	22.59	0.733		1.4	2.6	37.0		0.16
I ARM D	10.40	13.99	0.744		1.4	2.7	37.2		0.27

foresters way_grace hill_2026 Do Something AM 01_001.vao

I
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM B	16.56	22.58	0.734		2.6	2.7	40.2		0.17
I										
I	ARM D	10.40	13.98	0.744		2.7	2.8	41.6		0.28
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM B	13.52	22.72	0.595		2.7	1.5	23.5		0.11
I										
I	ARM D	8.49	14.29	0.594		2.8	1.5	24.0		0.18
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I										

foresters way_grace hill_2026 Do Something AM 01_001.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I									
I									
I									
I	09.00-09.15								
I									
I	ARM B	11.32	22.84	0.496		1.5	1.0	15.4	0.09
I									
I	ARM D	7.11	14.52	0.490		1.5	1.0	15.3	0.14
I									
I									
I									

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.4	*
08.30	2.6	***
08.45	2.7	***
09.00	1.5	*
09.15	1.0	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.4	*
08.30	2.7	***
08.45	2.8	***
09.00	1.5	**
09.15	1.0	*

foresters way_grace hill_2026 Do Something AM 01_001.vao
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY *		I	* DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B	I	1242.3	I 828.2	I	151.0	I 0.12	I	151.0	I 0.12	I
I	D	I	780.2	I 520.1	I	151.8	I 0.19	I	151.8	I 0.19	I
I	ALL	I	2022.5	I 1348.4	I	302.8	I 0.15	I	302.8	I 0.15	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Foord Rd_New Street 2026 Do Something AM only 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Foord Rd_New Street\
Foord Rd_New Street 2026 Do Something AM only 01_001.vpi"
(drive-on-the-left) at 14:17:15 on Monday, 8 November 2010

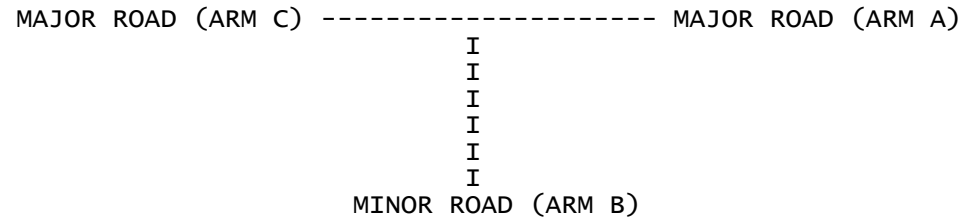
.RUN INFORMATION

RUN TITLE	: Foord Rd_New Street
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Foord Rd_New Street 2026 Do Something AM only 01_001.vpo



ARM A IS Grace Hill
 ARM B IS Foord Rd north
 ARM C IS New Street

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Foord Rd_New Street 2026 Do Something AM only 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.03	0.28	0.11	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	574.06	0.26	0.10	0.17	0.38	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Foord Rd_New Street 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Foord Rd_New Street 2026 Do Something AM only 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	6.93	I	10.39	I	6.93	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.14	I	9.21	I	6.14	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Foord Rd_New Street 2026 Do Something AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	554.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	9.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	1.000
I		I		I	491.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	1.0)
I		I		I	
I		I	ARM	I	0.000
I		I		I	0.000
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I	(	I	0.0)
I		I	(	I	0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Foord Rd_New Street 2026 Do Something AM
AND FOR TIME PERIOD 1

I	TIME	I	DEMAND	I	CAPACITY	I	DEMAND/	I	PEDESTRIAN	I	START	I	END	I	DELAY	I	GEOMETRIC DELAY	I	AVERAGE DELAY
I		I	(VEH/MIN)	I	(VEH/MIN)	I	CAPACITY	I	FLOW	I	QUEUE	I	QUEUE	I	(VEH.MIN/	I	(VEH.MIN/	I	PER ARRIVING
I		I		I		I	(RFC)	I	(PEDS/MIN)	I	(VEHS)	I	(VEHS)	I	TIME SEGMENT)	I	TIME SEGMENT)	I	VEHICLE (MIN)
I	07.45-08.00	I		I		I		I		I		I		I		I		I	
I	B-AC	I	6.16	I	9.80	I	0.629	I		I	0.00	I	1.61	I	21.9	I		I	0.26

Foord Rd_New Street 2026 Do Something AM only 01_001.vpo

I	C-A	0.00								
I										
I	C-B	0.00	7.16	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	6.95								
I										
I										
I										
.										
--										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.00-08.15									
I										
I	B-AC	7.36	9.40	0.783		1.61	3.20	42.2		0.44
I										
I	C-A	0.00								
I										
I	C-B	0.00	6.87	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	8.30								
I										
I										
I										
.										
--										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.15-08.30									

I	B-AC	9.01	8.83	1.020		3.20	13.14	134.1		1.29
I	C-A	0.00								
I	C-B	0.00	6.46	0.000		0.00	0.00	0.0		0.00
I	A-B	0.00								
I	A-C	10.17								
I										
I										
.										
--										

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	9.01	8.83	1.020		13.14	19.25	244.8		2.14
C-A	0.00								
C-B	0.00	6.46	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	10.17								

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/	AVERAGE DELAY PER ARRIVING

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
08.45-09.00							
B-AC	7.36	9.40	0.783	19.25	4.35	137.5	1.19
C-A	0.00						
C-B	0.00	6.87	0.000	0.00	0.00	0.0	0.00
A-B	0.00						
A-C	8.30						

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	6.16	9.80	0.629		4.35	1.77	30.0		0.30
C-A	0.00								
C-B	0.00	7.16	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	6.95								

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Foord Rd_New Street 2026 Do Something AM only 01_001.vpo

SEGMENT ENDING	VEHICLES IN QUEUE	
08.00	1.6	**
08.15	3.2	***
08.30	13.1	*****
08.45	19.3	*****
09.00	4.3	****
09.15	1.8	**

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I		I		I		I		I
I		I		I		I		I
I	B-AC	I	675.8	I	450.6	I	610.4	I
I		I		I		I	0.90	I
I	C-A	I	0.0	I	0.0	I		I
I		I		I		I		I
I	C-B	I	0.0	I	0.0	I	0.00	I
I		I		I		I		I
I	A-B	I	0.0	I	0.0	I		I
I		I		I		I		I
I	A-C	I	762.5	I	508.4	I		I
I		I		I		I		I
I	ALL	I	1438.4	I	958.9	I	610.4	I
I		I		I		I	0.42	I
I		I		I		I		I
I		I		I		I	610.6	I
I		I		I		I	0.90	I
I		I		I		I		I
I		I		I		I	0.00	I
I		I		I		I		I
I		I		I		I		I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Dover Rd_Tontine St 2026 Do Something 01_001.vpo
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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Dover Rd_Tontine Street\
Dover Rd_Tontine St 2026 Do Something 01_001.vpi"
(drive-on-the-left) at 14:21:59 on Monday, 8 November 2010

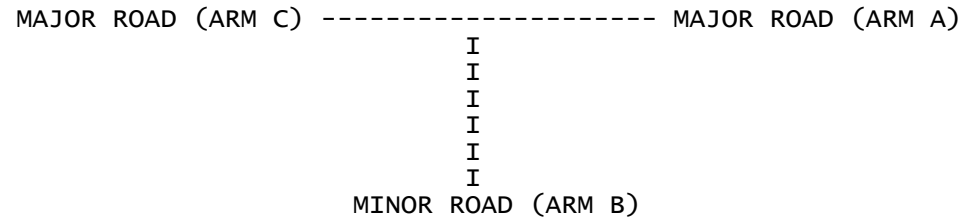
.RUN INFORMATION

RUN TITLE	: Dover Rd / Tontine Street
LOCATION	: Folkestone one-way
DATE	: 18/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

Dover Rd_Tontine St 2026 Do Something 01_001.vpo



ARM A IS Dover Rd (north)
 ARM B IS Tontine Stret
 ARM C IS Dover Rd (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 40.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 5.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Dover Rd_Tontine St 2026 Do Something 01_001.vpo			
I	STREAM B-C	STREAM A-C	STREAM A-B I
I	779.09	0.30	0.12 I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	620.29	0.29	0.11	0.18	0.41	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

.Demand set: Dover Rd / Tontine Street 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I		I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I		I		I	I	I

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	5.36	I	8.04	I	5.36	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.14	I	9.21	I	6.14	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I

.Demand set: Dover Rd / Tontine Street 2026 Do Something AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	A
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.0
I		I		I	0.0
I		I	ARM	I	B
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.0
I		I		I	0.0
I		I	ARM	I	C
I		I		I	0.000
I		I		I	0.0
I		I	(	I	0.0)
I		I		I	0.0

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Dover Rd / Tontine Street 2026 Do Something AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-AC	6.16	11.22	0.549		0.00	1.18	16.5		0.19

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

I	C-A	0.00								
I										
I	C-B	0.00	7.59	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	5.38								
I										
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I										
I	B-AC	7.36	10.90	0.675		1.18	1.97	27.4		0.27
I										
I	C-A	0.00								
I										
I	C-B	0.00	7.37	0.000		0.00	0.00	0.0		0.00
I										
I	A-B	0.00								
I										
I	A-C	6.43								
I										
I										

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									

		1	2	3	4	5	6	7
I								
I	B-AC	9.01	10.46	0.862		1.97	4.95	61.7
I								0.55
I	C-A	0.00						
I								
I	C-B	0.00	7.07	0.000		0.00	0.00	0.0
I								0.00
I	A-B	0.00						
I								
I	A-C	7.87						
I								
I								
I								
.								
--								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	9.01	10.46	0.862		4.95	5.45	78.6		0.65
C-A	0.00								
C-B	0.00	7.07	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	7.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH. MIN/	GEOMETRIC DELAY (VEH. MIN/	AVERAGE DELAY PER ARRIVING

	Dover Rd	Tontine St	2026 Do	Something	01_001.vpo				
	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME	SEGMENT)	TIME	SEGMENT)	VEHICLE (MIN)
08.45-09.00									
B-AC	7.36	10.90	0.675	5.45	2.19	37.7			0.32
C-A	0.00								
C-B	0.00	7.37	0.000	0.00	0.00	0.0			0.00
A-B	0.00								
A-C	6.43								

QUEUE FOR STREAM	B-AC
TIME	NO. OF

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

SEGMENT ENDING	VEHICLES IN QUEUE	
08.00	1.2	*
08.15	2.0	**
08.30	5.0	*****
08.45	5.4	*****
09.00	2.2	**
09.15	1.3	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	675.8	I	450.6	I	241.9	I	0.36	I
I	C-A	I	0.0	I	0.0	I		I		I
I	C-B	I	0.0	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I		I		I
I	A-C	I	590.5	I	393.7	I		I		I
I	ALL	I	1266.3	I	844.2	I	241.9	I	0.19	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	779.09	0.30	0.12	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	620.29	0.29	0.11	0.18	0.41	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Dover Rd / Tontine Street 2026 Do Something PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

I	I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I
			I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	
I	ARM	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I
I		I		I	I	I	I	I	I
I	ARM A	I	15.00	I 45.00	I 75.00	I 3.36	I 5.04	I 3.36	I
I	ARM B	I	15.00	I 45.00	I 75.00	I 3.97	I 5.96	I 3.97	I
I	ARM C	I	15.00	I 45.00	I 75.00	I 0.00	I 0.00	I 0.00	I

.Demand set: Dover Rd / Tontine Street 2026 Do Something PM

		TURNING PROPORTIONS										
		TURNING COUNTS										
		(PERCENTAGE OF H.V.S)										
	TIME	FROM/TO	ARM	A	ARM	B	ARM	C				
	16.45 - 17.00											
		ARM	A	0.000	0.000	1.000						
				0.0	0.0	269.0						
				(0.0)	(0.0)	(0.0)						
		ARM	B	0.000	0.000	1.000						
				0.0	0.0	318.0						
				(0.0)	(0.0)	(0.0)						
		ARM	C	0.000	0.000	0.000						
				0.0	0.0	0.0						
				(0.0)	(0.0)	(0.0)						

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET		Dover Rd / Tontine Street 2026 Do Something PM								
AND FOR TIME PERIOD		2								
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT	TIME SEGMENT	VEHICLE (MIN)
I I I I 16.45-17.00							
I I B-A C	3.99	11.97	0.333	0.00	0.49	7.1	0.12
I I C-A	0.00						
I I C-B	0.00	8.01	0.000	0.00	0.00	0.0	0.00
I I A-B	0.00						
I I A-C	3.38						
I I .-----							

[illegible]

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC	DELAY	AVERAGE	DELAY

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.15-17.30									
I B-AC	5.84	11.49	0.508		0.67	1.01	14.5		0.18
I C-A	0.00								
I C-B	0.00	7.70	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	4.94								
I									
I									
I									
.									
--									

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.30-17.45									
I B-AC	5.84	11.49	0.508		1.01	1.02	15.2		0.18
I C-A	0.00								
I C-B	0.00	7.70	0.000		0.00	0.00	0.0		0.00
I A-B	0.00								
I A-C	4.94								
I									
I									
I									
.									
--									

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	4.76	11.77	0.405		1.02	0.69	10.8		0.14
C-A	0.00								
C-B	0.00	7.88	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.03								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	3.99	11.97	0.333		0.69	0.51	7.8		0.13
C-A	0.00								
C-B	0.00	8.01	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.38								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.0	*
17.45	1.0	*
18.00	0.7	*
18.15	0.5	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	437.7	I	291.8	I	65.1	I	65.1	I
I	C-A	I	0.0	I	0.0	I		I		I
I	C-B	I	0.0	I	0.0	I	0.0	I	0.0	I
I	A-B	I	0.0	I	0.0	I		I		I
I	A-C	I	370.3	I	246.8	I		I		I
I	ALL	I	808.0	I	538.6	I	65.1	I	65.1	I
							0.08		0.08	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

Dover Rd_Tontine St 2026 Do Something 01_001.vpo

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

cheriton rd_radnor park rd_2026 Do Something PM.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Cheriton Rd_Radnor Park Rd\
cheriton rd_radnor park rd_2026 Do Something PM.vai"
(drive-on-the-left) at 12:22:37 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: Cheriton Rd_Radnor Park Rd
LOCATION: Folkestone
DATE: 17/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

cheriton rd_radnor park rd_2026 Do Something PM.vao

ARM A - Radnor Park Rd
ARM B - Cheriton Rd (south)
ARM C - Cheriton Rd (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN) I																	

I	ARM A	I	5.00	I	7.50	I	3.00	I	61.00	I	34.00	I	34.0	I	0.670	I	29.238
I	ARM B	I	5.00	I	8.00	I	22.00	I	57.00	I	34.00	I	41.0	I	0.739	I	35.567
I	ARM C	I	5.00 *	I	5.00	I	0.00	I	42.50	I	34.00	I	17.0	I	0.659	I	27.043
I		I		I		I		I		I		I		I		I	

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

WARNING ARM C - INPUT VALUE OF V (6.50) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%) I

I	A	I	100 I
I	B	I	100 I
I	C	I	100 I

cheriton rd_radnor park rd_2026 Do Something PM.vao

.TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Something PM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I	I	I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	8.09	I	12.13	I	8.09	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	15.00	I	22.50	I	15.00	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.40	I	18.60	I	12.40	I

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Something PM

		I	TURNING PROPORTIONS						I	
		I	TURNING COUNTS (VEH/HR)						I	
		I	(PERCENTAGE OF H.V.S)						I	
		I	-----						I	
	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	16.45 - 18.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.750	I	0.250	I
I		I		I	0.0	I	485.0	I	162.0	I
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.484	I	0.000	I	0.516	I
I		I		I	581.0	I	0.0	I	619.0	I
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.351	I	0.649	I	0.000	I
I		I		I	348.0	I	644.0	I	0.0	I
I		I		I	(0.0)	I	(1.0)	I	(0.0)	I
I		I		I		I		I		I

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

cheriton rd_radnor park rd_2026 Do Something PM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	8.09	23.77	0.340		0.0	0.5	7.5		0.06
ARM B	15.00	33.89	0.443		0.0	0.8	11.5		0.05
ARM C	12.40	22.13	0.560		0.0	1.3	18.0		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	9.66	22.71	0.425		0.5	0.7	10.8		0.08
ARM B	17.91	33.59	0.533		0.8	1.1	16.6		0.06
ARM C	14.81	21.20	0.699		1.3	2.2	31.6		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING

cheriton rd_radnor park rd_2026 Do Something PM.vao

I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I										
I	ARM A	11.83	21.38	0.553		0.7	1.2	17.6		0.10
I										
I	ARM B	21.94	33.19	0.661		1.1	1.9	27.6		0.09
I										
I	ARM C	18.13	19.93	0.910		2.2	7.7	93.1		0.41
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM A	11.83	21.25	0.557		1.2	1.2	18.5		0.11
I										
I	ARM B	21.94	33.19	0.661		1.9	1.9	28.9		0.09
I										
I	ARM C	18.13	19.91	0.911		7.7	8.6	123.7		0.51
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I										
I	ARM A	9.66	22.50	0.429		1.2	0.8	11.7		0.08

cheriton rd_radnor park rd_2026 Do Something PM.vao

I	ARM B	17.91	33.58	0.533	1.9	1.2	17.8	0.06
I	ARM C	14.81	21.17	0.699	8.6	2.4	42.7	0.18

I
I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	8.09	23.70	0.341		0.8	0.5	8.0		0.06
ARM B	15.00	33.88	0.443		1.2	0.8	12.2		0.05
ARM C	12.40	22.10	0.561		2.4	1.3	20.3		0.10

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.2 *
17.45	1.2 *
18.00	0.8 *
18.15	0.5 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	0.8 *
17.15	1.1 *
17.30	1.9 **
17.45	1.9 **
18.00	1.2 *
18.15	0.8 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

17.00	1.3 *
17.15	2.2 **
17.30	7.7 *****
17.45	8.6 *****
18.00	2.4 **
18.15	1.3 *

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	887.2	I	591.4	I	74.1	I
I	B	I	1645.5	I	1097.0	I	114.7	I
I	C	I	1360.2	I	906.8	I	329.4	I
I	ALL	I	3892.9	I	2595.2	I	518.2	I

cheriton rd_radnor park rd_2026 Do Something PM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

cheriton rd_radnor park rd_2026 Do Something AM.vao

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\Cheriton Rd_Radnor Park Rd\
cheriton rd_radnor park rd_2026 Do Something AM.vai"
(drive-on-the-left) at 12:20:07 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: Cheriton Rd_Radnor Park Rd
LOCATION: Folkestone
DATE: 17/08/2010
CLIENT: Shepway District Council
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

cheriton rd_radnor park rd_2026 Do Something AM.vao

ARM A - Radnor Park Rd
ARM B - Cheriton Rd (south)
ARM C - Cheriton Rd (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN) I																	

I	ARM A	I	5.00	I	7.50	I	3.00	I	61.00	I	34.00	I	34.0	I	0.670	I	29.238
I	ARM B	I	5.00	I	8.00	I	22.00	I	57.00	I	34.00	I	41.0	I	0.739	I	35.567
I	ARM C	I	5.00 *	I	5.00	I	0.00	I	42.50	I	34.00	I	17.0	I	0.659	I	27.043

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

WARNING ARM C - INPUT VALUE OF V (6.50) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW	SCALE(%)	I

I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

cheriton rd_radnor park rd_2026 Do Something AM.vao

.TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Something AM

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
I		I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I	ARM A	I 15.00	I 45.00	I 75.00	I 9.16	I 13.74	I 9.16
I	ARM B	I 15.00	I 45.00	I 75.00	I 11.56	I 17.34	I 11.56
I	ARM C	I 15.00	I 45.00	I 75.00	I 13.34	I 20.01	I 13.34

DEMAND SET TITLE: Cheriton Rd_Radnor Park Rd 2026 Do Something AM

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS (VEH/HR)	I
I	I	(PERCENTAGE OF H.V.S)	I
I	I	I	I
I	TIME	I FROM/TO	I ARM A I ARM B I ARM C I
I	07.45 - 09.15	I	I
I		I ARM A	I 0.000 I 0.772 I 0.228 I
I		I	I 0.0 I 566.0 I 167.0 I
I		I (0.0)	I (0.0) I (1.0) I
I		I	I I I
I		I ARM B	I 0.463 I 0.000 I 0.537 I
I		I	I 428.0 I 0.0 I 497.0 I
I		I (2.0)	I (0.0) I (3.0) I
I		I	I I I
I		I ARM C	I 0.261 I 0.739 I 0.000 I
I		I	I 278.0 I 789.0 I 0.0 I
I		I (2.0)	I (1.0) I (0.0) I
I		I	I I I

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

cheriton rd_radnor park rd_2026 Do Something AM.vao

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)				
07.45-08.00									
ARM A	9.16	22.56	0.406		0.0	0.7	9.9		0.07
ARM B	11.56	33.17	0.349		0.0	0.5	7.8		0.05
ARM C	13.34	23.16	0.576		0.0	1.3	19.1		0.10

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)				
08.00-08.15									
ARM A	10.94	21.26	0.515		0.7	1.0	15.2		0.10
ARM B	13.81	32.88	0.420		0.5	0.7	10.6		0.05
ARM C	15.93	22.47	0.709		1.3	2.4	33.2		0.15

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)				

cheriton rd_radnor park rd_2026 Do Something AM.vao

	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I								
I								
I	08.15-08.30							
I								
I	ARM A	13.40	19.61	0.683	1.0	2.1	29.4	0.16
I								
I	ARM B	16.91	32.48	0.521	0.7	1.1	15.8	0.06
I								
I	ARM C	19.51	21.52	0.906	2.4	7.6	93.0	0.38
I								
I								
I								

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.30-08.45									
I										
I	ARM A	13.40	19.46	0.688		2.1	2.2	32.1		0.16
I										
I	ARM B	16.91	32.47	0.521		1.1	1.1	16.2		0.06
I										
I	ARM C	19.51	21.51	0.907		7.6	8.4	121.2		0.46
I										
I										
I										

-										
.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I										
I	ARM A	10.94	21.03	0.520		2.2	1.1	17.2		0.10

cheriton rd_radnor park rd_2026 Do Something AM.vao

I	ARM B	13.81	32.86	0.420	1.1	0.7	11.2	0.05
I	ARM C	15.93	22.46	0.709	8.4	2.5	44.0	0.17

I
I
I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	9.16	22.48	0.408		1.1	0.7	10.7		0.08
ARM B	11.56	33.16	0.349		0.7	0.5	8.2		0.05
ARM C	13.34	23.15	0.576		2.5	1.4	21.6		0.10

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.0 *
08.30	2.1 **
08.45	2.2 **
09.00	1.1 *
09.15	0.7 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.1 *
08.45	1.1 *
09.00	0.7 *
09.15	0.5 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3 *
08.15	2.4 **
08.30	7.6 *****
08.45	8.4 *****
09.00	2.5 ***
09.15	1.4 *

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	A	I	1005.1	I	670.1	I	114.4	I
I	B	I	1268.4	I	845.6	I	69.8	I
I	C	I	1463.1	I	975.4	I	332.2	I
I	ALL	I	3736.6	I	2491.0	I	516.4	I

cheriton rd_radnor park rd_2026 Do Something AM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Cheriton Interchange_2026 Do Something 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

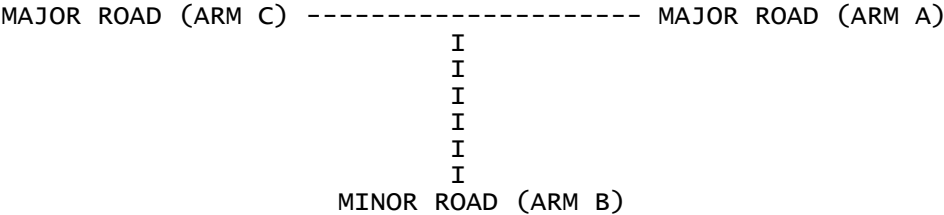
"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Cheriton Interchange\
Cheriton Interchange_2026 Do Something 01_001.vpi"
(drive-on-the-left) at 16:00:01 on Tuesday, 2 November 2010

.RUN INFORMATION

RUN TITLE	: Cheriton Interchange
LOCATION	: Cheriton, Folkestone
DATE	: 17/08/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS A20 Cheriton High Street (south)
ARM B IS Cheriton High Street (west)
ARM C IS A20 Cheriton High Street (north)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 14.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 5.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.50 M.	I
I	- VISIBILITY	I	(VC-B) 90.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Cheriton Interchange_2026 Do Something 01_001.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.18	0.07	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	654.56	0.18	0.07	0.11	0.25	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	714.66	0.18	0.18	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Cheriton Interchange 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I

Cheriton Interchange_2026 Do Something 01_001.vpo

I	ARM	A	I	15.00	I	45.00	I	75.00	I	13.29	I	19.93	I	13.29	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	11.23	I	16.84	I	11.23	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	20.50	I	30.75	I	20.50	I

.Demand set: Cheriton Interchange 2026 Do Something AM

I		I		TURNING PROPORTIONS	I
I		I		TURNING COUNTS	I
I		I		(PERCENTAGE OF H.V.S)	I
I		I			I
I	TIME	I	FROM/TO	I	ARM
I		I	A	I	ARM
I		I	B	I	ARM
I		I	C	I	
I	07.45 - 08.00	I		I	
I		I	ARM	I	A
I		I		I	0.000
I		I		I	0.0
I		I		I	(0.0)
I		I		I	(2.0)
I		I		I	(5.0)
I		I		I	
I		I	ARM	I	B
I		I		I	0.000
I		I		I	0.0
I		I		I	0.0
I		I		I	(0.0)
I		I		I	(0.0)
I		I		I	(2.0)
I		I		I	
I		I	ARM	I	C
I		I		I	0.518
I		I		I	850.0
I		I		I	790.0
I		I		I	0.0
I		I		I	(4.0)
I		I		I	(2.0)
I		I		I	(0.0)
I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Cheriton Interchange 2026 Do Something AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00									
I	B-AC	11.27	9.86	1.143		0.00	26.47	221.6		1.65

Cheriton Interchange_2026 Do Something 01_001.vpo

I	C-A	10.67								
I										
I	C-B	9.91	9.23	1.074		0.00	17.70	157.7		1.30
I										
I	A-B	5.01								
I										
I	A-C	8.33								
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I										
I	B-AC	13.45	9.49	1.418		26.47	86.14	845.1		6.27
I										
I	C-A	12.74								
I										
I	C-B	11.84	8.75	1.353		17.70	64.36	616.4		5.07
I										
I	A-B	5.98								
I										
I	A-C	9.95								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30									

Cheriton Interchange_2026 Do Something 01_001.vpo

I										
I	B-AC	16.48	8.97	1.837		86.14	198.75	2136.7		15.99
I	C-A	15.60								
I	C-B	14.50	8.09	1.792		64.36	160.46	1686.2		14.05
I	A-B	7.32								
I	A-C	12.18								
I										
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.30-08.45									
I	B-AC	16.48	8.97	1.837		198.75	311.34	3825.7		28.58
I	C-A	15.60								
I	C-B	14.50	8.09	1.792		160.46	256.55	3127.6		25.93
I	A-B	7.32								
I	A-C	12.18								
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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I										

(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

08.45-09.00

B-AC	13.45	9.49	1.418	311.34	370.84	5116.4	35.28
C-A	12.74						
C-B	11.84	8.75	1.353	256.55	302.86	4195.6	31.22
A-B	5.98						
A-C	9.95						

QUEUE FOR STREAM B-AC

TIME	NO. OF

Cheriton Interchange_2026 Do Something 01_001.vpo

SEGMENT ENDING	VEHICLES IN QUEUE
08.00	26.5
08.15	86.1
08.30	198.7
08.45	311.3
09.00	370.8
09.15	391.9

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	17.7
08.15	64.4
08.30	160.5
08.45	256.5
09.00	302.9
09.15	313.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-AC	I 1236.0	I 824.0	I 17866.2	I 14.45	I 25654.1	I 20.76	I
I	C-A	I 1170.0	I 780.0	I	I	I	I	I
I	C-B	I 1087.4	I 724.9	I 14403.8	I 13.25	I 19719.9	I 18.14	I
I	A-B	I 549.2	I 366.1	I	I	I	I	I
I	A-C	I 913.9	I 609.3	I	I	I	I	I
I	ALL	I 4956.5	I 3304.3	I 32270.0	I 6.51	I 45374.0	I 9.15	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	721.27	0.18	0.07	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	654.56	0.18	0.07	0.11	0.25	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	714.66	0.18	0.18	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

.Demand set: Cheriton Interchange 2026 Do Something PM

Cheriton Interchange_2026 Do Something 01_001.vpo

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I																	
			I	FLOW STARTS	I	TOP OF PEAK		I	FLOW STOPS	I		BEFORE	I	AT TOP	I	AFTER												
																	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	12.70	I	19.05	I	12.70	I													
I	ARM	B	I	15.00	I	45.00	I	75.00	I	12.30	I	18.45	I	12.30	I													
I	ARM	C	I	15.00	I	45.00	I	75.00	I	20.92	I	31.39	I	20.92	I													

.Demand set: Cheriton Interchange 2026 Do Something PM

I I I I I	TIME	TURNING PROPORTIONS										I I I	
		TURNING COUNTS											
		(PERCENTAGE OF H.V.S)											

		I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 17.00	I		I		I		I		I		I	
I		I	ARM	A	I	0.000	I	0.406	I	0.594	I		I
I		I			I	0.0	I	412.0	I	604.0	I		I
I		I			I	(0.0)	I	(0.0)	I	(1.0)	I		I
I		I			I		I		I		I		I
I		I	ARM	B	I	0.000	I	0.000	I	1.000	I		I
I		I			I	0.0	I	0.0	I	984.0	I		I
I		I			I	(0.0)	I	(0.0)	I	(1.0)	I		I
I		I			I		I		I		I		I
I		I	ARM	C	I	0.584	I	0.416	I	0.000	I		I
I		I			I	977.0	I	697.0	I	0.0	I		I
I		I			I	(3.0)	I	(2.0)	I	(0.0)	I		I
I		I			I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

Cheriton Interchange_2026 Do Something 01_001.vpo
 FOR DEMAND SET Cheriton Interchange 2026 Do Something PM
 AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	12.35	10.15	1.216		0.00	36.93	297.0		2.09
C-A	12.26								
C-B	8.75	9.41	0.930		0.00	7.22	78.4		0.71
A-B	5.17								
A-C	7.58								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	14.74	9.81	1.502		36.93	110.98	1109.6		7.88
C-A	14.64								
C-B	10.44	8.97	1.165		7.22	31.25	293.4		2.52
A-B	6.17								
A-C	9.05								

Cheriton Interchange_2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	18.06	9.34	1.933		110.98	241.69	2645.1		18.93
C-A	17.93								
C-B	12.79	8.36	1.530		31.25	97.83	968.4		7.95
A-B	7.56								
A-C	11.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	18.06	9.34	1.933		241.69	372.40	4605.7		33.01
C-A	17.93								
C-B	12.79	8.36	1.530		97.83	164.33	1966.3		15.26
A-B	7.56								

Cheriton Interchange_2026 Do Something 01_001.vpo

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I A-C 11.08
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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN)
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I 17.45-18.00
I
I B-AC 14.74 9.81 1.502 372.40 446.36 6140.7 40.95
I
I C-A 14.64
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I C-B 10.44 8.97 1.165 164.33 186.50 2631.3 19.49
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I A-B 6.17
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I A-C 9.05
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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING
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I

I 18.00-18.15
I
I B-AC 12.35 10.15 1.216 446.36 479.27 6942.2 45.71
I
I C-A 12.26
I

I	C-B	8.75	9.41	0.930	186.50	177.32	2728.6	19.44
I								
I	A-B	5.17						
I	A-C	7.58						
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QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	36.9	*****
17.15	111.0	

17.30	241.7	

17.45	372.4	

18.00	446.4	

18.15	479.3	

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QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	7.2	*****
17.15	31.2	*****
17.30	97.8	

17.45	164.3	

18.00	186.5	

18.15	177.3	

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

Cheriton Interchange_2026 Do Something 01_001.vpo

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* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770356
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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\Canterbury_Alkhams Valley\
Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpi"
(drive-on-the-left) at 15:34:16 on Monday, 8 November 2010

.RUN INFORMATION

RUN TITLE	: Canterbury Rd / Alkhams Valley Rd
LOCATION	:
DATE	: 08/11/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	: Geometries taken from Hawkinge mixed use development TA (downloaded from SDC planning)

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

Canterbury Rd_Alkhram Valley Rd 2026 Do Something.vpo

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

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I
I
I
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MINOR ROAD (ARM B)

ARM A IS A260 Canterbury Rd north
ARM B IS Alkhram Valley Rd
ARM C IS A260 Canterbury Rd south

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.60 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 30.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 49.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.10 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.20 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.40 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpo

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM A-B	I
I	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM A-B	I
I	728.15		0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

.Demand set: Canterbury Rd / Alkhams Valley Rd 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I						
			I	I	I	I	I	I	I	I							
												I	I	I	I	I	I
I		I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER									
I		I	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK									
I		I															
I	ARM	A	I	15.00	I	45.00	I	75.00	I	25.44	I	38.16	I	25.44			
I	ARM	B	I	15.00	I	45.00	I	75.00	I	3.96	I	5.94	I	3.96			
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.55	I	12.83	I	8.55			

[illegible]

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

FOR DEMAND SET Canterbury Rd / Alkham Valley Rd 2026 Do Something AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

[illegible]

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
07.45-08.00									
B-C	3.12	5.41	0.578		0.00	1.28	17.0		0.41
B-A	0.85	1.87	0.456		0.00	0.75	9.5		0.90
C-A	7.01								
C-B	1.57	4.34	0.362		0.00	0.55	7.5		0.35
A-B	13.25								
A-C	12.28								

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.73	3.01	1.239		1.28	14.31	124.1		7.71
B-A	1.02	0.84	1.208		0.75	5.07	47.2		11.56
C-A	8.38								
C-B	1.87	3.11	0.602		0.55	1.35	17.6		0.75
A-B	15.82								
A-C	14.67								

Canterbury Rd_Alkhram Valley Rd 2026 Do Something.vpo

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	4.57	0.44	10.272		14.31	76.19	678.8		104.50
B-A	1.25	0.13	9.770		5.07	21.89	202.3		112.98
C-A	10.26								
C-B	2.29	1.42	1.618		1.35	15.32	128.2		7.04
A-B	19.38								
A-C	17.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	4.57	0.00	***		76.19	144.72	1656.8		42.91
B-A	1.25	0.00	***		21.89	40.61	468.7		44.23
C-A	10.26								

[illegible]

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	3.73	2.26	1.653		144.72	166.83	2336.7		47.38
B-A	1.02	0.63	1.621		40.61	46.47	653.1		48.57
C-A	8.38								
C-B	1.87	3.11	0.602		28.57	11.57	301.0		6.62
A-B	15.82								
A-C	14.67								

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[illegible]

Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpo

Stream	Segment	Time	Capacity	Flow	Delay	Queue	Cost
I	B-C	3.12	3.80	0.823	166.83	157.09	2429.5
I	B-A	0.85	1.05	0.810	46.47	43.81	677.1
I	C-A	7.01					
I	C-B	1.57	4.34	0.362	11.57	0.59	34.3
I	A-B	13.25					
I	A-C	12.28					

WARNING THE ENTRY CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.
(AG23 REF. 8.4.2(i)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3
08.15	14.3
08.30	76.2
08.45	144.7
09.00	166.8
09.15	157.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8
08.15	5.1
08.30	21.9
08.45	40.6
09.00	46.5
09.15	43.8

Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpo

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	1.3	*
08.30	15.3	*****
08.45	28.6	*****
09.00	11.6	*****
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	342.7	I 228.5	I 7242.9	I 21.13	I 10493.0	I 30.62
I	B-A	I	93.6	I 62.4	I 2057.8	I 21.99	I 2969.2	I 31.72
I	C-A	I	769.4	I 512.9	I	I	I	I
I	C-B	I	172.1	I 114.7	I 817.9	I 4.75	I 818.0	I 4.75
I	A-B	I	1453.5	I 969.0	I	I	I	I
I	A-C	I	1347.5	I 898.3	I	I	I	I
I	ALL	I	4178.8	I 2785.9	I 10118.6	I 2.42	I 14280.1	I 3.42

WARNING THE CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I

Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpo

I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	728.15	0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

.Demand set: Canterbury Rd / Alkhams Valley Rd 2026 Do Something PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I

Canterbury Rd_Alkhām valley Rd 2026 Do Something.vpo															
I			I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I			I		I		I		I		I		I		I
I	ARM	A	I	15.00	I	45.00	I	75.00	I	23.02	I	34.54	I	23.02	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	3.90	I	5.85	I	3.90	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	12.65	I	18.97	I	12.65	I

.Demand set: Canterbury Rd / Alkhām valley Rd 2026 Do Something PM

		TURNING PROPORTIONS											
		TURNING COUNTS											
		(PERCENTAGE OF H.V.S)											
TIME		FROM/TO	ARM	A	ARM	B	ARM	C					
16.45 - 17.00													
		ARM	A	0.000	0.542	0.458							
				0.0	998.0	844.0							
				(0.0)	(11.0)	(12.0)							
		ARM	B	0.330	0.000	0.670							
				103.0	0.0	209.0							
				(10.0)	(0.0)	(10.0)							
		ARM	C	0.789	0.211	0.000							
				798.0	214.0	0.0							
				(8.0)	(12.0)	(0.0)							

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Canterbury Rd / Alkhām valley Rd 2026 Do Something PM
AND FOR TIME PERIOD 2

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									

Canterbury Rd_Alkhram valley Rd 2026 Do Something.vpo

I	B-C	2.62	4.92	0.533	0.00	1.08	14.4	0.41
I								
I	B-A	1.29	1.92	0.672	0.00	1.61	18.7	1.23
I								
I	C-A	10.01						
I								
I	C-B	2.69	5.05	0.531	0.00	1.07	14.3	0.40
I								
I	A-B	12.52						
I								
I	A-C	10.59						
I								
I								

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.00-17.15									
I										
I	B-C	3.13	1.95	1.604		1.08	19.75	160.4		22.59
I										
I	B-A	1.54	1.01	1.535		1.61	10.47	92.9		25.58
I										
I	C-A	11.96								
I										
I	C-B	3.21	3.93	0.816		1.07	3.24	38.8		1.02
I										
I	A-B	14.95								
I										
I	A-C	12.65								
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

Canterbury Rd_Alkhram valley Rd 2026 Do Something.vpo

		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	I	17.15-17.30								
I	I	B-C	3.84	0.00	***	19.75	77.28	727.7		55.56
I	I	B-A	1.89	0.00	***	10.47	38.82	369.7		56.31
I	I	C-A	14.64							
I	I	C-B	3.93	2.38	1.652	3.24	27.02	229.0		7.11
I	I	A-B	18.31							
I	I	A-C	15.49							
I	I									
I	I									

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
I	I									PER ARRIVING
I	I									VEHICLE (MIN)
I	I	17.30-17.45								
I	I	B-C	3.84	0.00	***		77.28	134.81	1590.7	-999.00
I	I	B-A	1.89	0.00	***		38.82	67.17	794.9	-999.00
I	I	C-A	14.64							
I	I	C-B	3.93	2.38	1.652		27.02	50.32	580.1	13.11
I	I	A-B	18.31							
I	I	A-C	15.49							
I	I									
I	I									

Canterbury Rd_Alkhram Valley Rd 2026 Do Something.vpo

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	3.13	0.45	6.892		134.81	174.97	2323.3		77.89
B-A	1.54	0.23	6.836		67.17	86.93	1155.8		78.46
C-A	11.96								
C-B	3.21	3.93	0.816		50.32	40.61	682.0		10.86
A-B	14.95								
A-C	12.65								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	2.62	2.37	1.107		174.97	178.76	2653.0		75.09
B-A	1.29	1.18	1.099		86.93	88.70	1317.3		75.34
C-A	10.01								

I	C-B	2.69	5.05	0.531	40.61	6.93	356.6	5.02
I								
I	A-B	12.52						
I								
I	A-C	10.59						
I								
I								
I								

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WARNING THE ENTRY CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.
 (AG23 REF. 8.4.2(i)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	19.8	*****
17.30	77.3	*****
17.45	134.8	*****
18.00	175.0	*****
18.15	178.8	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.6	**
17.15	10.5	*****
17.30	38.8	*****
17.45	67.2	*****
18.00	86.9	*****
18.15	88.7	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

Canterbury Rd_Alkhams Valley Rd 2026 Do Something.vpo

17.00	1.1	*
17.15	3.2	***
17.30	27.0	*****
17.45	50.3	*****
18.00	40.6	*****
18.15	6.9	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	287.7	I	191.8	I	7469.5	I
I	B-A	I	141.8	I	94.5	I	3749.3	I
I	C-A	I	1098.4	I	732.3	I		I
I	C-B	I	294.6	I	196.4	I	1900.8	I
I	A-B	I	1373.7	I	915.8	I		I
I	A-C	I	1161.7	I	774.5	I		I
I	ALL	I	4357.8	I	2905.2	I	13119.6	I
							3.01	I
							23212.6	I
							5.33	I

WARNING THE CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES

WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS

A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\
A260 Spitfire Way_A20_A260 Canterbury Rd\A260 Spitfire Way_A20_A260 2026 Do Something PM.vai"
(drive-on-the-left) at 08:57:24 on Tuesday, 9 November 2010

.FILE PROPERTIES

RUN TITLE: A260 Spitfire way / A260 Canterbury Rd / A20
LOCATION:
DATE: 09/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries taken from Hawkinge mixed use TA (downloaded
from SDC website)

A260 Spitfire Way_A20_A260 2026 Do Something PM.vao

.INPUT DATA

ARM A - A260 Canterbury Rd south

ARM B - A260 Spitfire way

ARM C - A260 Canterbury Rd north

ARM D - A20

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)																	

I	ARM A	I	4.60	I	6.60	I	19.10	I	13.70	I	41.70	I	21.0	I	0.673	I	31.064
I	ARM B	I	4.00	I	6.80	I	5.30	I	16.20	I	41.70	I	36.0	I	0.584	I	24.633
I	ARM C	I	3.90	I	6.70	I	21.10	I	20.30	I	41.70	I	45.0	I	0.619	I	28.100
I	ARM D	I	7.10	I	8.40	I	2.70	I	14.90	I	41.70	I	44.0	I	0.708	I	35.928

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

A260 Spitfire Way_A20_A260 2026 Do Something PM.vao

 .TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Something PM

I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I				
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.29	I	16.93	I	11.29	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	11.27	I	16.91	I	11.27	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.85	I	8.77	I	5.85	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	15.99	I	23.98	I	15.99	I

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Something PM

		TURNING PROPORTIONS									
		TURNING COUNTS (VEH/HR)									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D					
16.45 - 18.15		ARM A	0.000 0.0 (0.0)	0.640 578.0 (8.0)	0.277 250.0 (8.0)	0.083 75.0 (8.0)					
		ARM B	0.931 840.0 (11.0)	0.000 0.0 (0.0)	0.007 6.0 (60.0)	0.062 56.0 (13.0)					
		ARM C	0.953 446.0 (10.0)	0.006 3.0 (0.0)	0.000 0.0 (0.0)	0.041 19.0 (29.0)					
		ARM D	0.436 558.0 (9.0)	0.409 523.0 (11.0)	0.155 198.0 (14.0)	0.000 0.0 (0.0)					

A260 Spitfire Way_A20_A260 2026 Do Something PM.vao

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QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.29	22.54	0.501		0.0	1.0	14.3		0.09
ARM B	11.27	18.36	0.614		0.0	1.6	21.9		0.14
ARM C	5.85	17.92	0.326		0.0	0.5	7.0		0.08
ARM D	15.99	21.16	0.756		0.0	2.9	39.9		0.18

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	13.48	21.63	0.623		1.0	1.6	23.2		0.12
ARM B	13.46	17.69	0.761		1.6	3.0	41.2		0.23
ARM C	6.99	16.45	0.425		0.5	0.7	10.6		0.11
ARM D	19.09	18.93	1.009		2.9	18.0	180.5		0.79

A260 Spitfire Way_A20_A260 2026 Do Something PM.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.15-17.30									
I										
I	ARM A	16.51	22.39	0.737		1.6	2.7	37.9		0.17
I										
I	ARM B	16.49	17.26	0.955		3.0	10.9	122.1		0.61
I										
I	ARM C	8.56	14.69	0.582		0.7	1.4	19.3		0.16
I										
I	ARM D	23.38	16.17	1.446		18.0	126.6	1085.7		4.65
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.30-17.45									
I										
I	ARM A	16.51	22.49	0.734		2.7	2.7	40.7		0.17
I										
I	ARM B	16.49	17.27	0.955		10.9	13.3	183.0		0.86
I										
I	ARM C	8.56	14.46	0.592		1.4	1.4	21.0		0.17
I										
I	ARM D	23.38	15.90	1.471		126.6	238.8	2740.4		10.90
I										
I										

A260 Spitfire Way_A20_A260 2026 Do Something PM.vao

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	17.45-18.00									
I	ARM A	13.48	21.52	0.626		2.7	1.7	27.0		0.13
I	ARM B	13.46	17.64	0.763		13.3	3.4	71.1		0.33
I	ARM C	6.99	15.98	0.437		1.4	0.8	12.3		0.11
I	ARM D	19.09	18.39	1.038		238.8	249.4	3661.7		12.62
I										
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	18.00-18.15									
I	ARM A	11.29	20.53	0.550		1.7	1.2	19.3		0.11
I	ARM B	11.27	17.87	0.631		3.4	1.8	28.0		0.16
I	ARM C	5.85	17.78	0.329		0.8	0.5	7.6		0.08
I	ARM D	15.99	20.98	0.762		249.4	175.8	3188.8		10.19
I										
I										
I										

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	2.7	***
17.45	2.7	***
18.00	1.7	**
18.15	1.2	*

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.6	**
17.15	3.0	***
17.30	10.9	*****
17.45	13.3	*****
18.00	3.4	***
18.15	1.8	**

 .QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.4	*
17.45	1.4	*
18.00	0.8	*
18.15	0.5	

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.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.9	***
17.15	18.0	*****
17.30	126.6	

17.45	238.8	

18.00	249.4	

18.15	175.8	

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1238.2	825.5	162.3
B	1236.8	824.6	467.3
C	641.7	427.8	77.8
D	1753.8	1169.2	10897.0
ALL	4870.5	3247.0	11604.4

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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RG40 3GA, UK	

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\
A260 Spitfire Way_A20_A260 Canterbury Rd\A260 Spitfire Way_A20_A260 2026 Do Something AM.vai"
(drive-on-the-left) at 08:55:10 on Tuesday, 9 November 2010

.FILE PROPERTIES

RUN TITLE: A260 Spitfire way / A260 Canterbury Rd / A20
LOCATION:
DATE: 09/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries taken from Hawkinge mixed use TA (downloaded
from SDC website)

A260 Spitfire Way_A20_A260 2026 Do Something AM.vao

.INPUT DATA

ARM A - A260 Canterbury Rd south

ARM B - A260 Spitfire way

ARM C - A260 Canterbury Rd north

ARM D - A20

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)																	

I	ARM A	I	4.60	I	6.60	I	19.10	I	13.70	I	41.70	I	21.0	I	0.673	I	31.064
I	ARM B	I	4.00	I	6.80	I	5.30	I	16.20	I	41.70	I	36.0	I	0.584	I	24.633
I	ARM C	I	3.90	I	6.70	I	21.10	I	20.30	I	41.70	I	45.0	I	0.619	I	28.100
I	ARM D	I	7.10	I	8.40	I	2.70	I	14.90	I	41.70	I	44.0	I	0.708	I	35.928

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

A260 Spitfire Way_A20_A260 2026 Do Something AM.vao

 .TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Something AM

I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I				
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	IFALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.64	I	11.46	I	7.64	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	16.35	I	24.53	I	16.35	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.94	I	10.41	I	6.94	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	9.36	I	14.04	I	9.36	I

DEMAND SET TITLE: A260 Spitfire Way / A260 Canterbury Rd / A20 2026 Do Something AM

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D						
	07.45 - 09.15											
		ARM A	0.000	0.609	0.224	0.167						
			0.0	372.0	137.0	102.0						
			(0.0)	(12.0)	(18.0)	(10.0)						
		ARM B	0.911	0.000	0.002	0.087						
			1192.0	0.0	2.0	114.0						
			(10.0)	(0.0)	(0.0)	(12.0)						
		ARM C	0.917	0.002	0.000	0.081						
			509.0	1.0	0.0	45.0						
			(10.0)	(0.0)	(0.0)	(8.0)						
		ARM D	0.465	0.417	0.119	0.000						
			348.0	312.0	89.0	0.0						
			(15.0)	(18.0)	(27.0)	(0.0)						

A260 Spitfire Way_A20_A260 2026 Do Something AM.vao

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QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	7.64	23.93	0.319		0.0	0.5	6.8		0.06
ARM B	16.35	19.81	0.825		0.0	4.3	55.4		0.25
ARM C	6.94	14.83	0.468		0.0	0.9	12.4		0.12
ARM D	9.36	16.65	0.562		0.0	1.3	17.8		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	9.12	23.25	0.392		0.5	0.6	9.4		0.07
ARM B	19.52	19.31	1.011		4.3	19.0	193.2		0.83
ARM C	8.28	13.14	0.631		0.9	1.6	23.1		0.20
ARM D	11.18	14.33	0.780		1.3	3.3	43.4		0.29

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	11.17	22.64	0.493		0.6	1.0	14.0		0.09
I	ARM B	23.91	18.70	1.279		19.0	97.7	876.5		3.29
I	ARM C	10.15	12.85	0.790		1.6	3.4	45.3		0.34
I	ARM D	13.69	13.17	1.040		3.3	18.9	182.5		1.13
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	11.17	22.53	0.496		1.0	1.0	14.6		0.09
I	ARM B	23.91	18.67	1.280		97.7	176.3	2054.6		7.38
I	ARM C	10.15	12.85	0.790		3.4	3.6	52.4		0.37
I	ARM D	13.69	13.10	1.045		18.9	30.4	371.9		2.11
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	08.45-09.00									
I	ARM A	9.12	22.56	0.404		1.0	0.7	10.5		0.07
I	ARM B	19.52	19.16	1.019		176.3	182.0	2687.1		9.34
I	ARM C	8.28	12.76	0.649		3.6	1.9	31.1		0.23
I	ARM D	11.18	13.87	0.806		30.4	5.1	220.3		1.24
I										
I										
I										

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										
I	09.00-09.15									
I										
I	ARM A	7.64	23.82	0.321		0.7	0.5	7.3		0.06
I										
I	ARM B	16.35	19.78	0.827		182.0	132.2	2356.5		8.00
I										
I	ARM C	6.94	12.59	0.551		1.9	1.3	19.9		0.18
I										
I	ARM D	9.36	14.41	0.650		5.1	1.9	32.3		0.22
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	1.0 *
08.45	1.0 *
09.00	0.7 *
09.15	0.5

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	4.3 ****
08.15	19.0 *****
08.30	97.7 *****
08.45	176.3 *****
09.00	182.0 *****
09.15	132.2 *****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.6 **

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08.30	3.4	***
08.45	3.6	****
09.00	1.9	**
09.15	1.3	*

.QUEUE AT ARM D

TIME SEGMENT
ENDING NO. OF
VEHICLES
IN QUEUE

08.00	1.3	*
08.15	3.3	***
08.30	18.9	*****
08.45	30.4	*****
09.00	5.1	*****
09.15	1.9	**

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	837.8	I	558.5	I	62.6	I
I	B	I	1793.5	I	1195.7	I	4.58	I
I	C	I	761.0	I	507.3	I	0.24	I
I	D	I	1027.0	I	684.7	I	0.85	I
I	ALL	I	4419.4	I	2946.3	I	2.11	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Basic Results Summary

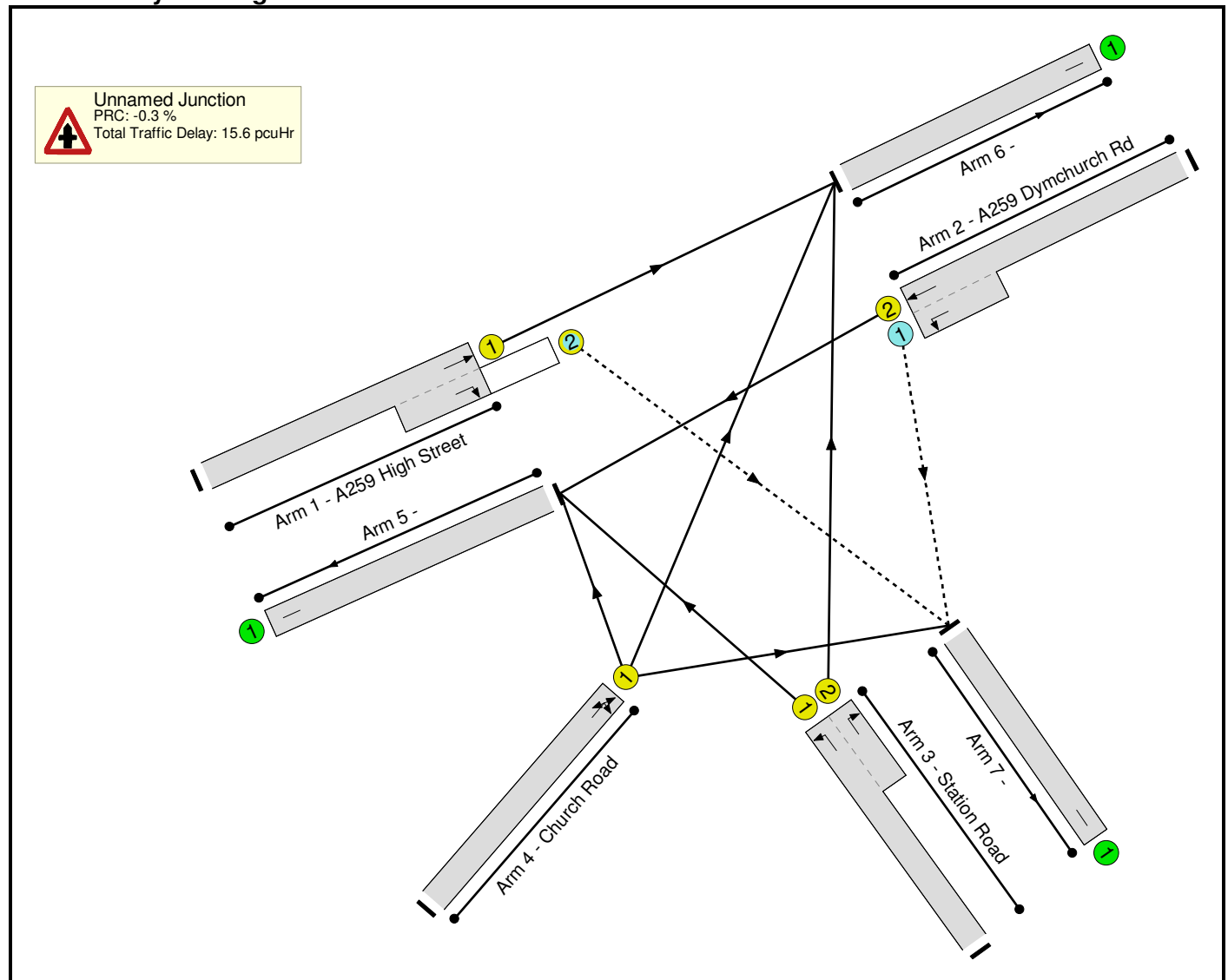
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	A259 High Street_Station Rd_stage 3 and 5 every other cycle 01_001.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2010 Base AM' (FG1: '2010 Base AM', Plan 1: 'Network Control Plan 1')

Junction Layout Diagram

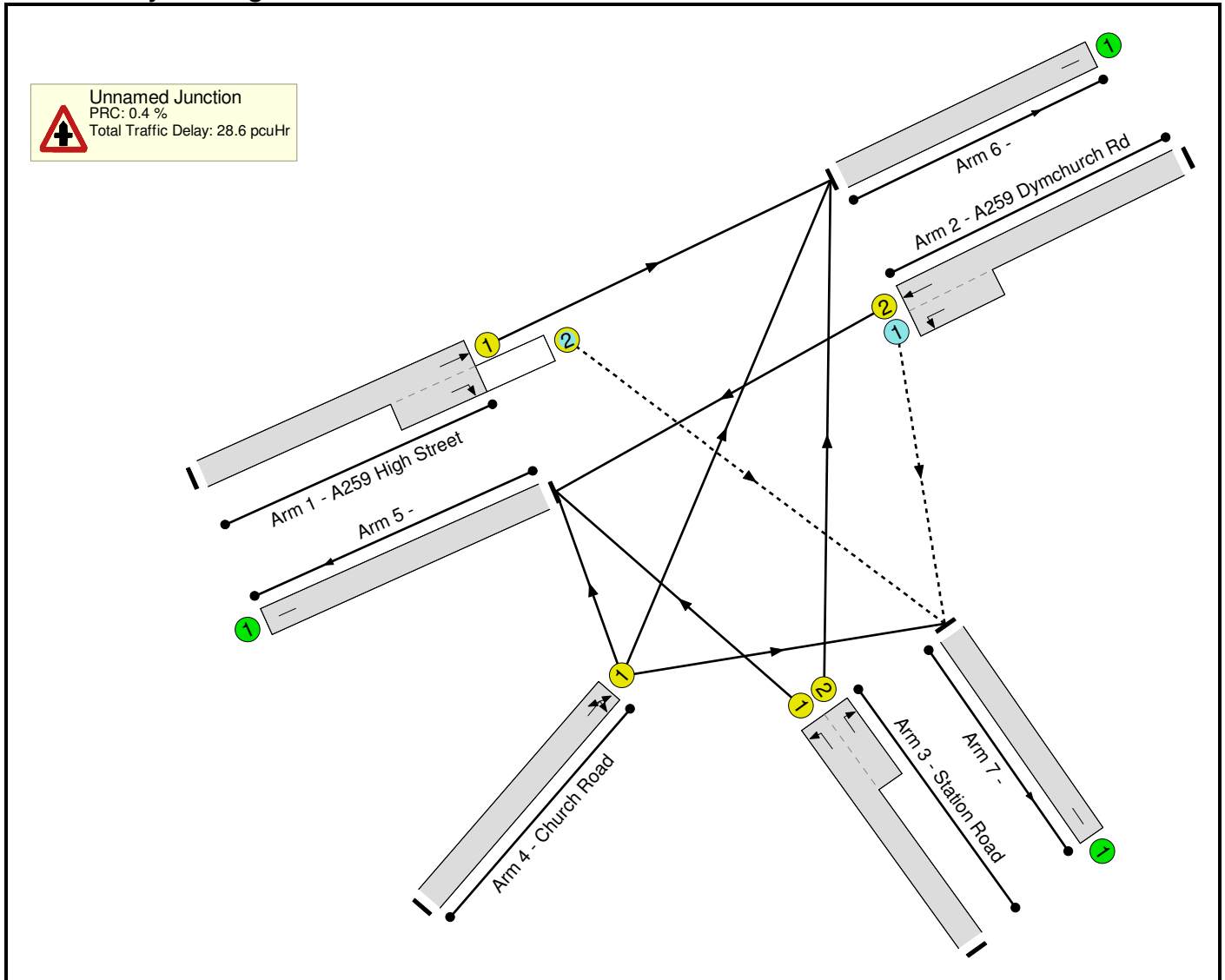


Basic Results Summary

Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	90.3%	15.6	-	-
Unnamed Junction	-	-	-	-	90.3%	15.6	-	-
1/1+1/2	A259 High Street Ahead Right	377	1940:1731	547	68.9%	3.1	29.8	5.4
2/2+2/1	A259 Dymchurch Rd Ahead Left	604	1965:1400	814	74.2%	2.9	17.2	5.3
3/1+3/2	Station Road Left Right	695	1754:1827	770	90.3%	7.8	40.2	9.8
4/1	Church Road U-Turn Ahead Right	60	1933	141	42.7%	1.2	71.0	2.1
5/1		562	1940	1940	29.0%	0.2	1.3	0.2
6/1		517	1940	1940	26.6%	0.2	1.3	0.2
7/1		657	1965	1965	33.4%	0.3	1.4	0.8
C1 PRC for Signalled Lanes (%): -0.3 PRC Over All Lanes (%): -0.3 Total Delay for Signalled Lanes (pcuHr): 14.96 Total Delay Over All Lanes(pcuHr): 15.59 Cycle Time (s): 110								

Junction Layout Diagram

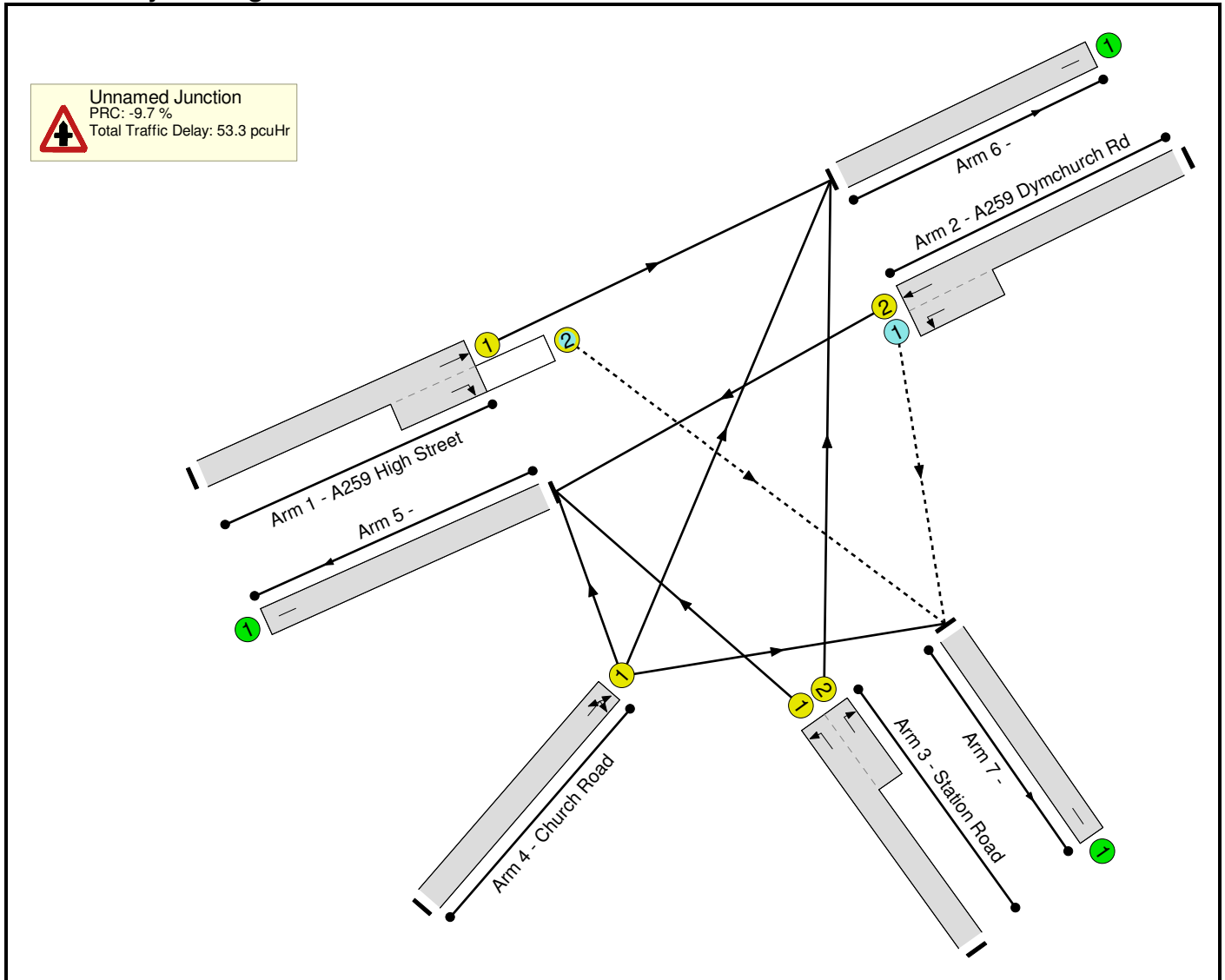


Basic Results Summary

Link Results

[illegible]

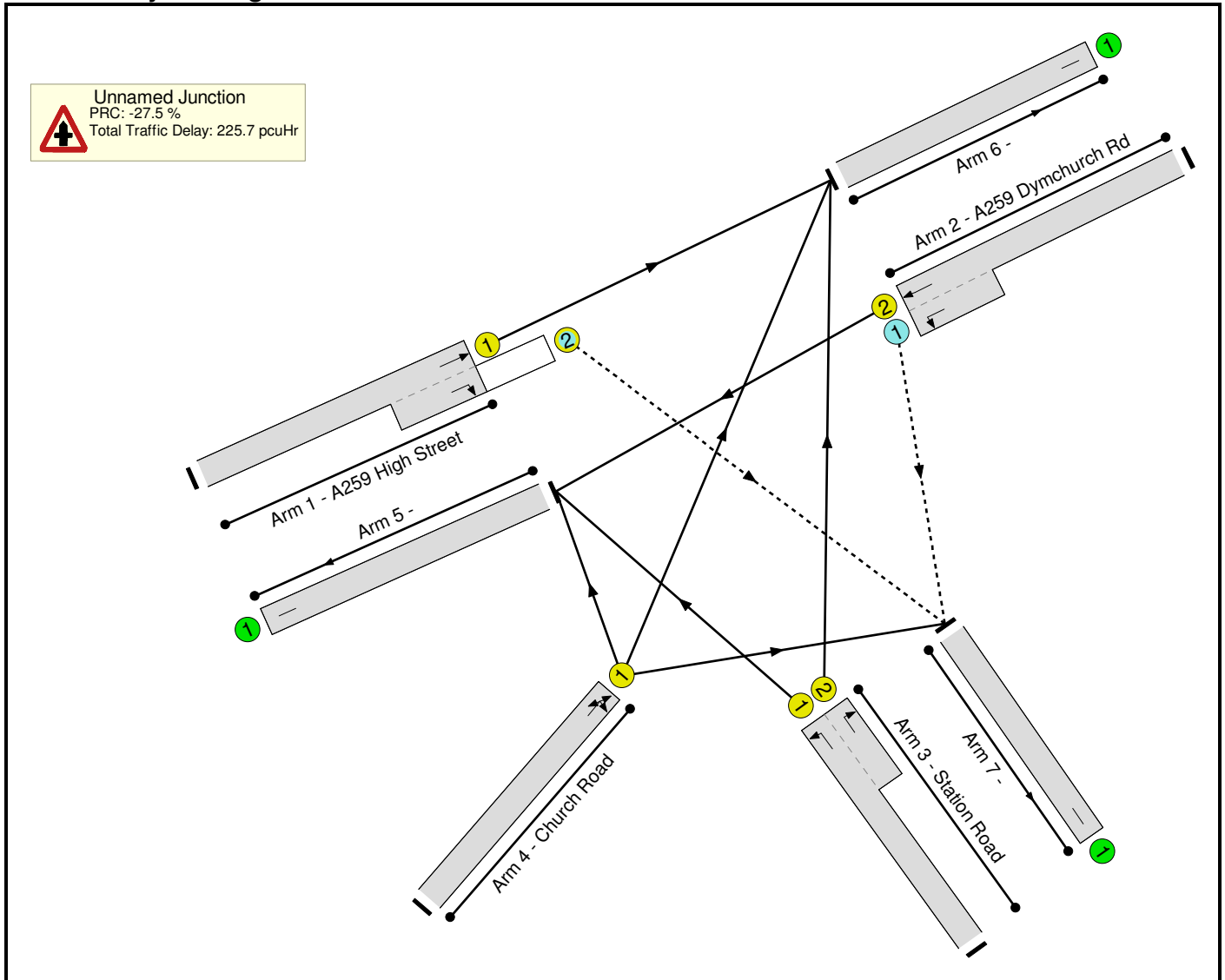
Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	98.7%	53.3	-	-
Unnamed Junction	-	-	-	-	98.7%	53.3	-	-
1/1+1/2	A259 High Street Ahead Right	525	1940:1731	554	94.8%	11.6	79.8	20.3
2/2+2/1	A259 Dymchurch Rd Ahead Left	771	1965:1400	781	98.7%	17.2	80.5	42.3
3/1+3/2	Station Road Left Right	872	1754:1827	883	98.7%	20.7	85.6	35.3
4/1	Church Road U-Turn Ahead Right	60	1933	81	74.1%	2.8	167.0	4.4
5/1		713	1940	1940	36.8%	0.3	1.5	0.3
6/1		695	1940	1940	35.8%	0.3	1.4	0.3
7/1		820	1965	1965	41.7%	0.4	1.6	1.5
C1 PRC for Signalled Lanes (%): -9.7 PRC Over All Lanes (%): -9.7 Total Delay for Signalled Lanes (pcuHr): 52.39 Total Delay Over All Lanes(pcuHr): 53.32 Cycle Time (s): 191								

Junction Layout Diagram

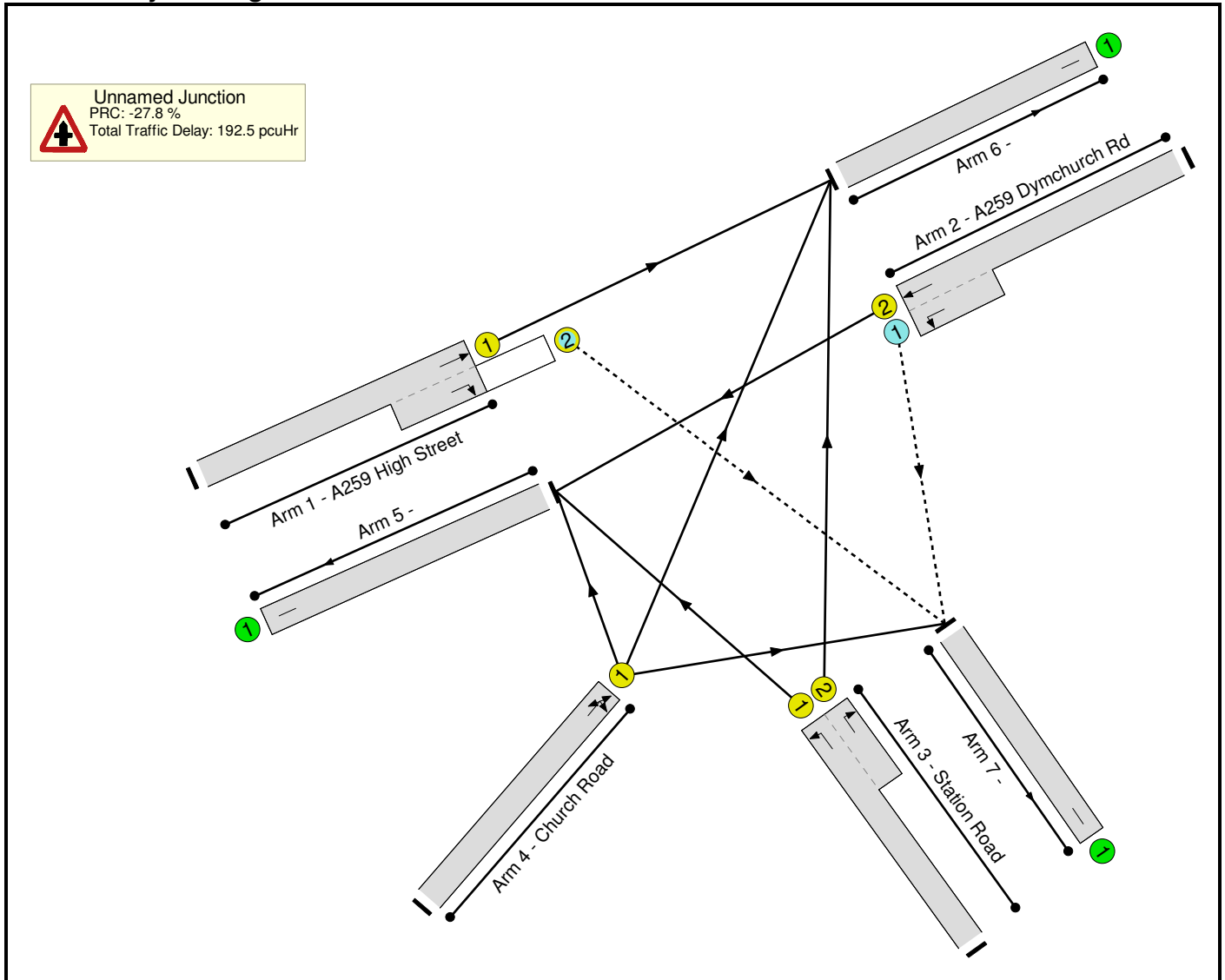


Basic Results Summary

Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	114.7%	225.7	-	-
Unnamed Junction	-	-	-	-	114.7%	225.7	-	-
1/1+1/2	A259 High Street Ahead Right	876	1940:1731	770	113.7%	78.8	324.0	106.6
2/2+2/1	A259 Dymchurch Rd Ahead Left	658	1965:1400	574	114.7%	61.5	336.3	131.6
3/1+3/2	Station Road Left Right	822	1754:1827	717	114.7%	79.7	349.2	100.5
4/1	Church Road U-Turn Ahead Right	60	1933	65	92.7%	4.8	287.5	6.8
5/1		573	1940	1940	25.9%	0.2	1.1	0.2
6/1		812	1940	1940	36.7%	0.3	1.3	0.3
7/1		1031	1965	1965	46.1%	0.4	1.5	3.2
C1 PRC for Signalled Lanes (%): -27.5 PRC Over All Lanes (%): -27.5 Total Delay for Signalled Lanes (pcuHr): 224.83 Total Delay Over All Lanes(pcuHr): 225.72 Cycle Time (s): 239								

Junction Layout Diagram

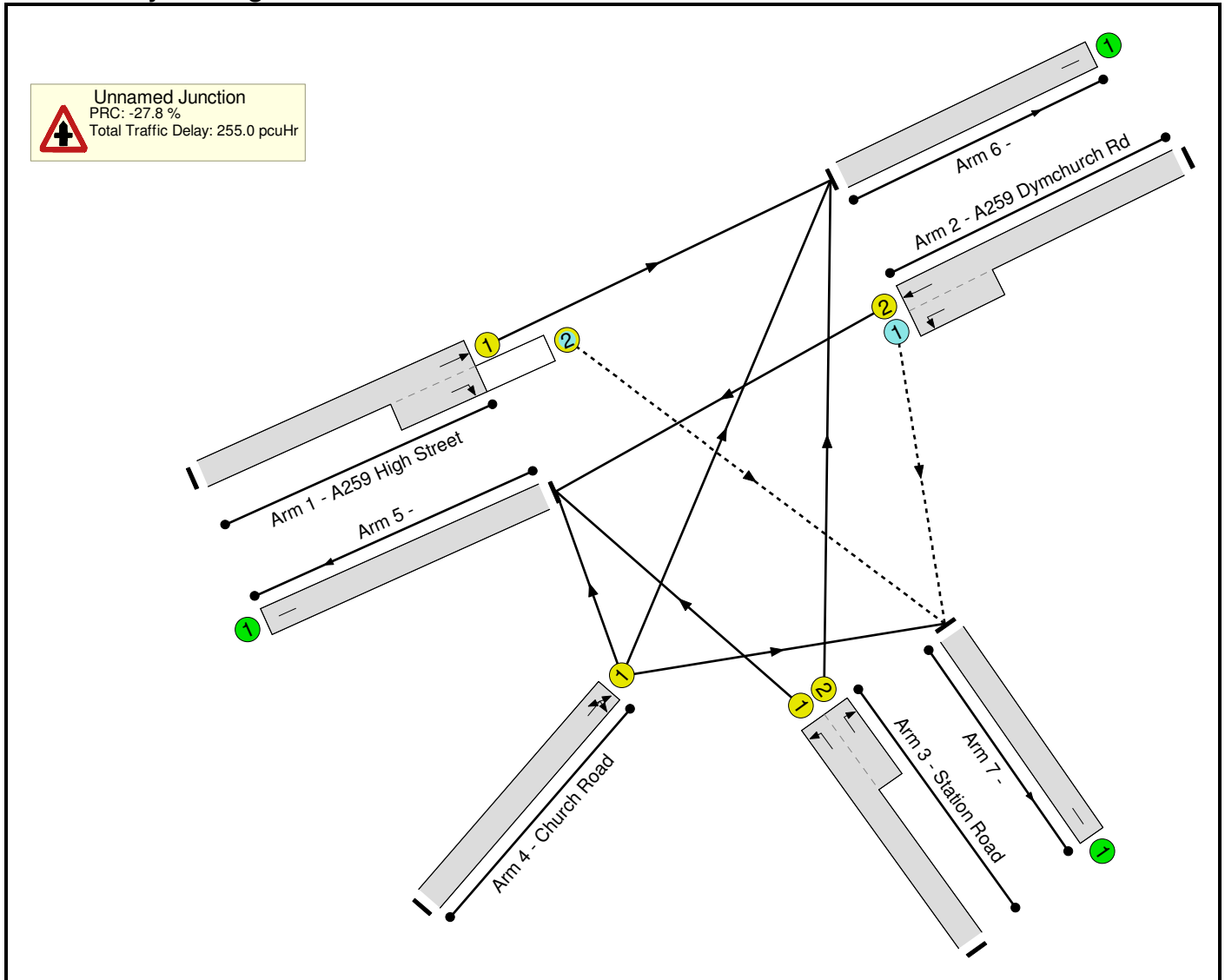


Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	115.0%	192.5	-	-
Unnamed Junction	-	-	-	-	115.0%	192.5	-	-
1/1+1/2	A259 High Street Ahead Right	589	1940:1731	590	99.8%	17.2	105.3	23.4
2/2+2/1	A259 Dymchurch Rd Ahead Left	967	1965:1400	841	115.0%	89.5	333.2	207.7
3/1+3/2	Station Road Left Right	808	1754:1827	703	114.9%	80.0	356.7	100.2
4/1	Church Road U-Turn Ahead Right	60	1933	64	93.1%	4.8	290.9	6.9
5/1		915	1940	1940	41.2%	0.3	1.4	0.3
6/1		748	1940	1940	35.7%	0.3	1.3	0.3
7/1		761	1965	1965	35.7%	0.3	1.3	3.1

C1 PRC for Signalled Lanes (%): -27.8 Total Delay for Signalled Lanes (pcuHr): 191.62
 PRC Over All Lanes (%): -27.8 Total Delay Over All Lanes(pcuHr): 192.53 Cycle Time (s): 240

Junction Layout Diagram



Link Results

Item	Lane Description	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	115.0%	255.0	-	-
Unnamed Junction	-	-	-	-	115.0%	255.0	-	-
1/1+1/2	A259 High Street Ahead Right	1063	1940:1731	925	115.0%	99.8	337.9	133.3
2/2+2/1	A259 Dymchurch Rd Ahead Left	750	1965:1400	654	114.7%	72.7	349.0	167.7
3/1+3/2	Station Road Left Right	761	1754:1827	662	115.0%	76.6	362.5	97.8
4/1	Church Road U-Turn Ahead Right	60	1933	64	93.1%	4.8	290.9	6.9
5/1		673	1940	1940	30.3%	0.2	1.2	0.2
6/1		1005	1940	1940	45.2%	0.4	1.5	0.4
7/1		956	1965	1965	42.5%	0.4	1.4	3.1
C1 PRC for Signalled Lanes (%): -27.8 PRC Over All Lanes (%): -27.8 Total Delay for Signalled Lanes (pcuHr): 253.96 Total Delay Over All Lanes(pcuHr): 254.96 Cycle Time (s): 240								

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\A20_Alkhams Valley\
A20_Alkhams Valley 2026 Do Something PM.vai"
(drive-on-the-left) at 16:11:33 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: A20 / Alkhams Valley
LOCATION:
DATE: 08/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries from Hawkings Mixed Use developmnet TA (Obtained
from SDC planning site)

A20_Alkhām valley 2026 Do Something PM.vao

.INPUT DATA

ARM A - Alkhām Valley Rd west

ARM B - A20 Onslip

ARM C - A20 Offslip

ARM D - Alkhām Valley Rd east

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I ARM (PCU/MIN)	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I INTERCEPT

I ARM A	I	4.10	I	6.90	I	9.10	I	24.40	I	43.70	I	30.0	I	0.632	I 28.075
I ARM C	I	7.20	I	8.10	I	11.40	I	24.80	I	43.70	I	24.0	I	0.793	I 41.199
I ARM D	I	3.60	I	7.80	I	26.70	I	21.00	I	43.70	I	60.0	I	0.610	I 29.002

V = approach half-width

E = entry width

L = effective flare length

R = entry radius

D = inscribed circle diameter

PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I ARM	I	FLOW SCALE(%)	I

I A	I	100	I
I B	I	100	I
I C	I	100	I
I D	I	100	I

A20_Alkhams valley 2026 Do Something PM.vao

 .TIME PERIOD BEGINS 16.45 AND ENDS 18.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Something PM

I	ARM	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I							
			I	FLOW STARTS	I		TOP OF PEAK	I	FLOW STOPS		I	BEFORE	I	AT TOP	I	AFTER	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.21	I	22.82	I	15.21	I			
I	ARM C	I	15.00	I	45.00	I	75.00	I	2.28	I	3.41	I	2.28	I			
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.49	I	6.73	I	4.49	I			

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Something PM

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D						
	16.45 - 18.15											
		ARM A	0.000	0.479	0.000	0.521						
			0.0	583.0	0.0	634.0						
			(0.0)	(12.0)	(0.0)	(10.0)						
		ARM C	0.934	0.000	0.000	0.066						
			170.0	0.0	0.0	12.0						
			(10.0)	(0.0)	(0.0)	(18.0)						
		ARM D	0.379	0.621	0.000	0.000						
			136.0	223.0	0.0	0.0						
			(11.0)	(8.0)	(0.0)	(0.0)						

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

A20_Alkhram valley 2026 Do Something PM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	15.21	23.59	0.645		0.0	1.8	25.1		0.12
ARM C	2.28	31.07	0.073		0.0	0.1	1.2		0.03
ARM D	4.49	25.27	0.178		0.0	0.2	3.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	18.17	23.26	0.781		1.8	3.4	46.6		0.19
ARM C	2.72	29.85	0.091		0.1	0.1	1.5		0.04
ARM D	5.36	25.02	0.214		0.2	0.3	4.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

A20_Alkhaym valley 2026 Do Something PM.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.15-17.30									
I ARM A	22.25	22.80	0.976		3.4	14.5	157.1		0.58
I ARM C	3.33	28.44	0.117		0.1	0.1	2.0		0.04
I ARM D	6.56	24.67	0.266		0.3	0.4	5.3		0.06
I									
I									

-									
.									
--									
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.30-17.45									
I ARM A	22.25	22.80	0.976		14.5	18.7	251.6		0.88
I ARM C	3.33	28.24	0.118		0.1	0.1	2.0		0.04
I ARM D	6.56	24.67	0.266		0.4	0.4	5.4		0.06
I									
I									

-									
.									
--									
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 17.45-18.00									

A20_Alkhram valley 2026 Do Something PM.vao

I									
I	ARM A	18.17	23.25	0.781		18.7	3.8	88.6	0.30
I									
I	ARM C	2.72	29.40	0.092		0.1	0.1	1.5	0.04
I									
I	ARM D	5.36	25.01	0.214		0.4	0.3	4.2	0.05
I									
I									
I									

-										
.										
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	18.00-18.15									
I										
I	ARM A	15.21	23.59	0.645		3.8	1.9	29.5		0.12
I										
I	ARM C	2.28	30.97	0.073		0.1	0.1	1.2		0.03
I										
I	ARM D	4.49	25.27	0.178		0.3	0.2	3.3		0.05
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.8	**
17.15	3.4	***
17.30	14.5	*****
17.45	18.7	*****
18.00	3.8	****
18.15	1.9	**

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1668.8	598.5	0.36
C	249.6	9.4	0.04
D	492.3	25.4	0.05
ALL	2410.6	633.3	0.26

A20_Alkhām valley 2026 Do Something PM.vao

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-
"m:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Arcady\A20_Alkhams Valley\
A20_Alkhams Valley 2026 Do Something AM.vai"
(drive-on-the-left) at 16:10:07 on Monday, 8 November 2010

.FILE PROPERTIES

RUN TITLE: A20 / Alkhams Valley
LOCATION:
DATE: 08/11/2010
CLIENT:
ENUMERATOR: 35090pw [UK1004395D]
JOB NUMBER:
STATUS:
DESCRIPTION: Junction geometries from Hawkings Mixed Use developmnet TA (Obtained
from SDC planning site)

A20_Alkhams Valley 2026 Do Something AM.vao

.INPUT DATA

ARM A - Alkhams Valley Rd west

ARM B - A20 Onslip

ARM C - A20 Offslip

ARM D - Alkhams Valley Rd east

.GEOMETRIC DATA

ARM B IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT
(PCU/MIN)																	

I	ARM A	I	4.10	I	6.90	I	9.10	I	24.40	I	43.70	I	30.0	I	0.632	I	28.075
I	ARM C	I	7.20	I	8.10	I	11.40	I	24.80	I	43.70	I	24.0	I	0.793	I	41.199
I	ARM D	I	3.60	I	7.80	I	26.70	I	21.00	I	43.70	I	60.0	I	0.610	I	29.002
I		I		I		I		I		I		I		I		I	

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

I	ARM	I	FLOW SCALE(%)

I	A	I	100
I	B	I	100
I	C	I	100
I	D	I	100

A20_Alkhams valley 2026 Do Something AM.vao

 .TIME PERIOD BEGINS 07.45 AND ENDS 09.15
 .LENGTH OF TIME PERIOD - 90 MINUTES.
 .LENGTH OF TIME SEGMENT - 15 MINUTES.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Something AM

I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS		I BEFORE	I AT TOP	I AFTER	
I	I	I TO RISE	I IS REACHED	I FALLING	I	I PEAK	I OF PEAK	I PEAK	I
I ARM A	I	15.00	I 45.00	I 75.00	I	14.84	I 22.26	I 14.84	I
I ARM C	I	15.00	I 45.00	I 75.00	I	1.42	I 2.14	I 1.42	I
I ARM D	I	15.00	I 45.00	I 75.00	I	9.30	I 13.95	I 9.30	I

DEMAND SET TITLE: A20 / Alkhams valley 2026 Do Something AM

		TURNING PROPORTIONS								
		TURNING COUNTS (VEH/HR)								
		(PERCENTAGE OF H.V.S)								
	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
	07.45 - 09.15									
		ARM A	0.000	0.771	0.000	0.229				
			0.0	915.0	0.0	272.0				
			(0.0)	(11.0)	(0.0)	(18.0)				
		ARM C	0.947	0.009	0.000	0.044				
			108.0	1.0	0.0	5.0				
			(19.0)	(0.0)	(0.0)	(0.0)				
		ARM D	0.294	0.706	0.000	0.000				
			219.0	525.0	0.0	0.0				
			(9.0)	(10.0)	(0.0)	(0.0)				

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

A20_Alkhram valley 2026 Do Something AM.vao

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	14.84	20.89	0.710		0.0	2.4	32.6		0.16
ARM C	1.42	32.25	0.044		0.0	0.0	0.7		0.03
ARM D	9.30	25.54	0.364		0.0	0.6	8.3		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	17.72	20.10	0.882		2.4	6.2	78.9		0.35
ARM C	1.70	31.74	0.054		0.0	0.1	0.8		0.03
ARM D	11.11	25.36	0.438		0.6	0.8	11.3		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

A20_Alkhaym valley 2026 Do Something AM.vao

	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.15-08.30									
I ARM A	21.70	19.01	1.141		6.2	49.5	428.8		1.67
I ARM C	2.08	31.50	0.066		0.1	0.1	1.1		0.03
I ARM D	13.60	25.12	0.541		0.8	1.2	17.0		0.09

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.30-08.45									
I ARM A	21.70	19.00	1.142		49.5	90.4	1050.1		3.79
I ARM C	2.08	31.47	0.066		0.1	0.1	1.1		0.03
I ARM D	13.60	25.12	0.541		1.2	1.2	17.6		0.09

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I 08.45-09.00									

A20_Alkhram valley 2026 Do Something AM.vao

I										
I	ARM A	17.72	20.08	0.882		90.4	58.3	1115.2		3.75
I										
I	ARM C	1.70	31.31	0.054		0.1	0.1	0.9		0.03
I										
I	ARM D	11.11	25.36	0.438		1.2	0.8	12.1		0.07
I										
I										
I										

-										
.										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	09.00-09.15									
I										
I	ARM A	14.84	20.87	0.711		58.3	2.7	313.6		1.02
I										
I	ARM C	1.42	31.55	0.045		0.1	0.0	0.7		0.03
I										
I	ARM D	9.30	25.54	0.364		0.8	0.6	8.8		0.06
I										
I										
I										

.QUEUE AT ARM A

TIME SEGMENT	NO. OF	
ENDING	VEHICLES	
	IN QUEUE	
08.00	2.4	**
08.15	6.2	*****
08.30	49.5	*****
08.45	90.4	*****
*****		*****
09.00	58.3	*****

09.15 2.7 ***

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.6 *
08.15	0.8 *
08.30	1.2 *
08.45	1.2 *
09.00	0.8 *
09.15	0.6 *

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
			(VEH/H)		(MIN/VEH)		(MIN/VEH)	
I	A	I	1627.6	I	1085.1	I	3019.3	I
							1.86	
I	C	I	156.3	I	104.2	I	5.2	I
							0.03	
I	D	I	1020.2	I	680.1	I	75.1	I
							0.07	

A20_Alkham valley 2026 Do Something AM.vao
I ALL I 2804.1 I 1869.4 I 3099.6 I 1.11 I 3099.8 I 1.11 I

- * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
- * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
- * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\A20_Stone Street\
A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpi"
(drive-on-the-left) at 15:35:03 on Tuesday, 2 November 2010

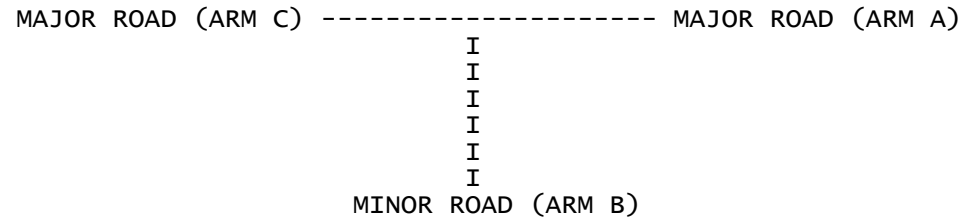
.RUN INFORMATION

RUN TITLE	: A20 Ashford Rd / Stone Street
LOCATION	:
DATE	: 24/09/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo



ARM A IS A20 Ashford Rd (north)
 ARM B IS Stone Street
 ARM C IS A20 Ashford Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 2 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	608.71	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I						
			I	I	I	I	I	I	I	I							
												I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I						
I	I	I	I	I	I	I	I	I	I	I	I						
I	ARM	A	I	15.00	I	45.00	I	75.00	I	10.93	I	16.39	I	10.93	I		
I	ARM	B	I	15.00	I	45.00	I	75.00	I	7.89	I	11.83	I	7.89	I		
I	ARM	C	I	15.00	I	45.00	I	75.00	I	7.96	I	11.94	I	7.96	I		

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Something AM

		TURNING PROPORTIONS									
		TURNING COUNTS									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM	A	ARM	B	ARM	C			
07.45	- 08.00	ARM A	0.000	0.221	0.779						
			0.0	193.0	681.0						
			(0.0)	(2.0)	(4.0)						
		ARM B	0.948	0.000	0.052						
			598.0	0.0	33.0						
			(4.0)	(0.0)	(0.0)						
		ARM C	0.959	0.041	0.000						
			611.0	26.0	0.0						
			(8.0)	(0.0)	(0.0)						

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Rd / Stone Street 2026 Do Something AM
AND FOR TIME PERIOD 1

[illegible]

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	0.61	0.29	2.080		4.75	9.58	107.6		28.77
B-A	10.97	4.87	2.255		66.62	158.25	1686.5		22.59
C-AB	0.48	6.91	0.069		0.05	0.07	1.1		0.16
A-B	3.54								
A-C	12.50								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	0.61	0.28	2.153		9.58	14.48	180.5		40.90
B-A	10.97	4.87	2.255		158.25	249.87	3060.9		42.15
C-AB	0.48	6.91	0.069		0.07	0.07	1.1		0.16
A-B	3.54								
A-C	12.50								

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00									
I	B-C	0.49	0.33	1.489		14.48	16.96	235.9		47.16
I	B-A	8.96	5.83	1.538		249.87	296.87	4100.5		43.70
I	C-AB	0.39	7.50	0.052		0.07	0.06	0.8		0.14
I	A-B	2.89								
I	A-C	10.20								

--

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15									
I	B-C	0.41	0.37	1.121		16.96	17.72	260.1		49.85
I	B-A	7.50	6.52	1.150		296.87	311.58	4563.4		46.84
I	C-AB	0.33	7.93	0.041		0.06	0.04	0.6		0.13
I	A-B	2.42								
I	A-C	8.54								

I
I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.4	**
08.15	4.7	*****
08.30	9.6	*****
08.45	14.5	*****
09.00	17.0	*****
09.15	17.7	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	19.5	*****
08.15	66.6	*****
08.30	158.2	*****
08.45	249.9	*****
09.00	296.9	*****
09.15	311.6	*****

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	45.4	I	30.3	I	859.4	I
I	B-A	I	823.1	I	548.7	I	14222.5	I
I	C-AB	I	35.8	I	23.9	I	5.1	I
I	A-B	I	265.7	I	177.1	I		I
I	A-C	I	937.3	I	624.9	I		I
I	ALL	I	2948.3	I	1965.5	I	15087.0	I
							5.12	
							22954.1	
							7.79	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	I
I	0.00		0.00		0.00		0.00	I
							0.00	

* Due to the presence of a flare, data is not available

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

I Intercept For I STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
608.71	0.19	0.19	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM	I FLOW SCALE(%)	I
I A	100	I
I B	100	I
I C	100	I

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Something PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM	I NUMBER OF MINUTES FROM START WHEN I FLOW STARTS TO RISE	I TOP OF PEAK IS REACHED	I FLOW STOPS FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE PEAK	I AT TOP OF PEAK	I AFTER PEAK	I
I ARM A	15.00	45.00	75.00	13.04	19.56	13.04	I
I ARM B	15.00	45.00	75.00	3.49	5.23	3.49	I
I ARM C	15.00	45.00	75.00	11.32	16.99	11.32	I

.Demand set: A20 Ashford Rd / Stone Street 2026 Do Something PM

I	I TURNING PROPORTIONS	I
I	I TURNING COUNTS	I
I	I (PERCENTAGE OF H.V.S)	I
I	I	I
I TIME	I FROM/TO I ARM A I ARM B I ARM C	I

I			I	I	I	I	I	I
I	16.45 - 17.00	I		I		I		I
I		I ARM A	I 0.000	I 0.462	I 0.538	I		I
I		I	I 0.0	I 482.0	I 561.0	I		I
I		I	I (0.0)	I (1.0)	I (7.0)	I		I
I		I	I	I	I	I		I
I		I ARM B	I 0.832	I 0.000	I 0.168	I		I
I		I	I 232.0	I 0.0	I 47.0	I		I
I		I	I (4.0)	I (0.0)	I (5.0)	I		I
I		I	I	I	I	I		I
I		I ARM C	I 0.950	I 0.050	I 0.000	I		I
I		I	I 861.0	I 45.0	I 0.0	I		I
I		I	I (2.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	0.59	6.67	0.088		0.00	0.10	1.4		0.16
B-A	2.91	5.95	0.489		0.00	0.92	12.5		0.32
C-AB	0.56	7.49	0.075		0.00	0.08	1.2		0.14
A-B	6.05								
A-C	7.04								

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	0.70	4.79	0.147		0.10	0.17	2.4		0.24
B-A	3.48	5.15	0.675		0.92	1.88	24.9		0.56
C-AB	0.67	6.97	0.097		0.08	0.11	1.6		0.16
A-B	7.22								
A-C	8.41								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	0.86	0.80	1.075		0.17	3.58	33.1		4.15
B-A	4.26	4.02	1.058		1.88	9.79	95.7		2.06
C-AB	0.83	6.26	0.132		0.11	0.15	2.2		0.18
A-B	8.84								
A-C	10.29								

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

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TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
17.30-17.45									
B-C	0.86	0.90	0.960		3.58	4.62	61.9		5.27
B-A	4.26	4.01	1.063		9.79	15.28	189.1		3.55
C-AB	0.83	6.26	0.132		0.15	0.15	2.3		0.18
A-B	8.84								
A-C	10.29								

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TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
17.45-18.00									
B-C	0.70	2.65	0.266		4.62	0.38	12.3		0.69
B-A	3.48	5.08	0.685		15.28	2.62	102.7		1.71
C-AB	0.67	6.97	0.097		0.15	0.11	1.6		0.16
A-B	7.22								
A-C	8.41								

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	0.59	6.47	0.091		0.38	0.10	1.6		0.17
B-A	2.91	5.95	0.490		2.62	1.00	16.9		0.35
C-AB	0.56	7.49	0.075		0.11	0.08	1.2		0.14
A-B	6.05								
A-C	7.04								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.2	
17.30	3.6	****
17.45	4.6	*****
18.00	0.4	
18.15	0.1	

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES

A20 Ashford Rd_Stone Street 2026 Do Something 01_001.vpo

ENDING	IN QUEUE	
17.00	0.9	*
17.15	1.9	**
17.30	9.8	*****
17.45	15.3	*****
18.00	2.6	***
18.15	1.0	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.2
18.00	0.1
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I 64.7	I 43.1	I	112.8	I 1.74	I 112.8	I 1.74
I	B-A	I 319.3	I 212.9	I	441.8	I 1.38	I 441.9	I 1.38
I	C-AB	I 61.9	I 41.3	I	10.2	I 0.16	I 10.2	I 0.16
I	A-B	I 663.4	I 442.3	I		I	I	I
I	A-C	I 772.2	I 514.8	I		I	I	I
I	ALL	I 3066.7	I 2044.5	I	564.8	I 0.18	I 564.9	I 0.18

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo
TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"M:\Development Control\D130901 Shepway\Design Deliverables\Junction Analysis\Picady\
A20 Ashford Rd_A261 Hythe Rd\A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpi"
(drive-on-the-left) at 15:28:56 on Tuesday, 2 November 2010

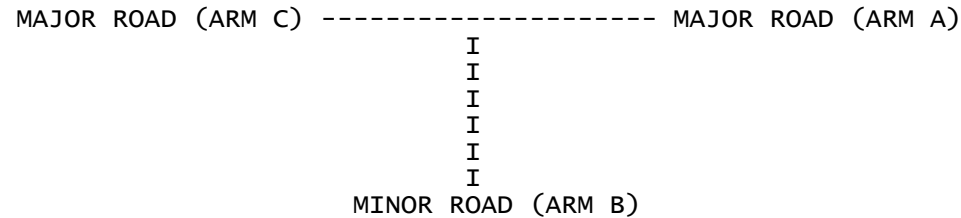
.RUN INFORMATION

RUN TITLE	: A20 Ashford Road / A261 Hythe Rd
LOCATION	:
DATE	: 24/09/10
CLIENT	:
ENUMERATOR	: 35090pw [UK1004395D]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo



ARM A IS A20 Ashford Rd (north)
 ARM B IS A261 Hythe Rd
 ARM C IS A20 Ashford Rd (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
 STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
 ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 5.50 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 5.00 M.	I
I	- VISIBILITY	I	(VC-B) 60.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 70.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 60.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	6.00 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	4.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	794.21	0.25	0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Something AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I																
			I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE		I	AT TOP	I	AFTER												
																I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	12.06	I	18.09	I	12.06	I												
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.35	I	9.52	I	6.35	I												
I	ARM	C	I	15.00	I	45.00	I	75.00	I	15.11	I	22.67	I	15.11	I												

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Something AM

		TURNING PROPORTIONS									
		TURNING COUNTS									
		(PERCENTAGE OF H.V.S)									
TIME		FROM/TO	ARM	A	ARM	B	ARM	C			
07.45	- 08.00	ARM	A	0.000	0.291	0.709					
				0.0	281.0	684.0					
				(0.0)	(7.0)	(7.0)					
		ARM	B	0.628	0.000	0.372					
				319.0	0.0	189.0					
				(12.0)	(0.0)	(0.0)					
		ARM	C	0.835	0.165	0.000					
				1009.0	200.0	0.0					
				(8.0)	(8.0)	(0.0)					

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Road / A261 Hythe Rd 2026 Do Something AM
AND FOR TIME PERIOD 1

[illegible]

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo										
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	
I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	
I	07.45-08.00									
I	B-C	2.37	3.91	0.606	0.00	1.39	17.8		0.58	
I	B-A	4.00	4.70	0.851	0.00	3.90	43.9		0.89	
I	C-A	12.66								
I	C-B	2.51	9.29	0.270	0.00	0.37	5.2		0.15	
I	A-B	3.53								
I	A-C	8.58								
I										
I										
I										

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15									
I	B-C	2.83	2.22	1.277		1.39	12.41	108.9		4.26
I	B-A	4.78	3.82	1.251		3.90	19.73	181.1		3.96
I	C-A	15.12								
I	C-B	3.00	8.71	0.344		0.37	0.52	7.5		0.17
I	A-B	4.21								
I	A-C	10.25								
I										
I										
I										

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	3.47	1.73	2.009		12.41	38.63	383.0		15.41
B-A	5.85	2.88	2.032		19.73	64.38	631.0		14.86
C-A	18.52								
C-B	3.67	7.91	0.464		0.52	0.84	12.0		0.23
A-B	5.16								
A-C	12.55								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.47	1.71	2.023		38.63	64.95	776.9		30.99
B-A	5.85	2.88	2.034		64.38	109.02	1300.5		30.54
C-A	18.52								
C-B	3.67	7.91	0.464		0.84	0.85	12.7		0.24

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo

I
I A-B 5.16
I
I A-C 12.55
I
I
I

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	2.83	2.26	1.255		64.95	73.62	1039.3		28.98
B-A	4.78	3.80	1.259		109.02	123.81	1746.2		28.72
C-A	15.12								
C-B	3.00	8.71	0.344		0.85	0.53	8.4		0.18
A-B	4.21								
A-C	10.25								

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo									
I	B-C	2.37	2.62	0.903	73.62	70.35	1079.7		27.86
I									
I	B-A	4.00	4.42	0.906	123.81	118.08	1814.2		27.59
I									
I	C-A	12.66							
I									
I	C-B	2.51	9.29	0.270	0.53	0.38	5.8		0.15
I									
I	A-B	3.53							
I									
I	A-C	8.58							
I									
I									

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QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.4	*
08.15	12.4	*****
08.30	38.6	*****
08.45	65.0	*****
09.00	73.6	*****
09.15	70.3	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	3.9	****
08.15	19.7	*****
08.30	64.4	*****
08.45	109.0	*****
09.00	123.8	*****
09.15	118.1	*****

QUEUE FOR STREAM C-B

TIME	NO. OF

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo

SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.4
08.15	0.5 *
08.30	0.8 *
08.45	0.9 *
09.00	0.5 *
09.15	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE *	QUEUEING	* I
I		I			I	* DELAY *	I	* DELAY *		I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	B-C	I	260.1	I 173.4	I	3405.7	I 13.09	I	4348.3	I 16.71
I	B-A	I	439.1	I 292.7	I	5717.0	I 13.02	I	7294.5	I 16.61
I	C-A	I	1388.8	I 925.9	I			I		
I	C-B	I	275.3	I 183.5	I	51.6	I 0.19	I	51.6	I 0.19
I	A-B	I	386.8	I 257.9	I			I		
I	A-C	I	941.5	I 627.7	I			I		
I	ALL	I	3691.6	I 2461.1	I	9174.2	I 2.49	I	11694.3	I 3.17

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope	For Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B
I		0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For I STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	I
I 0.00	I 0.00	I 0.00	I 0.00	I 0.00	I

* Due to the presence of a flare, data is not available

I Intercept For I STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
I 794.21	I 0.25	I 0.25	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM	I FLOW SCALE(%)	I
I A	I 100	I
I B	I 100	I
I C	I 100	I

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Something PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM	I NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TOP OF PEAK I FLOW STOPS I TO RISE I IS REACHED I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I AT TOP I AFTER I PEAK I OF PEAK I PEAK	I
I ARM A	I 15.00 I 45.00 I 75.00	I 16.08 I 24.11 I 16.08	I
I ARM B	I 15.00 I 45.00 I 75.00	I 5.91 I 8.87 I 5.91	I

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 I ARM C I 15.00 I 45.00 I 75.00 I 13.68 I 20.51 I 13.68 I

.Demand set: A20 Ashford Road / A261 Hythe Rd 2026 Do Something PM

		TURNING PROPORTIONS					
		TURNING COUNTS					
		(PERCENTAGE OF H.V.S)					
TIME	FROM/TO	ARM	A	ARM	B	ARM	C
16.45 - 17.00	ARM A		0.000	0.341	0.659		
			0.0	439.0	847.0		
			(0.0)	(3.0)	(7.0)		
	ARM B		0.586	0.000	0.414		
			277.0	0.0	196.0		
			(5.0)	(0.0)	(0.0)		
	ARM C		0.697	0.303	0.000		
			762.0	332.0	0.0		
			(4.0)	(1.0)	(0.0)		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET A20 Ashford Road / A261 Hythe Rd 2026 Do Something PM
 AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.46	4.36	0.564		0.00	1.20	15.7		0.49
B-A	3.48	4.38	0.794		0.00	2.98	34.9		0.81
C-A	9.56								

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I										
I	C-B	4.17	8.93	0.467		0.00	0.85	11.9		0.21
I										
I	A-B	5.51								
I	A-C	10.63								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I										
I	B-C	2.94	2.30	1.278		1.20	12.67	110.0		4.26
I	B-A	4.15	3.31	1.253		2.98	17.12	155.2		4.09
I										
I	C-A	11.42								
I										
I	C-B	4.97	8.12	0.613		0.85	1.51	20.9		0.31
I										
I	A-B	6.58								
I										
I	A-C	12.69								
I										
I										
I										
.	-----									
--										
.	-----									
--										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I										

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I 17.15-17.30

I	B-C	3.60	1.61	2.236		12.67	42.56	414.5		17.51
I	B-A	5.08	2.25	2.255		17.12	59.61	575.6		17.11
I	C-A	13.98								
I	C-B	6.09	7.00	0.871		1.51	4.79	57.0		0.77
I	A-B	8.06								
I	A-C	15.54								
I										
I										

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I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)

I 17.30-17.45

I	B-C	3.60	1.57	2.294		42.56	73.01	866.8		37.58
I	B-A	5.08	2.21	2.303		59.61	102.76	1217.7		37.29
I	C-A	13.98								
I	C-B	6.09	7.00	0.871		4.79	5.46	77.6		0.97
I	A-B	8.06								
I	A-C	15.54								
I										
I										

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A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
17.45-18.00									
B-C	2.94	2.30	1.278		73.01	82.62	1167.2		30.85
B-A	4.15	3.24	1.282		102.76	116.45	1644.1		30.72
C-A	11.42								
C-B	4.97	8.12	0.613		5.46	1.67	30.4		0.37
A-B	6.58								
A-C	12.69								

TIME	DEMAND	CAPACITY	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	(VEH/MIN)	(VEH/MIN)	(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)			
18.00-18.15									
B-C	2.46	2.81	0.875		82.62	77.87	1203.7		28.91
B-A	3.48	3.96	0.877		116.45	109.65	1695.7		28.80
C-A	9.56								
C-B	4.17	8.93	0.467		1.67	0.90	14.3		0.21
A-B	5.51								
A-C	10.63								

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QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	12.7	*****
17.30	42.6	*****
17.45	73.0	*****
18.00	82.6	*****
18.15	77.9	*****

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	3.0	***
17.15	17.1	*****
17.30	59.6	*****
17.45	102.8	*****
18.00	116.5	*****
18.15	109.6	*****

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.5	**
17.30	4.8	*****
17.45	5.5	*****
18.00	1.7	**
18.15	0.9	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

A20 Ashford Rd_A261 Hythe Rd 2026 Do Something 01_001.vpo

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY *		I	* DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-C	I	269.8	I 179.9	I	3777.9	I 14.00	I	4857.2	I 18.00	I
I	B-A	I	381.3	I 254.2	I	5323.2	I 13.96	I	6839.9	I 17.94	I
I	C-A	I	1048.8	I 699.2	I		I	I		I	I
I	C-B	I	457.0	I 304.6	I	212.2	I 0.46	I	212.2	I 0.46	I
I	A-B	I	604.3	I 402.8	I		I	I		I	I
I	A-C	I	1165.8	I 777.2	I		I	I		I	I
I	ALL	I	3926.9	I 2618.0	I	9313.3	I 2.37	I	11909.3	I 3.03	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****