
Project	Wrexham Glyndŵr University
Location	Site 1: Plas Coch Campus
Title	Highways Addendum
Date	10 th December 2018
Author(s)	Mark Lever
Project Code	2627
Version	1



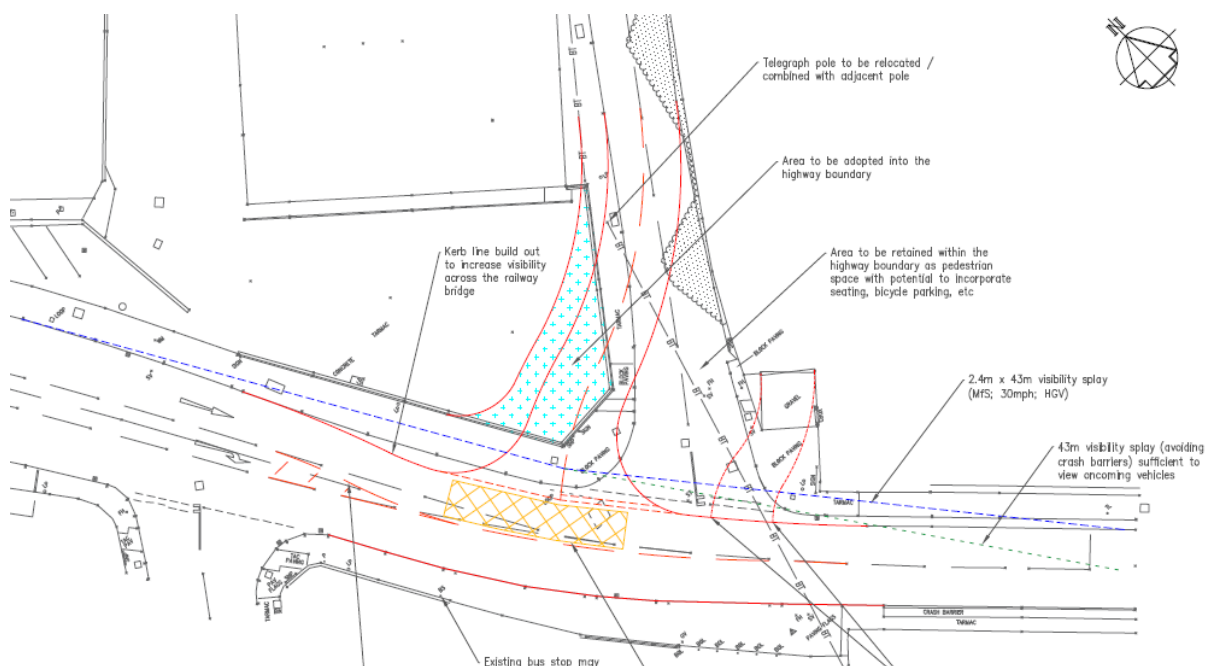
1. Introduction

- 1.1 The following Highways Addendum has been produced to respond to a number of outstanding queries raised by Wrexham County Borough Council (WCBC) highways officers following submission of the relevant planning applications (P/2018/0666, P/2018/0671, P/2018/0672) and a subsequent meeting on 12th September 2018.
- 1.2 The addendum should be read in addition to the submitted Transport Assessment (v3 dated 31st July 2018). In the case of conflicting information, that presented in the Highways Addendum should be taken as the most relevant and up-to-date.
- 1.3 The addendum is set out into the following chapters, reflecting each outstanding issue:
 - **Crispin Lane / Mold Road junction** – Providing a revised layout showing a relocated junction to improve visibility for vehicles emerging from Crispin Lane
 - **Parking provision** – Providing details of the existing and proposed car parking provision against use classes and floor areas to allow a direct comparison
 - **Junction Assessments** – Examining the outcome of changing the access strategy to retain university access from Plas Coch Road, limiting the impact on Crispin Lane
 - **A483 J5 / DIY Roundabout** – providing results of VISSIM modelling of the junctions, helping to quantify the development impact
- 1.4 It is hoped that following the submission of this Highways Addendum, WCBC highways officers will be in a position to confirm their support for the proposed development and recommend for approval. It should continue to be noted that this application does not sit in isolation and forms one part of a wider masterplan for Wrexham Glyndŵr University.

2. Crispin Lane / Mold Road Junction

- 2.1 A revised layout for the potential upgrades to the Crispin Lane / Mold Road junction has been included in Appendix A. This is considered to principally address previous concerns regarding limited visibility over the railway bridge, ensuring, unlike previous plans, that all movements are retained at the junction.
- 2.2 In line with feedback from WCBC the access strategy for the main university campus has also been modified to discourage any uplift in the number of vehicles using Crispin Lane, reflecting the concerns raised for the junctions at either end.
- 2.3 We understand that Wrexham Glyndŵr University does not currently have definite plans for the redevelopment of the land adjacent to the junction (required in order to deliver the potential junction upgrade) and therefore this has not been included within the red line boundary for the planning application. It is considered that any upgrade to the junction could be delivered as an off-site upgrade through a suitably worded planning condition.
- 2.4 Whilst we accept that previous planning permission granted for the development of the Wrexham Village student accommodation required the upgrade of this junction, Wrexham Glyndŵr University was not involved at that point, and we would question whether this should be carried over to the current application.
- 2.5 It is also noted that the current proposals do not result in a significant impact at this junction and therefore the conditioning of the junction upgrade should be weighed up against strict necessity of the junction upgrade.

Figure 2-1: Crispin Lane / Mold Road junction scheme



3. Junction Assessments

- 3.1 WCBC has requested that revised junction modelling is carried out to determine the impact of retaining the university campus vehicular access from Plas Coch Road. The results presented within the submitted Transport Assessment assumed that following the implementation of the PRS scheme, only infrequent emergency and servicing access would be possible from this point.
- 3.2 This strategy neutralised any impact on Plas Coch Road with the PRS scheme trips being mitigated by the rerouting of existing university trips. It did however result in some intensification of Crispin Lane, which WCBC did not consider appropriate or preferable to increasing the number of trips using Plas Coch Road.
- 3.3 **The revised access strategy, as detailed by flow diagrams included in Appendix B, assumes university access is retained from all three existing accesses, with no overall change therefore in the number of vehicles making use of Crispin Lane.**
- 3.4 The summary tables (Table 3-1 to Table 3-6) below show the greatest-impact 2035 scenarios, however, as previously presented, 2020 (presumed opening year) assessment and sensitivity testing scenarios have also been included in the full modelling reports, included in Appendices C-H.

Entrance A (Mold Road)

- 3.5 As previously, the upgraded access from Mold Road is proposed to prohibit right-turns from being made into the university from Mold Road westbound. It is now assumed that rather than turning right into Crispin Lane prior to reaching the access, drivers will now continue to Plas Coch Road and enter the university via Entrance B.

Table 3-1: Entrance A (Mold Road) junction assessment summary

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2035 Baseline	<1	0.09	<1	0.29
2035 Baseline + Development (Previous Transport Assessment Scenario)	<1	0.23	2	0.71
2035 Baseline + Development (Revised Highways Addendum Scenario)	<1	0.10	<1	0.34

- 3.6 With a proportion of drivers now continuing to use the Plas Coch Road access the number of vehicles using the access has decreased significantly, reducing the RFC and queuing. The results of the revised assessment add further weight to the argument that upgrade of the junction is not required as a result of the current proposed development.

Entrance B (Plas Coch Road)

- 3.7 This roundabout junction has now been modelled by retaining the existing university trips, as well as adding a proportion of newly-generated university trips. This is in addition to the proposed PRS scheme trips that were previously present in the Transport Assessment modelling. The resulting operation of the junction is affected accordingly; however, it is noted that this approach has been considered preferable to loading additional trips onto Crispin Lane.

Table 3-2: Entrance B (Plas Coch Road) junction assessment summary

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2035 Baseline				
Plas Coch Rd (N)	<1	0.41	2	0.61
Entrance B	<1	0.09	2	0.72
Plas Coch Rd (S)	1	0.50	2	0.69
Retail Park	<1	0.20	1	0.51
2035 Baseline + Development (Previous Transport Assessment Scenario)				
Plas Coch Rd (N)	<1	0.38	2	0.70
Entrance B	<1	0.35	3	0.75
Plas Coch Rd (S)	1	0.51	3	0.74
Retail Park	<1	0.20	1	0.53
2035 Baseline + Development (Revised Highways Addendum Scenario)				
Plas Coch Rd (N)	<1	0.43	17	0.74
Entrance B	<1	0.42	210*	1.06
Plas Coch Rd (S)	1	0.54	8	0.76
Retail Park	<1	0.21	4	0.55

** influenced by RFC exceeding 1.0, therefore not accurately representing driver behaviour*

- 3.8 It is noted that in reality the congestion experienced when leaving the site in the PM peak will result in drivers naturally making use of alternative exit points from the campus, however congestion on exiting the site does not appear to have a severe impact on any of the other arms of the roundabout which continue to operate much the same as in the baseline scenario. It should also be considered that with the limitations of ARCADY software, once an arm exceeds and RFC of 1.0, driver behaviour is not accurately portrayed and results in an unrealistic level of queuing being predicted.

Entrance C (Crispin Lane)

- 3.9 No new development trips are now predicted to make use of this junction therefore the revised development scenario demonstrates the same results as the baseline.
- 3.10 It should be noted that no change has been made to existing trips, university-based or otherwise, that currently use this junction. There will, therefore, continue to be a proportion of university-based trips that will continue to use the junction.

Table 3-3: Entrance C (Crispin Lane) junction assessment summary

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2035 Baseline				
Entrance C	<1	0.07	<1	0.11
Crispin Lane (N)	<1	0.07	<1	0.04
2035 Baseline + Development (Previous Transport Assessment Scenario)				
Entrance C	<1	0.07	<1	0.14
Crispin Lane (N)	<1	0.17	<1	0.05
2035 Baseline + Development (Revised Highways Addendum Scenario)				
Entrance C	<1	0.07	<1	0.11
Crispin Lane (N)	<1	0.07	<1	0.04

Mold Road / Crispin Lane

- 3.11 No new development trips are now predicted to make use of the Crispin Lane arm of this junction, however rerouting of trips does mean that mainline flows are slightly elevated, resulting in the difference between the baseline and revised development scenarios.

Table 3-4: Mold Road / Crispin Lane junction assessment summary

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2035 Baseline – Existing Layout				
Crispin Lane	<1	0.37	<1	0.51
Mold Road (E)	<1	0.23	9	0.77
2035 Baseline + Development (Previous Transport Assessment Scenario) – Transport Assessment layout				
Crispin Lane	<1	0.34	<1	0.31
Mold Road (E)	1	0.33	28	0.96
2035 Baseline + Development (Revised Highways Addendum Scenario) – revised layout				
Crispin Lane	<1	0.34	<1	0.48
Mold Road (E)	<1	0.24	13	0.83

Crispin Lane / Stansty Road

- 3.12 No new development trips are now predicted to make use of the Crispin Lane arm of this junction, however rerouting of trips does mean that mainline flows are slightly elevated, resulting in the difference between the baseline and revised development scenarios.

Table 3-5: Crispin Lane / Stansty Road junction assessment summary

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2035 Baseline				
Crispin Lane	<1	0.14	<1	0.26
Stansty Road (W)	<1	0.17	<1	0.08
2035 Baseline + Development (Previous Transport Assessment Scenario)				
Crispin Lane	<1	0.15	<1	0.32
Stansty Road (W)	<1	0.18	<1	0.08
2035 Baseline + Development (Revised Highways Addendum Scenario)				

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
Crispin Lane	<1	0.14	<1	0.27
Stansty Road (W)	<1	0.18	<1	0.08

Stansty Road / New Road

- 3.13 No changes have been made to the flows through this junction as a result of the rerouting of trips away from Crispin Lane. Both development scenarios are therefore identical.

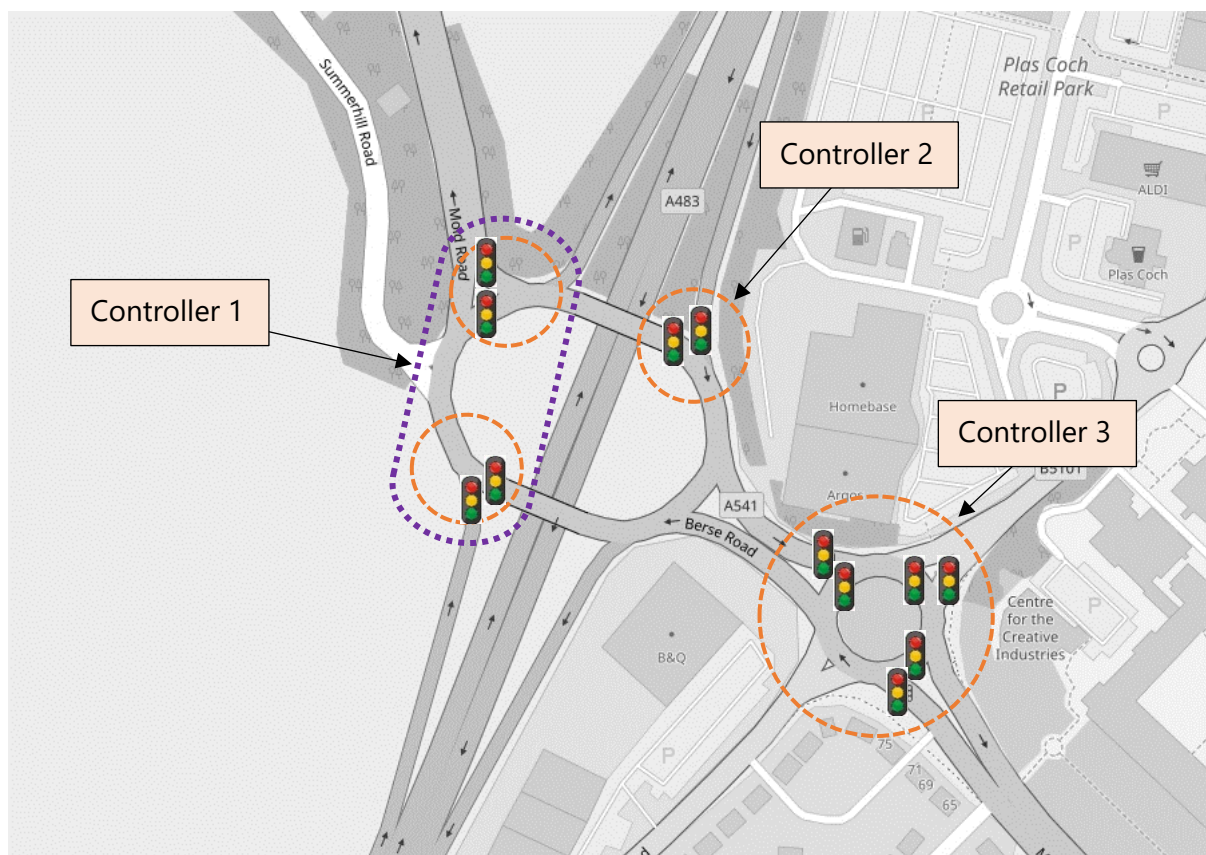
Table 3-6: Stansty Road / New Road junction assessment summary

	AM Peak		PM Peak	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2035 Baseline				
Stansty Road (left turn)	2	0.71	6	0.89
Stansty Road (right turn)	2	0.68	3	0.76
New Road (N)	2	0.57	4	0.74
2035 Baseline + Development (Previous Transport Assessment Scenario)				
Stansty Road (left turn)	4	0.84	11	0.97
Stansty Road (right turn)	5	0.85	6	0.95
New Road (N)	2	0.58	5	0.79
2035 Baseline + Development (Revised Highways Addendum Scenario)				
Stansty Road (left turn)	4	0.84	11	0.97
Stansty Road (right turn)	5	0.85	6	0.95
New Road (N)	2	0.58	5	0.79

4. A483 J5 / DIY Roundabout

- 4.1 The combined A483 junction 5 and adjacent DIY store roundabout (Mold Road / Plas Coch Road) have been considered to be the principal constraint when assessing both existing and proposed traffic movements in the vicinity of the Plas Coch Campus.
- 4.2 The junction is currently put under significant pressure during short, but intense, AM and PM peak periods. Outside of these periods the junctions operate well, with little or no congestion, as with the majority of roads in and around Wrexham.

Figure 4-1: A483 J5 / DIY Roundabout signal controllers



Source: Open Street Map

- 4.3 ITP has developed a VISSIM microsimulation model to assess the operation of the junction. This has sought, in the first instance, to replicate existing junction operation, using traffic survey data previously obtained on 4th July 2018, summarised in Appendix I, and traffic signal data provided by Telnet – WCBC's signalling contractor. The model has used optimised signal timings based on the Mova maxima currently programmed for each peak period.
- 4.4 Since the traffic survey data was collected outside of term time, full university flows have been reassigned to the junction for the with development assessment scenarios, in addition to the development trips. The development scenarios therefore include the

following trip generators, in addition to the baseline traffic survey data and TEMPro growth factors:

- 110% of the existing university trip generation assigned to the junction (representing previously-assessed 10% growth associated with proposed development)
- 410-apartment PRS scheme
- 112-dwelling Gatewen Road residential development

- 4.5 The development scenarios therefore include more than just the proposed development – due to the need to undertake traffic surveys outside of term time. The results when viewed as a comparison with the baseline scenarios are highly robust.
- 4.6 The baseline scenarios have been calibrated and validated against traffic flows and observed queuing to the Welsh transport appraisal guidance (WelTAG), with reference to Department for Transport WebTAG guidelines and modelling best practice. They are therefore considered to form a reliable basis for the scope of this assessment, which is looking at the impact of the various Wrexham Glyndŵr University developments. It should be noted that no physical changes are currently being proposed, therefore simplifying the modelling process.
- 4.7 The aim of the modelling, as requested by WCBC, is to show the impact of the proposed development, whilst accepting that there is very little physical mitigation that can be achieved at the junction. The junction already operates Mova-enabled signal controllers and there is limited space to cost-effectively increase capacity. Equally, any increase in capacity is likely to only shift the issue to other nearby junctions or induce new demand.
- 4.8 It should also be noted that the development itself is predicted to only add a relatively small number of trips to the junction, when considering the number of vehicles already using the junction, as shown in Table 4-1 and flow diagrams included in Appendix J. The predominant flow from the development is also opposite to that of the background traffic in both cases.

Table 4-1: A483 J5 / DIY Roundabout development percentage impact

Period	2018 Baseline	Total development trips	Percent impact
AM peak	9,479	232	2.4%
PM peak	10,791	236	2.2%

- 4.9 Since VISSIM provides a predominantly visual output, video files have been provided to accompany this note, referenced as Appendix K. These show the modelled scenarios at

their most congested in the middle of both the AM and PM peaks, allowing comparison with and without the development trips.

Overall Network Performance

- 4.10 Information on the model has been assessed through the modelling process to provide a network-wide level of average readings on the conditions of the vehicles. This includes vehicle journey times, speed and additional time spent by drivers due to delay.
- 4.11 Table 4-2 and Table 4-3 below provide the network statistics for the AM and PM peaks respectively. They provide a comparison between the modelled baseline 2018 network; baseline 2035 network; and baseline 2035 plus development trips network.
- 4.12 They show that the background traffic growth predicted to take place between now and 2035 has a large impact on vehicle delay, understandably, however adding the development scenario (including the existing university trips) on top of the 2035 traffic levels has very little impact.

Table 4-2: Network statistics comparison – AM peak (08:00-09:00)

Indicator	2018 Base	2035 Base	Difference (2035 Base – 2018 Base)	2035 Base + Dev	Difference (2035 Base + Dev – 2035 Base)
Total Vehicles through the model in peak hour	4,646	5,041	+395	5,212	+171
Average % delay per vehicle on completed trips	65%	85%	+20pp	86%	+1pp
Average Travel Time Per Vehicle (mins)	7	14	+7	14	±0
Average Delay Per Vehicle (mins)	4	12	+7	12	±0
Average Speed (mph)	13	6	-7	5	-1

Table 4-3: Network statistics comparison – PM peak (17:00-18:00)

Indicator	2018 Base	2035 Base	Difference (2035 Base – 2018 Base)	2035 Base + Dev	Difference (2035 Base + Dev – 2035 Base)
Total Vehicles through the model in peak hour	5,559	4,020	-1539	6,502	+2482
Average % delay per vehicle on completed trips	73%	86%	+13pp	85%	-1pp
Average Travel Time Per Vehicle (mins)	9	14	+5	14	±0
Average Delay Per Vehicle (mins)	6	12	+6	11	-1
Average Speed (mph)	10	5	-5	6	+1

Queue Length Comparison

As a proxy for junction performance, the level of queuing on approach to each arm has been summarised in Table 4-5 and Table 4-5 below. A visual comparison between the three scenarios is provided in

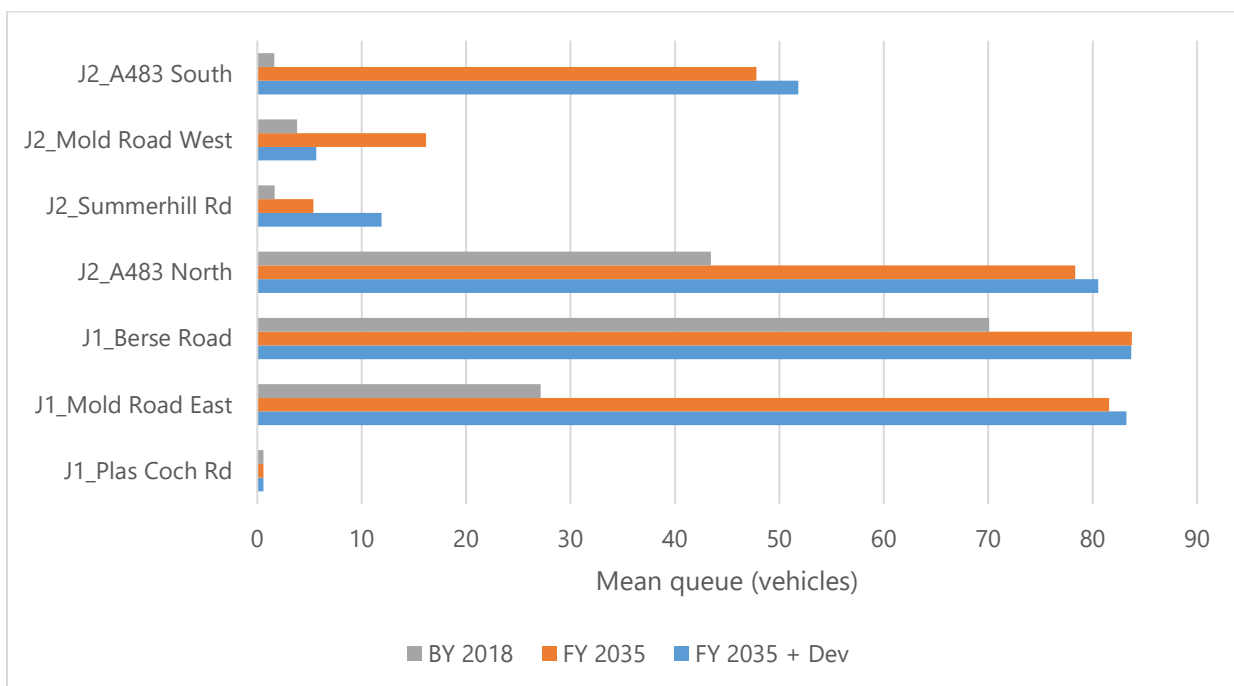
- 4.13 Figure 4-2 and Figure 4-3 for the AM and PM peaks respectively.
- 4.14 This is considered to be the most noticeable factor for drivers and therefore by demonstrating that overall queuing is unlikely to change significantly as a result of adding the development scenarios, it is considered to demonstrate that the impact of the proposed development is far from severe.
- 4.15 This conclusion is logical – looking at the development flows they are predominantly opposite in direction to the heaviest background traffic movements. For example, in the AM peak the predominant development flow is away from Wrexham, onto the A483, whilst the most significant existing congestion is seen by vehicles trying to drive into Wrexham.

Table 4-4: A483 J5 / DIY Roundabout mean queue – AM peak (08:00-09:00)

Approach	2018 Base	2035 Base	Difference (2035 Base – 2018 Base)	2035 Base + Dev	Difference (2035 Base + Dev – 2035 Base)
Plas Coch Rd	1	1	±0	1	±0
Mold Road East	27	82	+54	83	+2
Berse Road	70	84	+14	84	±0
A483 SB slip	43	78	+35	81	+2
Summerhill Rd	2	5	+4	12	+7
Mold Road West	4	16	+12	6	-11
A483 NB slip	2	48	+46	52	+4
Total	149	314	+165	319	+4

Counts in vehicles

Figure 4-2: A483 J5 / DIY Roundabout mean queue – AM peak (08:00-09:00)



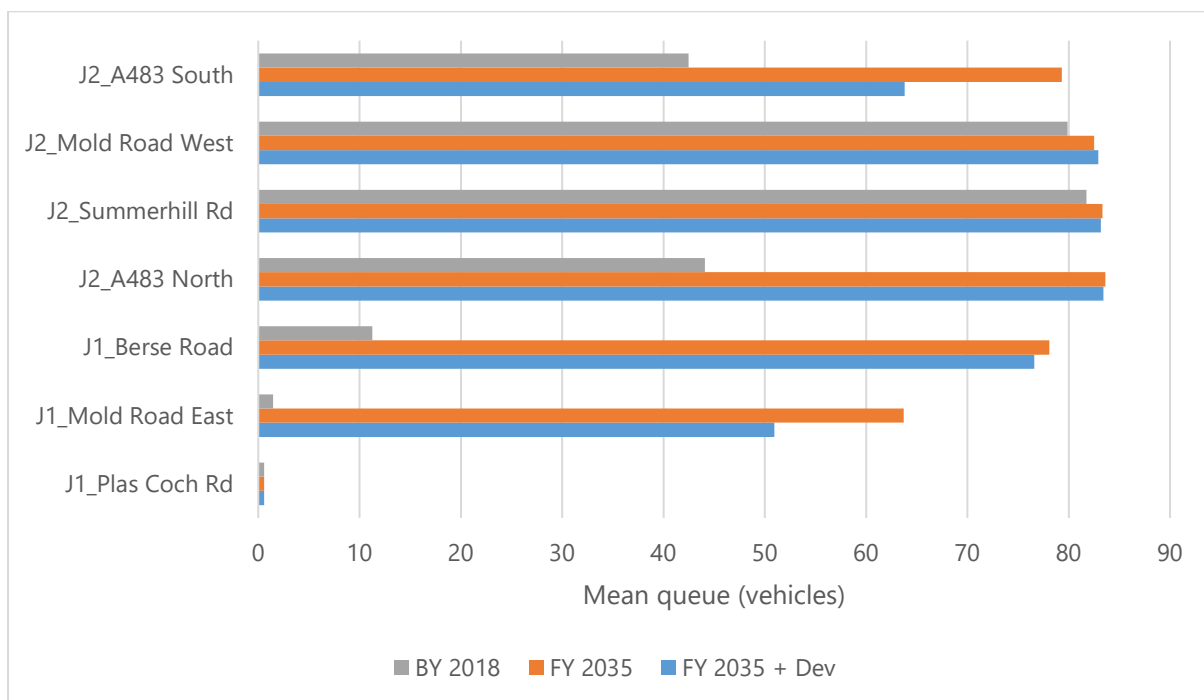
- 4.16 In the AM peak there is no discernible difference in queuing in the future year scenario with or without development. This conclusion is repeated in the PM peak, shown below, with a significant reduction in queues on certain arms, likely to be as a result of rebalancing flows around the junctions.

Table 4-5: A483 J5 / DIY Roundabout mean queue – PM peak (17:00-18:00)

Approach	2018 Base	2035 Base	Difference (2035 Base – 2018 Base)	2035 Base + Dev	Difference (2035 Base + Dev – 2035 Base)
Plas Coch Rd	1	1	0	1	0
Mold Road East	1	51	49	51	0
Berse Road	11	78	66	77	-1
A483 SB slip	44	84	39	83	0
Summerhill Rd	82	83	1	83	0
Mold Road West	80	82	2	83	1
A483 NB slip	42	77	34	64	-13
Total	261	456	+191	442	-13

Counts in vehicles

Figure 4-3: A483 J5 / DIY Roundabout mean queue – PM peak (17:00-18:00)



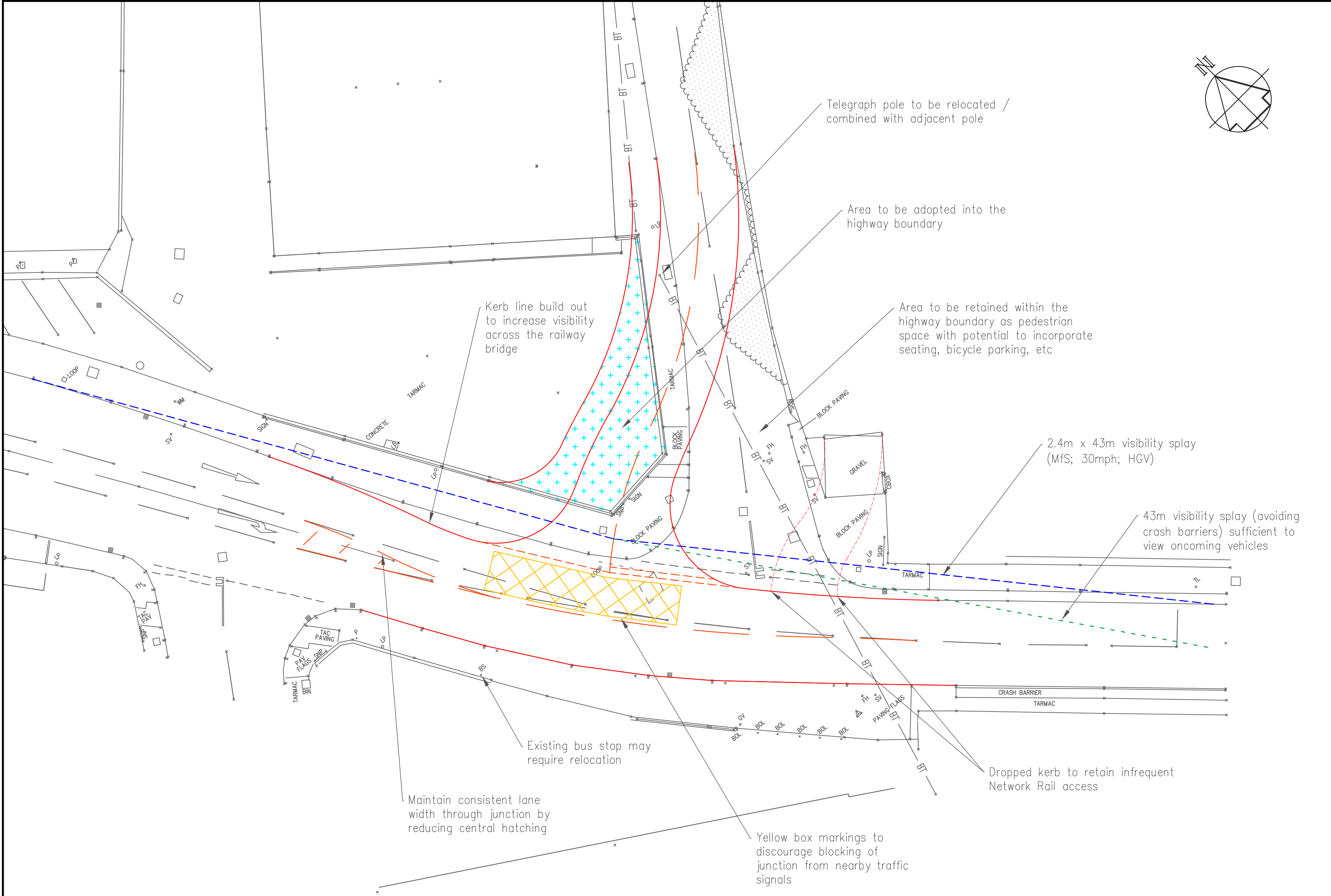
- 4.17 In both of the above peak periods, it must be considered that the queue lengths assume that demand from drivers will continue to grow in line with TEMPro estimations. In reality, should congestion continue to grow as predicted, many drivers will consider using alternative routes, different methods of transport or travelling at different times.
- 4.18 The VISSIM modelling confirms that the impact contributable to the proposed development is minimal and therefore no further assessment is deemed necessary.

5. Conclusion

- 5.1 The Highways Addendum, in conjunction with the previously-submitted Transport Assessment, presents a transparent assessment of the traffic and transport impact of the proposed development, which in this case is not considered to be severe. This is based on the following key features and findings:
- Despite the proposed development only predicted to have a minor impact on the Mold Road / Crispin Lane junction, a revised indicative junction upgrade scheme has been presented which we feel, subject to agreement of a fair funding mechanism could be delivered via a suitably worded planning condition.
 - The proposed development has been shown to have a modest impact on the existing local highway network, despite adjustments being made to retain university access via the retail park roundabout.
 - In particular, the impact on the A483 junction 5 and adjacent DIY roundabout has been shown to be negligible as a result of the university development, even in a 2035 future year scenario, notwithstanding existing peak hour congestion.
 - Despite issues being recognised at the DIY roundabout during peak periods, WCBC has acknowledged that the peak periods in Wrexham are relatively short in duration. The marginal impact of the proposed development on the junction is not deemed severe with very little difference shown in queue lengths with and without development.
 - Overall the development flows contribute less than 3% growth on top of the surveyed traffic flows. The results presented in this note confirm this limited impact on the junction performance, with background traffic growth being the overriding factor for deteriorating junction performance.
- 5.2 Based on the feedback received to date by WCBC, it is considered that all outstanding issues have now been addressed. Based on the information presented within this Highways Addendum, ITP consider that WCBC should be in a position to support the proposed development.

Appendix A

Crispin Lane / Mold Road junction

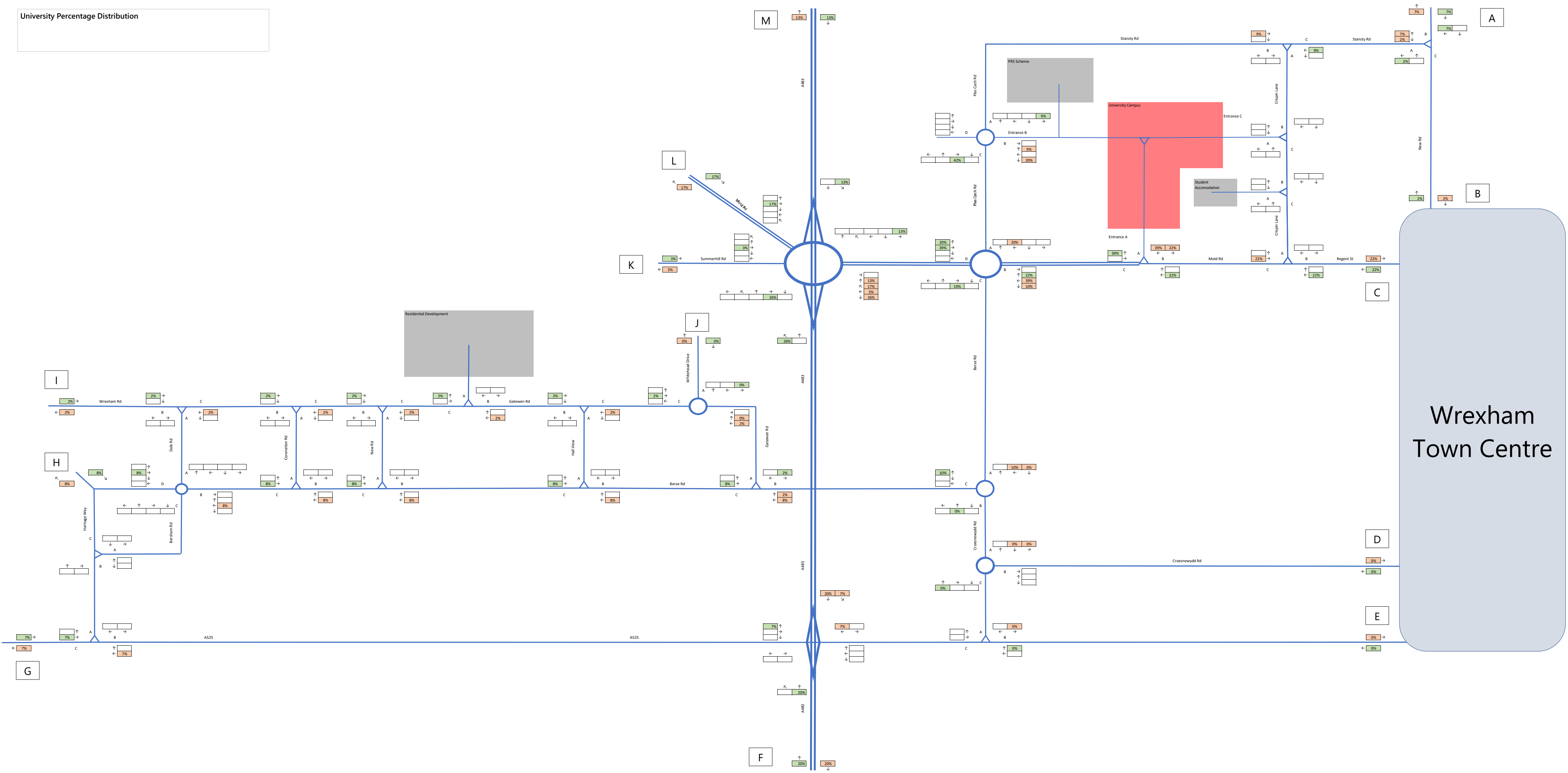


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Relocated junction position Consultation	B A	DP DP	03/10/18 14/06/18
REVISIONS	REV	Auth	DATE
Notes: Preliminary drawing - not for construction The acceptability of the proposed design is subject to further investigation, including utilities searched, land ownership enquiries, swept-path analysis and road safety audit. Proposed kerb line Proposed lining Visibility splay			
Post-submission Consultation Draft for Information	B A -	DP DP DP	03/10/18 14/06/18 12/06/18
PURPOSE OF ISSUE	REV	Auth	DATE
 Integrated Transport Planning Ltd Cornwall Buildings 45 Newhall Street Birmingham B3 3QR Tel: 0121 213 4725 Fax: 0121 213 4793 http://www.itpworld.net			
CLIENT Wrexham Glyndwr University			
PROJECT Plas Coch Campus			
DRAWING TITLE Mold Road / Crispin Lane Junction Improvements			
BASE SCALE 1: 200 @ A2		DATE Oct 2018	
DRAWING NUMBER DWG/2627/102		REV B	

Appendix B

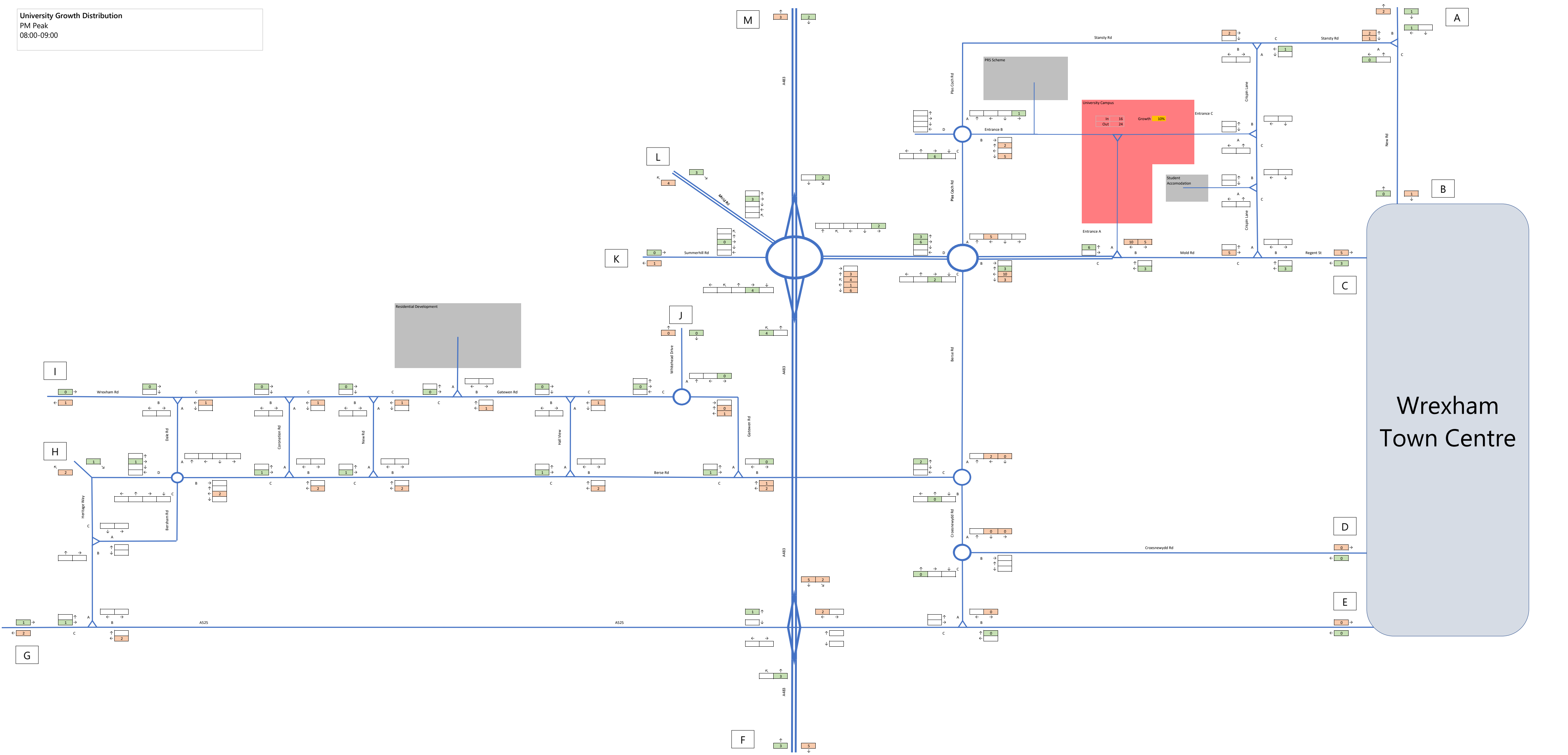
Flow Diagrams

University Percentage Distribution

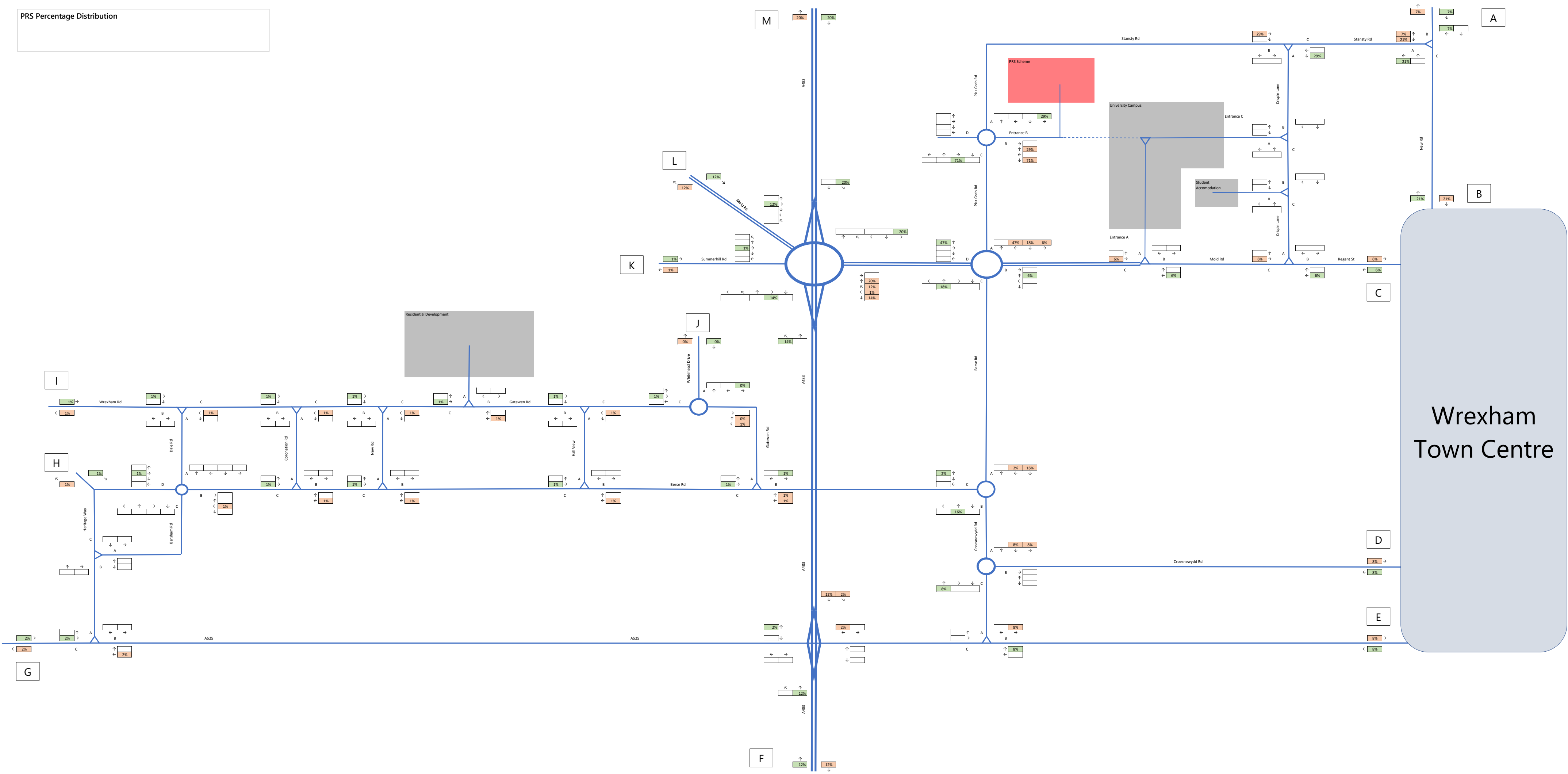


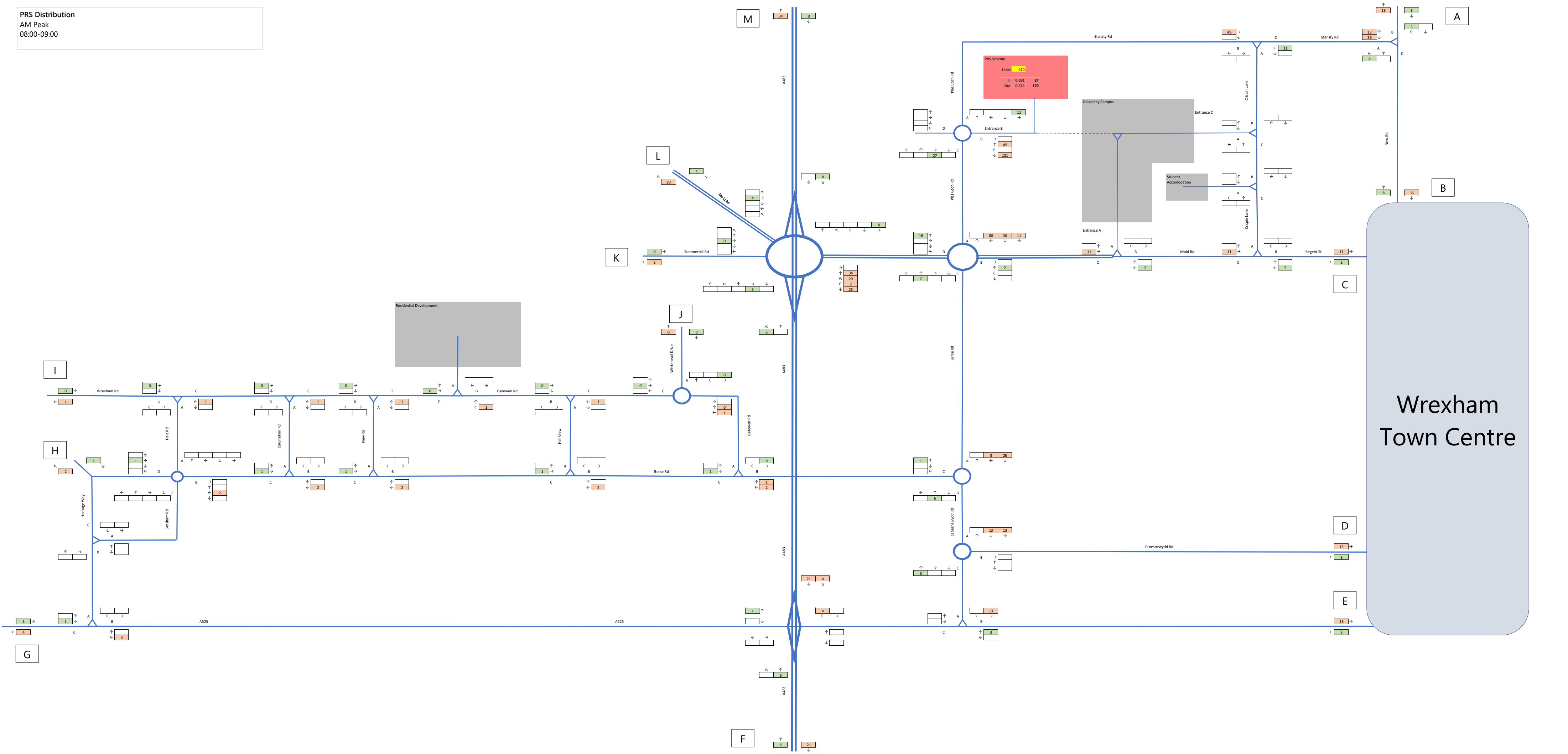
University Growth Distribution
AM Peak
08:00-09:00

University Growth Distribution
PM Peak
08:00-09:00

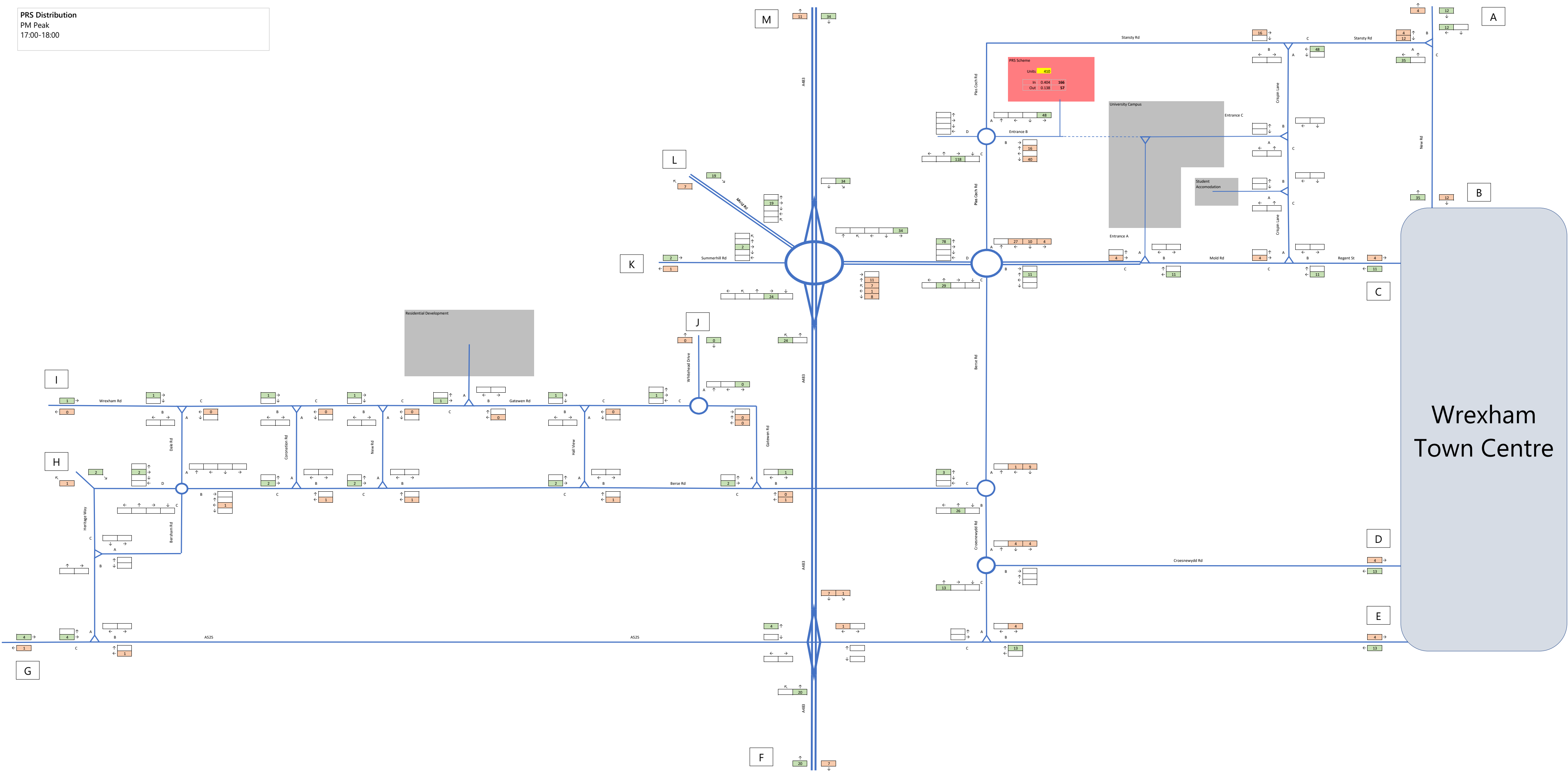


PRS Percentage Distribution





PRS Distribution
PM Peak
17:00-18:00

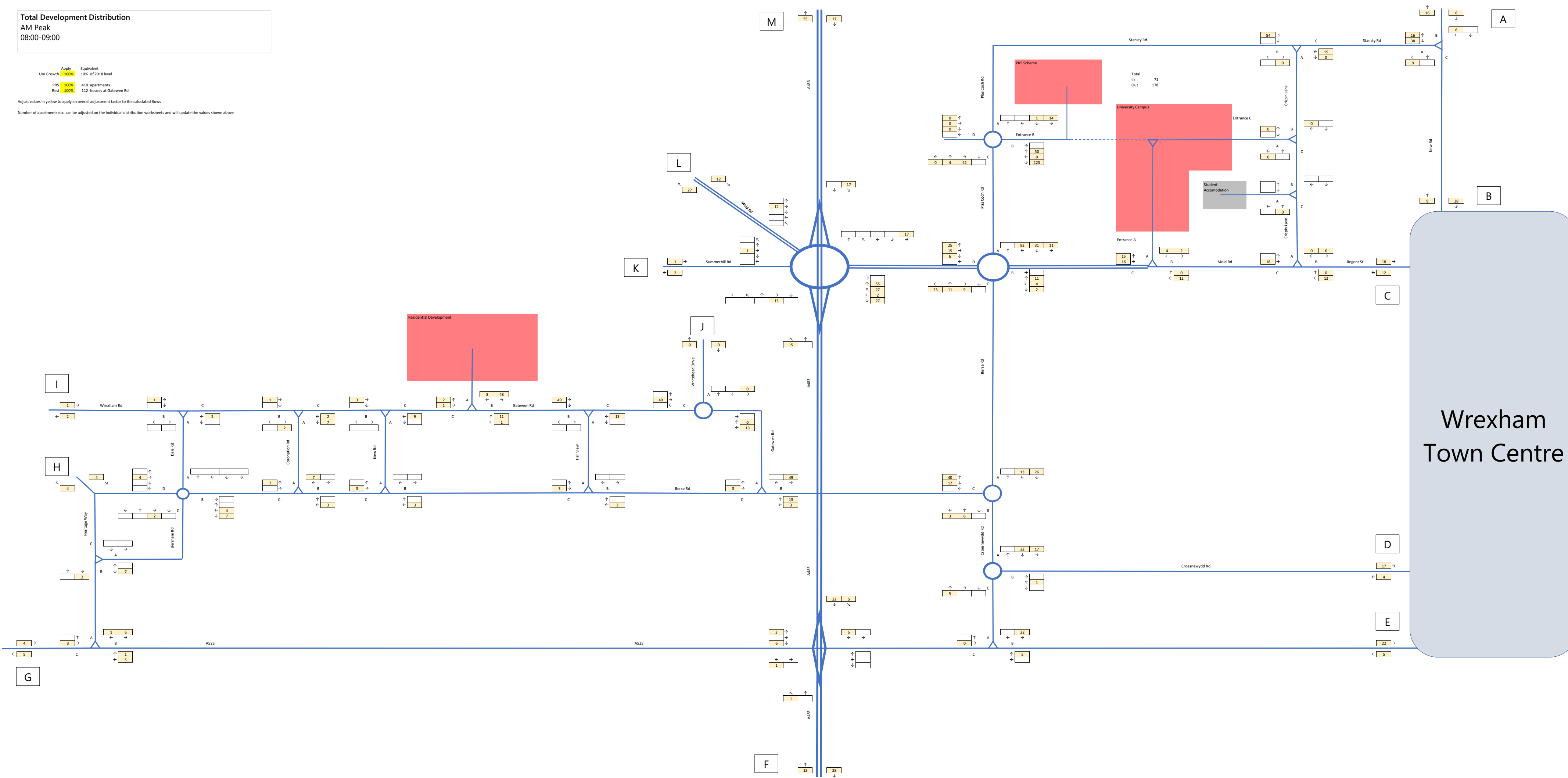


AM Peak
08:00-09:00

	Apply	Equivalent
Uni Growth	100%	10% of 2018 level
PRS	100%	410 apartments
Resi	100%	112 houses at Gatewen Rd

Adjust values in yellow to apply an overall adjustment factor to the calculated flows

Number of apartments etc. can be adjusted on the individual distribution worksheets and will update the values shown above

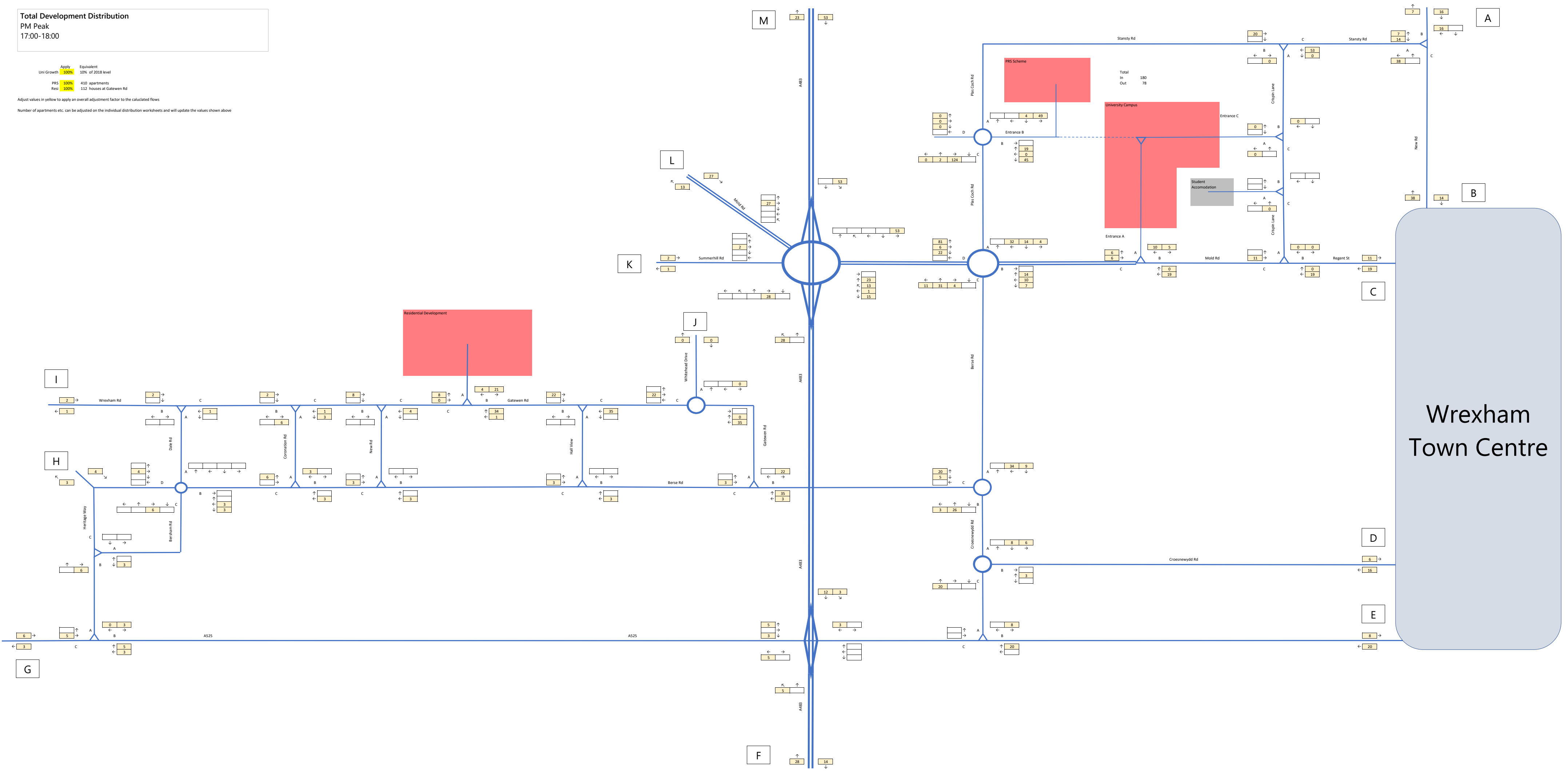


PM Peak
17:00-18:00

	Apply	Equivalent
Uni Growth	100%	10% of 2018 level
PRS	100%	410 apartments
Resi	100%	112 houses at Gatewen Rd

Adjust values in yellow to apply an overall adjustment factor to the calculated flows

Number of apartments etc. can be adjusted on the individual distribution worksheets and will update the values shown above



Appendix C

Entrance A (Mold Road) PICADY Results

Junctions 9		
PICADY 9 - Priority Intersection Module		
Version: 9.5.0.6896 © Copyright TRL Limited, 2018		
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk		
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Filename: MoldRdAccess_261018.j9

Path: Z:\2600-2699\2627 Wrexham Glyndwr University\Data\Junction Assessment

Report generation date: 26/10/2018 10:51:06

- »Proposed Layout - 2018 Baseline, AM Peak
- »Proposed Layout - 2018 Baseline, PM Peak
- »Proposed Layout - 2020 Baseline, AM Peak
- »Proposed Layout - 2020 Baseline, PM Peak
- »Proposed Layout - 2020 Baseline + Dev, AM Peak
- »Proposed Layout - 2020 Baseline + Dev, PM Peak
- »Proposed Layout - 2035 Baseline, AM Peak
- »Proposed Layout - 2035 Baseline, PM Peak
- »Proposed Layout - 2035 Baseline + Dev, AM Peak
- »Proposed Layout - 2035 Baseline + Dev, PM Peak
- »Proposed Layout - 2035 Baseline + Dev (Sensitivity), AM Peak
- »Proposed Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Summary of junction performance

	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Proposed Layout - 2018 Baseline						
Stream B-AC	0.1	8.39	0.07	0.3	11.24	0.22
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Proposed Layout - 2020 Baseline						
Stream B-AC	0.1	8.53	0.07	0.3	11.57	0.23
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Proposed Layout - 2020 Baseline + Dev						
Stream B-AC	0.1	8.76	0.09	1.5	23.37	0.61
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Proposed Layout - 2035 Baseline						
Stream B-AC	0.1	9.28	0.09	0.4	13.68	0.29
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Proposed Layout - 2035 Baseline + Dev						
Stream B-AC	0.1	9.56	0.10	2.3	33.64	0.71
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
Proposed Layout - 2035 Baseline + Dev (Sensitivity)						
Stream B-AC	0.2	10.43	0.17	1.0	18.92	0.50
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00

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

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

File summary

File Description

Title	Wrexham Glyndwr University
Location	Plas Coch Campus
Site number	
Date	26/10/2018
Version	3
Status	
Identifier	
Client	Wrexham Glyndwr University
Jobnumber	2627
Enumerator	Mark Lever
Description	To accompany Highways Addendum, based on revised trip routing

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D1	2018 Baseline	AM Peak	ONE HOUR	07:45	09:15	15		✓		
D2	2018 Baseline	PM Peak	ONE HOUR	16:45	18:15	15		✓		
D3	2020 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.0335
D4	2020 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0316
D5	2020 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3+D11
D6	2020 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4+D12
D7	2035 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.2062
D8	2035 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.1991
D9	2035 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D11
D10	2035 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D12
D11	Dev	AM Peak	ONE HOUR	07:45	09:15	15				
D12	Dev	PM Peak	ONE HOUR	16:45	18:15	15				
D13	2035 Baseline + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D15
D14	2035 Baseline + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D16
D15	Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15				
D16	Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15				

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Proposed Layout	ITP DWG-2627-101	✓	100.000	100.000

Proposed Layout - 2018 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Entrance A		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	16.66	✓	4.55		0.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.30	30	74

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	594	0.053	0.133	0.084	0.190
1	B-C	691	0.057	0.143	-	-
1	C-B	574	0.119	0.119	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	950	100.000
B		ONE HOUR	✓	28	100.000
C		ONE HOUR	✓	411	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	61	889
	B	18	0	10
	C	411	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.39	0.1	A	26	39
C-AB	0.00	0.00	0.0	A	0	0
C-A					377	566
A-B					56	84
A-C					816	1224

Proposed Layout - 2018 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	742	100.000
B		ONE HOUR	✓	82	100.000
C		ONE HOUR	✓	1018	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	36	706
	B	72	0	10
	C	1018	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.22	11.24	0.3	B	75	113
C-AB	0.00	0.00	0.0	A	0	0
C-A					934	1401
A-B					33	50
A-C					648	972

Proposed Layout - 2020 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D3	2020 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.0335

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	982	100.000
B		ONE HOUR	✓	29	100.000
C		ONE HOUR	✓	425	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	63	919
	B	19	0	10
	C	425	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.53	0.1	A	27	40
C-AB	0.00	0.00	0.0	A	0	0
C-A					390	585
A-B					58	87
A-C					843	1265

Proposed Layout - 2020 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D4	2020 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0316

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	765	100.000
B		ONE HOUR	✓	85	100.000
C		ONE HOUR	✓	1050	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	37	728
	B	74	0	10
	C	1050	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.23	11.57	0.3	B	78	116
C-AB	0.00	0.00	0.0	A	0	0
C-A					964	1445
A-B					34	51
A-C					668	1002

Proposed Layout - 2020 Baseline + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3+D11

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1013	100.000
B		ONE HOUR	✓	35	100.000
C		ONE HOUR	✓	437	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	78	935
	B	23	0	12
	C	437	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	8.76	0.1	A	32	48
C-AB	0.00	0.00	0.0	A	0	0
C-A					401	601
A-B					72	107
A-C					858	1287

Proposed Layout - 2020 Baseline + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	O-D data		O-D matrix contains negative demand. Matrix should only be used as a development matrix for Demand Set relationships and should not be run on its own.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D6	2020 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4+D12

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	848	100.000
B		ONE HOUR	✓	216	100.000
C		ONE HOUR	✓	1056	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	114	734
	B	200	0	15
	C	1065	-9	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.61	23.37	1.5	C	198	297
C-AB	0.00	0.00	0.0	A	0	0
C-A					977	1466
A-B					105	157
A-C					674	1011

Proposed Layout - 2035 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D7	2035 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.2062

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1146	100.000
B		ONE HOUR	✓	34	100.000
C		ONE HOUR	✓	496	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	From A	0	74	1072
	From B	22	0	12
	From C	496	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	From A	0	0	3
	From B	0	0	0
	From C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	9.28	0.1	A	31	46
C-AB	0.00	0.00	0.0	A	0	0
C-A					455	682
A-B					68	101
A-C					984	1476

Proposed Layout - 2035 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D8	2035 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.1991

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	890	100.000
B		ONE HOUR	✓	98	100.000
C		ONE HOUR	✓	1221	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	43	847
	B	86	0	12
	C	1221	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.29	13.68	0.4	B	90	135
C-AB	0.00	0.00	0.0	A	0	0
C-A					1120	1680
A-B					40	59
A-C					777	1165

Proposed Layout - 2035 Baseline + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D9	2035 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D11

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1177	100.000
B		ONE HOUR	✓	40	100.000
C		ONE HOUR	✓	508	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	89	1088
	B	26	0	14
	C	508	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.10	9.56	0.1	A	36	55
C-AB	0.00	0.00	0.0	A	0	0
C-A					466	699
A-B					81	122
A-C					999	1498

Proposed Layout - 2035 Baseline + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	O-D data		O-D matrix contains negative demand. Matrix should only be used as a development matrix for Demand Set relationships and should not be run on its own.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D10	2035 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D12

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	973	100.000
B		ONE HOUR	✓	229	100.000
C		ONE HOUR	✓	1227	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	120	853
	B	212	0	17
	C	1236	-9	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A	B	C
	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.71	33.64	2.3	D	210	316
C-AB	0.00	0.00	0.0	A	0	0
C-A					1134	1701
A-B					110	165
A-C					782	1173

Proposed Layout - 2035 Baseline + Dev (Sensitivity), AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D13	2035 Baseline + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1235	100.000
B		ONE HOUR	✓	63	100.000
C		ONE HOUR	✓	541	100.000

Origin-Destination Data

Demand (PCU/hr)

	To		
	A	B	C
From	A	0	147
	B	41	0
	C	541	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A	B	C
	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	10.43	0.2	B	58	86
C-AB	0.00	0.00	0.0	A	0	0
C-A					496	744
A-B					135	202
A-C					999	1498

Proposed Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D14	2035 Baseline + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	926	100.000
B		ONE HOUR	✓	173	100.000
C		ONE HOUR	✓	1253	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	73	853
	B	134	0	39
	C	1253	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A	B	C
	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	18.92	1.0	C	159	239
C-AB	0.00	0.00	0.0	A	0	0
C-A					1149	1724
A-B					67	101
A-C					782	1173

Appendix D

Entrance B (Plas Coch Road) ARCADY Results

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2018
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Filename: PlasCochRdAccess_261018.arc8

Path: Z:\2600-2699\2627 Wrexham Glyndwr University\Data\Junction Assessment

Report generation date: 26/10/2018 11:08:11

Summary of junction performance

	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2018 Baseline						
Arm 1	0.48	4.35	0.32	0.85	6.60	0.46
Arm 2	0.07	5.99	0.07	0.62	17.50	0.39
Arm 3	0.72	3.17	0.41	1.30	4.34	0.57
Arm 4	0.20	2.25	0.16	0.72	2.86	0.42
Existing Layout - 2020 Baseline						
Arm 1	0.51	4.47	0.34	0.93	6.99	0.48
Arm 2	0.08	6.11	0.07	0.72	19.73	0.42
Arm 3	0.76	3.25	0.43	1.41	4.55	0.58
Arm 4	0.21	2.28	0.17	0.77	2.94	0.43
Existing Layout - 2020 Baseline + Dev						
Arm 1	0.56	4.73	0.36	1.43	9.59	0.59
Arm 2	0.59	9.04	0.37	1.77	32.49	0.65
Arm 3	0.88	3.53	0.46	1.95	5.63	0.66
Arm 4	0.22	2.41	0.17	0.86	3.29	0.46
Existing Layout - 2035 Baseline						
Arm 1	0.69	5.23	0.41	1.57	10.19	0.61
Arm 2	0.10	6.78	0.09	2.35	58.16	0.72
Arm 3	1.03	3.76	0.50	2.19	6.11	0.69
Arm 4	0.27	2.47	0.20	1.06	3.49	0.51
Existing Layout - 2035 Baseline + Dev						
Arm 1	0.77	5.58	0.43	2.80	16.75	0.74
Arm 2	0.71	10.60	0.42	13.61	209.69	1.06
Arm 3	1.19	4.14	0.54	3.21	8.14	0.76
Arm 4	0.28	2.62	0.21	1.20	3.98	0.55
Existing Layout - 2035 Baseline + Dev (Sensitivity)						
Arm 1	0.86	6.11	0.46	3.16	18.78	0.77
Arm 2	0.77	10.95	0.44	25.30	328.91	1.20
Arm 3	1.38	4.50	0.58	3.49	8.72	0.78
Arm 4	0.29	2.73	0.22	1.24	4.11	0.55

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

"D1 - 2018 Baseline, AM Peak" model duration: 07:45 - 09:15

"D2 - 2018 Baseline, PM Peak" model duration: 16:45 - 18:15

"D3 - 2020 Baseline, AM Peak" model duration: 07:45 - 09:15

"D4 - 2020 Baseline, PM Peak" model duration: 16:45 - 18:15

"D5 - 2020 Baseline + Dev, AM Peak" model duration: 07:45 - 09:15

"D6 - 2020 Baseline + Dev, PM Peak" model duration: 16:45 - 18:15

"D7 - 2035 Baseline, AM Peak" model duration: 07:45 - 09:15

"D8 - 2035 Baseline, PM Peak" model duration: 16:45 - 18:15

"D9 - 2035 Baseline + Dev, AM Peak" model duration: 07:45 - 09:15

"D10 - 2035 Baseline + Dev, PM Peak" model duration: 16:45 - 18:15

"D11 - Dev, AM Peak" model duration: 07:45 - 09:15

"D12 - Dev, PM Peak" model duration: 16:45 - 18:15

"D13 - 2035 Baseline + Dev (Sensitivity), AM Peak" model duration: 07:45 - 09:15

"D14 - 2035 Baseline + Dev (Sensitivity), PM Peak" model duration: 16:45 - 18:15

"D15 - Dev (Sensitivity), AM Peak" model duration: 07:45 - 09:15

"D16 - Dev (Sensitivity), PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 26/10/2018 11:08:00

File summary

Title	Wrexham Glyndwr University
Location	Plas Coch Campus
Site Number	
Date	26/10/2018
Version	4
Status	
Identifier	
Client	Wrexham Glyndwr University
Jobnumber	2627
Enumerator	Mark Lever
Description	To accompany Highways Addendum, based on revised trip routing

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Existing Layout - 2018 Baseline, AM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2018 Baseline, AM Peak	2018 Baseline	AM Peak		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				3.36	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	362.00	100.000
2	ONE HOUR	✓	41.00	100.000
3	ONE HOUR	✓	744.00	100.000
4	ONE HOUR	✓	292.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	1.000	49.000	236.000	76.000
	2	2.000	0.000	31.000	8.000
	3	255.000	182.000	9.000	298.000
	4	56.000	15.000	221.000	0.000

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

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.32	4.35	0.48	A	332.18	498.27	32.32	3.89	0.36	32.32	3.89
2	0.07	5.99	0.07	A	37.62	56.43	5.19	5.52	0.06	5.19	5.52
3	0.41	3.17	0.72	A	682.71	1024.06	48.73	2.86	0.54	48.74	2.86
4	0.16	2.25	0.20	A	267.94	401.92	14.19	2.12	0.16	14.19	2.12

Existing Layout - 2018 Baseline, PM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2018 Baseline, PM Peak	2018 Baseline	PM Peak		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.89	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	426.00	100.000
2	ONE HOUR	✓	118.00	100.000
3	ONE HOUR	✓	988.00	100.000
4	ONE HOUR	✓	828.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	3.000	299.000	124.000
	2	9.000	0.000	83.000	26.000
	3	203.000	54.000	0.000	731.000
	4	124.000	12.000	692.000	0.000

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

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.46	6.60	0.85	A	390.91	586.36	52.33	5.35	0.58	52.33	5.35
2	0.39	17.50	0.62	C	108.28	162.42	33.36	12.32	0.37	33.37	12.33
3	0.57	4.34	1.30	A	906.61	1359.91	82.26	3.63	0.91	82.27	3.63
4	0.42	2.86	0.72	A	759.79	1139.68	48.18	2.54	0.54	48.18	2.54

Existing Layout - 2020 Baseline, AM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2020 Baseline, AM Peak	2020 Baseline	AM Peak		Varies by Arm	07:45	09:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				3.44	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.778	38.126	183.625	59.134
	2	1.556	0.000	24.120	6.225
	3	198.409	141.609	7.003	231.866
	4	43.572	11.671	171.954	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.929	45.526	219.266	70.611
	2	1.858	0.000	28.802	7.433
	3	236.919	169.095	8.362	276.870
	4	52.029	13.936	205.330	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	1.138	55.757	268.546	86.481
	2	2.276	0.000	35.275	9.103
	3	290.166	207.099	10.241	339.096
	4	63.723	17.069	251.477	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	1.138	55.757	268.546	86.481
	2	2.276	0.000	35.275	9.103
	3	290.166	207.099	10.241	339.096
	4	63.723	17.069	251.477	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.929	45.526	219.266	70.611
	2	1.858	0.000	28.802	7.433
	3	236.919	169.095	8.362	276.870
	4	52.029	13.936	205.330	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.778	38.126	183.625	59.134
	2	1.556	0.000	24.120	6.225
	3	198.409	141.609	7.003	231.866
	4	43.572	11.671	171.954	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.34	4.47	0.51	A	343.31	514.96	34.13	3.98	0.38	34.13	3.98
2	0.07	6.11	0.08	A	38.88	58.32	5.45	5.61	0.06	5.45	5.61
3	0.43	3.25	0.76	A	705.58	1058.37	51.41	2.91	0.57	51.41	2.91
4	0.17	2.28	0.21	A	276.92	415.38	14.83	2.14	0.16	14.84	2.14

Existing Layout - 2020 Baseline, PM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2020 Baseline, PM Peak	2020 Baseline	PM Peak		Varies by Arm	16:45	18:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				5.19	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

	To				
From		1	2	3	4
	1	0.000	2.330	232.216	96.304
	2	6.990	0.000	64.461	20.193
	3	157.658	41.939	0.000	567.726
	4	96.304	9.320	537.437	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

	To				
		1	2	3	4
From	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	0.000	2.782	277.289	114.996
	2	8.346	0.000	76.973	24.112
	3	188.260	50.079	0.000	677.920
	4	114.996	11.129	641.752	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

	To				
		1	2	3	4
From	1	0.000	3.407	339.608	140.841
	2	10.222	0.000	94.272	29.531
	3	230.570	61.334	0.000	830.279
	4	140.841	13.630	785.982	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

	To				
		1	2	3	4
From	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	0.000	3.407	339.608	140.841
	2	10.222	0.000	94.272	29.531
	3	230.570	61.334	0.000	830.279
	4	140.841	13.630	785.982	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	2.782	277.289	114.996
	2	8.346	0.000	76.973	24.112
	3	188.260	50.079	0.000	677.920
	4	114.996	11.129	641.752	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	2.330	232.216	96.304
	2	6.990	0.000	64.461	20.193
	3	157.658	41.939	0.000	567.726
	4	96.304	9.320	537.437	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.48	6.99	0.93	A	403.26	604.89	56.33	5.59	0.63	56.33	5.59
2	0.42	19.73	0.72	C	111.70	167.55	37.39	13.39	0.42	37.40	13.39
3	0.58	4.55	1.41	A	935.25	1402.88	87.92	3.76	0.98	87.92	3.76
4	0.43	2.94	0.77	A	783.80	1175.69	50.84	2.59	0.56	50.85	2.59

Existing Layout - 2020 Baseline + Dev, AM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2020 Baseline + Dev, AM Peak	2020 Baseline + Dev	AM Peak		Varies by Arm	07:45	09:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.29	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.778	48.666	184.378	59.134
	2	39.199	0.000	116.721	6.225
	3	201.420	173.229	7.003	231.866
	4	43.572	11.671	171.954	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.17	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.929	58.111	220.165	70.611
	2	46.807	0.000	139.376	7.433
	3	240.515	206.852	8.362	276.870
	4	52.029	13.936	205.330	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.17	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.138	71.172	269.647	86.481
	2	57.327	0.000	170.701	9.103
	3	294.570	253.342	10.241	339.096
	4	63.723	17.069	251.477	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.17	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.138	71.172	269.647	86.481
	2	57.327	0.000	170.701	9.103
	3	294.570	253.342	10.241	339.096
	4	63.723	17.069	251.477	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.17	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.929	58.111	220.165	70.611
	2	46.807	0.000	139.376	7.433
	3	240.515	206.852	8.362	276.870
	4	52.029	13.936	205.330	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.17	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.778	48.666	184.378	59.134
	2	39.199	0.000	116.721	6.225
	3	201.420	173.229	7.003	231.866
	4	43.572	11.671	171.954	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.17	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.36	4.73	0.56	A	357.07	535.60	37.08	4.15	0.41	37.08	4.15
2	0.37	9.04	0.59	A	197.63	296.45	37.53	7.60	0.42	37.53	7.60
3	0.46	3.53	0.88	A	747.79	1121.68	58.11	3.11	0.65	58.11	3.11
4	0.17	2.41	0.22	A	276.92	415.38	15.49	2.24	0.17	15.49	2.24

Existing Layout - 2020 Baseline + Dev, PM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2020 Baseline + Dev, PM Peak	2020 Baseline + Dev	PM Peak		Varies by Arm	16:45	18:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				7.48	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	39.220	235.228	96.304
	2	21.294	0.000	98.340	20.193
	3	159.164	135.292	0.000	567.726
	4	96.304	9.320	537.437	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.11	0.63	0.26
	2	0.15	0.00	0.70	0.14
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	46.832	280.885	114.996
	2	25.427	0.000	117.427	24.112
	3	190.058	161.552	0.000	677.920
	4	114.996	11.129	641.752	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.11	0.63	0.26
	2	0.15	0.00	0.70	0.14
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	57.357	344.012	140.841
	2	31.142	0.000	143.818	29.531
	3	232.772	197.860	0.000	830.279
	4	140.841	13.630	785.982	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.11	0.63	0.26
	2	0.15	0.00	0.70	0.14
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	57.357	344.012	140.841
	2	31.142	0.000	143.818	29.531
	3	232.772	197.860	0.000	830.279
	4	140.841	13.630	785.982	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.11	0.63	0.26
	2	0.15	0.00	0.70	0.14
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	46.832	280.885	114.996
	2	25.427	0.000	117.427	24.112
	3	190.058	161.552	0.000	677.920
	4	114.996	11.129	641.752	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.11	0.63	0.26
	2	0.15	0.00	0.70	0.14
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	39.220	235.228	96.304
	2	21.294	0.000	98.340	20.193
	3	159.164	135.292	0.000	567.726
	4	96.304	9.320	537.437	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.11	0.63	0.26
	2	0.15	0.00	0.70	0.14
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.59	9.59	1.43	A	451.89	677.84	79.28	7.02	0.88	79.28	7.02
2	0.65	32.49	1.77	D	170.43	255.64	79.07	18.56	0.88	79.08	18.56
3	0.66	5.63	1.95	A	1050.87	1576.31	115.55	4.40	1.28	115.56	4.40
4	0.46	3.29	0.86	A	783.80	1175.69	55.50	2.83	0.62	55.50	2.83

Existing Layout - 2035 Baseline, AM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2035 Baseline, AM Peak	2035 Baseline	AM Peak		Varies by Arm	07:45	09:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				3.95	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default	Vehicle Mix	Vehicle Mix	Vehicle Mix	PCU Factor	Default	Estimate	Turning	Turning	Turning
Mix	Over Time	Over Turn	Over Entry	HV (PCU)	Proportions	entry/exit counts	Vary Over Time	Vary Over Turn	Vary Over Entry
	✓	✓	✓	HV Percentages	2.00		✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.908	44.496	214.309	69.015
	2	1.816	0.000	28.151	7.265
	3	231.563	165.272	8.173	270.611
	4	50.853	13.621	200.688	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

	To				
		1	2	3	4
From	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	1.084	53.133	255.906	82.411
	2	2.169	0.000	33.615	8.675
	3	276.509	197.352	9.759	323.136
	4	60.724	16.265	239.641	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	1.328	65.075	313.420	100.932
	2	2.656	0.000	41.170	10.624
	3	338.653	241.705	11.952	395.759
	4	74.371	19.921	293.499	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	1.328	65.075	313.420	100.932
	2	2.656	0.000	41.170	10.624
	3	338.653	241.705	11.952	395.759
	4	74.371	19.921	293.499	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.084	53.133	255.906	82.411
	2	2.169	0.000	33.615	8.675
	3	276.509	197.352	9.759	323.136
	4	60.724	16.265	239.641	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.908	44.496	214.309	69.015
	2	1.816	0.000	28.151	7.265
	3	231.563	165.272	8.173	270.611
	4	50.853	13.621	200.688	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.14	0.65	0.21
	2	0.05	0.00	0.76	0.20
	3	0.34	0.24	0.01	0.40
	4	0.19	0.05	0.76	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.010	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	1.0	32.6	4.3
	4	5.2	0.0	6.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.41	5.23	0.69	A	400.67	601.01	44.97	4.49	0.50	44.97	4.49
2	0.09	6.78	0.10	A	45.38	68.07	6.91	6.09	0.08	6.91	6.09
3	0.50	3.76	1.03	A	823.48	1235.22	67.21	3.26	0.75	67.21	3.26
4	0.20	2.47	0.27	A	323.19	484.79	18.45	2.28	0.20	18.45	2.28

Existing Layout - 2035 Baseline, PM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2035 Baseline, PM Peak	2035 Baseline	PM Peak		Varies by Arm	16:45	18:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				8.53	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	2.708	269.921	111.940
	2	8.125	0.000	74.928	23.471
	3	183.257	48.748	0.000	659.907
	4	111.940	10.833	624.700	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	3.234	322.312	133.668
	2	9.702	0.000	89.471	28.027
	3	218.827	58.210	0.000	787.993
	4	133.668	12.936	745.953	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	3.961	394.750	163.709
	2	11.882	0.000	109.579	34.326
	3	268.007	71.293	0.000	965.091
	4	163.709	15.843	913.602	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	3.961	394.750	163.709
	2	11.882	0.000	109.579	34.326
	3	268.007	71.293	0.000	965.091
	4	163.709	15.843	913.602	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	3.234	322.312	133.668
	2	9.702	0.000	89.471	28.027
	3	218.827	58.210	0.000	787.993
	4	133.668	12.936	745.953	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.000	2.708	269.921	111.940
	2	8.125	0.000	74.928	23.471
	3	183.257	48.748	0.000	659.907
	4	111.940	10.833	624.700	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.00	0.01	0.70	0.29
	2	0.08	0.00	0.70	0.22
	3	0.21	0.05	0.00	0.74
	4	0.15	0.01	0.84	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.61	10.19	1.57	B	468.73	703.10	85.80	7.32	0.95	85.81	7.32
2	0.72	58.16	2.35	F	129.84	194.76	87.90	27.08	0.98	87.91	27.08
3	0.69	6.11	2.19	A	1087.11	1630.67	126.74	4.66	1.41	126.75	4.66
4	0.51	3.49	1.06	A	911.06	1366.59	67.39	2.96	0.75	67.39	2.96

Existing Layout - 2035 Baseline + Dev, AM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2035 Baseline + Dev, AM Peak	2035 Baseline + Dev	AM Peak		Varies by Arm	07:45	09:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.93	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.908	55.036	215.062	69.015
	2	39.459	0.000	120.752	7.265
	3	234.575	196.892	8.173	270.611
	4	50.853	13.621	200.688	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.16	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.084	65.719	256.805	82.411
	2	47.118	0.000	144.189	8.675
	3	280.105	235.109	9.759	323.136
	4	60.724	16.265	239.641	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.16	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.328	80.489	314.521	100.932
	2	57.707	0.000	176.595	10.624
	3	343.057	287.948	11.952	395.759
	4	74.371	19.921	293.499	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.16	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.328	80.489	314.521	100.932
	2	57.707	0.000	176.595	10.624
	3	343.057	287.948	11.952	395.759
	4	74.371	19.921	293.499	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.16	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.084	65.719	256.805	82.411
	2	47.118	0.000	144.189	8.675
	3	280.105	235.109	9.759	323.136
	4	60.724	16.265	239.641	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.16	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.908	55.036	215.062	69.015
	2	39.459	0.000	120.752	7.265
	3	234.575	196.892	8.173	270.611
	4	50.853	13.621	200.688	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.16	0.63	0.20
	2	0.24	0.00	0.72	0.04
	3	0.33	0.28	0.01	0.38
	4	0.19	0.05	0.76	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.008	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.8	32.6	4.3
	4	5.2	0.0	6.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.43	5.58	0.77	A	414.44	621.66	48.90	4.72	0.54	48.90	4.72
2	0.42	10.60	0.71	B	204.13	306.19	43.67	8.56	0.49	43.67	8.56
3	0.54	4.14	1.19	A	865.69	1298.54	76.06	3.51	0.85	76.07	3.51
4	0.21	2.62	0.28	A	323.19	484.79	19.33	2.39	0.21	19.33	2.39

Existing Layout - 2035 Baseline + Dev, PM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	R
2035 Baseline + Dev, PM Peak	2035 Baseline + Dev	PM Peak		Varies by Arm	16:45	18:15	90	15			✓	✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				21.86	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	39.598	272.932	111.940
	2	22.429	0.000	108.806	23.471
	3	184.763	142.102	0.000	659.907
	4	111.940	10.833	624.700	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.09	0.64	0.26
	2	0.14	0.00	0.70	0.15
	3	0.19	0.14	0.00	0.67
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	47.284	325.908	133.668
	2	26.782	0.000	129.925	28.027
	3	220.625	169.684	0.000	787.993
	4	133.668	12.936	745.953	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.09	0.64	0.26
	2	0.14	0.00	0.70	0.15
	3	0.19	0.14	0.00	0.67
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	57.911	399.154	163.709
	2	32.801	0.000	159.125	34.326
	3	270.209	207.819	0.000	965.091
	4	163.709	15.843	913.602	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.09	0.64	0.26
	2	0.14	0.00	0.70	0.15
	3	0.19	0.14	0.00	0.67
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	57.911	399.154	163.709
	2	32.801	0.000	159.125	34.326
	3	270.209	207.819	0.000	965.091
	4	163.709	15.843	913.602	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.09	0.64	0.26
	2	0.14	0.00	0.70	0.15
	3	0.19	0.14	0.00	0.67
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	47.284	325.908	133.668
	2	26.782	0.000	129.925	28.027
	3	220.625	169.684	0.000	787.993
	4	133.668	12.936	745.953	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.09	0.64	0.26
	2	0.14	0.00	0.70	0.15
	3	0.19	0.14	0.00	0.67
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	39.598	272.932	111.940
	2	22.429	0.000	108.806	23.471
	3	184.763	142.102	0.000	659.907
	4	111.940	10.833	624.700	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.09	0.64	0.26
	2	0.14	0.00	0.70	0.15
	3	0.19	0.14	0.00	0.67
	4	0.15	0.01	0.84	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.74	16.75	2.80	C	517.37	776.05	132.66	10.26	1.47	132.67	10.26
2	1.06	209.69	13.61	F	188.56	282.85	334.01	70.85	3.71	334.03	70.86
3	0.76	8.14	3.21	A	1202.73	1804.10	172.05	5.72	1.91	172.06	5.72
4	0.55	3.98	1.20	A	911.06	1366.59	74.60	3.28	0.83	74.60	3.28

Existing Layout - 2035 Baseline + Dev (Sensitivity), AM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically
2035 Baseline + Dev (Sensitivity), AM Peak	2035 Baseline + Dev (Sensitivity)	AM Peak		Varies by Arm	07:45	09:15	90	15			✓	✓

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				5.29	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.908	65.576	215.062	69.015
	2	41.717	0.000	126.022	7.265
	3	234.575	244.322	8.173	270.611
	4	50.853	13.621	200.688	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.19	0.61	0.20
	2	0.24	0.00	0.72	0.04
	3	0.31	0.32	0.01	0.36
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.084	78.305	256.805	82.411
	2	49.815	0.000	150.482	8.675
	3	280.105	291.744	9.759	323.136
	4	60.724	16.265	239.641	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.19	0.61	0.20
	2	0.24	0.00	0.72	0.04
	3	0.31	0.32	0.01	0.36
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.328	95.903	314.521	100.932
	2	61.010	0.000	184.302	10.624
	3	343.057	357.312	11.952	395.759
	4	74.371	19.921	293.499	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.19	0.61	0.20
	2	0.24	0.00	0.72	0.04
	3	0.31	0.32	0.01	0.36
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.328	95.903	314.521	100.932
	2	61.010	0.000	184.302	10.624
	3	343.057	357.312	11.952	395.759
	4	74.371	19.921	293.499	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.19	0.61	0.20
	2	0.24	0.00	0.72	0.04
	3	0.31	0.32	0.01	0.36
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.084	78.305	256.805	82.411
	2	49.815	0.000	150.482	8.675
	3	280.105	291.744	9.759	323.136
	4	60.724	16.265	239.641	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.19	0.61	0.20
	2	0.24	0.00	0.72	0.04
	3	0.31	0.32	0.01	0.36
	4	0.19	0.05	0.76	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.908	65.576	215.062	69.015
	2	41.717	0.000	126.022	7.265
	3	234.575	244.322	8.173	270.611
	4	50.853	13.621	200.688	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.19	0.61	0.20
	2	0.24	0.00	0.72	0.04
	3	0.31	0.32	0.01	0.36
	4	0.19	0.05	0.76	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.007	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.7	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.007	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.7	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.007	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.7	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.007	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.7	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.007	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.7	32.6	4.3
	4	5.2	0.0	6.7	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.008	1.000
	2	1.000	1.000	1.000	1.000
	3	1.007	1.007	1.326	1.043
	4	1.052	1.000	1.067	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.8	0.0
	2	0.0	0.0	0.0	0.0
	3	0.7	0.7	32.6	4.3
	4	5.2	0.0	6.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.46	6.11	0.86	A	427.28	640.93	54.02	5.06	0.60	54.02	5.06
2	0.44	10.95	0.77	B	213.30	319.96	46.74	8.76	0.52	46.74	8.77
3	0.58	4.50	1.38	A	923.50	1385.25	86.34	3.74	0.96	86.35	3.74
4	0.22	2.73	0.29	A	323.19	484.79	19.99	2.47	0.22	19.99	2.47

Existing Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set (s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing Layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically
2035 Baseline + Dev (Sensitivity), PM Peak	2035 Baseline + Dev (Sensitivity)	PM Peak		Varies by Arm	16:45	18:15	90	15			✓	✓

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				32.85	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Plas Coch Rd (N)	
2	2	Entrance B	
3	3	Plas Coch Rd (S)	
4	4	Retail Park	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.80	5.60	25.70	13.60	36.30	39.00	
2	2.70	3.60	2.70	13.10	36.30	25.50	
3	3.40	8.10	26.80	26.80	36.30	17.00	
4	7.30	7.30	0.00	95.00	36.30	13.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.595	1510.322
2		(calculated)	(calculated)	0.493	940.417
3		(calculated)	(calculated)	0.739	2054.108
4		(calculated)	(calculated)	0.825	2423.933

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓	✓	✓	HV Percentages	2.00			✓	✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	DIRECT		N/A	100.000
2	DIRECT		N/A	100.000
3	DIRECT		N/A	100.000
4	DIRECT		N/A	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	44.115	272.932	111.940
	2	28.452	0.000	123.110	23.471
	3	184.763	161.676	0.000	659.907
	4	111.940	10.833	624.700	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.10	0.64	0.26
	2	0.16	0.00	0.70	0.13
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	52.678	325.908	133.668
	2	33.974	0.000	147.006	28.027
	3	220.625	193.057	0.000	787.993
	4	133.668	12.936	745.953	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.10	0.64	0.26
	2	0.16	0.00	0.70	0.13
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	64.517	399.154	163.709
	2	41.610	0.000	180.045	34.326
	3	270.209	236.446	0.000	965.091
	4	163.709	15.843	913.602	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.10	0.64	0.26
	2	0.16	0.00	0.70	0.13
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	64.517	399.154	163.709
	2	41.610	0.000	180.045	34.326
	3	270.209	236.446	0.000	965.091
	4	163.709	15.843	913.602	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.10	0.64	0.26
	2	0.16	0.00	0.70	0.13
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	52.678	325.908	133.668
	2	33.974	0.000	147.006	28.027
	3	220.625	193.057	0.000	787.993
	4	133.668	12.936	745.953	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.10	0.64	0.26
	2	0.16	0.00	0.70	0.13
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	44.115	272.932	111.940
	2	28.452	0.000	123.110	23.471
	3	184.763	161.676	0.000	659.907
	4	111.940	10.833	624.700	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.10	0.64	0.26
	2	0.16	0.00	0.70	0.13
	3	0.18	0.16	0.00	0.66
	4	0.15	0.01	0.84	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.013
	4	1.000	1.000	1.011	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	1.3
	4	0.0	0.0	1.1	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.77	18.78	3.16	C	522.87	784.31	144.44	11.05	1.60	144.45	11.05
2	1.20	328.91	25.30	F	213.34	320.01	624.32	117.06	6.94	624.35	117.06
3	0.78	8.72	3.49	A	1226.59	1839.88	184.80	6.03	2.05	184.82	6.03
4	0.55	4.11	1.24	A	911.06	1366.59	76.49	3.36	0.85	76.49	3.36

Appendix E

Entrance C (Crispin Lane) PICADY Results

Junctions 9						
PICADY 9 - Priority Intersection Module						
Version: 9.5.0.6896						
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Filename: CrispinLnAccess_261018.j9

Path: Z:\2600-2699\2627 Wrexham Glyndwr University\Data\Junction Assessment

Report generation date: 26/10/2018 11:13:28

- »Existing Layout - 2018 Baseline, AM Peak
- »Existing Layout - 2018 Baseline, PM Peak
- »Existing Layout - 2020 Baseline, AM Peak
- »Existing Layout - 2020 Baseline, PM Peak
- »Existing Layout - 2020 Baseline + Dev, AM Peak
- »Existing Layout - 2020 Baseline + Dev, PM Peak
- »Existing Layout - 2035 Baseline, AM Peak
- »Existing Layout - 2035 Baseline, PM Peak
- »Existing Layout - 2035 Baseline + Dev, AM Peak
- »Existing Layout - 2035 Baseline + Dev, PM Peak
- »Existing Layout - 2035 Baseline + Dev (Sensitivity), AM Peak
- »Existing Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Summary of junction performance

	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2018 Baseline						
Stream B-AC	0.1	7.95	0.05	0.1	8.56	0.09
Stream C-AB	0.1	6.11	0.06	0.0	6.11	0.04
Existing Layout - 2020 Baseline						
Stream B-AC	0.1	7.97	0.06	0.1	8.60	0.10
Stream C-AB	0.1	6.11	0.06	0.1	6.11	0.04
Existing Layout - 2020 Baseline + Dev						
Stream B-AC	0.1	7.97	0.06	0.1	8.60	0.10
Stream C-AB	0.1	6.11	0.06	0.1	6.11	0.04
Existing Layout - 2035 Baseline						
Stream B-AC	0.1	8.11	0.07	0.1	8.84	0.11
Stream C-AB	0.1	6.12	0.07	0.1	6.12	0.04
Existing Layout - 2035 Baseline + Dev						
Stream B-AC	0.1	8.11	0.07	0.1	8.84	0.11
Stream C-AB	0.1	6.12	0.07	0.1	6.12	0.04
Existing Layout - 2035 Baseline + Dev (Sensitivity)						
Stream B-AC	0.1	8.11	0.07	0.1	8.84	0.11
Stream C-AB	0.1	6.12	0.07	0.1	6.12	0.04

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

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

File summary

File Description

Title	Wrexham Glyndwr University
Location	Plas Coch Campus
Site number	
Date	26/10/2018
Version	3
Status	
Identifier	
Client	Wrexham Glyndwr University
Jobnumber	2627
Enumerator	Mark Lever
Description	To accompany Highways Addendum, based on revised trip routing

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D1	2018 Baseline	AM Peak	ONE HOUR	07:45	09:15	15		✓		
D2	2018 Baseline	PM Peak	ONE HOUR	16:45	18:15	15		✓		
D3	2020 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.0335
D4	2020 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0316
D5	2020 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3+D11
D6	2020 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4+D12
D7	2035 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.2062
D8	2035 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.1991
D9	2035 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D11
D10	2035 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D12
D11	Dev	AM Peak	ONE HOUR	07:45	09:15	15				
D12	Dev	PM Peak	ONE HOUR	16:45	18:15	15				
D13	2035 Baseline + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D15
D14	2035 Baseline + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D16
D15	Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15				
D16	Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15				

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000

Existing Layout - 2018 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.50			130.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.20	15	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	452	0.081	0.204	0.128	0.291
1	B-C	584	0.088	0.222	-	-
1	C-B	649	0.246	0.246	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	72	100.000
B		ONE HOUR	✓	26	100.000
C		ONE HOUR	✓	109	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	28	44
	B	6	0	20
	C	79	30	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.05	7.95	0.1	A	24	36
C-AB	0.06	6.11	0.1	A	31	46
C-A					69	104
A-B					26	39
A-C					40	61

Existing Layout - 2018 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	82	100.000
B		ONE HOUR	✓	44	100.000
C		ONE HOUR	✓	84	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	21	61
	B	14	0	30
	C	64	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	8.56	0.1	A	40	61
C-AB	0.04	6.11	0.0	A	20	30
C-A					57	85
A-B					19	29
A-C					56	84

Existing Layout - 2020 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D3	2020 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.0335

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	74	100.000
B		ONE HOUR	✓	27	100.000
C		ONE HOUR	✓	113	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	29	45
	B	6	0	21
	C	82	31	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	7.97	0.1	A	25	37
C-AB	0.06	6.11	0.1	A	32	48
C-A					71	107
A-B					27	40
A-C					42	63

Existing Layout - 2020 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D4	2020 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0316

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	85	100.000
B		ONE HOUR	✓	45	100.000
C		ONE HOUR	✓	87	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	22	63
	B	14	0	31
	C	66	21	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.10	8.60	0.1	A	42	62
C-AB	0.04	6.11	0.1	A	21	31
C-A					59	88
A-B					20	30
A-C					58	87

Existing Layout - 2020 Baseline + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3+D11

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	74	100.000
B		ONE HOUR	✓	27	100.000
C		ONE HOUR	✓	113	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	29	45
	B	6	0	21
	C	82	31	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	7.97	0.1	A	25	37
C-AB	0.06	6.11	0.1	A	32	48
C-A					71	107
A-B					27	40
A-C					42	63

Existing Layout - 2020 Baseline + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D6	2020 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4+D12

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	85	100.000
B		ONE HOUR	✓	45	100.000
C		ONE HOUR	✓	87	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	22	63
	B	14	0	31
	C	66	21	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.10	8.60	0.1	A	42	62
C-AB	0.04	6.11	0.1	A	21	31
C-A					59	88
A-B					20	30
A-C					58	87

Existing Layout - 2035 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D7	2035 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.2062

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	87	100.000
B		ONE HOUR	✓	31	100.000
C		ONE HOUR	✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	34	53
	B	7	0	24
	C	95	36	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.11	0.1	A	29	43
C-AB	0.07	6.12	0.1	A	38	57
C-A					82	124
A-B					31	46
A-C					49	73

Existing Layout - 2035 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D8	2035 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.1991

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	98	100.000
B		ONE HOUR	✓	53	100.000
C		ONE HOUR	✓	101	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	25	73
	B	17	0	36
	C	77	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	8.84	0.1	A	48	73
C-AB	0.04	6.12	0.1	A	25	37
C-A					68	102
A-B					23	35
A-C					67	101

Existing Layout - 2035 Baseline + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D9	2035 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D11

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	87	100.000
B		ONE HOUR	✓	31	100.000
C		ONE HOUR	✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	34	53
	B	7	0	24
	C	95	36	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.11	0.1	A	29	43
C-AB	0.07	6.12	0.1	A	38	57
C-A					82	124
A-B					31	46
A-C					49	73

Existing Layout - 2035 Baseline + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D10	2035 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D12

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	98	100.000
B		ONE HOUR	✓	53	100.000
C		ONE HOUR	✓	101	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	25	73
	B	17	0	36
	C	77	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	8.84	0.1	A	48	73
C-AB	0.04	6.12	0.1	A	25	37
C-A					68	102
A-B					23	35
A-C					67	101

Existing Layout - 2035 Baseline + Dev (Sensitivity), AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D13	2035 Baseline + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	87	100.000
B		ONE HOUR	✓	31	100.000
C		ONE HOUR	✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	34	53
	B	7	0	24
	C	95	36	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A	B	C
	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.11	0.1	A	29	43
C-AB	0.07	6.12	0.1	A	38	57
C-A					82	124
A-B					31	46
A-C					49	73

Existing Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D14	2035 Baseline + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	98	100.000
B		ONE HOUR	✓	53	100.000
C		ONE HOUR	✓	101	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	25	73
	B	17	0	36
	C	77	24	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A	B	C	
	A	0	10	10
	B	10	0	10
	C	10	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	8.84	0.1	A	48	73
C-AB	0.04	6.12	0.1	A	25	37
C-A					68	102
A-B					23	35
A-C					67	101

Appendix F

Mold Road / Crispin Lane PICADY Results

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
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Filename: MoldRdCrispinLane_261018.j9

Path: Z:\2600-2699\2627 Wrexham Glyndwr University\Data\Junction Assessment

Report generation date: 26/10/2018 13:41:12

-
- »Existing - 2018 Baseline, AM Peak
 - »Existing - 2018 Baseline, PM Peak
 - »Existing - 2020 Baseline, AM Peak
 - »Existing - 2020 Baseline, PM Peak
 - »Existing - 2035 Baseline, AM Peak
 - »Existing - 2035 Baseline, PM Peak
 - »Proposed Layout - 2020 Baseline + Dev, AM Peak
 - »Proposed Layout - 2020 Baseline + Dev, PM Peak
 - »Proposed Layout - 2035 Baseline + Dev, AM Peak
 - »Proposed Layout - 2035 Baseline + Dev, PM Peak
 - »Proposed Layout - 2035 Baseline + Dev (Sensitivity), AM Peak
 - »Proposed Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Summary of junction performance

	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing - 2018 Baseline						
Stream B-AC	0.3	12.38	0.23	0.3	14.01	0.25
Stream C-AB	0.4	6.17	0.16	1.8	4.63	0.38
Existing - 2020 Baseline						
Stream B-AC	0.3	12.88	0.25	0.4	14.89	0.27
Stream C-AB	0.5	6.20	0.17	2.2	4.86	0.41
Existing - 2035 Baseline						
Stream B-AC	0.5	16.35	0.33	0.7	24.62	0.41
Stream C-AB	0.8	6.48	0.23	8.8	11.40	0.76

	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Proposed Layout - 2020 Baseline + Dev						
Stream B-AC	0.4	13.52	0.26	0.4	16.24	0.29
Stream C-AB	0.5	6.25	0.17	2.4	5.02	0.44
Proposed Layout - 2035 Baseline + Dev						
Stream B-AC	0.5	17.62	0.34	0.9	32.05	0.48
Stream C-AB	0.8	6.57	0.24	12.7	16.63	0.83
Proposed Layout - 2035 Baseline + Dev (Sensitivity)						
Stream B-AC	0.5	15.30	0.31	0.4	15.52	0.31
Stream C-AB	2.0	9.79	0.47	46.3	97.14	1.01

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

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

File summary

File Description

Title	Wrexham Glyndwr University
Location	Plas Coch Campus
Site number	
Date	26/10/2018
Version	4
Status	
Identifier	
Client	Wrexham Glyndwr University
Jobnumber	2627
Enumerator	Mark Lever
Description	To accompany Highways Addendum, based on revised junction design and trip routing

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D1	2018 Baseline	AM Peak	ONE HOUR	07:45	09:15	15		✓		
D2	2018 Baseline	PM Peak	ONE HOUR	16:45	18:15	15		✓		
D3	2020 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.0335
D4	2020 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0316
D5	2020 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3+D11
D6	2020 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4+D12
D7	2035 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.2062
D8	2035 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.1991
D9	2035 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D11
D10	2035 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D12
D11	Dev	AM Peak	ONE HOUR	07:45	09:15	15				
D12	Dev	PM Peak	ONE HOUR	16:45	18:15	15				
D13	2035 Baseline + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D15
D14	2035 Baseline + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D16
D15	Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15				
D16	Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15				

Existing - 2018 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4,D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.59			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	16	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516	0.088	0.221	0.139	0.316
1	B-C	667	0.095	0.241	-	-
1	C-B	643	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	889	100.000
B		ONE HOUR	✓	85	100.000
C		ONE HOUR	✓	434	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	27	862
	B	8	0	77
	C	389	45	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	7
	B	0	0	7
	C	10	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.23	12.38	0.3	B	78	117
C-AB	0.16	6.17	0.4	A	85	128
C-A					313	470
A-B					25	37
A-C					791	1186

Existing - 2018 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4,D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.59			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	16	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516	0.088	0.221	0.139	0.316
1	B-C	667	0.095	0.241	-	-
1	C-B	643	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	716	100.000
B		ONE HOUR	✓	78	100.000
C		ONE HOUR	✓	1069	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	23	693
	B	17	0	61
	C	1010	59	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.25	14.01	0.3	B	72	107
C-AB	0.38	4.63	1.8	A	298	447
C-A					683	1024
A-B					21	32
A-C					636	954

Existing - 2020 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4,D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.59			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	16	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516	0.088	0.221	0.139	0.316
1	B-C	667	0.095	0.241	-	-
1	C-B	643	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D3	2020 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.0335

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	919	100.000
B		ONE HOUR	✓	88	100.000
C		ONE HOUR	✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	28	891
	B	8	0	80
	C	402	47	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	7
	B	0	0	6
	C	10	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.25	12.88	0.3	B	81	121
C-AB	0.17	6.20	0.5	A	91	136
C-A					321	482
A-B					26	38
A-C					817	1226

Existing - 2020 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4,D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.53	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.59			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	16	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516	0.088	0.221	0.139	0.316
1	B-C	667	0.095	0.241	-	-
1	C-B	643	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D4	2020 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.0316

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	739	100.000
B		ONE HOUR	✓	80	100.000
C		ONE HOUR	✓	1103	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	24	715
	B	18	0	63
	C	1042	61	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.27	14.89	0.4	B	74	111
C-AB	0.41	4.86	2.2	A	330	496
C-A					682	1022
A-B					22	33
A-C					656	984

Existing - 2035 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4,D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.59			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	16	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516	0.088	0.221	0.139	0.316
1	B-C	667	0.095	0.241	-	-
1	C-B	643	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D7	2035 Baseline	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1*1.2062

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1072	100.000
B		ONE HOUR	✓	103	100.000
C		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	33	1040
	B	10	0	93
	C	469	54	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	7
	B	0	0	6
	C	10	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.33	16.35	0.5	C	94	141
C-AB	0.23	6.48	0.8	A	124	187
C-A					356	534
A-B					30	45
A-C					954	1431

Existing - 2035 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	D1,D2,D3,D4,D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.59			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	16	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516	0.088	0.221	0.139	0.316
1	B-C	667	0.095	0.241	-	-
1	C-B	643	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D8	2035 Baseline	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2*1.1991

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	859	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	1282	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	28	831
	B	20	0	73
	C	1211	71	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.41	24.62	0.7	C	86	129
C-AB	0.76	11.40	8.8	B	598	897
C-A					578	868
A-B					25	38
A-C					763	1144

Proposed Layout - 2020 Baseline + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed Layout	ITP DWG-2627-102 Rev B	✓	✓	D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.89			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	24	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.091	0.230	0.145	0.328
1	B-C	668	0.098	0.249	-	-
1	C-B	643	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3+D11

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	937	100.000
B		ONE HOUR	✓	88	100.000
C		ONE HOUR	✓	461	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	28	909
	B	8	0	80
	C	414	47	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	7
	B	0	0	6
	C	10	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.26	13.52	0.4	B	81	121
C-AB	0.17	6.25	0.5	A	94	141
C-A					329	493
A-B					26	38
A-C					834	1251

Proposed Layout - 2020 Baseline + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed Layout	ITP DWG-2627-102 Rev B	✓	✓	D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.89			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	24	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.091	0.230	0.145	0.328
1	B-C	668	0.098	0.249	-	-
1	C-B	643	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D6	2020 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4+D12

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	750	100.000
B		ONE HOUR	✓	80	100.000
C		ONE HOUR	✓	1122	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	24	726
	B	18	0	63
	C	1061	61	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.29	16.24	0.4	C	74	111
C-AB	0.44	5.02	2.4	A	348	523
C-A					681	1021
A-B					22	33
A-C					666	999

Proposed Layout - 2035 Baseline + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed Layout	ITP DWG-2627-102 Rev B	✓	✓	D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.89			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	24	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.091	0.230	0.145	0.328
1	B-C	668	0.098	0.249	-	-
1	C-B	643	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D9	2035 Baseline + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D11

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1090	100.000
B		ONE HOUR	✓	103	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	33	1058
	B	10	0	93
	C	481	54	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	7
	B	0	0	6
	C	10	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.34	17.62	0.5	C	94	141
C-AB	0.24	6.57	0.8	A	130	194
C-A					362	543
A-B					30	45
A-C					971	1456

Proposed Layout - 2035 Baseline + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed Layout	ITP DWG-2627-102 Rev B	✓	✓	D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.89			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	24	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.091	0.230	0.145	0.328
1	B-C	668	0.098	0.249	-	-
1	C-B	643	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D10	2035 Baseline + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D12

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	870	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	1301	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	28	842
	B	20	0	73
	C	1230	71	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.48	32.05	0.9	D	86	129
C-AB	0.83	16.63	12.7	C	647	970
C-A					547	820
A-B					25	38
A-C					773	1159

Proposed Layout - 2035 Baseline + Dev (Sensitivity), AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed Layout	ITP DWG-2627-102 Rev B	✓	✓	D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.89			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	24	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.091	0.230	0.145	0.328
1	B-C	668	0.098	0.249	-	-
1	C-B	643	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D13	2035 Baseline + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D7+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1098	100.000
B		ONE HOUR	✓	103	100.000
C		ONE HOUR	✓	568	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	33	1066
	B	2	0	101
	C	460	108	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	7
	B	0	0	6
	C	10	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.31	15.30	0.5	C	94	141
C-AB	0.47	9.79	2.0	A	250	376
C-A					271	407
A-B					30	45
A-C					978	1467

Proposed Layout - 2035 Baseline + Dev (Sensitivity), PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Dev, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Proposed Layout	ITP DWG-2627-102 Rev B	✓	✓	D5,D6,D9,D10,D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		40.22	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mold Rd (W)		Major
B	Crispin Lane		Minor
C	Mold Rd (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.89			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.50	24	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.091	0.230	0.145	0.328
1	B-C	668	0.098	0.249	-	-
1	C-B	643	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D14	2035 Baseline + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	892	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	1314	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	28	864
	B	3	0	90
	C	1217	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	1
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.31	15.52	0.4	C	86	129
C-AB	1.01	97.14	46.3	F	860	1290
C-A					346	519
A-B					25	38
A-C					793	1189

Appendix G

Crispin Lane / Stansty Road PICADY Results

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
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Filename: CrispinLnStanstyRd_261018.j9

Path: Z:\2600-2699\2627 Wrexham Glyndwr University\Data\Junction Assessment

Report generation date: 26/10/2018 11:21:35

-
- »Existing Layout - 2018 Baseline, AM Peak
 - »Existing Layout - 2018 Baseline, PM Peak
 - »Existing Layout - 2018 Baseline + Uni, AM Peak
 - »Existing Layout - 2018 Baseline + Uni, PM Peak
 - »Existing Layout - 2020 Baseline + Uni, AM Peak
 - »Existing Layout - 2020 Baseline + Uni, PM Peak
 - »Existing Layout - 2020 Baseline + Uni + Dev, AM Peak
 - »Existing Layout - 2020 Baseline + Uni + Dev, PM Peak
 - »Existing Layout - 2035 Baseline + Uni, AM Peak
 - »Existing Layout - 2035 Baseline + Uni, PM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev, AM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev, PM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), AM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), PM Peak

Summary of junction performance

	AM Peak				PM Peak			
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC
Existing Layout - 2018 Baseline								
Stream B-AC	0.1	0.5	8.91	0.11	0.2	0.5	10.25	0.15
Stream C-AB	0.3	1.4	5.14	0.13	0.1	0.5	4.98	0.06
Existing Layout - 2018 Baseline + Uni								
Stream B-AC	0.1	0.5	8.91	0.11	0.2	1.2	11.25	0.20
Stream C-AB	0.3	1.4	5.14	0.13	0.1	0.5	4.98	0.06
Existing Layout - 2020 Baseline + Uni								
Stream B-AC	0.1	0.5	9.06	0.11	0.3	1.2	11.56	0.21
Stream C-AB	0.3	1.4	5.12	0.13	0.1	0.5	4.96	0.06
Existing Layout - 2020 Baseline + Uni + Dev								
Stream B-AC	0.1	0.5	9.32	0.11	0.3	1.3	12.00	0.21
Stream C-AB	0.4	1.1	4.96	0.14	0.1	0.6	4.80	0.06
Existing Layout - 2035 Baseline + Uni								
Stream B-AC	0.2	0.5	9.92	0.14	0.4	1.2	13.48	0.26
Stream C-AB	0.4	1.5	5.03	0.17	0.1	0.9	4.84	0.08
Existing Layout - 2035 Baseline + Uni + Dev								
Stream B-AC	0.2	0.5	10.24	0.14	0.4	1.3	14.11	0.27
Stream C-AB	0.5	1.4	4.89	0.18	0.1	1.0	4.69	0.08
Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity)								
Stream B-AC	0.2	0.5	10.37	0.14	0.4	1.4	14.59	0.28
Stream C-AB	0.5	1.4	4.89	0.18	0.1	1.0	4.80	0.08

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

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

File summary

File Description

Title	Wrexham Glyndwr University
Location	Plas Coch
Site number	
Date	26/10/2018
Version	2
Status	
Identifier	
Client	Wrexham Glyndwr University
Jobnumber	2627
Enumerator	Mark Lever
Description	To accompany Highways Addendum, based on revised trip routing.

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D1	2018 Baseline	AM Peak	Surveys conducted 04/07/18	ONE HOUR	07:45	09:15	15		✓		
D2	2018 Baseline	PM Peak	Surveys conducted 04/07/18	ONE HOUR	16:45	18:15	15		✓		
D3	2018 Baseline + Uni	AM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1+D13
D4	2018 Baseline + Uni	PM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2+D14
D5	2020 Baseline + Uni	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.0335
D6	2020 Baseline + Uni	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.0316
D7	2020 Baseline + Uni + Dev	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D5+D15
D8	2020 Baseline + Uni + Dev	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D6+D16
D9	2035 Baseline + Uni	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.2062
D10	2035 Baseline + Uni	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.1991
D11	2035 Baseline + Uni + Dev	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D15
D12	2035 Baseline + Uni + Dev	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D16
D13	Uni	AM Peak		ONE HOUR	07:45	09:15	15				
D14	Uni	PM Peak		ONE HOUR	16:45	18:15	15				
D15	Dev	AM Peak		ONE HOUR	07:45	09:15	15				
D16	Dev	PM Peak		ONE HOUR	16:45	18:15	15				
D17	2035 Baseline + Uni + Dev (Sensitivity)	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D19
D18	2035 Baseline + Uni + Dev (Sensitivity)	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D20
D19	Dev (Sensitivity)	AM Peak		ONE HOUR	07:45	09:15	15				
D20	Dev (Sensitivity)	PM Peak		ONE HOUR	16:45	18:15	15				

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000

Existing Layout - 2018 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	B5101 Stansty Road (E)		Major
B	Crispin Lane		Minor
C	B5101 Stansty Road (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - B5101 Stansty Road (W)	7.30			70.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Crispin Lane	One lane	3.60	30	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	532	0.091	0.231	0.145	0.330
1	B-C	681	0.099	0.249	-	-
1	C-B	615	0.225	0.225	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Baseline	AM Peak	Surveys conducted 04/07/18	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	340	100.000
B - Crispin Lane		ONE HOUR	✓	44	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	From			
	A - B5101 Stansty Road (E)	0	45	295
	B - Crispin Lane	23	0	21
	C - B5101 Stansty Road (W)	404	46	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	From			
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	8.91	0.1	0.5	A	40	61
C-AB	0.13	5.14	0.3	1.4	A	80	121
C-A						332	499
A-B						41	62
A-C						271	406

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	499	0.066	33	0.0	0.1	7.721	A
C-AB	57	14	767	0.075	57	0.0	0.1	5.129	A
C-A	281	70			281				
A-B	34	8			34				
A-C	222	56			222				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	480	0.082	39	0.1	0.1	8.180	A
C-AB	76	19	799	0.095	76	0.1	0.2	5.037	A
C-A	328	82			328				
A-B	40	10			40				
A-C	265	66			265				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	452	0.107	48	0.1	0.1	8.905	A
C-AB	108	27	844	0.127	107	0.2	0.3	4.938	A
C-A	388	97			388				
A-B	50	12			50				
A-C	325	81			325				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	452	0.107	48	0.1	0.1	8.912	A
C-AB	108	27	845	0.128	108	0.3	0.3	4.938	A
C-A	388	97			388				
A-B	50	12			50				
A-C	325	81			325				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	479	0.083	40	0.1	0.1	8.188	A
C-AB	76	19	799	0.095	77	0.3	0.2	5.037	A
C-A	328	82			328				
A-B	40	10			40				
A-C	265	66			265				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	499	0.066	33	0.1	0.1	7.735	A
C-AB	58	14	767	0.075	58	0.2	0.1	5.138	A
C-A	281	70			281				
A-B	34	8			34				
A-C	222	56			222				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.19	0.00	0.00	0.19	0.19			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.29	0.03	0.28	0.50	1.41			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.30	0.00	0.00	0.30	0.30			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

Existing Layout - 2018 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		0.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Baseline	PM Peak	Surveys conducted 04/07/18	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	480	100.000
B - Crispin Lane		ONE HOUR	✓	58	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	422	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	37	443
	B - Crispin Lane	32	0	26
	C - B5101 Stansty Road (W)	403	19	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.15	10.25	0.2	0.5	B	53	80
C-AB	0.06	4.98	0.1	0.5	A	34	51
C-A						353	530
A-B						34	51
A-C						407	610

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	472	0.093	43	0.0	0.1	8.392	A
C-AB	24	6	747	0.032	24	0.0	0.0	4.980	A
C-A	294	73			294				
A-B	28	7			28				
A-C	334	83			334				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	13	448	0.116	52	0.1	0.1	9.083	A
C-AB	32	8	776	0.041	32	0.0	0.1	4.840	A
C-A	347	87			347				
A-B	33	8			33				
A-C	398	100			398				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	415	0.154	64	0.1	0.2	10.238	B
C-AB	46	11	817	0.056	46	0.1	0.1	4.666	A
C-A	419	105			419				
A-B	41	10			41				
A-C	488	122			488				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	64	16	415	0.154	64	0.2	0.2	10.249	B
C-AB	46	11	817	0.056	46	0.1	0.1	4.667	A
C-A	419	105			419				
A-B	41	10			41				
A-C	488	122			488				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	13	448	0.116	52	0.2	0.1	9.099	A
C-AB	32	8	776	0.042	32	0.1	0.1	4.844	A
C-A	347	87			347				
A-B	33	8			33				
A-C	398	100			398				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44	11	472	0.093	44	0.1	0.1	8.414	A
C-AB	24	6	747	0.032	24	0.1	0.0	4.984	A
C-A	294	73			294				
A-B	28	7			28				
A-C	334	83			334				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.09	0.03	0.26	0.47	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

Existing Layout - 2018 Baseline + Uni, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D3	2018 Baseline + Uni	AM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1+D13

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	340	100.000
B - Crispin Lane		ONE HOUR	✓	44	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	45	295
	B - Crispin Lane	23	0	21
	C - B5101 Stansty Road (W)	404	46	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	8.91	0.1	0.5	A	40	61
C-AB	0.13	5.14	0.3	1.4	A	80	121
C-A						332	499
A-B						41	62
A-C						271	406

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	499	0.066	33	0.0	0.1	7.721	A
C-AB	57	14	767	0.075	57	0.0	0.1	5.129	A
C-A	281	70			281				
A-B	34	8			34				
A-C	222	56			222				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	480	0.082	39	0.1	0.1	8.180	A
C-AB	76	19	799	0.095	76	0.1	0.2	5.039	A
C-A	328	82			328				
A-B	40	10			40				
A-C	265	66			265				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	452	0.107	48	0.1	0.1	8.905	A
C-AB	108	27	844	0.127	107	0.2	0.3	4.938	A
C-A	388	97			388				
A-B	50	12			50				
A-C	325	81			325				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	452	0.107	48	0.1	0.1	8.912	A
C-AB	108	27	845	0.128	108	0.3	0.3	4.940	A
C-A	388	97			388				
A-B	50	12			50				
A-C	325	81			325				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	479	0.083	40	0.1	0.1	8.190	A
C-AB	76	19	799	0.095	77	0.3	0.2	5.037	A
C-A	328	82			328				
A-B	40	10			40				
A-C	265	66			265				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	499	0.066	33	0.1	0.1	7.736	A
C-AB	58	14	767	0.075	58	0.2	0.1	5.138	A
C-A	281	70			281				
A-B	34	8			34				
A-C	222	56			222				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.19	0.00	0.00	0.19	0.19			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.29	0.03	0.28	0.50	1.41			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.30	0.00	0.00	0.30	0.30			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

Existing Layout - 2018 Baseline + Uni, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D4	2018 Baseline + Uni	PM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2+D14

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	480	100.000
B - Crispin Lane		ONE HOUR	✓	72	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	422	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	37	443
	B - Crispin Lane	46	0	26
	C - B5101 Stansty Road (W)	403	19	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	11.25	0.2	1.2	B	66	99
C-AB	0.06	4.98	0.1	0.5	A	34	51
C-A						353	530
A-B						34	51
A-C						407	610

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	14	457	0.119	54	0.0	0.1	8.917	A
C-AB	24	6	747	0.032	24	0.0	0.0	4.980	A
C-A	294	73			294				
A-B	28	7			28				
A-C	334	83			334				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	433	0.150	65	0.1	0.2	9.772	A
C-AB	32	8	776	0.041	32	0.0	0.1	4.840	A
C-A	347	87			347				
A-B	33	8			33				
A-C	398	100			398				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	399	0.199	79	0.2	0.2	11.234	B
C-AB	46	11	817	0.056	46	0.1	0.1	4.666	A
C-A	419	105			419				
A-B	41	10			41				
A-C	488	122			488				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	399	0.199	79	0.2	0.2	11.255	B
C-AB	46	11	817	0.056	46	0.1	0.1	4.667	A
C-A	419	105			419				
A-B	41	10			41				
A-C	488	122			488				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	433	0.150	65	0.2	0.2	9.795	A
C-AB	32	8	776	0.042	32	0.1	0.1	4.844	A
C-A	347	87			347				
A-B	33	8			33				
A-C	398	100			398				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	14	457	0.119	54	0.2	0.1	8.948	A
C-AB	24	6	747	0.032	24	0.1	0.0	4.984	A
C-A	294	73			294				
A-B	28	7			28				
A-C	334	83			334				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.09	0.03	0.26	0.47	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.25	0.03	0.29	0.81	1.17			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

Existing Layout - 2020 Baseline + Uni, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Uni	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.0335

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	351	100.000
B - Crispin Lane		ONE HOUR	✓	45	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	465	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	47	305
	B - Crispin Lane	24	0	22
	C - B5101 Stansty Road (W)	418	48	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.06	0.1	0.5	A	42	63
C-AB	0.13	5.12	0.3	1.4	A	85	128
C-A						342	513
A-B						43	64
A-C						280	420

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	496	0.069	34	0.0	0.1	7.794	A
C-AB	60	15	772	0.078	60	0.0	0.1	5.110	A
C-A	290	72			290				
A-B	35	9			35				
A-C	230	57			230				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	10	476	0.086	41	0.1	0.1	8.281	A
C-AB	80	20	806	0.100	80	0.1	0.2	5.021	A
C-A	338	84			338				
A-B	42	10			42				
A-C	274	69			274				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	447	0.112	50	0.1	0.1	9.053	A
C-AB	114	29	853	0.134	114	0.2	0.3	4.925	A
C-A	398	99			398				
A-B	51	13			51				
A-C	336	84			336				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	447	0.112	50	0.1	0.1	9.060	A
C-AB	114	29	853	0.134	114	0.3	0.3	4.927	A
C-A	398	99			398				
A-B	51	13			51				
A-C	336	84			336				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	10	475	0.086	41	0.1	0.1	8.289	A
C-AB	81	20	806	0.100	81	0.3	0.2	5.022	A
C-A	338	84			338				
A-B	42	10			42				
A-C	274	69			274				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	495	0.069	34	0.1	0.1	7.809	A
C-AB	61	15	773	0.079	61	0.2	0.1	5.119	A
C-A	289	72			289				
A-B	35	9			35				
A-C	230	57			230				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.21	0.00	0.00	0.21	0.21			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.31	0.03	0.27	0.49	1.43			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.32	0.00	0.00	0.32	0.32			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.22	0.00	0.00	0.22	0.22			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.15	0.00	0.00	0.15	0.15			N/A	N/A

Existing Layout - 2020 Baseline + Uni, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.05	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D6	2020 Baseline + Uni	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.0316

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	495	100.000
B - Crispin Lane		ONE HOUR	✓	74	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	38	457
	B - Crispin Lane	47	0	27
	C - B5101 Stansty Road (W)	416	20	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.21	11.56	0.3	1.2	B	68	102
C-AB	0.06	4.96	0.1	0.5	A	36	54
C-A						363	545
A-B						35	53
A-C						419	629

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	453	0.123	55	0.0	0.1	9.041	A
C-AB	25	6	751	0.034	25	0.0	0.0	4.957	A
C-A	302	76			302				
A-B	29	7			29				
A-C	344	86			344				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	428	0.156	67	0.1	0.2	9.953	A
C-AB	34	8	781	0.043	34	0.0	0.1	4.814	A
C-A	357	89			357				
A-B	34	9			34				
A-C	411	103			411				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	82	20	393	0.208	81	0.2	0.3	11.533	B
C-AB	49	12	825	0.059	49	0.1	0.1	4.638	A
C-A	431	108			431				
A-B	42	11			42				
A-C	503	126			503				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	82	20	393	0.208	82	0.3	0.3	11.557	B
C-AB	49	12	825	0.059	49	0.1	0.1	4.639	A
C-A	431	108			431				
A-B	42	11			42				
A-C	503	126			503				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	428	0.156	67	0.3	0.2	9.980	A
C-AB	34	8	782	0.043	34	0.1	0.1	4.817	A
C-A	357	89			357				
A-B	34	9			34				
A-C	411	103			411				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	453	0.123	56	0.2	0.1	9.075	A
C-AB	25	6	752	0.034	25	0.1	0.0	4.958	A
C-A	302	76			302				
A-B	29	7			29				
A-C	344	86			344				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.26	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.09	0.03	0.26	0.47	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.26	0.03	0.30	0.91	1.24			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

Existing Layout - 2020 Baseline + Uni + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		0.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D7	2020 Baseline + Uni + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D5+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	366	100.000
B - Crispin Lane		ONE HOUR	✓	45	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	519	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	47	320
	B - Crispin Lane	24	0	22
	C - B5101 Stansty Road (W)	472	48	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	9.32	0.1	0.5	A	42	63
C-AB	0.14	4.96	0.4	1.1	A	93	139
C-A						384	576
A-B						43	64
A-C						294	440

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	488	0.070	34	0.0	0.1	7.917	A
C-AB	64	16	799	0.081	64	0.0	0.2	4.953	A
C-A	326	82			326				
A-B	35	9			35				
A-C	241	60			241				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	10	467	0.088	41	0.1	0.1	8.447	A
C-AB	87	22	837	0.104	87	0.2	0.2	4.848	A
C-A	380	95			380				
A-B	42	10			42				
A-C	288	72			288				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	436	0.115	50	0.1	0.1	9.310	A
C-AB	126	31	892	0.141	125	0.2	0.4	4.741	A
C-A	446	111			446				
A-B	51	13			51				
A-C	352	88			352				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	436	0.115	50	0.1	0.1	9.318	A
C-AB	126	32	893	0.141	126	0.4	0.4	4.746	A
C-A	445	111			445				
A-B	51	13			51				
A-C	352	88			352				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	10	467	0.088	41	0.1	0.1	8.459	A
C-AB	87	22	838	0.104	88	0.4	0.2	4.852	A
C-A	379	95			379				
A-B	42	10			42				
A-C	288	72			288				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	488	0.070	34	0.1	0.1	7.932	A
C-AB	65	16	799	0.081	65	0.2	0.2	4.962	A
C-A	326	81			326				
A-B	35	9			35				
A-C	241	60			241				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.15	0.00	0.00	0.15	0.15			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.22	0.00	0.00	0.22	0.22			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.35	0.03	0.28	0.50	1.09			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.36	0.00	0.00	0.36	0.36			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.23	0.00	0.00	0.23	0.23			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.16	0.00	0.00	0.16	0.16			N/A	N/A

Existing Layout - 2020 Baseline + Uni + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D8	2020 Baseline + Uni + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D6+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	510	100.000
B - Crispin Lane		ONE HOUR	✓	74	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	489	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	38	472
	B - Crispin Lane	47	0	27
	C - B5101 Stansty Road (W)	470	20	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.21	12.00	0.3	1.3	B	68	102
C-AB	0.06	4.80	0.1	0.6	A	39	59
C-A						410	615
A-B						35	53
A-C						433	650

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	445	0.126	55	0.0	0.1	9.218	A
C-AB	27	7	778	0.035	27	0.0	0.0	4.792	A
C-A	341	85			341				
A-B	29	7			29				
A-C	355	89			355				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	419	0.159	67	0.1	0.2	10.214	B
C-AB	37	9	814	0.045	37	0.0	0.1	4.632	A
C-A	403	101			403				
A-B	34	9			34				
A-C	424	106			424				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	82	20	382	0.214	81	0.2	0.3	11.976	B
C-AB	54	13	865	0.062	54	0.1	0.1	4.436	A
C-A	485	121			485				
A-B	42	11			42				
A-C	520	130			520				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	82	20	382	0.214	82	0.3	0.3	12.003	B
C-AB	54	13	865	0.062	54	0.1	0.1	4.437	A
C-A	485	121			485				
A-B	42	11			42				
A-C	520	130			520				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	419	0.159	67	0.3	0.2	10.245	B
C-AB	37	9	814	0.045	37	0.1	0.1	4.636	A
C-A	403	101			403				
A-B	34	9			34				
A-C	424	106			424				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	445	0.126	56	0.2	0.1	9.255	A
C-AB	27	7	778	0.035	27	0.1	0.0	4.796	A
C-A	341	85			341				
A-B	29	7			29				
A-C	355	89			355				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.07	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.27	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.10	0.03	0.26	0.48	0.61			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.27	0.03	0.30	0.95	1.27			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

Existing Layout - 2035 Baseline + Uni, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D9	2035 Baseline + Uni	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.2062

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	410	100.000
B - Crispin Lane		ONE HOUR	✓	53	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	543	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	54	356
	B - Crispin Lane	28	0	25
	C - B5101 Stansty Road (W)	487	55	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	9.92	0.2	0.5	A	49	73
C-AB	0.17	5.03	0.4	1.5	A	112	168
C-A						386	579
A-B						50	75
A-C						327	490

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	478	0.084	40	0.0	0.1	8.197	A
C-AB	77	19	801	0.096	76	0.0	0.2	5.020	A
C-A	332	83			332				
A-B	41	10			41				
A-C	268	67			268				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	455	0.105	48	0.1	0.1	8.841	A
C-AB	105	26	841	0.125	104	0.2	0.3	4.943	A
C-A	383	96			383				
A-B	49	12			49				
A-C	320	80			320				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	421	0.139	58	0.1	0.2	9.912	A
C-AB	153	38	897	0.171	152	0.3	0.4	4.885	A
C-A	445	111			445				
A-B	60	15			60				
A-C	392	98			392				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	421	0.139	58	0.2	0.2	9.923	A
C-AB	153	38	897	0.171	153	0.4	0.4	4.888	A
C-A	444	111			444				
A-B	60	15			60				
A-C	392	98			392				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	455	0.105	48	0.2	0.1	8.855	A
C-AB	105	26	841	0.125	106	0.4	0.3	4.948	A
C-A	383	96			383				
A-B	49	12			49				
A-C	320	80			320				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	478	0.084	40	0.1	0.1	8.218	A
C-AB	78	19	801	0.097	78	0.3	0.2	5.034	A
C-A	331	83			331				
A-B	41	10			41				
A-C	268	67			268				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.28	0.00	0.00	0.28	0.28			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.16	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.44	0.03	0.27	0.49	1.47			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.16	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.44	0.03	0.34	1.13	1.32			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.29	0.00	0.00	0.29	0.29			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.21	0.00	0.00	0.21	0.21			N/A	N/A

Existing Layout - 2035 Baseline + Uni, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D10	2035 Baseline + Uni	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.1991

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	576	100.000
B - Crispin Lane		ONE HOUR	✓	86	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	506	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	44	531
	B - Crispin Lane	55	0	31
	C - B5101 Stansty Road (W)	483	23	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.26	13.48	0.4	1.2	B	79	119
C-AB	0.08	4.84	0.1	0.9	A	47	71
C-A						417	625
A-B						41	61
A-C						487	731

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	432	0.150	64	0.0	0.2	9.766	A
C-AB	32	8	776	0.042	32	0.0	0.1	4.835	A
C-A	349	87			349				
A-B	33	8			33				
A-C	400	100			400				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	403	0.193	77	0.2	0.2	11.048	B
C-AB	44	11	813	0.054	44	0.1	0.1	4.686	A
C-A	411	103			411				
A-B	40	10			40				
A-C	478	119			478				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	362	0.263	95	0.2	0.3	13.440	B
C-AB	65	16	865	0.076	65	0.1	0.1	4.503	A
C-A	492	123			492				
A-B	49	12			49				
A-C	585	146			585				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	362	0.263	95	0.3	0.4	13.484	B
C-AB	66	16	865	0.076	66	0.1	0.1	4.507	A
C-A	492	123			492				
A-B	49	12			49				
A-C	585	146			585				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	403	0.193	78	0.4	0.2	11.097	B
C-AB	44	11	813	0.054	44	0.1	0.1	4.690	A
C-A	411	103			411				
A-B	40	10			40				
A-C	478	119			478				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	432	0.150	65	0.2	0.2	9.818	A
C-AB	32	8	777	0.042	33	0.1	0.1	4.841	A
C-A	349	87			349				
A-B	33	8			33				
A-C	400	100			400				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	0.08	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.35	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.14	0.03	0.27	0.49	0.92			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.35	0.03	0.31	1.17	1.17			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

Existing Layout - 2035 Baseline + Uni + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D11	2035 Baseline + Uni + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	425	100.000
B - Crispin Lane		ONE HOUR	✓	53	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	597	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	54	371
	B - Crispin Lane	28	0	25
	C - B5101 Stansty Road (W)	541	55	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	10.24	0.2	0.5	B	49	73
C-AB	0.18	4.89	0.5	1.4	A	122	183
C-A						426	639
A-B						50	75
A-C						340	510

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	471	0.085	40	0.0	0.1	8.335	A
C-AB	82	21	827	0.100	81	0.0	0.2	4.874	A
C-A	367	92			367				
A-B	41	10			41				
A-C	279	70			279				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	446	0.107	48	0.1	0.1	9.038	A
C-AB	113	28	873	0.130	113	0.2	0.3	4.788	A
C-A	423	106			423				
A-B	49	12			49				
A-C	333	83			333				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	410	0.143	58	0.1	0.2	10.228	B
C-AB	169	42	937	0.180	168	0.3	0.5	4.729	A
C-A	488	122			488				
A-B	60	15			60				
A-C	408	102			408				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	410	0.143	58	0.2	0.2	10.242	B
C-AB	169	42	938	0.181	169	0.5	0.5	4.731	A
C-A	488	122			488				
A-B	60	15			60				
A-C	408	102			408				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	446	0.107	48	0.2	0.1	9.056	A
C-AB	114	28	873	0.130	114	0.5	0.3	4.794	A
C-A	423	106			423				
A-B	49	12			49				
A-C	333	83			333				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	471	0.085	40	0.1	0.1	8.358	A
C-AB	83	21	828	0.100	83	0.3	0.2	4.889	A
C-A	366	92			366				
A-B	41	10			41				
A-C	279	70			279				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.21	0.00	0.00	0.21	0.21			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.31	0.00	0.00	0.31	0.31			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.16	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.49	0.03	0.27	0.49	1.17			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.50	0.05	0.46	1.29	1.40			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.33	0.00	0.00	0.33	0.33			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.22	0.00	0.00	0.22	0.22			N/A	N/A

Existing Layout - 2035 Baseline + Uni + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D12	2035 Baseline + Uni + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	591	100.000
B - Crispin Lane		ONE HOUR	✓	86	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
From	A - B5101 Stansty Road (E)	0	44	546
	B - Crispin Lane	55	0	31
	C - B5101 Stansty Road (W)	537	23	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.27	14.11	0.4	1.3	B	79	119
C-AB	0.08	4.69	0.1	1.0	A	52	78
C-A						462	693
A-B						41	61
A-C						501	752

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	424	0.153	64	0.0	0.2	9.979	A
C-AB	35	9	803	0.043	34	0.0	0.1	4.679	A
C-A	387	97			387				
A-B	33	8			33				
A-C	411	103			411				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	394	0.197	77	0.2	0.2	11.374	B
C-AB	48	12	845	0.057	48	0.1	0.1	4.515	A
C-A	456	114			456				
A-B	40	10			40				
A-C	491	123			491				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	350	0.271	95	0.2	0.4	14.052	B
C-AB	73	18	906	0.080	72	0.1	0.1	4.318	A
C-A	544	136			544				
A-B	49	12			49				
A-C	601	150			601				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	350	0.272	95	0.4	0.4	14.111	B
C-AB	73	18	906	0.080	73	0.1	0.1	4.322	A
C-A	544	136			544				
A-B	49	12			49				
A-C	601	150			601				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	394	0.197	78	0.4	0.2	11.430	B
C-AB	48	12	846	0.057	48	0.1	0.1	4.519	A
C-A	455	114			455				
A-B	40	10			40				
A-C	491	123			491				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	424	0.153	65	0.2	0.2	10.032	B
C-AB	35	9	804	0.043	35	0.1	0.1	4.685	A
C-A	387	97			387				
A-B	33	8			33				
A-C	411	103			411				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	0.09	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.37	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.15	0.03	0.27	0.49	0.99			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.37	0.03	0.31	1.24	1.33			N/A	N/A
C-AB	0.15	0.00	0.00	0.15	0.15			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.25	0.00	0.00	0.25	0.25			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D17	2035 Baseline + Uni + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D19

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	439	100.000
B - Crispin Lane		ONE HOUR	✓	53	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	601	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
A - B5101 Stansty Road (E)		0	54	385
B - Crispin Lane		28	0	25
C - B5101 Stansty Road (W)		545	55	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	10.37	0.2	0.5	B	49	73
C-AB	0.18	4.89	0.5	1.4	A	123	184
C-A						428	643
A-B						50	75
A-C						353	530

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	468	0.085	40	0.0	0.1	8.392	A
C-AB	83	21	828	0.100	82	0.0	0.2	4.876	A
C-A	369	92			369				
A-B	41	10			41				
A-C	290	72			290				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	442	0.108	48	0.1	0.1	9.120	A
C-AB	114	29	873	0.131	114	0.2	0.3	4.792	A
C-A	426	106			426				
A-B	49	12			49				
A-C	346	86			346				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	406	0.144	58	0.1	0.2	10.359	B
C-AB	171	43	938	0.182	170	0.3	0.5	4.735	A
C-A	491	123			491				
A-B	60	15			60				
A-C	424	106			424				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	15	405	0.144	58	0.2	0.2	10.373	B
C-AB	171	43	938	0.183	171	0.5	0.5	4.740	A
C-A	490	123			490				
A-B	60	15			60				
A-C	424	106			424				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	12	442	0.108	48	0.2	0.1	9.136	A
C-AB	115	29	874	0.131	115	0.5	0.3	4.798	A
C-A	425	106			425				
A-B	49	12			49				
A-C	346	86			346				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	468	0.085	40	0.1	0.1	8.414	A
C-AB	83	21	828	0.101	84	0.3	0.2	4.889	A
C-A	369	92			369				
A-B	41	10			41				
A-C	290	72			290				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.21	0.00	0.00	0.21	0.21			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.32	0.00	0.00	0.32	0.32			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.50	0.03	0.27	0.50	1.21			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.51	0.05	0.48	1.30	1.41			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.33	0.00	0.00	0.33	0.33			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.22	0.00	0.00	0.22	0.22			N/A	N/A

Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Crispin Lane / Stansty Road	T-Junction	Two-way		1.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D18	2035 Baseline + Uni + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D20

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5101 Stansty Road (E)		ONE HOUR	✓	635	100.000
B - Crispin Lane		ONE HOUR	✓	86	100.000
C - B5101 Stansty Road (W)		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)	
	A - B5101 Stansty Road (E)	0	44	590
	B - Crispin Lane	55	0	31
	C - B5101 Stansty Road (W)	512	23	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5101 Stansty Road (E)	B - Crispin Lane	C - B5101 Stansty Road (W)
	A - B5101 Stansty Road (E)	0	0	0
	B - Crispin Lane	0	0	0
	C - B5101 Stansty Road (W)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.28	14.59	0.4	1.4	B	79	119
C-AB	0.08	4.80	0.1	1.0	A	50	76
C-A						441	661
A-B						41	61
A-C						542	812

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	419	0.155	64	0.0	0.2	10.136	B
C-AB	34	8	784	0.043	34	0.0	0.1	4.795	A
C-A	369	92			369				
A-B	33	8			33				
A-C	444	111			444				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	387	0.201	77	0.2	0.2	11.627	B
C-AB	47	12	823	0.057	47	0.1	0.1	4.641	A
C-A	434	109			434				
A-B	40	10			40				
A-C	531	133			531				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	342	0.278	95	0.2	0.4	14.534	B
C-AB	70	18	878	0.080	70	0.1	0.1	4.457	A
C-A	519	130			519				
A-B	49	12			49				
A-C	650	162			650				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	342	0.278	95	0.4	0.4	14.593	B
C-AB	71	18	878	0.080	70	0.1	0.1	4.459	A
C-A	519	130			519				
A-B	49	12			49				
A-C	650	162			650				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	387	0.201	78	0.4	0.3	11.688	B
C-AB	47	12	823	0.057	47	0.1	0.1	4.643	A
C-A	434	109			434				
A-B	40	10			40				
A-C	531	133			531				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	419	0.155	65	0.3	0.2	10.194	B
C-AB	34	8	784	0.043	34	0.1	0.1	4.801	A
C-A	369	92			369				
A-B	33	8			33				
A-C	444	111			444				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.25	0.00	0.00	0.25	0.25			N/A	N/A
C-AB	0.09	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.15	0.03	0.27	0.49	0.99			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.03	0.31	1.27	1.43			N/A	N/A
C-AB	0.15	0.00	0.00	0.15	0.15			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.26	0.00	0.00	0.26	0.26			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

Appendix H

Stansty Road / New Road PICADY Results

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
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Filename: StanstyRdNewRd_261018.j9

Path: Z:\2600-2699\2627 Wrexham Glyndwr University\Data\Junction Assessment

Report generation date: 26/10/2018 13:18:39

-
- »Existing Layout - 2018 Baseline, AM Peak
 - »Existing Layout - 2018 Baseline, PM Peak
 - »Existing Layout - 2018 Baseline + Uni, AM Peak
 - »Existing Layout - 2018 Baseline + Uni, PM Peak
 - »Existing Layout - 2020 Baseline + Uni, AM Peak
 - »Existing Layout - 2020 Baseline + Uni, PM Peak
 - »Existing Layout - 2020 Baseline + Uni + Dev, AM Peak
 - »Existing Layout - 2020 Baseline + Uni + Dev, PM Peak
 - »Existing Layout - 2035 Baseline + Uni, AM Peak
 - »Existing Layout - 2035 Baseline + Uni, PM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev, AM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev, PM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), AM Peak
 - »Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), PM Peak

Summary of junction performance

	AM Peak				PM Peak			
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC
Existing Layout - 2018 Baseline								
Stream B-C	1.1	3.5	12.80	0.53	1.7	6.4	17.39	0.64
Stream B-A	0.9	4.2	21.43	0.48	0.7	3.1	21.47	0.40
Stream C-AB	1.0	4.3	9.16	0.46	1.6	6.7	13.07	0.58
Existing Layout - 2018 Baseline + Uni								
Stream B-C	1.1	3.5	12.80	0.53	1.8	7.3	18.40	0.65
Stream B-A	0.9	4.2	21.43	0.48	0.8	3.9	23.42	0.45
Stream C-AB	1.0	4.3	9.16	0.46	1.6	6.7	13.07	0.58
Existing Layout - 2020 Baseline + Uni								
Stream B-C	1.2	3.8	13.70	0.56	2.1	9.4	20.53	0.68
Stream B-A	1.0	4.7	23.19	0.51	0.9	4.5	25.61	0.48
Stream C-AB	1.1	4.6	9.35	0.48	1.8	7.7	13.70	0.60
Existing Layout - 2020 Baseline + Uni + Dev								
Stream B-C	1.6	5.2	16.77	0.62	2.4	12.1	23.93	0.72
Stream B-A	1.7	8.3	31.45	0.64	1.2	6.0	30.84	0.56
Stream C-AB	1.2	4.8	9.52	0.49	2.3	10.8	15.21	0.65
Existing Layout - 2035 Baseline + Uni								
Stream B-C	2.3	10.9	22.24	0.71	6.2	32.4	54.93	0.89
Stream B-A	2.0	10.5	40.76	0.68	2.7	13.9	68.59	0.76
Stream C-AB	1.8	7.3	10.44	0.57	3.9	21.0	19.21	0.74
Existing Layout - 2035 Baseline + Uni + Dev								
Stream B-C	4.4	24.1	42.27	0.84	11.0	44.5	92.57	0.97
Stream B-A	4.6	23.2	77.30	0.85	6.2	24.1	138.12	0.95
Stream C-AB	1.9	7.9	10.67	0.58	5.3	29.0	23.35	0.79
Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity)								
Stream B-C	5.2	28.0	49.41	0.87	13.5	47.8	108.52	1.00
Stream B-A	5.1	24.8	85.90	0.88	7.1	26.0	155.91	0.97
Stream C-AB	2.1	8.8	11.02	0.60	5.7	30.7	24.31	0.80

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

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

File summary

File Description

Title	Wrexham Glyndwr University
Location	Plas Coch
Site number	
Date	26/10/2018
Version	2
Status	
Identifier	
Client	Wrexham Glyndwr University
Jobnumber	2627
Enumerator	Mark Lever
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D1	2018 Baseline	AM Peak	Surveys conducted 04/07/18	ONE HOUR	07:45	09:15	15		✓		
D2	2018 Baseline	PM Peak	Surveys conducted 04/07/18	ONE HOUR	16:45	18:15	15		✓		
D3	2018 Baseline + Uni	AM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1+D13
D4	2018 Baseline + Uni	PM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2+D14
D5	2020 Baseline + Uni	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.0335
D6	2020 Baseline + Uni	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.0316
D7	2020 Baseline + Uni + Dev	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D5+D15
D8	2020 Baseline + Uni + Dev	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D6+D16
D9	2035 Baseline + Uni	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.2062
D10	2035 Baseline + Uni	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.1991
D11	2035 Baseline + Uni + Dev	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D15
D12	2035 Baseline + Uni + Dev	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D16
D13	Uni	AM Peak		ONE HOUR	07:45	09:15	15				
D14	Uni	PM Peak		ONE HOUR	16:45	18:15	15				
D15	Dev	AM Peak		ONE HOUR	07:45	09:15	15				
D16	Dev	PM Peak		ONE HOUR	16:45	18:15	15				
D17	2035 Baseline + Uni + Dev (Sensitivity)	AM Peak		ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D19
D18	2035 Baseline + Uni + Dev (Sensitivity)	PM Peak		ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D20
D19	Dev (Sensitivity)	AM Peak		ONE HOUR	07:45	09:15	15				
D20	Dev (Sensitivity)	PM Peak		ONE HOUR	16:45	18:15	15				

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000

Existing Layout - 2018 Baseline, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		5.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	B5425 Rhosddu Road (S)		Major
B	B5101 Stansty Road		Minor
C	B5425 Rhosddu Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - B5425 Rhosddu Road (N)	10.40		✓	3.50	70.0	✓	2.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - B5101 Stansty Road	One lane plus flare	10.00	10.00	8.40	6.60	5.60		9.00	70	60

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	556	0.082	0.207	0.130	0.295
1	B-C	770	0.095	0.241	-	-
1	C-B	701	0.220	0.220	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Baseline	AM Peak	Surveys conducted 04/07/18	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	377	100.000
B - B5101 Stansty Road		ONE HOUR	✓	433	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	769	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	97	280
	B - B5101 Stansty Road	142	0	291
	C - B5425 Rhosddu Road (N)	515	254	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	1	4
	B - B5101 Stansty Road	1	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.53	12.80	1.1	3.5	B	267	401
B-A	0.48	21.43	0.9	4.2	C	130	195
C-AB	0.46	9.16	1.0	4.3	A	262	393
C-A						443	665
A-B						89	134
A-C						257	385

Existing Layout - 2018 Baseline, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		6.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Baseline	PM Peak	Surveys conducted 04/07/18	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	700	100.000
B - B5101 Stansty Road		ONE HOUR	✓	431	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	622	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	232	468
	B - B5101 Stansty Road	102	0	329
	C - B5425 Rhosddu Road (N)	343	279	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	0	1
	B - B5101 Stansty Road	0	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.64	17.39	1.7	6.4	C	302	453
B-A	0.40	21.47	0.7	3.1	C	94	140
C-AB	0.58	13.07	1.6	6.7	B	293	440
C-A						277	416
A-B						213	319
A-C						429	644

Existing Layout - 2018 Baseline + Uni, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		5.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D3	2018 Baseline + Uni	AM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D1+D13

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	377	100.000
B - B5101 Stansty Road		ONE HOUR	✓	433	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	769	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	97	280
	B - B5101 Stansty Road	142	0	291
	C - B5425 Rhosddu Road (N)	515	254	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
A - B5425 Rhosddu Road (S)		0	1	4
B - B5101 Stansty Road		1	0	0
C - B5425 Rhosddu Road (N)		2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.53	12.80	1.1	3.5	B	267	401
B-A	0.48	21.43	0.9	4.2	C	130	195
C-AB	0.46	9.16	1.0	4.3	A	262	393
C-A						443	665
A-B						89	134
A-C						257	385

Existing Layout - 2018 Baseline + Uni, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		7.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D4	2018 Baseline + Uni	PM Peak	Adjusted to match network flows during university term time based on previous traffic surveys for nearby junctions.	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D2+D14

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	700	100.000
B - B5101 Stansty Road		ONE HOUR	✓	445	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	622	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	232	468
	B - B5101 Stansty Road	116	0	329
	C - B5425 Rhosddu Road (N)	343	279	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	0	1
	B - B5101 Stansty Road	0	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.65	18.40	1.8	7.3	C	302	453
B-A	0.45	23.42	0.8	3.9	C	106	160
C-AB	0.58	13.07	1.6	6.7	B	293	440
C-A						277	416
A-B						213	319
A-C						429	644

Existing Layout - 2020 Baseline + Uni, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		6.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Uni	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.0335

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	390	100.000
B - B5101 Stansty Road		ONE HOUR	✓	448	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	795	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	100	289
	B - B5101 Stansty Road	147	0	301
	C - B5425 Rhosddu Road (N)	532	263	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	1	4
	B - B5101 Stansty Road	1	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.56	13.70	1.2	3.8	B	276	414
B-A	0.51	23.19	1.0	4.7	C	135	202
C-AB	0.48	9.35	1.1	4.6	A	275	412
C-A						455	682
A-B						92	138
A-C						266	398

Existing Layout - 2020 Baseline + Uni, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		8.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D6	2020 Baseline + Uni	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.0316

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	722	100.000
B - B5101 Stansty Road		ONE HOUR	✓	459	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	642	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	239	483
	B - B5101 Stansty Road	120	0	339
	C - B5425 Rhosddu Road (N)	354	288	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	0	1
	B - B5101 Stansty Road	0	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.68	20.53	2.1	9.4	C	311	467
B-A	0.48	25.61	0.9	4.5	D	110	165
C-AB	0.60	13.70	1.8	7.7	B	307	461
C-A						281	422
A-B						220	329
A-C						443	665

Existing Layout - 2020 Baseline + Uni + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		8.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D7	2020 Baseline + Uni + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D5+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	399	100.000
B - B5101 Stansty Road		ONE HOUR	✓	502	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	801	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	109	289
	B - B5101 Stansty Road	185	0	317
	C - B5425 Rhosddu Road (N)	532	269	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	1	4
	B - B5101 Stansty Road	1	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.62	16.77	1.6	5.2	C	291	436
B-A	0.64	31.45	1.7	8.3	D	170	254
C-AB	0.49	9.52	1.2	4.8	A	283	424
C-A						452	678
A-B						100	150
A-C						266	398

Existing Layout - 2020 Baseline + Uni + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		9.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D8	2020 Baseline + Uni + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D6+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	760	100.000
B - B5101 Stansty Road		ONE HOUR	✓	480	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	658	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	277	483
	B - B5101 Stansty Road	134	0	346
	C - B5425 Rhosddu Road (N)	354	304	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
A - B5425 Rhosddu Road (S)		0	0	1
B - B5101 Stansty Road		0	0	0
C - B5425 Rhosddu Road (N)		2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.72	23.93	2.4	12.1	C	318	477
B-A	0.56	30.84	1.2	6.0	D	123	184
C-AB	0.65	15.21	2.3	10.8	C	332	498
C-A						271	407
A-B						254	382
A-C						443	665

Existing Layout - 2035 Baseline + Uni, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		9.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D9	2035 Baseline + Uni	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D3*1.2062

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	455	100.000
B - B5101 Stansty Road		ONE HOUR	✓	522	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	928	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	117	338
	B - B5101 Stansty Road	171	0	351
	C - B5425 Rhosddu Road (N)	621	306	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	1	4
	B - B5101 Stansty Road	1	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.71	22.24	2.3	10.9	C	322	483
B-A	0.68	40.76	2.0	10.5	E	157	236
C-AB	0.57	10.44	1.8	7.3	B	348	522
C-A						503	754
A-B						107	161
A-C						310	465

Existing Layout - 2035 Baseline + Uni, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		18.67	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D10	2035 Baseline + Uni	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D4*1.1991

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	839	100.000
B - B5101 Stansty Road		ONE HOUR	✓	534	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	746	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	278	561
	B - B5101 Stansty Road	139	0	395
	C - B5425 Rhosddu Road (N)	411	335	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	0	1
	B - B5101 Stansty Road	0	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.89	54.93	6.2	32.4	F	362	543
B-A	0.76	68.59	2.7	13.9	F	128	191
C-AB	0.74	19.21	3.9	21.0	C	399	599
C-A						285	428
A-B						255	383
A-C						515	772

Existing Layout - 2035 Baseline + Uni + Dev, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		18.17	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D11	2035 Baseline + Uni + Dev	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D15

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	464	100.000
B - B5101 Stansty Road		ONE HOUR	✓	576	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	934	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	126	338
	B - B5101 Stansty Road	209	0	367
	C - B5425 Rhosddu Road (N)	621	312	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	1	4
	B - B5101 Stansty Road	1	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.84	42.27	4.4	24.1	E	337	505
B-A	0.85	77.30	4.6	23.2	F	192	288
C-AB	0.58	10.67	1.9	7.9	B	358	538
C-A						498	747
A-B						116	173
A-C						310	465

Existing Layout - 2035 Baseline + Uni + Dev, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		31.60	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D12	2035 Baseline + Uni + Dev	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D16

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	877	100.000
B - B5101 Stansty Road		ONE HOUR	✓	555	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	762	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
From	A - B5425 Rhosddu Road (S)	0	316	561
	B - B5101 Stansty Road	153	0	402
	C - B5425 Rhosddu Road (N)	411	351	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	0	1
	B - B5101 Stansty Road	0	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.97	92.57	11.0	44.5	F	368	553
B-A	0.95	138.12	6.2	24.1	F	140	211
C-AB	0.79	23.35	5.3	29.0	C	433	650
C-A						266	399
A-B						290	435
A-C						515	772

Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		20.50	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D17	2035 Baseline + Uni + Dev (Sensitivity)	AM Peak	ONE HOUR	07:45	09:15	15	✓	✓	Simple	D9+D19

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	468	100.000
B - B5101 Stansty Road		ONE HOUR	✓	579	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	944	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	130	338
	B - B5101 Stansty Road	210	0	369
	C - B5425 Rhosddu Road (N)	621	322	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	1	4
	B - B5101 Stansty Road	1	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.87	49.41	5.2	28.0	E	339	508
B-A	0.88	85.90	5.1	24.8	F	193	289
C-AB	0.60	11.02	2.1	8.8	B	375	563
C-A						491	736
A-B						119	179
A-C						310	465

Existing Layout - 2035 Baseline + Uni + Dev (Sensitivity), PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2020 Baseline + Uni, AM Peak [Locked]	Demand Set relationships are chained. This may slow down the file.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Stansty Road / New Road	T-Junction	Two-way		36.29	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Locked	Run automatically	Relationship type	Relationship
D18	2035 Baseline + Uni + Dev (Sensitivity)	PM Peak	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D10+D20

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B5425 Rhosddu Road (S)		ONE HOUR	✓	878	100.000
B - B5101 Stansty Road		ONE HOUR	✓	563	100.000
C - B5425 Rhosddu Road (N)		ONE HOUR	✓	766	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	317	561
	B - B5101 Stansty Road	155	0	408
	C - B5425 Rhosddu Road (N)	411	355	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - B5425 Rhosddu Road (S)	B - B5101 Stansty Road	C - B5425 Rhosddu Road (N)
	A - B5425 Rhosddu Road (S)	0	0	1
	B - B5101 Stansty Road	0	0	0
	C - B5425 Rhosddu Road (N)	2	0	0

Results

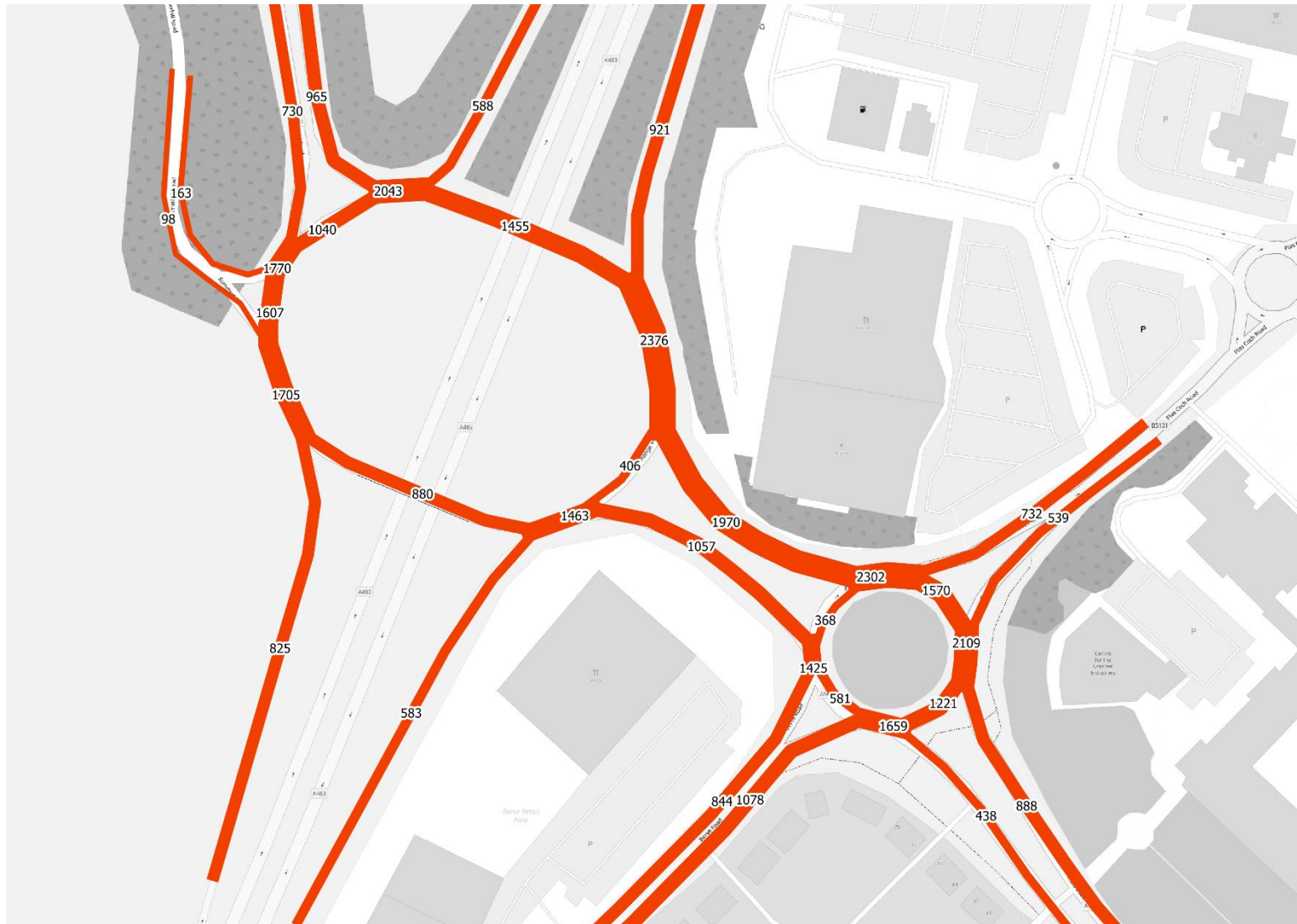
Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.00	108.52	13.5	47.8	F	374	561
B-A	0.97	155.91	7.1	26.0	F	142	213
C-AB	0.80	24.31	5.7	30.7	C	441	661
C-A						262	393
A-B						291	437
A-C						515	772

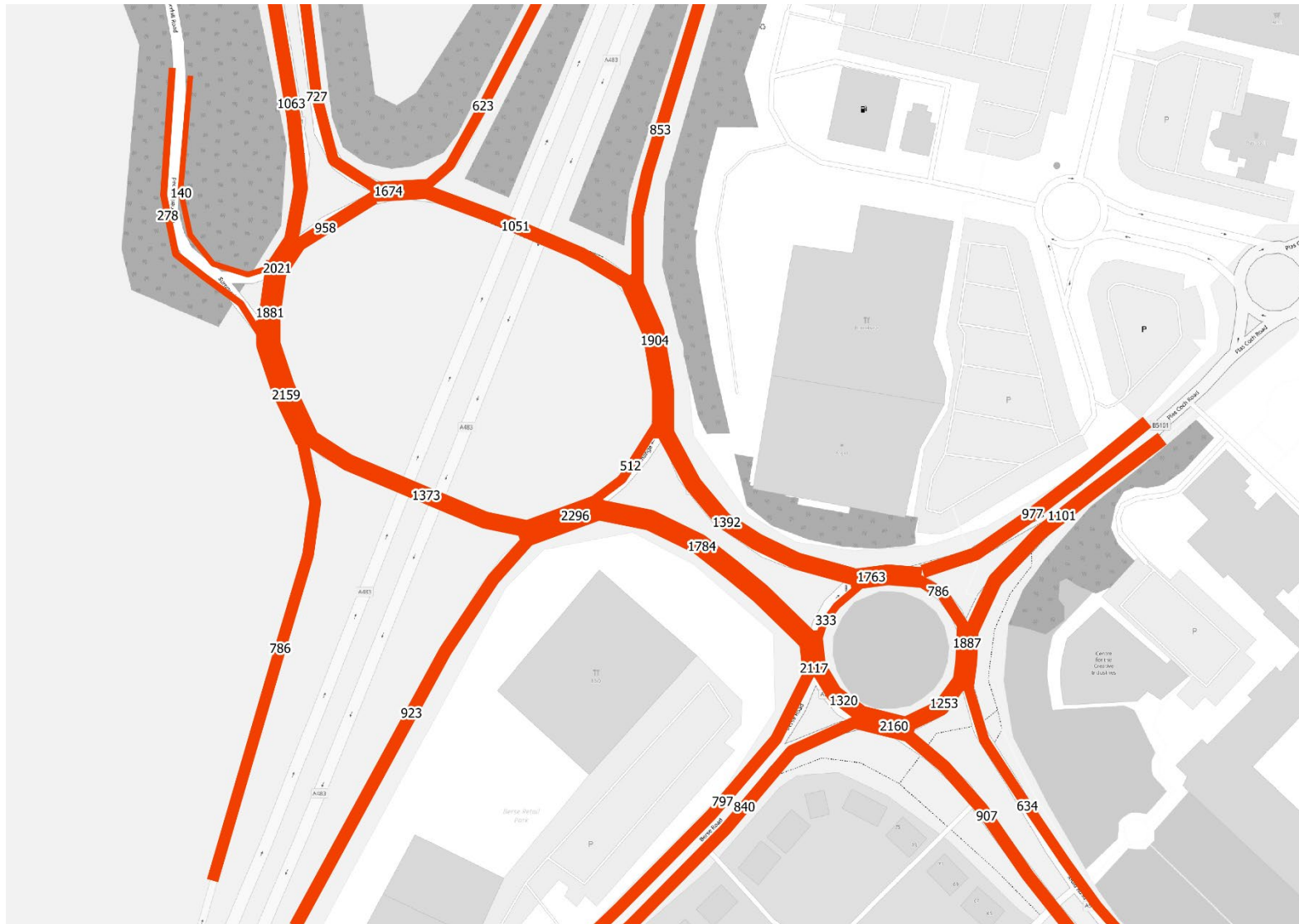
Appendix I

A483 Junction 5 / DIY Roundabout Survey Flow Diagrams

4th July 2018 – AM peak (08:00-09:00) (PCUs)



4th July 2018 – PM peak (17:00-18:00) (PCUs)

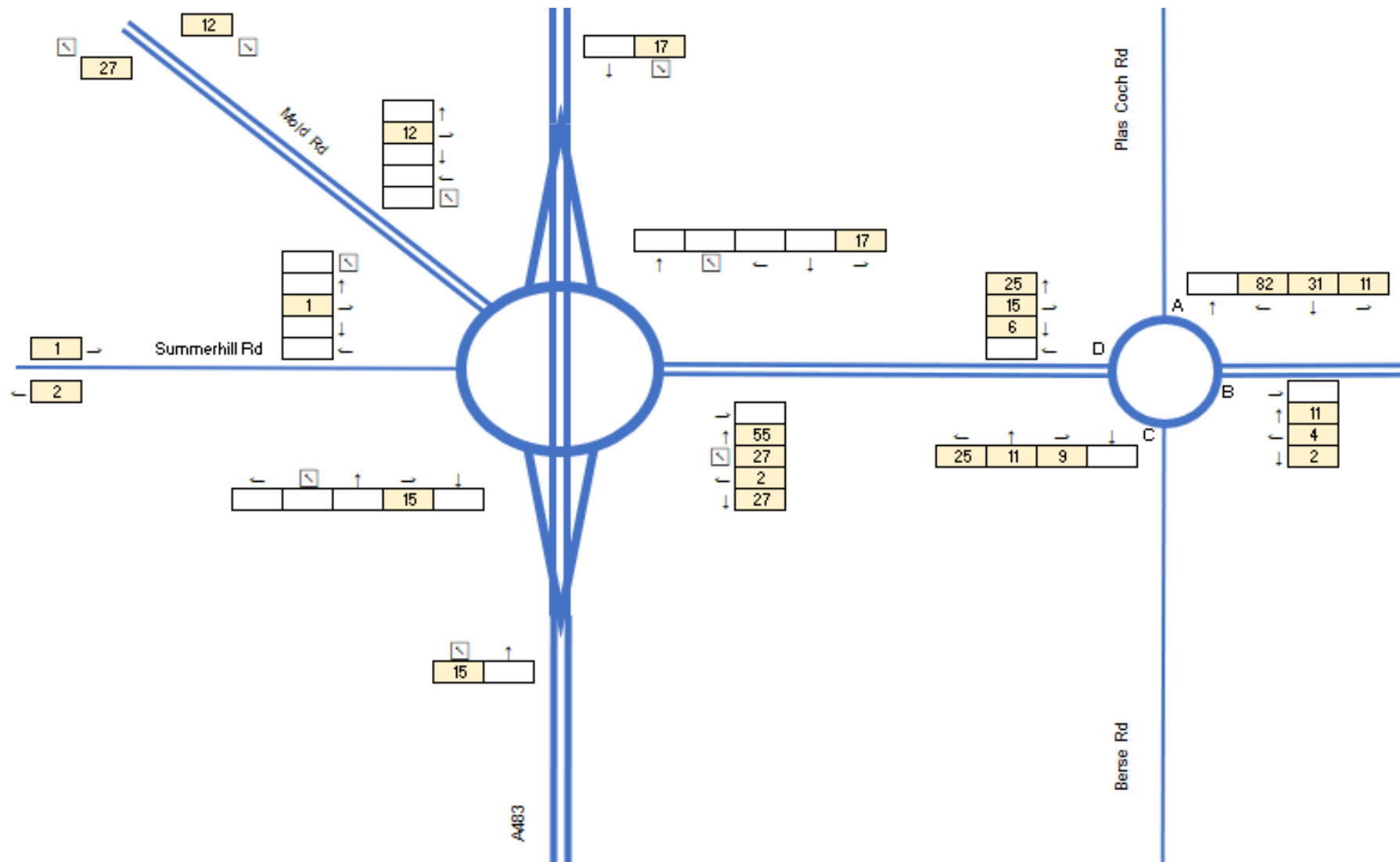


Appendix J

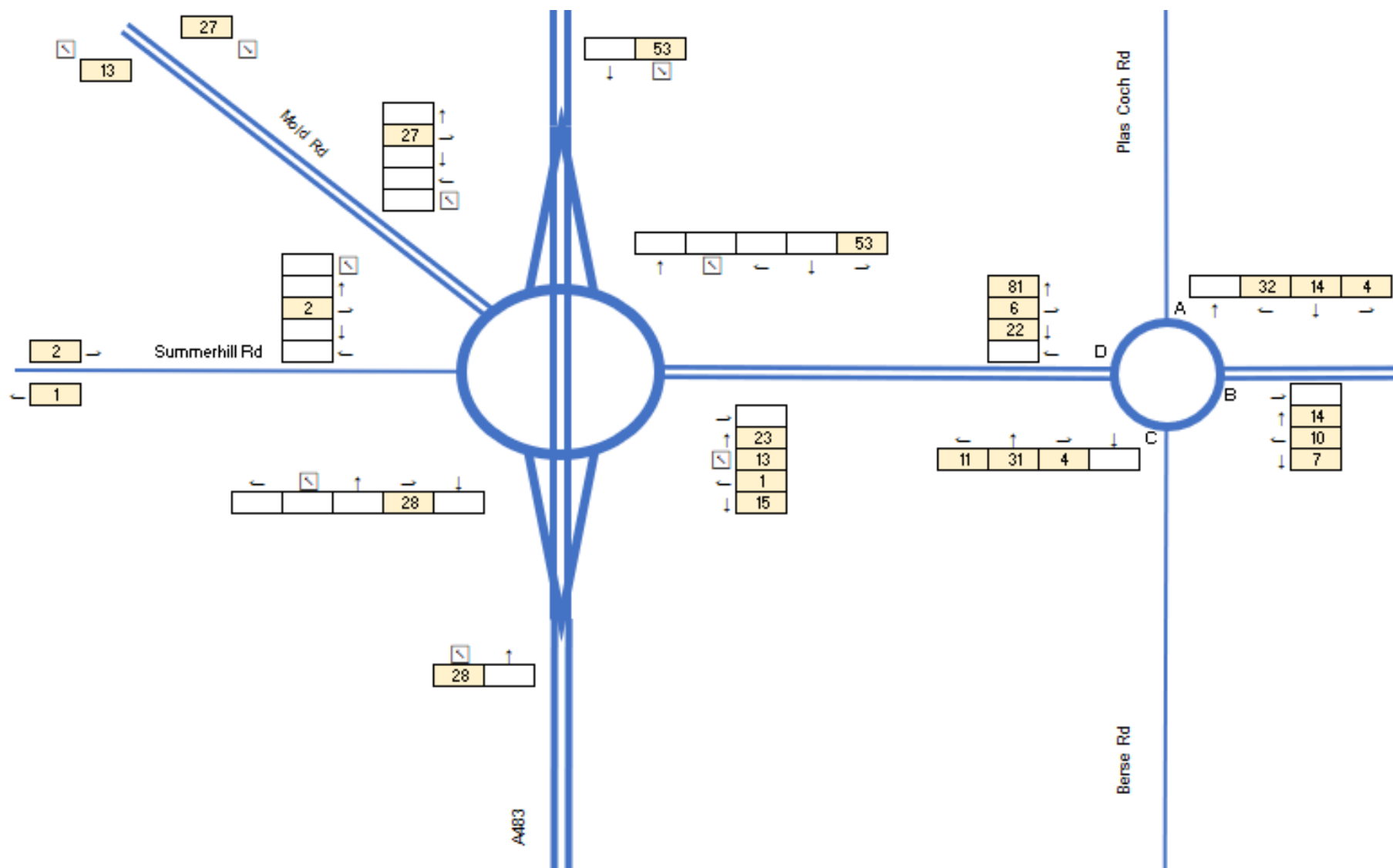
A483 Junction 5 / DIY Roundabout Development Flow Diagrams

- Development trips – AM Peak
- Development trips – PM Peak
- Development trips (plus existing university trips) – AM Peak
- Development trips (plus existing university trips) – PM Peak

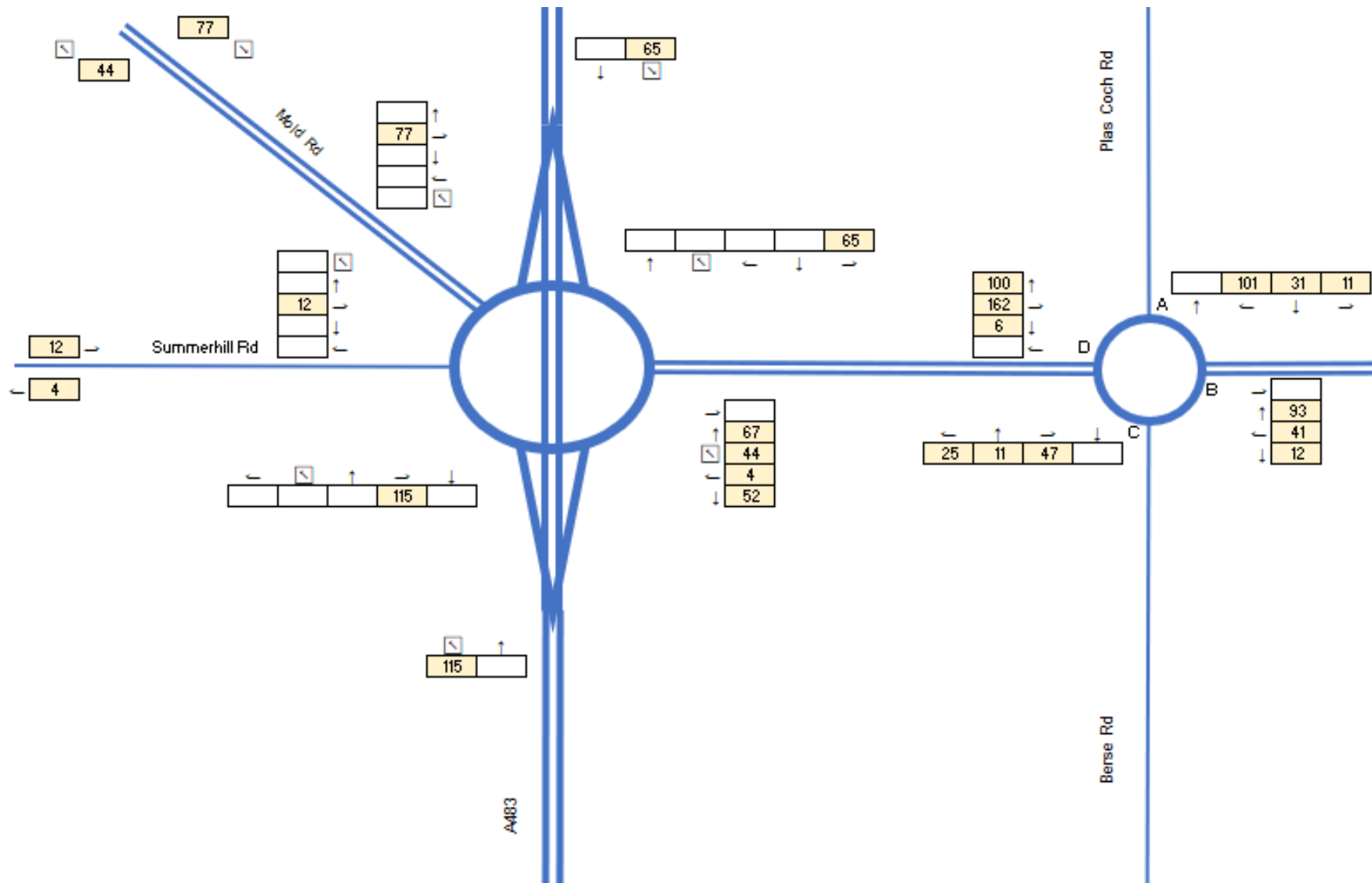
Development trips – AM peak (08:00-09:00)



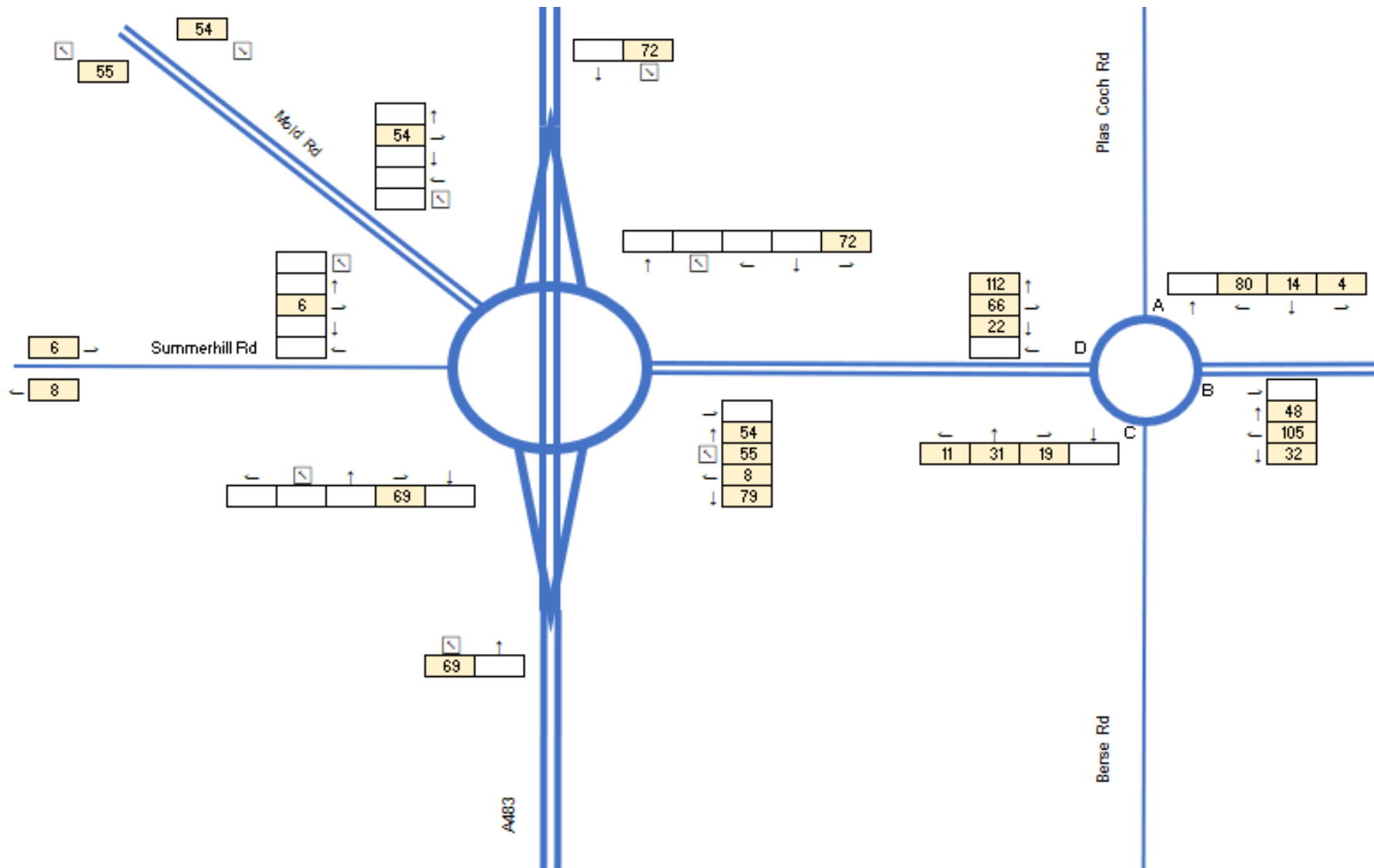
Development trips – PM peak (17:00-18:00)



Development trips (plus existing university trips) – AM peak (08:00-09:00)



Development trips (plus existing university trips) – PM peak (17:00-18:00)



Appendix K

A483 Junction 5 / DIY Roundabout

VISSIM Results

[Video files provided separately]