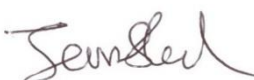



Land off Pump Lane  
Rainham  
Kent  
ME8 7TJ

Town and Country Planning Act 1990  
Appeal Reference: APP/A2280/W/20/3259868

Appeal by A C Goatham & Sons

Addendum Highways Statement of Common Ground

Signed by:	
James Rand, Paul Basham Associates, on behalf of Medway Council	
Simon Tucker, DTA on behalf of Appellant	

## 1. INTRODUCTION

- 1.1 This document has been prepared in relation to an appeal by A C Goatham & Sons against the decision of Medway Council to refuse planning application MC/19/1566. A Highways Statement of Common Ground was previously agreed, prior to the inquiry, and is Core Document 11.4.
- 1.2 The Transport Assessment (CD5.25) sets out the off-site highway mitigation works proposed at the time of planning submission, and these are still proposed at the time this document has been prepared. The original off-site mitigation works relate to:
- Widening of Lower Rainham Road at the roundabout with Yokosuka Way & Gads Hill – drawing 20230-10A
  - An additional lane on the A2 (EB) at the signalised junction with Bloors Lane & PlayFootball – drawing 20230-09A
  - Signalisation of Pump Lane under the railway – drawing 20230-05A
- 1.3 The council used the Medway Aimsun Model (MAM) to assess the impact of the development on the local road network. The council have included the appellant's mitigation works as described above in all of the MAM assessments to date, which in chronological order are CD12.10, CD12.1, CD12.3 & CD12.2.
- 1.4 During the inquiry, the appellants tabled additional highway mitigation works in a document entitled A2 Junction Review (attached here as **Appendix A**). The transport aspects of the inquiry were adjourned until Mid-April.
- 1.5 The purpose of this document is to set out the matters that are agreed in respect of the additional mitigation works proposed by the appellants.

## 2. ADDITIONAL MITIGATION WORKS

- 2.1 The A2 Junction Review document proposed the following additional mitigation works:
- Configuration of the Toucan crossing east of Bowaters Roundabout & additional lane capacity as shown on drawing 20230-17
  - Lane markings & additional lane capacity at Will Adams Roundabout as shown on drawing 20230-18
- 2.2 The additional mitigation works were discussed and further clarified in a meeting on 24<sup>th</sup> February. These were to be incorporated into the MAM, which the Council has used to assess the impact of the appeal scheme on the local road network. In addition to the items listed above, further mitigation was proposed by the appellant during this meeting, specifically:
- Revised signal timings for the Bowaters Roundabout

- 2.3 The meeting was followed by an email from Mr Tucker dated 28<sup>th</sup> February 2021 (attached as **Appendix B**). This email included a number of attachments, which revised the additional mitigation schemes as follows:
- Revised proposals for Toucan crossing east of Bowaters Roundabout & additional lane capacity, shown on drawing 20230-17B (replacing drawing 20230-17 attached to the A2 Junction Review);
  - Revised lane markings & additional lane capacity at Will Adams Roundabout as shown on drawing 20230-18B (replacing drawing 20230-18 attached to the A2 Junction Review)
- 2.4 The email attachments also included:
- The signal timings files for Bowaters Roundabout
  - The signal timings files for Otterham Quay Lane / A2 / Meresborough Road
- 2.5 Finally, the email attachments included drawing 20230-10B, which is a revision to the appellant's original proposed mitigation works at the Lower Rainham Road/Yokosuka Way roundabout (drawing 20230-10A).
- 2.6 The council requested a Stage 1 Road Safety audit to be undertaken and this has been provided to the council on 8<sup>th</sup> April 2021. The report is dated 8<sup>th</sup> April and was supported by a site visit on 31<sup>st</sup> March 2021. Apart from issue 3.2.5, the other issues raised can be dealt with through the normal detail design progression at the Section 278 stage, post consent, if granted.

### 3. REVISED ASSESSMENT IN THE MAM

- 3.1 CD12.2 & CD12.3 present the results of the council's previous modelling assessments for scenarios in 2028 and 2037 respectively. The Council has undertaken new assessments incorporating the additional mitigation works in future year scenarios of 2028 & 2037.
- 3.2 The results of the modelling assessments including the appellants' additional mitigation works are presented in Sweco's Lower Rainham Report Addendum 3, which will become an Inquiry Document.
- 3.3 It is agreed that the physical mitigation works at Bowaters Roundabout (consistent with drawing 20230-17B) and Will Adams Way Roundabout (consistent with drawing 20230-18B) have been included in the modelling.
- 3.4 The signal timings included in the MAM at the Bowaters Roundabout and the Otterham Quay Lane/A2/Meresborough Road junction are consistent with those provided by the appellant on 28<sup>th</sup> February.

- 3.5 The revised mitigation works at Yokosuka Way – Lower Rainham Road Roundabout, shown on drawing 20230-10B is not included in the modelling. For the avoidance of doubt the original proposed mitigation at this roundabout, shown in drawing 20230-10A is included in the modelling.
- 3.6 The modelling results of the scenarios including the additional mitigation works are presented as 2A, 3A, 5A & 6A, in Sweco’s report as follows:

LRR Scenario	Assessment Year	Trip rates for development at Pump Lane	Development zone used	Additional A2 mitigations
2	2037	MAM Trip rates	Standalone development zone	No
2A	2037	MAM Trip rates	Standalone development zone	Yes
3	2037	Developer Trip rates	Standalone development zone	No
3A	2037	Developer Trip rates	Standalone development zone	Yes
5	2028	MAM Trip rates	Standalone development zone	No
5A	2028	MAM Trip rates	Standalone development zone	Yes
6	2028	Developer Trip rates	Standalone development zone	No
6A	2028	Developer Trip rates	Standalone development zone	Yes



**LAND OFF PUMP LANE  
RAINHAM  
KENT  
ME8 7TJ**

**TOWN AND COUNTRY PLANNING ACT 1990  
APPEAL REFERENCE: APP/A2280/W/20/3259868**

**APPEAL BY A C GOATHAM & SON**

**INQUIRY DOCUMENT: A2 Junction Operation Review**

**PREPARED BY:**

**Simon Tucker for the Appellant**

**23/02/2021**

**INQUIRY DOCUMENT REF: CD24**

1. As discussed in Mr Tucker's Rebuttal at para 6.4, the MAM model output at Figure 3 of Jarvis PoE it appears that there is some blocking back from the pedestrian crossing, circa 150m west of the Bowater Roundabout. This blocking back appears to progress through the Bowater Roundabout along the A2 to the Will Adams Roundabout and manifests in some queuing on the A2 and Ito Way.
2. There are natural gaps in traffic from the signals on the Bowater Roundabout where the A2 eastbound traffic is held so that traffic from Twydall Lane can enter the gyratory.
3. As such the crossing could be called by a pedestrian (i.e. the button pushed) every 60 seconds (corresponding to the cycle time on the Bowater Roundabout) without disrupting traffic patterns more widely. In practice the crossing is called on demand and, most likely, significantly less frequently.
4. It is evident that this synergy between Bowater Roundabout and the crossing whereby there are natural gaps in traffic is not realised within the MAM modelling. This may be due to poor co-ordination of the traffic signals (i.e. the pedestrian crossing is holding the A2 through traffic from the Will Adams Roundabout). It may be due to reduced lane capacity at the crossing (i.e. less than the upstream lane saturation flows).
5. There is no evidence in the observed conditions, including as reported in the DTA traffic surveys, or in the MAM validation as to the causality (i.e. in the reference case the crossing is co-ordinated and/or the level of demand is insufficient to modify the journey times along the link).
6. Should the operation of the crossing become an issue there are interventions that could be readily implemented to overcome this bottleneck. This arrangement is shown on **DTA Drawing 20230-16**.
7. A refuge island would allow pedestrians to cross in two stages. The reduced crossing distances will reduce the time required for pedestrians to cross and therefore reduce the intergreens (i.e. the time lost between the end of the invitation to cross to pedestrians and drivers getting a green light).
8. A reduction in the intergreens by 4 seconds will increase the two-way throughput by up to 270 vehicles per hour; equivalent to a 15% increase in traffic demand.
9. The provision of on-crossing detection will also minimise the number of demands that are no longer required when pedestrians cross when it is safe to do so. A halving in the number of demands at the crossing will increase the two-way throughput by up to 640 vehicles per hour; equivalent to a 35% increase in traffic demand.

10. A more significant increase in capacity would be achieved by doubling the number of lanes entries and taper these down to the west of the crossing. This arrangement is shown on **DTA Drawing 20230-17**. In broad terms doubling the lanes will double the traffic capacity however the intergreens would increase reducing this gain in addition to which the capacity of the funnel would limit any capacity increase to a 50% increase in traffic demand; equivalent to a further 1,000 vehicles per hour.

### **Will Adams Roundabout**

11. The Will Adams Roundabout is a four-arm roundabout. In response to ARCADY modelling and the MAM, to adapt this junction to forecast demand patterns changes to the road markings have been identified. These are to change the A2 East (Sovereign Avenue) entry and circulatory carriageway. Currently the lanes are marked from the nearside as: left only; ahead only; and, ahead and right. The proposed lane markings are: left and ahead; ahead only; and, right only. This requires changes to the circulatory carriageway so that the southern section in the future will mirror the northern section; both with three lanes. These changes are shown on **DTA Drawing 20230-18**.

12. The ARCADY modelling within the Transport Assessment (TA) reports lower levels of queuing on the A2 East entry than evident on the ground during the AM peak. At present the lane markings reflect that the highest demand is the ahead movement (52%) followed by the right turn movement (45%). 97% of the traffic is therefore assigned to two of the three entry lanes but can balance evenly between them. This however means that the available capacity from the nearside flare is not realised; there is a poor correlation between the road markings and the traffic demand overall. The 3% of the peak hour demand which turns left the lane has circa 20% of the entry capacity (i.e. based on the differential in capacity with and without the flare).

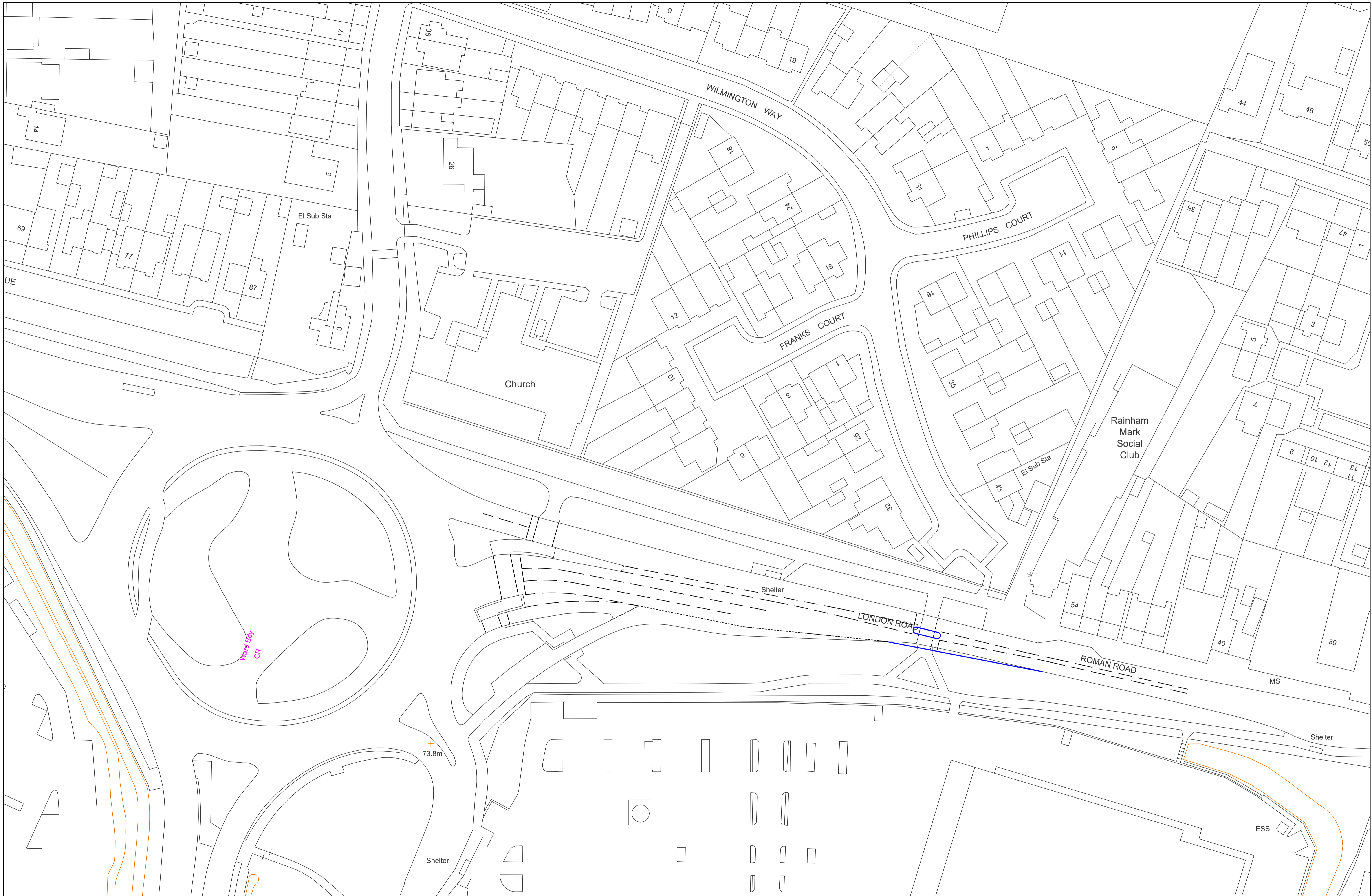
13. To realise circa 17% underutilised capacity from the flare the lane markings should be amended so that ahead traffic can use the nearside and middle lane. This in turn will free up right turn capacity by removing ahead traffic from this lane. Operationally the performance will be as reported in the TA (i.e., with reduced existing and future queuing).

14. The ARCADY modelling within the TA forecasts queuing on Will Adams Way which is not evident in the MAM output. Ultimately both models are likely to predict similar levels of entry capacity but with variability in the rate at capacity (slope) decreases with increases in the circulatory flow (i.e., gap acceptance). The revised modelling which is attached maintains the entry capacity but changes the slope in response to the amended circulatory carriageway markings. The result is a significant reduction in the



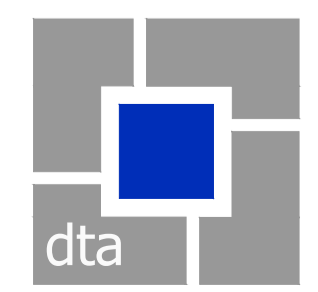
forecast queuing on Will Adams Way bringing it in line with the Council's expectations from the MAM appraisal.

**Simon Tucker**  
**23 February 2021**



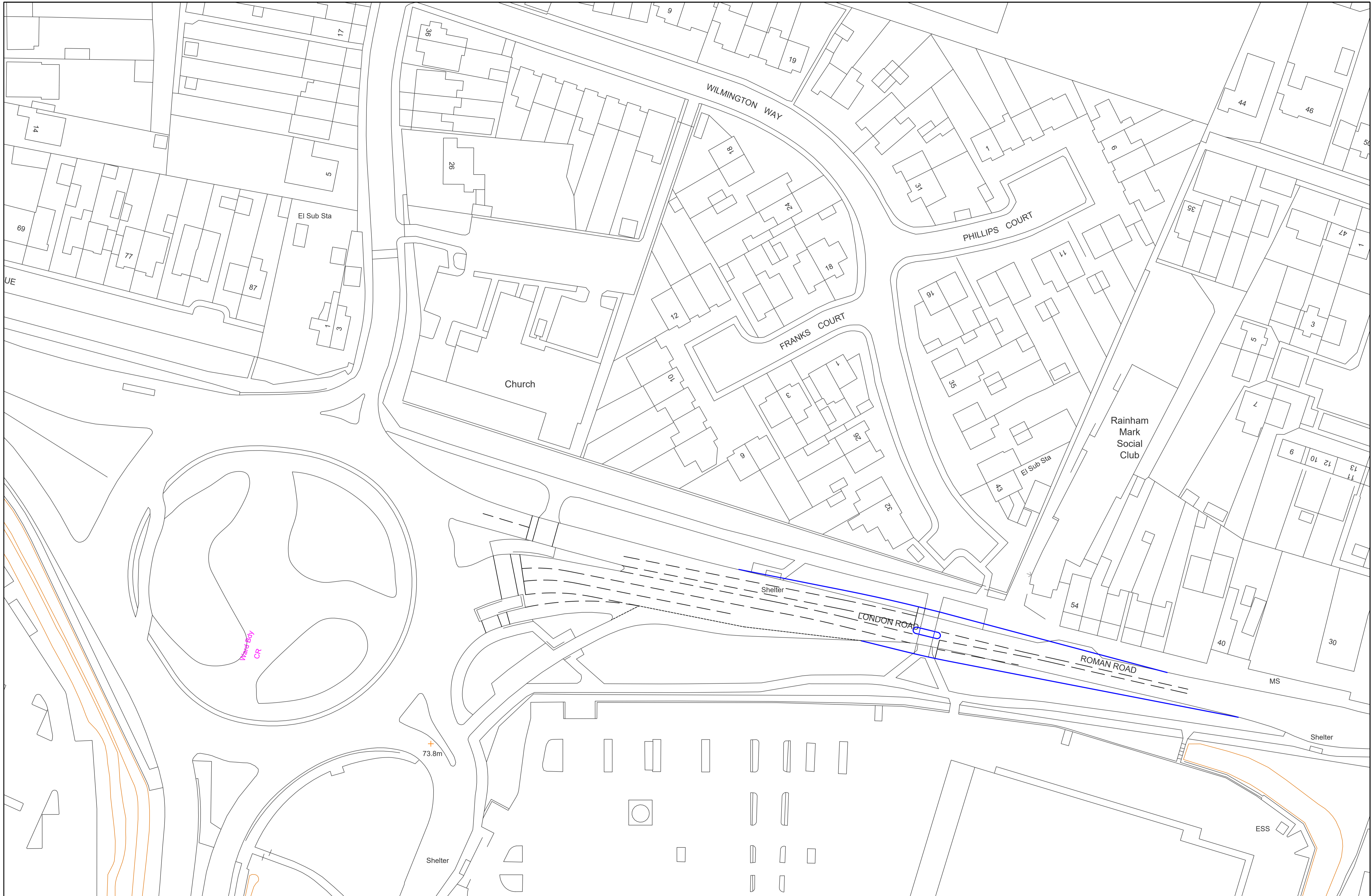
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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE



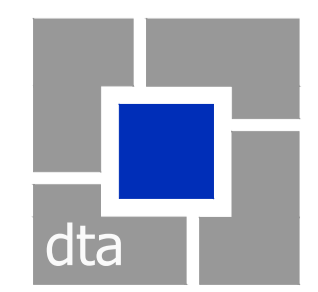
**david tucker associates**  
 transport planning consultants  
 Forester House, Doctors Lane  
 Henley-in-Arden  
 Warwickshire B95 5AW  
 Tel: +44(0)1564 793598  
 Fax: +44(0)1564 793983  
 www.dtatransportation.co.uk

JOB TITLE PUMP LANE, LOWER RAINHAM		CLIENT A C GOATHAM	
DRAWING TITLE PEDESTRIAN CROSSING EAST OF BOWATER OPTION 1			
SCALE 1:500@A1	DRAWN BY RM	DATE 22/02/21	DRAWING No 20230-16
			REVISION



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**david tucker associates**  
 transport planning consultants  
 Forester House, Doctors Lane  
 Henley-in-Arden  
 Warwickshire B95 5AW  
 Tel: +44(0)1564 793598  
 Fax: +44(0)1564 793983  
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JOB TITLE PUMP LANE, LOWER RAINHAM		CLIENT A C GOATHAM	
DRAWING TITLE PEDESTRIAN CROSSING EAST OF BOWATER OPTION 2			
SCALE 1:500@A1	DRAWN BY RM	DATE 22/02/21	DRAWING No 20230-17
			REVISION

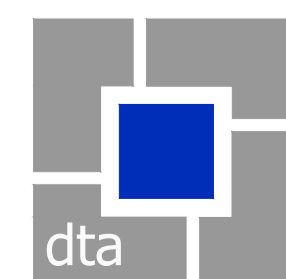


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**david tucker associates**  
 transport planning consultants

Forester House, Doctors Lane  
 Hurlley-in-Arden  
 Warwickshire B95 5AW  
 Tel: +44(0)1564 793598  
 Fax: +44(0)1564 793983  
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JOB TITLE PUMP LANE, LOWER RAINHAM		CLIENT A C GOATHAM	
DRAWING TITLE WILL ADAMS ROUNDABOUT			
SCALE 1: 250@A1	DRAWN BY RM	DATE 22/02/21	DRAWING No 20230-18
			REVISION

APPENDIX A

**ARCADY Output Reports**

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A2\_Ito Way\_Will Adams Way\_RevC (Existing A2E Road Markings).j9  
 Path: P:\20000's\20230\Junction Assessments  
 Report generation date: 23/02/2021 10:39:26

- »2018 Base, AM
- »2018 Base , PM
- »2018 Base+Dev, AM
- »2018 Base+Dev, PM
- »2029 Base, AM
- »2029 Base , PM
- »2029 Base+Dev, AM
- »2029 Base+Dev, PM

**Summary of junction performance**

	AM				PM			
	Set ID	Q (PCU)	Delay (s)	RFC	Set ID	Q (PCU)	Delay (s)	RFC
<b>2018 Base</b>								
1 - Ito Way	D1	1.4	5.53	0.59	D2	1.8	6.32	0.64
2 - A2 East		5.7	14.97	0.86		6.2	14.38	0.87
3 - Will Adams Way		2.8	13.52	0.74		2.8	15.03	0.74
4 - A2 West		2.1	5.75	0.68		1.7	5.00	0.63
<b>2018 Base+Dev</b>								
1 - Ito Way	D3	1.7	6.20	0.63	D4	2.0	6.77	0.66
2 - A2 East		7.0	18.52	0.88		6.9	15.96	0.88
3 - Will Adams Way		3.3	15.85	0.77		3.5	18.02	0.78
4 - A2 West		2.2	6.08	0.69		1.9	5.52	0.66
<b>2029 Base</b>								
1 - Ito Way	D5	2.1	7.40	0.68	D6	3.0	9.64	0.75
2 - A2 East		24.3	57.96	0.98		30.8	63.81	0.99
3 - Will Adams Way		5.5	27.24	0.85		6.8	37.42	0.88
4 - A2 West		3.1	8.00	0.76		2.5	6.84	0.72
<b>2029 Base+Dev</b>								
1 - Ito Way	D7	2.6	8.65	0.73	D8	3.4	10.73	0.78
2 - A2 East		43.3	99.11	1.01		41.4	84.07	1.00
3 - Will Adams Way		6.8	34.09	0.88		10.0	53.66	0.93
4 - A2 West		3.4	8.50	0.77		3.0	7.78	0.75

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 Av. delay per arriving vehicle.

## File summary

### File Description

<b>Title</b>	Will Adams Roundabout
<b>Location</b>	A2 - Ito Way
<b>Site number</b>	
<b>Date</b>	22/02/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	20230
<b>Enumerator</b>	DTA\Arcady (RM)
<b>Description</b>	

### Units

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

### Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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 period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

### Analysis Set Details

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

# 2018 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.99	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Ito Way	
2	A2 East	
3	Will Adams Way	
4	A2 West	

### Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Ito Way	7.40	9.06	18.8	20.8	55.0	32.0	
2 - A2 East	7.00	8.50	5.0	19.5	55.0	38.0	
3 - Will Adams Way	3.73	8.92	26.4	20.7	55.0	24.0	
4 - A2 West	7.15	10.48	35.6	16.8	55.0	41.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Ito Way	0.750	2621
2 - A2 East	0.683	2285
3 - Will Adams Way	0.671	2143
4 - A2 West	0.772	2803

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓



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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	936	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1301	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	202	295
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	130	737	429	5

## Vehicle Mix

### HV %s

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.59	5.53	1.4	A	936	936
2 - A2 East	0.86	14.97	5.7	B	1410	1410
3 - Will Adams Way	0.74	13.52	2.8	B	755	755
4 - A2 West	0.68	5.75	2.1	A	1301	1301

### Main Results for each time segment

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1369	1594	0.587	930	1044	0.0	1.4	5.382	A
2 - A2 East	1410	353	925	1653	0.853	1389	1374	0.0	5.3	12.772	B
3 - Will Adams Way	755	189	1650	1036	0.729	745	665	0.0	2.6	11.988	B
4 - A2 West	1301	325	1120	1939	0.671	1293	1275	0.0	2.0	5.506	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1587	0.590	936	1057	1.4	1.4	5.530	A
2 - A2 East	1410	353	931	1649	0.855	1409	1384	5.3	5.6	14.797	B
3 - Will Adams Way	755	189	1671	1022	0.739	754	669	2.6	2.7	13.407	B
4 - A2 West	1301	325	1135	1927	0.675	1301	1290	2.0	2.1	5.743	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.534	A
2 - A2 East	1410	353	931	1649	0.855	1410	1384	5.6	5.7	14.921	B
3 - Will Adams Way	755	189	1672	1021	0.739	755	669	2.7	2.8	13.495	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.752	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.534	A
2 - A2 East	1410	353	931	1649	0.855	1410	1384	5.7	5.7	14.966	B
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.8	2.8	13.515	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.753	A

# 2018 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	10.16	B

### 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 period length (min)	Time segment length (min)	Run automatically
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1010	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1212	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	142	257
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	100	874	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.64	6.32	1.8	A	1010	1010
2 - A2 East	0.87	14.38	6.2	B	1601	1601
3 - Will Adams Way	0.74	15.03	2.8	C	692	692
4 - A2 West	0.63	5.00	1.7	A	1212	1212

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1378	1587	0.636	1003	940	0.0	1.7	6.095	A
2 - A2 East	1601	400	633	1853	0.864	1578	1748	0.0	5.7	12.248	B
3 - Will Adams Way	692	173	1782	947	0.731	682	429	0.0	2.6	13.114	B
4 - A2 West	1212	303	1113	1945	0.623	1205	1351	0.0	1.6	4.829	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	952	1.7	1.8	6.313	A
2 - A2 East	1601	400	637	1850	0.865	1600	1761	5.7	6.1	14.213	B
3 - Will Adams Way	692	173	1805	932	0.743	691	432	2.6	2.8	14.881	B
4 - A2 West	1212	303	1128	1933	0.627	1212	1368	1.6	1.7	4.992	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	1850	0.865	1601	1761	6.1	6.2	14.335	B
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.001	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.998	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	1850	0.866	1601	1761	6.2	6.2	14.377	B
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.031	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.999	A



# 2018 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.64	B

### 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 period length (min)	Time segment length (min)	Run automatically
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1005	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1332	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	218	348
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	226	204	0	329
	4 - A2 West	160	738	429	5

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.63	6.20	1.7	A	1005	1005
2 - A2 East	0.88	18.52	7.0	C	1410	1410
3 - Will Adams Way	0.77	15.85	3.3	C	759	759
4 - A2 West	0.69	6.08	2.2	A	1332	1332

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1369	1594	0.631	998	1075	0.0	1.7	5.981	A
2 - A2 East	1410	353	993	1607	0.878	1385	1374	0.0	6.3	14.895	B
3 - Will Adams Way	759	190	1698	1003	0.757	747	680	0.0	2.9	13.524	B
4 - A2 West	1332	333	1121	1938	0.687	1323	1325	0.0	2.2	5.777	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1379	1586	0.634	1005	1091	1.7	1.7	6.193	A
2 - A2 East	1410	353	1000	1602	0.880	1408	1385	6.3	6.8	18.125	C
3 - Will Adams Way	759	190	1723	987	0.769	758	685	2.9	3.2	15.527	C
4 - A2 West	1332	333	1138	1925	0.692	1332	1343	2.2	2.2	6.066	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	1602	0.880	1409	1385	6.8	6.9	18.410	C
3 - Will Adams Way	759	190	1724	986	0.770	759	685	3.2	3.2	15.802	C
4 - A2 West	1332	333	1139	1924	0.692	1332	1344	2.2	2.2	6.079	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	1602	0.880	1410	1385	6.9	7.0	18.516	C
3 - Will Adams Way	759	190	1725	985	0.770	759	685	3.2	3.3	15.848	C
4 - A2 West	1332	333	1140	1924	0.692	1332	1344	2.2	2.2	6.084	A





# 2018 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.34	B

### 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 period length (min)	Time segment length (min)	Run automatically
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1047	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1263	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
1 - Ito Way	0	611	152	284
2 - A2 East	733	2	53	813
3 - Will Adams Way	142	274	0	298
4 - A2 West	150	875	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.66	6.77	2.0	A	1047	1047
2 - A2 East	0.88	15.96	6.9	C	1601	1601
3 - Will Adams Way	0.78	18.02	3.5	C	714	714
4 - A2 West	0.66	5.52	1.9	A	1263	1263

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1378	1587	0.660	1039	1010	0.0	1.9	6.485	A
2 - A2 East	1601	400	669	1828	0.876	1576	1748	0.0	6.3	13.219	B
3 - Will Adams Way	714	179	1807	930	0.767	702	439	0.0	3.1	15.036	C
4 - A2 West	1263	316	1132	1929	0.655	1256	1376	0.0	1.9	5.286	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1388	1579	0.663	1047	1024	1.9	1.9	6.757	A
2 - A2 East	1601	400	674	1825	0.877	1599	1761	6.3	6.7	15.707	C
3 - Will Adams Way	714	179	1831	914	0.781	713	442	3.1	3.4	17.713	C
4 - A2 West	1263	316	1150	1916	0.659	1263	1395	1.9	1.9	5.507	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	1.9	2.0	6.764	A
2 - A2 East	1601	400	674	1825	0.877	1600	1762	6.7	6.8	15.890	C
3 - Will Adams Way	714	179	1832	913	0.782	714	442	3.4	3.5	17.953	C
4 - A2 West	1263	316	1151	1915	0.659	1263	1396	1.9	1.9	5.518	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	2.0	2.0	6.767	A
2 - A2 East	1601	400	674	1825	0.877	1601	1762	6.8	6.9	15.957	C
3 - Will Adams Way	714	179	1833	913	0.782	714	442	3.5	3.5	18.018	C
4 - A2 West	1263	316	1151	1915	0.659	1263	1396	1.9	1.9	5.520	A



# 2029 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	27.47	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 period length (min)	Time segment length (min)	Run automatically
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1029	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1411	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	202	332
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	146	830	429	6

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.68	7.40	2.1	A	1029	1029
2 - A2 East	0.98	57.96	24.3	F	1584	1584
3 - Will Adams Way	0.85	27.24	5.5	D	755	755
4 - A2 West	0.76	8.00	3.1	A	1411	1411

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1459	1526	0.674	1021	1127	0.0	2.0	7.018	A
2 - A2 East	1584	396	961	1628	0.973	1525	1519	0.0	14.7	26.903	D
3 - Will Adams Way	755	189	1824	919	0.822	739	663	0.0	4.1	18.574	C
4 - A2 West	1411	353	1187	1887	0.748	1400	1375	0.0	2.9	7.222	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1472	1516	0.679	1029	1153	2.0	2.1	7.379	A
2 - A2 East	1584	396	969	1623	0.976	1565	1533	14.7	19.4	45.790	E
3 - Will Adams Way	755	189	1866	891	0.848	752	668	4.1	5.0	24.951	C
4 - A2 West	1411	353	1215	1866	0.756	1410	1403	2.9	3.0	7.886	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1473	1515	0.679	1029	1157	2.1	2.1	7.396	A
2 - A2 East	1584	396	969	1623	0.976	1572	1533	19.4	22.3	53.115	F
3 - Will Adams Way	755	189	1873	886	0.852	754	669	5.0	5.3	26.533	D
4 - A2 West	1411	353	1219	1862	0.758	1411	1407	3.0	3.1	7.967	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1474	1515	0.679	1029	1159	2.1	2.1	7.402	A
2 - A2 East	1584	396	969	1623	0.976	1576	1534	22.3	24.3	57.961	F
3 - Will Adams Way	755	189	1876	884	0.854	754	669	5.3	5.5	27.239	D
4 - A2 West	1411	353	1221	1861	0.758	1411	1409	3.1	3.1	7.999	A



# 2029 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	32.46	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 period length (min)	Time segment length (min)	Run automatically
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1122	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1338	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	142	290
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	113	987	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.75	9.64	3.0	A	1122	1122
2 - A2 East	0.99	63.81	30.8	F	1801	1801
3 - Will Adams Way	0.88	37.42	6.8	E	692	692
4 - A2 West	0.72	6.84	2.5	A	1338	1338

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1485	1507	0.745	1111	1025	0.0	2.8	8.859	A
2 - A2 East	1801	450	664	1831	0.983	1732	1932	0.0	17.4	27.119	D
3 - Will Adams Way	692	173	1969	822	0.842	674	427	0.0	4.6	22.198	C
4 - A2 West	1338	335	1182	1891	0.707	1329	1461	0.0	2.4	6.297	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1498	1497	0.750	1122	1049	2.8	2.9	9.572	A
2 - A2 East	1801	450	670	1827	0.986	1776	1950	17.4	23.5	48.082	E
3 - Will Adams Way	692	173	2015	791	0.875	687	431	4.6	5.9	32.422	D
4 - A2 West	1338	335	1210	1870	0.716	1338	1492	2.4	2.5	6.757	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1500	1496	0.750	1122	1053	2.9	3.0	9.621	A
2 - A2 East	1801	450	670	1827	0.986	1784	1952	23.5	27.6	57.242	F
3 - Will Adams Way	692	173	2023	785	0.881	690	431	5.9	6.4	35.745	E
4 - A2 West	1338	335	1215	1865	0.717	1338	1498	2.5	2.5	6.818	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1500	1495	0.750	1122	1055	3.0	3.0	9.635	A
2 - A2 East	1801	450	670	1827	0.986	1788	1952	27.6	30.8	63.805	F
3 - Will Adams Way	692	173	2027	783	0.884	691	432	6.4	6.8	37.417	E
4 - A2 West	1338	335	1217	1864	0.718	1338	1500	2.5	2.5	6.844	A





# 2029 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	41.90	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 period length (min)	Time segment length (min)	Run automatically
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1099	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1442	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
1 - Ito Way	0	495	218	386
2 - A2 East	795	5	38	746
3 - Will Adams Way	226	204	0	329
4 - A2 West	176	831	429	6

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.73	8.65	2.6	A	1099	1099
2 - A2 East	1.01	99.11	43.3	F	1584	1584
3 - Will Adams Way	0.88	34.09	6.8	D	759	759
4 - A2 West	0.77	8.50	3.4	A	1442	1442

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1459	1526	0.720	1089	1150	0.0	2.5	8.058	A
2 - A2 East	1584	396	1030	1582	1.001	1505	1518	0.0	19.7	33.511	D
3 - Will Adams Way	759	190	1858	896	0.847	740	677	0.0	4.7	21.039	C
4 - A2 West	1442	361	1179	1893	0.762	1430	1418	0.0	3.1	7.582	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1473	1516	0.725	1099	1176	2.5	2.6	8.614	A
2 - A2 East	1584	396	1039	1576	1.005	1546	1533	19.7	29.2	65.380	F
3 - Will Adams Way	759	190	1901	867	0.875	754	684	4.7	6.0	29.968	D
4 - A2 West	1442	361	1208	1871	0.771	1441	1447	3.1	3.3	8.353	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1474	1515	0.725	1099	1181	2.6	2.6	8.646	A
2 - A2 East	1584	396	1039	1575	1.005	1554	1534	29.2	36.8	83.756	F
3 - Will Adams Way	759	190	1909	862	0.880	757	684	6.0	6.5	32.703	D
4 - A2 West	1442	361	1214	1867	0.773	1442	1452	3.3	3.3	8.459	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1474	1515	0.726	1099	1183	2.6	2.6	8.655	A
2 - A2 East	1584	396	1039	1575	1.005	1558	1534	36.8	43.3	99.109	F
3 - Will Adams Way	759	190	1912	859	0.883	758	684	6.5	6.8	34.088	D
4 - A2 West	1442	361	1216	1865	0.773	1442	1454	3.3	3.4	8.504	A



# 2029 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	42.06	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 period length (min)	Time segment length (min)	Run automatically
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1160	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1389	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	152	318
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	142	274	0	298
	4 - A2 West	163	988	237	1

## Vehicle Mix

**HV %s**

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.78	10.73	3.4	B	1160	1160
2 - A2 East	1.00	84.07	41.4	F	1801	1801
3 - Will Adams Way	0.93	53.66	10.0	F	714	714
4 - A2 West	0.75	7.78	3.0	A	1389	1389

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1483	1508	0.769	1147	1090	0.0	3.2	9.667	A
2 - A2 East	1801	450	701	1806	0.997	1721	1930	0.0	20.1	30.307	D
3 - Will Adams Way	714	179	1985	810	0.881	691	436	0.0	5.8	26.458	D
4 - A2 West	1389	347	1195	1881	0.739	1378	1481	0.0	2.7	7.018	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1498	1497	0.775	1159	1115	3.2	3.3	10.624	B
2 - A2 East	1801	450	708	1802	1.000	1765	1950	20.1	29.0	57.636	F
3 - Will Adams Way	714	179	2032	779	0.917	705	441	5.8	8.0	42.617	E
4 - A2 West	1389	347	1225	1858	0.748	1388	1513	2.7	2.9	7.647	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1500	1496	0.776	1160	1120	3.3	3.4	10.701	B
2 - A2 East	1801	450	708	1801	1.000	1774	1952	29.0	35.8	72.271	F
3 - Will Adams Way	714	179	2041	773	0.923	709	441	8.0	9.2	49.537	E
4 - A2 West	1389	347	1231	1853	0.749	1389	1519	2.9	2.9	7.740	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1501	1495	0.776	1160	1122	3.4	3.4	10.728	B
2 - A2 East	1801	450	708	1801	1.000	1778	1953	35.8	41.4	84.070	F
3 - Will Adams Way	714	179	2045	771	0.927	711	441	9.2	10.0	53.657	F
4 - A2 West	1389	347	1234	1851	0.750	1389	1522	2.9	3.0	7.782	A

Junctions 9
ARCADY 9 - Roundabout Module
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Filename: A2\_Ito Way\_Will Adams Way\_RevC.j9  
 Path: P:\20000's\20230\Junction Assessments  
 Report generation date: 23/02/2021 10:37:13

- »2018 Base, AM
- »2018 Base , PM
- »2018 Base+Dev, AM
- »2018 Base+Dev, PM
- »2029 Base, AM
- »2029 Base , PM
- »2029 Base+Dev, AM
- »2029 Base+Dev, PM

**Summary of junction performance**

	AM				PM			
	Set ID	Q (PCU)	Delay (s)	RFC	Set ID	Q (PCU)	Delay (s)	RFC
<b>2018 Base</b>								
1 - Ito Way	D1	1.4	5.53	0.59	D2	1.8	6.32	0.64
2 - A2 East		1.9	4.75	0.65		2.0	4.49	0.67
3 - Will Adams Way		2.8	13.52	0.74		2.8	15.04	0.74
4 - A2 West		2.1	5.75	0.68		1.7	5.00	0.63
<b>2018 Base+Dev</b>								
1 - Ito Way	D3	1.7	6.20	0.63	D4	2.0	6.77	0.66
2 - A2 East		2.0	5.12	0.67		2.1	4.66	0.67
3 - Will Adams Way		3.3	15.87	0.77		3.5	18.04	0.78
4 - A2 West		2.2	6.09	0.69		1.9	5.52	0.66
<b>2029 Base</b>								
1 - Ito Way	D5	2.1	7.40	0.68	D6	3.0	9.64	0.75
2 - A2 East		2.8	6.49	0.74		3.1	6.26	0.76
3 - Will Adams Way		5.8	28.57	0.86		7.5	41.30	0.89
4 - A2 West		3.1	8.06	0.76		2.5	6.91	0.72
<b>2029 Base+Dev</b>								
1 - Ito Way	D7	2.6	8.66	0.73	D8	3.4	10.73	0.78
2 - A2 East		3.1	7.22	0.76		3.3	6.60	0.77
3 - Will Adams Way		8.1	40.70	0.90		12.7	67.86	0.94
4 - A2 West		3.5	8.72	0.78		3.0	7.92	0.75

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 Av. delay per arriving vehicle.



## File summary

### File Description

<b>Title</b>	Will Adams Roundabout
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	12/02/2019
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	DTA\Arcady
<b>Description</b>	

### Units

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

### Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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 period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

### Analysis Set Details

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

# 2018 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	6.72	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Ito Way	
2	A2 East	
3	Will Adams Way	
4	A2 West	

### Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Ito Way	7.40	9.06	18.8	20.8	55.0	32.0	
2 - A2 East	7.00	12.49	19.5	19.5	55.0	38.0	
3 - Will Adams Way	3.73	8.92	26.4	20.7	55.0	24.0	
4 - A2 West	7.15	10.48	35.6	16.8	55.0	41.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Ito Way	0.750	2621
2 - A2 East	0.796	2910
3 - Will Adams Way	0.671	2143
4 - A2 West	0.772	2803

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	936	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1301	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	202	295
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	130	737	429	5

## Vehicle Mix

### HV %s

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.59	5.53	1.4	A	936	936
2 - A2 East	0.65	4.75	1.9	A	1410	1410
3 - Will Adams Way	0.74	13.52	2.8	B	755	755
4 - A2 West	0.68	5.75	2.1	A	1301	1301

### Main Results for each time segment

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1369	1594	0.587	930	1050	0.0	1.4	5.381	A
2 - A2 East	1410	353	925	2173	0.649	1403	1374	0.0	1.8	4.632	A
3 - Will Adams Way	755	189	1663	1027	0.735	744	665	0.0	2.6	12.336	B
4 - A2 West	1301	325	1126	1934	0.673	1293	1281	0.0	2.0	5.549	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1587	0.590	936	1058	1.4	1.4	5.531	A
2 - A2 East	1410	353	931	2168	0.650	1410	1384	1.8	1.8	4.746	A
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.6	2.7	13.471	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.0	2.1	5.750	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.534	A
2 - A2 East	1410	353	931	2168	0.650	1410	1384	1.8	1.8	4.746	A
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.7	2.8	13.514	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.754	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.535	A
2 - A2 East	1410	353	931	2168	0.650	1410	1384	1.8	1.9	4.746	A
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.8	2.8	13.525	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.754	A

# 2018 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	6.65	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 period length (min)	Time segment length (min)	Run automatically
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1010	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1212	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	142	257
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	100	874	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.64	6.32	1.8	A	1010	1010
2 - A2 East	0.67	4.49	2.0	A	1601	1601
3 - Will Adams Way	0.74	15.04	2.8	C	692	692
4 - A2 West	0.63	5.00	1.7	A	1212	1212

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1378	1587	0.636	1003	947	0.0	1.7	6.094	A
2 - A2 East	1601	400	633	2406	0.666	1593	1748	0.0	2.0	4.390	A
3 - Will Adams Way	692	173	1797	937	0.738	681	429	0.0	2.7	13.569	B
4 - A2 West	1212	303	1119	1939	0.625	1205	1359	0.0	1.6	4.863	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.7	1.8	6.315	A
2 - A2 East	1601	400	637	2402	0.666	1601	1761	2.0	2.0	4.491	A
3 - Will Adams Way	692	173	1806	931	0.743	691	432	2.7	2.8	14.965	B
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.6	1.7	4.996	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	2402	0.666	1601	1761	2.0	2.0	4.491	A
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.027	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.999	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	2402	0.666	1601	1761	2.0	2.0	4.491	A
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.043	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.999	A



# 2018 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	7.46	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 period length (min)	Time segment length (min)	Run automatically
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1005	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1332	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	218	348
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	226	204	0	329
	4 - A2 West	160	738	429	5

## Vehicle Mix



**HV %s**

	To			
	1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From				
1 - Ito Way	0	0	0	0
2 - A2 East	0	0	0	0
3 - Will Adams Way	0	0	0	0
4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.63	6.20	1.7	A	1005	1005
2 - A2 East	0.67	5.12	2.0	A	1410	1410
3 - Will Adams Way	0.77	15.87	3.3	C	759	759
4 - A2 West	0.69	6.09	2.2	A	1332	1332

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1369	1594	0.631	998	1083	0.0	1.7	5.979	A
2 - A2 East	1410	353	993	2119	0.666	1402	1374	0.0	2.0	4.972	A
3 - Will Adams Way	759	190	1715	992	0.765	747	681	0.0	3.0	14.070	B
4 - A2 West	1332	333	1129	1932	0.690	1323	1333	0.0	2.2	5.837	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.195	A
2 - A2 East	1410	353	1000	2113	0.667	1410	1385	2.0	2.0	5.114	A
3 - Will Adams Way	759	190	1725	985	0.770	758	685	3.0	3.2	15.762	C
4 - A2 West	1332	333	1140	1924	0.692	1332	1344	2.2	2.2	6.078	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	2113	0.667	1410	1385	2.0	2.0	5.117	A
3 - Will Adams Way	759	190	1725	985	0.770	759	685	3.2	3.3	15.846	C
4 - A2 West	1332	333	1140	1924	0.692	1332	1344	2.2	2.2	6.083	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	2113	0.667	1410	1385	2.0	2.0	5.117	A
3 - Will Adams Way	759	190	1725	985	0.770	759	685	3.3	3.3	15.872	C
4 - A2 West	1332	333	1140	1923	0.693	1332	1344	2.2	2.2	6.085	A



# 2018 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	7.44	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 period length (min)	Time segment length (min)	Run automatically
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1047	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1263	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	152	284
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	142	274	0	298
	4 - A2 West	150	875	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.66	6.77	2.0	A	1047	1047
2 - A2 East	0.67	4.66	2.1	A	1601	1601
3 - Will Adams Way	0.78	18.04	3.5	C	714	714
4 - A2 West	0.66	5.52	1.9	A	1263	1263

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1377	1587	0.660	1039	1018	0.0	1.9	6.482	A
2 - A2 East	1601	400	669	2377	0.674	1593	1747	0.0	2.0	4.548	A
3 - Will Adams Way	714	179	1823	919	0.777	701	439	0.0	3.2	15.692	C
4 - A2 West	1263	316	1140	1924	0.657	1255	1384	0.0	1.9	5.329	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	1.9	1.9	6.759	A
2 - A2 East	1601	400	674	2373	0.675	1601	1761	2.0	2.1	4.660	A
3 - Will Adams Way	714	179	1833	913	0.782	713	442	3.2	3.4	17.879	C
4 - A2 West	1263	316	1150	1915	0.659	1263	1396	1.9	1.9	5.516	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	1.9	2.0	6.764	A
2 - A2 East	1601	400	674	2373	0.675	1601	1762	2.1	2.1	4.663	A
3 - Will Adams Way	714	179	1833	913	0.782	714	442	3.4	3.5	18.007	C
4 - A2 West	1263	316	1151	1915	0.660	1263	1396	1.9	1.9	5.520	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	2.0	2.0	6.767	A
2 - A2 East	1601	400	674	2373	0.675	1601	1762	2.1	2.1	4.663	A
3 - Will Adams Way	714	179	1833	913	0.782	714	442	3.5	3.5	18.045	C
4 - A2 West	1263	316	1151	1915	0.660	1263	1396	1.9	1.9	5.521	A



# 2029 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	10.64	B

### 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 period length (min)	Time segment length (min)	Run automatically
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1029	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1411	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	202	332
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	146	830	429	6

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.68	7.40	2.1	A	1029	1029
2 - A2 East	0.74	6.49	2.8	A	1584	1584
3 - Will Adams Way	0.86	28.57	5.8	D	755	755
4 - A2 West	0.76	8.06	3.1	A	1411	1411

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1458	1527	0.674	1021	1151	0.0	2.0	7.008	A
2 - A2 East	1584	396	961	2144	0.739	1573	1518	0.0	2.8	6.188	A
3 - Will Adams Way	755	189	1871	887	0.851	736	664	0.0	4.8	21.558	C
4 - A2 West	1411	353	1210	1870	0.755	1399	1397	0.0	3.0	7.472	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1473	1516	0.679	1029	1162	2.0	2.1	7.385	A
2 - A2 East	1584	396	969	2138	0.741	1584	1533	2.8	2.8	6.486	A
3 - Will Adams Way	755	189	1884	879	0.859	753	669	4.8	5.4	27.540	D
4 - A2 West	1411	353	1225	1858	0.759	1411	1412	3.0	3.1	8.026	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1474	1515	0.679	1029	1163	2.1	2.1	7.399	A
2 - A2 East	1584	396	969	2138	0.741	1584	1534	2.8	2.8	6.493	A
3 - Will Adams Way	755	189	1884	879	0.859	754	669	5.4	5.7	28.300	D
4 - A2 West	1411	353	1225	1857	0.760	1411	1413	3.1	3.1	8.054	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1474	1515	0.679	1029	1163	2.1	2.1	7.404	A
2 - A2 East	1584	396	969	2138	0.741	1584	1534	2.8	2.8	6.493	A
3 - Will Adams Way	755	189	1884	879	0.859	755	669	5.7	5.8	28.572	D
4 - A2 West	1411	353	1226	1857	0.760	1411	1413	3.1	3.1	8.060	A





# 2029 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	12.09	B

### 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 period length (min)	Time segment length (min)	Run automatically
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1122	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1338	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	142	290
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	113	987	237	1

## Vehicle Mix

## HV %s

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.75	9.64	3.0	A	1122	1122
2 - A2 East	0.76	6.26	3.1	A	1801	1801
3 - Will Adams Way	0.89	41.30	7.5	E	692	692
4 - A2 West	0.72	6.91	2.5	A	1338	1338

### Main Results for each time segment

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1483	1508	0.744	1111	1051	0.0	2.8	8.825	A
2 - A2 East	1801	450	664	2381	0.756	1789	1930	0.0	3.0	5.966	A
3 - Will Adams Way	692	173	2024	784	0.882	669	429	0.0	5.8	27.299	D
4 - A2 West	1338	335	1205	1873	0.714	1328	1488	0.0	2.4	6.498	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1499	1496	0.750	1121	1060	2.8	2.9	9.581	A
2 - A2 East	1801	450	670	2376	0.758	1801	1951	3.0	3.1	6.249	A
3 - Will Adams Way	692	173	2039	775	0.893	688	432	5.8	6.9	38.222	E
4 - A2 West	1338	335	1221	1861	0.719	1338	1505	2.4	2.5	6.877	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1500	1495	0.750	1122	1061	2.9	3.0	9.627	A
2 - A2 East	1801	450	670	2376	0.758	1801	1952	3.1	3.1	6.255	A
3 - Will Adams Way	692	173	2039	775	0.893	690	432	6.9	7.3	40.384	E
4 - A2 West	1338	335	1223	1859	0.720	1338	1506	2.5	2.5	6.901	A

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1501	1495	0.750	1122	1061	3.0	3.0	9.639	A
2 - A2 East	1801	450	670	2376	0.758	1801	1953	3.1	3.1	6.256	A
3 - Will Adams Way	692	173	2039	775	0.893	691	432	7.3	7.5	41.299	E
4 - A2 West	1338	335	1223	1859	0.720	1338	1507	2.5	2.5	6.906	A



# 2029 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	13.19	B

### 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 period length (min)	Time segment length (min)	Run automatically
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1099	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1442	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	218	386
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	226	204	0	329
	4 - A2 West	176	831	429	6

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.73	8.66	2.6	A	1099	1099
2 - A2 East	0.76	7.22	3.1	A	1584	1584
3 - Will Adams Way	0.90	40.70	8.1	E	759	759
4 - A2 West	0.78	8.72	3.5	A	1442	1442

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1457	1528	0.719	1089	1182	0.0	2.5	8.033	A
2 - A2 East	1584	396	1030	2090	0.758	1572	1516	0.0	3.0	6.799	A
3 - Will Adams Way	759	190	1923	853	0.890	734	679	0.0	6.2	26.540	D
4 - A2 West	1442	361	1210	1870	0.771	1429	1447	0.0	3.2	7.954	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1473	1516	0.725	1099	1195	2.5	2.6	8.617	A
2 - A2 East	1584	396	1039	2083	0.761	1584	1533	3.0	3.1	7.204	A
3 - Will Adams Way	759	190	1938	843	0.901	754	685	6.2	7.4	37.465	E
4 - A2 West	1442	361	1227	1856	0.777	1441	1465	3.2	3.4	8.656	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1474	1515	0.726	1099	1196	2.6	2.6	8.649	A
2 - A2 East	1584	396	1039	2082	0.761	1584	1534	3.1	3.1	7.216	A
3 - Will Adams Way	759	190	1938	842	0.901	757	685	7.4	7.9	39.723	E
4 - A2 West	1442	361	1229	1855	0.777	1442	1466	3.4	3.4	8.704	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1475	1515	0.726	1099	1197	2.6	2.6	8.657	A
2 - A2 East	1584	396	1039	2082	0.761	1584	1535	3.1	3.1	7.220	A
3 - Will Adams Way	759	190	1938	842	0.901	758	685	7.9	8.1	40.696	E
4 - A2 West	1442	361	1229	1854	0.778	1442	1466	3.4	3.5	8.719	A



# 2029 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	16.55	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 period length (min)	Time segment length (min)	Run automatically
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1160	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1389	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	152	318
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	142	274	0	298
	4 - A2 West	163	988	237	1

## Vehicle Mix

**HV %s**

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.78	10.73	3.4	B	1160	1160
2 - A2 East	0.77	6.60	3.3	A	1801	1801
3 - Will Adams Way	0.94	67.86	12.7	F	714	714
4 - A2 West	0.75	7.92	3.0	A	1389	1389

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1480	1511	0.768	1147	1119	0.0	3.2	9.598	A
2 - A2 East	1801	450	701	2351	0.766	1788	1926	0.0	3.2	6.260	A
3 - Will Adams Way	714	179	2051	766	0.932	682	438	0.0	8.1	34.777	D
4 - A2 West	1389	347	1221	1861	0.747	1378	1512	0.0	2.9	7.292	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1498	1497	0.775	1159	1131	3.2	3.3	10.612	B
2 - A2 East	1801	450	708	2346	0.768	1801	1949	3.2	3.2	6.592	A
3 - Will Adams Way	714	179	2067	756	0.944	704	442	8.1	10.5	56.251	F
4 - A2 West	1389	347	1240	1846	0.752	1389	1531	2.9	3.0	7.852	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1500	1496	0.776	1160	1132	3.3	3.4	10.698	B
2 - A2 East	1801	450	708	2346	0.768	1801	1952	3.2	3.3	6.600	A
3 - Will Adams Way	714	179	2067	756	0.945	709	442	10.5	11.8	63.648	F
4 - A2 West	1389	347	1243	1844	0.753	1389	1533	3.0	3.0	7.902	A



17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1501	1495	0.776	1160	1132	3.4	3.4	10.727	B
2 - A2 East	1801	450	708	2346	0.768	1801	1953	3.3	3.3	6.603	A
3 - Will Adams Way	714	179	2067	756	0.945	711	442	11.8	12.7	67.856	F
4 - A2 West	1389	347	1244	1843	0.754	1389	1534	3.0	3.0	7.920	A

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
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Filename: A2\_Ito Way\_Will Adams Way\_RevC (Existing A2E Road Markings).j9  
 Path: P:\20000's\20230\Junction Assessments  
 Report generation date: 23/02/2021 10:39:26

- »2018 Base, AM
- »2018 Base , PM
- »2018 Base+Dev, AM
- »2018 Base+Dev, PM
- »2029 Base, AM
- »2029 Base , PM
- »2029 Base+Dev, AM
- »2029 Base+Dev, PM

**Summary of junction performance**

	AM				PM			
	Set ID	Q (PCU)	Delay (s)	RFC	Set ID	Q (PCU)	Delay (s)	RFC
<b>2018 Base</b>								
1 - Ito Way	D1	1.4	5.53	0.59	D2	1.8	6.32	0.64
2 - A2 East		5.7	14.97	0.86		6.2	14.38	0.87
3 - Will Adams Way		2.8	13.52	0.74		2.8	15.03	0.74
4 - A2 West		2.1	5.75	0.68		1.7	5.00	0.63
<b>2018 Base+Dev</b>								
1 - Ito Way	D3	1.7	6.20	0.63	D4	2.0	6.77	0.66
2 - A2 East		7.0	18.52	0.88		6.9	15.96	0.88
3 - Will Adams Way		3.3	15.85	0.77		3.5	18.02	0.78
4 - A2 West		2.2	6.08	0.69		1.9	5.52	0.66
<b>2029 Base</b>								
1 - Ito Way	D5	2.1	7.40	0.68	D6	3.0	9.64	0.75
2 - A2 East		24.3	57.96	0.98		30.8	63.81	0.99
3 - Will Adams Way		5.5	27.24	0.85		6.8	37.42	0.88
4 - A2 West		3.1	8.00	0.76		2.5	6.84	0.72
<b>2029 Base+Dev</b>								
1 - Ito Way	D7	2.6	8.65	0.73	D8	3.4	10.73	0.78
2 - A2 East		43.3	99.11	1.01		41.4	84.07	1.00
3 - Will Adams Way		6.8	34.09	0.88		10.0	53.66	0.93
4 - A2 West		3.4	8.50	0.77		3.0	7.78	0.75

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 Av. delay per arriving vehicle.

## File summary

### File Description

<b>Title</b>	Will Adams Roundabout
<b>Location</b>	A2 - Ito Way
<b>Site number</b>	
<b>Date</b>	22/02/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	20230
<b>Enumerator</b>	DTA\Arcady (RM)
<b>Description</b>	

### Units

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

### Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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 period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

### Analysis Set Details

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

# 2018 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.99	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Ito Way	
2	A2 East	
3	Will Adams Way	
4	A2 West	

### Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Ito Way	7.40	9.06	18.8	20.8	55.0	32.0	
2 - A2 East	7.00	8.50	5.0	19.5	55.0	38.0	
3 - Will Adams Way	3.73	8.92	26.4	20.7	55.0	24.0	
4 - A2 West	7.15	10.48	35.6	16.8	55.0	41.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Ito Way	0.750	2621
2 - A2 East	0.683	2285
3 - Will Adams Way	0.671	2143
4 - A2 West	0.772	2803

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	936	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1301	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	202	295
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	130	737	429	5

## Vehicle Mix

### HV %s

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.59	5.53	1.4	A	936	936
2 - A2 East	0.86	14.97	5.7	B	1410	1410
3 - Will Adams Way	0.74	13.52	2.8	B	755	755
4 - A2 West	0.68	5.75	2.1	A	1301	1301

### Main Results for each time segment

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1369	1594	0.587	930	1044	0.0	1.4	5.382	A
2 - A2 East	1410	353	925	1653	0.853	1389	1374	0.0	5.3	12.772	B
3 - Will Adams Way	755	189	1650	1036	0.729	745	665	0.0	2.6	11.988	B
4 - A2 West	1301	325	1120	1939	0.671	1293	1275	0.0	2.0	5.506	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1587	0.590	936	1057	1.4	1.4	5.530	A
2 - A2 East	1410	353	931	1649	0.855	1409	1384	5.3	5.6	14.797	B
3 - Will Adams Way	755	189	1671	1022	0.739	754	669	2.6	2.7	13.407	B
4 - A2 West	1301	325	1135	1927	0.675	1301	1290	2.0	2.1	5.743	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.534	A
2 - A2 East	1410	353	931	1649	0.855	1410	1384	5.6	5.7	14.921	B
3 - Will Adams Way	755	189	1672	1021	0.739	755	669	2.7	2.8	13.495	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.752	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.534	A
2 - A2 East	1410	353	931	1649	0.855	1410	1384	5.7	5.7	14.966	B
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.8	2.8	13.515	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.753	A

# 2018 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	10.16	B

### 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 period length (min)	Time segment length (min)	Run automatically
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1010	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1212	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	142	257
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	100	874	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.64	6.32	1.8	A	1010	1010
2 - A2 East	0.87	14.38	6.2	B	1601	1601
3 - Will Adams Way	0.74	15.03	2.8	C	692	692
4 - A2 West	0.63	5.00	1.7	A	1212	1212

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1378	1587	0.636	1003	940	0.0	1.7	6.095	A
2 - A2 East	1601	400	633	1853	0.864	1578	1748	0.0	5.7	12.248	B
3 - Will Adams Way	692	173	1782	947	0.731	682	429	0.0	2.6	13.114	B
4 - A2 West	1212	303	1113	1945	0.623	1205	1351	0.0	1.6	4.829	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	952	1.7	1.8	6.313	A
2 - A2 East	1601	400	637	1850	0.865	1600	1761	5.7	6.1	14.213	B
3 - Will Adams Way	692	173	1805	932	0.743	691	432	2.6	2.8	14.881	B
4 - A2 West	1212	303	1128	1933	0.627	1212	1368	1.6	1.7	4.992	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	1850	0.865	1601	1761	6.1	6.2	14.335	B
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.001	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.998	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	1850	0.866	1601	1761	6.2	6.2	14.377	B
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.031	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.999	A





# 2018 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.64	B

### 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 period length (min)	Time segment length (min)	Run automatically
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1005	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1332	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
1 - Ito Way	0	439	218	348
2 - A2 East	706	4	38	662
3 - Will Adams Way	226	204	0	329
4 - A2 West	160	738	429	5

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.63	6.20	1.7	A	1005	1005
2 - A2 East	0.88	18.52	7.0	C	1410	1410
3 - Will Adams Way	0.77	15.85	3.3	C	759	759
4 - A2 West	0.69	6.08	2.2	A	1332	1332

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1369	1594	0.631	998	1075	0.0	1.7	5.981	A
2 - A2 East	1410	353	993	1607	0.878	1385	1374	0.0	6.3	14.895	B
3 - Will Adams Way	759	190	1698	1003	0.757	747	680	0.0	2.9	13.524	B
4 - A2 West	1332	333	1121	1938	0.687	1323	1325	0.0	2.2	5.777	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1379	1586	0.634	1005	1091	1.7	1.7	6.193	A
2 - A2 East	1410	353	1000	1602	0.880	1408	1385	6.3	6.8	18.125	C
3 - Will Adams Way	759	190	1723	987	0.769	758	685	2.9	3.2	15.527	C
4 - A2 West	1332	333	1138	1925	0.692	1332	1343	2.2	2.2	6.066	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	1602	0.880	1409	1385	6.8	6.9	18.410	C
3 - Will Adams Way	759	190	1724	986	0.770	759	685	3.2	3.2	15.802	C
4 - A2 West	1332	333	1139	1924	0.692	1332	1344	2.2	2.2	6.079	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	1602	0.880	1410	1385	6.9	7.0	18.516	C
3 - Will Adams Way	759	190	1725	985	0.770	759	685	3.2	3.3	15.848	C
4 - A2 West	1332	333	1140	1924	0.692	1332	1344	2.2	2.2	6.084	A



# 2018 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.34	B

### 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 period length (min)	Time segment length (min)	Run automatically
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1047	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1263	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	152	284
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	142	274	0	298
	4 - A2 West	150	875	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.66	6.77	2.0	A	1047	1047
2 - A2 East	0.88	15.96	6.9	C	1601	1601
3 - Will Adams Way	0.78	18.02	3.5	C	714	714
4 - A2 West	0.66	5.52	1.9	A	1263	1263

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1378	1587	0.660	1039	1010	0.0	1.9	6.485	A
2 - A2 East	1601	400	669	1828	0.876	1576	1748	0.0	6.3	13.219	B
3 - Will Adams Way	714	179	1807	930	0.767	702	439	0.0	3.1	15.036	C
4 - A2 West	1263	316	1132	1929	0.655	1256	1376	0.0	1.9	5.286	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1388	1579	0.663	1047	1024	1.9	1.9	6.757	A
2 - A2 East	1601	400	674	1825	0.877	1599	1761	6.3	6.7	15.707	C
3 - Will Adams Way	714	179	1831	914	0.781	713	442	3.1	3.4	17.713	C
4 - A2 West	1263	316	1150	1916	0.659	1263	1395	1.9	1.9	5.507	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	1.9	2.0	6.764	A
2 - A2 East	1601	400	674	1825	0.877	1600	1762	6.7	6.8	15.890	C
3 - Will Adams Way	714	179	1832	913	0.782	714	442	3.4	3.5	17.953	C
4 - A2 West	1263	316	1151	1915	0.659	1263	1396	1.9	1.9	5.518	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	2.0	2.0	6.767	A
2 - A2 East	1601	400	674	1825	0.877	1601	1762	6.8	6.9	15.957	C
3 - Will Adams Way	714	179	1833	913	0.782	714	442	3.5	3.5	18.018	C
4 - A2 West	1263	316	1151	1915	0.659	1263	1396	1.9	1.9	5.520	A



# 2029 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	27.47	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 period length (min)	Time segment length (min)	Run automatically
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1029	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1411	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	202	332
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	146	830	429	6

## Vehicle Mix



**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.68	7.40	2.1	A	1029	1029
2 - A2 East	0.98	57.96	24.3	F	1584	1584
3 - Will Adams Way	0.85	27.24	5.5	D	755	755
4 - A2 West	0.76	8.00	3.1	A	1411	1411

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1459	1526	0.674	1021	1127	0.0	2.0	7.018	A
2 - A2 East	1584	396	961	1628	0.973	1525	1519	0.0	14.7	26.903	D
3 - Will Adams Way	755	189	1824	919	0.822	739	663	0.0	4.1	18.574	C
4 - A2 West	1411	353	1187	1887	0.748	1400	1375	0.0	2.9	7.222	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1472	1516	0.679	1029	1153	2.0	2.1	7.379	A
2 - A2 East	1584	396	969	1623	0.976	1565	1533	14.7	19.4	45.790	E
3 - Will Adams Way	755	189	1866	891	0.848	752	668	4.1	5.0	24.951	C
4 - A2 West	1411	353	1215	1866	0.756	1410	1403	2.9	3.0	7.886	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1473	1515	0.679	1029	1157	2.1	2.1	7.396	A
2 - A2 East	1584	396	969	1623	0.976	1572	1533	19.4	22.3	53.115	F
3 - Will Adams Way	755	189	1873	886	0.852	754	669	5.0	5.3	26.533	D
4 - A2 West	1411	353	1219	1862	0.758	1411	1407	3.0	3.1	7.967	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1474	1515	0.679	1029	1159	2.1	2.1	7.402	A
2 - A2 East	1584	396	969	1623	0.976	1576	1534	22.3	24.3	57.961	F
3 - Will Adams Way	755	189	1876	884	0.854	754	669	5.3	5.5	27.239	D
4 - A2 West	1411	353	1221	1861	0.758	1411	1409	3.1	3.1	7.999	A



# 2029 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	32.46	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 period length (min)	Time segment length (min)	Run automatically
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1122	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1338	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	142	290
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	113	987	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.75	9.64	3.0	A	1122	1122
2 - A2 East	0.99	63.81	30.8	F	1801	1801
3 - Will Adams Way	0.88	37.42	6.8	E	692	692
4 - A2 West	0.72	6.84	2.5	A	1338	1338

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1485	1507	0.745	1111	1025	0.0	2.8	8.859	A
2 - A2 East	1801	450	664	1831	0.983	1732	1932	0.0	17.4	27.119	D
3 - Will Adams Way	692	173	1969	822	0.842	674	427	0.0	4.6	22.198	C
4 - A2 West	1338	335	1182	1891	0.707	1329	1461	0.0	2.4	6.297	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1498	1497	0.750	1122	1049	2.8	2.9	9.572	A
2 - A2 East	1801	450	670	1827	0.986	1776	1950	17.4	23.5	48.082	E
3 - Will Adams Way	692	173	2015	791	0.875	687	431	4.6	5.9	32.422	D
4 - A2 West	1338	335	1210	1870	0.716	1338	1492	2.4	2.5	6.757	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1500	1496	0.750	1122	1053	2.9	3.0	9.621	A
2 - A2 East	1801	450	670	1827	0.986	1784	1952	23.5	27.6	57.242	F
3 - Will Adams Way	692	173	2023	785	0.881	690	431	5.9	6.4	35.745	E
4 - A2 West	1338	335	1215	1865	0.717	1338	1498	2.5	2.5	6.818	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1500	1495	0.750	1122	1055	3.0	3.0	9.635	A
2 - A2 East	1801	450	670	1827	0.986	1788	1952	27.6	30.8	63.805	F
3 - Will Adams Way	692	173	2027	783	0.884	691	432	6.4	6.8	37.417	E
4 - A2 West	1338	335	1217	1864	0.718	1338	1500	2.5	2.5	6.844	A



# 2029 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	41.90	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 period length (min)	Time segment length (min)	Run automatically
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1099	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1442	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	218	386
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	226	204	0	329
	4 - A2 West	176	831	429	6

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.73	8.65	2.6	A	1099	1099
2 - A2 East	1.01	99.11	43.3	F	1584	1584
3 - Will Adams Way	0.88	34.09	6.8	D	759	759
4 - A2 West	0.77	8.50	3.4	A	1442	1442

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1459	1526	0.720	1089	1150	0.0	2.5	8.058	A
2 - A2 East	1584	396	1030	1582	1.001	1505	1518	0.0	19.7	33.511	D
3 - Will Adams Way	759	190	1858	896	0.847	740	677	0.0	4.7	21.039	C
4 - A2 West	1442	361	1179	1893	0.762	1430	1418	0.0	3.1	7.582	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1473	1516	0.725	1099	1176	2.5	2.6	8.614	A
2 - A2 East	1584	396	1039	1576	1.005	1546	1533	19.7	29.2	65.380	F
3 - Will Adams Way	759	190	1901	867	0.875	754	684	4.7	6.0	29.968	D
4 - A2 West	1442	361	1208	1871	0.771	1441	1447	3.1	3.3	8.353	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1474	1515	0.725	1099	1181	2.6	2.6	8.646	A
2 - A2 East	1584	396	1039	1575	1.005	1554	1534	29.2	36.8	83.756	F
3 - Will Adams Way	759	190	1909	862	0.880	757	684	6.0	6.5	32.703	D
4 - A2 West	1442	361	1214	1867	0.773	1442	1452	3.3	3.3	8.459	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1474	1515	0.726	1099	1183	2.6	2.6	8.655	A
2 - A2 East	1584	396	1039	1575	1.005	1558	1534	36.8	43.3	99.109	F
3 - Will Adams Way	759	190	1912	859	0.883	758	684	6.5	6.8	34.088	D
4 - A2 West	1442	361	1216	1865	0.773	1442	1454	3.3	3.4	8.504	A





# 2029 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	42.06	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 period length (min)	Time segment length (min)	Run automatically
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1160	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1389	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	152	318
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	142	274	0	298
	4 - A2 West	163	988	237	1

## Vehicle Mix

**HV %s**

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.78	10.73	3.4	B	1160	1160
2 - A2 East	1.00	84.07	41.4	F	1801	1801
3 - Will Adams Way	0.93	53.66	10.0	F	714	714
4 - A2 West	0.75	7.78	3.0	A	1389	1389

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1483	1508	0.769	1147	1090	0.0	3.2	9.667	A
2 - A2 East	1801	450	701	1806	0.997	1721	1930	0.0	20.1	30.307	D
3 - Will Adams Way	714	179	1985	810	0.881	691	436	0.0	5.8	26.458	D
4 - A2 West	1389	347	1195	1881	0.739	1378	1481	0.0	2.7	7.018	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1498	1497	0.775	1159	1115	3.2	3.3	10.624	B
2 - A2 East	1801	450	708	1802	1.000	1765	1950	20.1	29.0	57.636	F
3 - Will Adams Way	714	179	2032	779	0.917	705	441	5.8	8.0	42.617	E
4 - A2 West	1389	347	1225	1858	0.748	1388	1513	2.7	2.9	7.647	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1500	1496	0.776	1160	1120	3.3	3.4	10.701	B
2 - A2 East	1801	450	708	1801	1.000	1774	1952	29.0	35.8	72.271	F
3 - Will Adams Way	714	179	2041	773	0.923	709	441	8.0	9.2	49.537	E
4 - A2 West	1389	347	1231	1853	0.749	1389	1519	2.9	2.9	7.740	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1501	1495	0.776	1160	1122	3.4	3.4	10.728	B
2 - A2 East	1801	450	708	1801	1.000	1778	1953	35.8	41.4	84.070	F
3 - Will Adams Way	714	179	2045	771	0.927	711	441	9.2	10.0	53.657	F
4 - A2 West	1389	347	1234	1851	0.750	1389	1522	2.9	3.0	7.782	A

Junctions 9
ARCADY 9 - Roundabout Module
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Filename: A2\_Ito Way\_Will Adams Way\_RevC.j9  
 Path: P:\20000's\20230\Junction Assessments  
 Report generation date: 23/02/2021 10:37:13

- »2018 Base, AM
- »2018 Base , PM
- »2018 Base+Dev, AM
- »2018 Base+Dev, PM
- »2029 Base, AM
- »2029 Base , PM
- »2029 Base+Dev, AM
- »2029 Base+Dev, PM

**Summary of junction performance**

	AM				PM			
	Set ID	Q (PCU)	Delay (s)	RFC	Set ID	Q (PCU)	Delay (s)	RFC
<b>2018 Base</b>								
1 - Ito Way	D1	1.4	5.53	0.59	D2	1.8	6.32	0.64
2 - A2 East		1.9	4.75	0.65		2.0	4.49	0.67
3 - Will Adams Way		2.8	13.52	0.74		2.8	15.04	0.74
4 - A2 West		2.1	5.75	0.68		1.7	5.00	0.63
<b>2018 Base+Dev</b>								
1 - Ito Way	D3	1.7	6.20	0.63	D4	2.0	6.77	0.66
2 - A2 East		2.0	5.12	0.67		2.1	4.66	0.67
3 - Will Adams Way		3.3	15.87	0.77		3.5	18.04	0.78
4 - A2 West		2.2	6.09	0.69		1.9	5.52	0.66
<b>2029 Base</b>								
1 - Ito Way	D5	2.1	7.40	0.68	D6	3.0	9.64	0.75
2 - A2 East		2.8	6.49	0.74		3.1	6.26	0.76
3 - Will Adams Way		5.8	28.57	0.86		7.5	41.30	0.89
4 - A2 West		3.1	8.06	0.76		2.5	6.91	0.72
<b>2029 Base+Dev</b>								
1 - Ito Way	D7	2.6	8.66	0.73	D8	3.4	10.73	0.78
2 - A2 East		3.1	7.22	0.76		3.3	6.60	0.77
3 - Will Adams Way		8.1	40.70	0.90		12.7	67.86	0.94
4 - A2 West		3.5	8.72	0.78		3.0	7.92	0.75

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 Av. delay per arriving vehicle.

## File summary

### File Description

<b>Title</b>	Will Adams Roundabout
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	12/02/2019
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	DTA\Arcady
<b>Description</b>	

### Units

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

### Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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 period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

### Analysis Set Details

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

# 2018 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	6.72	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Ito Way	
2	A2 East	
3	Will Adams Way	
4	A2 West	

### Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Ito Way	7.40	9.06	18.8	20.8	55.0	32.0	
2 - A2 East	7.00	12.49	19.5	19.5	55.0	38.0	
3 - Will Adams Way	3.73	8.92	26.4	20.7	55.0	24.0	
4 - A2 West	7.15	10.48	35.6	16.8	55.0	41.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Ito Way	0.750	2621
2 - A2 East	0.796	2910
3 - Will Adams Way	0.671	2143
4 - A2 West	0.772	2803

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2018 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	936	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1301	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	202	295
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	130	737	429	5

## Vehicle Mix

### HV %s

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.59	5.53	1.4	A	936	936
2 - A2 East	0.65	4.75	1.9	A	1410	1410
3 - Will Adams Way	0.74	13.52	2.8	B	755	755
4 - A2 West	0.68	5.75	2.1	A	1301	1301

### Main Results for each time segment

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1369	1594	0.587	930	1050	0.0	1.4	5.381	A
2 - A2 East	1410	353	925	2173	0.649	1403	1374	0.0	1.8	4.632	A
3 - Will Adams Way	755	189	1663	1027	0.735	744	665	0.0	2.6	12.336	B
4 - A2 West	1301	325	1126	1934	0.673	1293	1281	0.0	2.0	5.549	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1587	0.590	936	1058	1.4	1.4	5.531	A
2 - A2 East	1410	353	931	2168	0.650	1410	1384	1.8	1.8	4.746	A
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.6	2.7	13.471	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.0	2.1	5.750	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.534	A
2 - A2 East	1410	353	931	2168	0.650	1410	1384	1.8	1.8	4.746	A
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.7	2.8	13.514	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.754	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	936	234	1379	1586	0.590	936	1058	1.4	1.4	5.535	A
2 - A2 East	1410	353	931	2168	0.650	1410	1384	1.8	1.9	4.746	A
3 - Will Adams Way	755	189	1672	1021	0.740	755	669	2.8	2.8	13.525	B
4 - A2 West	1301	325	1136	1927	0.675	1301	1291	2.1	2.1	5.754	A



# 2018 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	6.65	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 period length (min)	Time segment length (min)	Run automatically
D2	2018 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1010	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1212	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	142	257
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	100	874	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.64	6.32	1.8	A	1010	1010
2 - A2 East	0.67	4.49	2.0	A	1601	1601
3 - Will Adams Way	0.74	15.04	2.8	C	692	692
4 - A2 West	0.63	5.00	1.7	A	1212	1212

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1378	1587	0.636	1003	947	0.0	1.7	6.094	A
2 - A2 East	1601	400	633	2406	0.666	1593	1748	0.0	2.0	4.390	A
3 - Will Adams Way	692	173	1797	937	0.738	681	429	0.0	2.7	13.569	B
4 - A2 West	1212	303	1119	1939	0.625	1205	1359	0.0	1.6	4.863	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.7	1.8	6.315	A
2 - A2 East	1601	400	637	2402	0.666	1601	1761	2.0	2.0	4.491	A
3 - Will Adams Way	692	173	1806	931	0.743	691	432	2.7	2.8	14.965	B
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.6	1.7	4.996	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	2402	0.666	1601	1761	2.0	2.0	4.491	A
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.027	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.999	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1010	253	1388	1580	0.639	1010	953	1.8	1.8	6.319	A
2 - A2 East	1601	400	637	2402	0.666	1601	1761	2.0	2.0	4.491	A
3 - Will Adams Way	692	173	1806	931	0.743	692	432	2.8	2.8	15.043	C
4 - A2 West	1212	303	1129	1932	0.627	1212	1369	1.7	1.7	4.999	A



# 2018 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	7.46	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 period length (min)	Time segment length (min)	Run automatically
D3	2018 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1005	100.000
2 - A2 East		FLAT	✓	1410	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1332	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	439	218	348
	2 - A2 East	706	4	38	662
	3 - Will Adams Way	226	204	0	329
	4 - A2 West	160	738	429	5

## Vehicle Mix

**HV %s**

	To			
	1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From				
1 - Ito Way	0	0	0	0
2 - A2 East	0	0	0	0
3 - Will Adams Way	0	0	0	0
4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.63	6.20	1.7	A	1005	1005
2 - A2 East	0.67	5.12	2.0	A	1410	1410
3 - Will Adams Way	0.77	15.87	3.3	C	759	759
4 - A2 West	0.69	6.09	2.2	A	1332	1332

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1369	1594	0.631	998	1083	0.0	1.7	5.979	A
2 - A2 East	1410	353	993	2119	0.666	1402	1374	0.0	2.0	4.972	A
3 - Will Adams Way	759	190	1715	992	0.765	747	681	0.0	3.0	14.070	B
4 - A2 West	1332	333	1129	1932	0.690	1323	1333	0.0	2.2	5.837	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.195	A
2 - A2 East	1410	353	1000	2113	0.667	1410	1385	2.0	2.0	5.114	A
3 - Will Adams Way	759	190	1725	985	0.770	758	685	3.0	3.2	15.762	C
4 - A2 West	1332	333	1140	1924	0.692	1332	1344	2.2	2.2	6.078	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	2113	0.667	1410	1385	2.0	2.0	5.117	A
3 - Will Adams Way	759	190	1725	985	0.770	759	685	3.2	3.3	15.846	C
4 - A2 West	1332	333	1140	1924	0.692	1332	1344	2.2	2.2	6.083	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1005	251	1380	1586	0.634	1005	1092	1.7	1.7	6.199	A
2 - A2 East	1410	353	1000	2113	0.667	1410	1385	2.0	2.0	5.117	A
3 - Will Adams Way	759	190	1725	985	0.770	759	685	3.3	3.3	15.872	C
4 - A2 West	1332	333	1140	1923	0.693	1332	1344	2.2	2.2	6.085	A



# 2018 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	7.44	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 period length (min)	Time segment length (min)	Run automatically
D4	2018 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1047	100.000
2 - A2 East		FLAT	✓	1601	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1263	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	611	152	284
	2 - A2 East	733	2	53	813
	3 - Will Adams Way	142	274	0	298
	4 - A2 West	150	875	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.66	6.77	2.0	A	1047	1047
2 - A2 East	0.67	4.66	2.1	A	1601	1601
3 - Will Adams Way	0.78	18.04	3.5	C	714	714
4 - A2 West	0.66	5.52	1.9	A	1263	1263

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1377	1587	0.660	1039	1018	0.0	1.9	6.482	A
2 - A2 East	1601	400	669	2377	0.674	1593	1747	0.0	2.0	4.548	A
3 - Will Adams Way	714	179	1823	919	0.777	701	439	0.0	3.2	15.692	C
4 - A2 West	1263	316	1140	1924	0.657	1255	1384	0.0	1.9	5.329	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	1.9	1.9	6.759	A
2 - A2 East	1601	400	674	2373	0.675	1601	1761	2.0	2.1	4.660	A
3 - Will Adams Way	714	179	1833	913	0.782	713	442	3.2	3.4	17.879	C
4 - A2 West	1263	316	1150	1915	0.659	1263	1396	1.9	1.9	5.516	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	1.9	2.0	6.764	A
2 - A2 East	1601	400	674	2373	0.675	1601	1762	2.1	2.1	4.663	A
3 - Will Adams Way	714	179	1833	913	0.782	714	442	3.4	3.5	18.007	C
4 - A2 West	1263	316	1151	1915	0.660	1263	1396	1.9	1.9	5.520	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1047	262	1389	1579	0.663	1047	1025	2.0	2.0	6.767	A
2 - A2 East	1601	400	674	2373	0.675	1601	1762	2.1	2.1	4.663	A
3 - Will Adams Way	714	179	1833	913	0.782	714	442	3.5	3.5	18.045	C
4 - A2 West	1263	316	1151	1915	0.660	1263	1396	1.9	1.9	5.521	A





# 2029 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	10.64	B

### 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 period length (min)	Time segment length (min)	Run automatically
D5	2029 Base	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1029	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	755	100.000
4 - A2 West		FLAT	✓	1411	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	202	332
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	222	204	0	329
	4 - A2 West	146	830	429	6

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.68	7.40	2.1	A	1029	1029
2 - A2 East	0.74	6.49	2.8	A	1584	1584
3 - Will Adams Way	0.86	28.57	5.8	D	755	755
4 - A2 West	0.76	8.06	3.1	A	1411	1411

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1458	1527	0.674	1021	1151	0.0	2.0	7.008	A
2 - A2 East	1584	396	961	2144	0.739	1573	1518	0.0	2.8	6.188	A
3 - Will Adams Way	755	189	1871	887	0.851	736	664	0.0	4.8	21.558	C
4 - A2 West	1411	353	1210	1870	0.755	1399	1397	0.0	3.0	7.472	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1473	1516	0.679	1029	1162	2.0	2.1	7.385	A
2 - A2 East	1584	396	969	2138	0.741	1584	1533	2.8	2.8	6.486	A
3 - Will Adams Way	755	189	1884	879	0.859	753	669	4.8	5.4	27.540	D
4 - A2 West	1411	353	1225	1858	0.759	1411	1412	3.0	3.1	8.026	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1474	1515	0.679	1029	1163	2.1	2.1	7.399	A
2 - A2 East	1584	396	969	2138	0.741	1584	1534	2.8	2.8	6.493	A
3 - Will Adams Way	755	189	1884	879	0.859	754	669	5.4	5.7	28.300	D
4 - A2 West	1411	353	1225	1857	0.760	1411	1413	3.1	3.1	8.054	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1029	257	1474	1515	0.679	1029	1163	2.1	2.1	7.404	A
2 - A2 East	1584	396	969	2138	0.741	1584	1534	2.8	2.8	6.493	A
3 - Will Adams Way	755	189	1884	879	0.859	755	669	5.7	5.8	28.572	D
4 - A2 West	1411	353	1226	1857	0.760	1411	1413	3.1	3.1	8.060	A



# 2029 Base , PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	12.09	B

### 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 period length (min)	Time segment length (min)	Run automatically
D6	2029 Base	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1122	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	692	100.000
4 - A2 West		FLAT	✓	1338	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	690	142	290
	2 - A2 East	828	2	53	918
	3 - Will Adams Way	120	274	0	298
	4 - A2 West	113	987	237	1

## Vehicle Mix

**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.75	9.64	3.0	A	1122	1122
2 - A2 East	0.76	6.26	3.1	A	1801	1801
3 - Will Adams Way	0.89	41.30	7.5	E	692	692
4 - A2 West	0.72	6.91	2.5	A	1338	1338

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1483	1508	0.744	1111	1051	0.0	2.8	8.825	A
2 - A2 East	1801	450	664	2381	0.756	1789	1930	0.0	3.0	5.966	A
3 - Will Adams Way	692	173	2024	784	0.882	669	429	0.0	5.8	27.299	D
4 - A2 West	1338	335	1205	1873	0.714	1328	1488	0.0	2.4	6.498	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1499	1496	0.750	1121	1060	2.8	2.9	9.581	A
2 - A2 East	1801	450	670	2376	0.758	1801	1951	3.0	3.1	6.249	A
3 - Will Adams Way	692	173	2039	775	0.893	688	432	5.8	6.9	38.222	E
4 - A2 West	1338	335	1221	1861	0.719	1338	1505	2.4	2.5	6.877	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1500	1495	0.750	1122	1061	2.9	3.0	9.627	A
2 - A2 East	1801	450	670	2376	0.758	1801	1952	3.1	3.1	6.255	A
3 - Will Adams Way	692	173	2039	775	0.893	690	432	6.9	7.3	40.384	E
4 - A2 West	1338	335	1223	1859	0.720	1338	1506	2.5	2.5	6.901	A

**17:45 - 18:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1122	281	1501	1495	0.750	1122	1061	3.0	3.0	9.639	A
2 - A2 East	1801	450	670	2376	0.758	1801	1953	3.1	3.1	6.256	A
3 - Will Adams Way	692	173	2039	775	0.893	691	432	7.3	7.5	41.299	E
4 - A2 West	1338	335	1223	1859	0.720	1338	1507	2.5	2.5	6.906	A



# 2029 Base+Dev, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	13.19	B

### 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 period length (min)	Time segment length (min)	Run automatically
D7	2029 Base+Dev	AM	FLAT	08:00	09:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1099	100.000
2 - A2 East		FLAT	✓	1584	100.000
3 - Will Adams Way		FLAT	✓	759	100.000
4 - A2 West		FLAT	✓	1442	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	495	218	386
	2 - A2 East	795	5	38	746
	3 - Will Adams Way	226	204	0	329
	4 - A2 West	176	831	429	6

## Vehicle Mix



**HV %s**

		To			
From		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.73	8.66	2.6	A	1099	1099
2 - A2 East	0.76	7.22	3.1	A	1584	1584
3 - Will Adams Way	0.90	40.70	8.1	E	759	759
4 - A2 West	0.78	8.72	3.5	A	1442	1442

**Main Results for each time segment**
**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1457	1528	0.719	1089	1182	0.0	2.5	8.033	A
2 - A2 East	1584	396	1030	2090	0.758	1572	1516	0.0	3.0	6.799	A
3 - Will Adams Way	759	190	1923	853	0.890	734	679	0.0	6.2	26.540	D
4 - A2 West	1442	361	1210	1870	0.771	1429	1447	0.0	3.2	7.954	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1473	1516	0.725	1099	1195	2.5	2.6	8.617	A
2 - A2 East	1584	396	1039	2083	0.761	1584	1533	3.0	3.1	7.204	A
3 - Will Adams Way	759	190	1938	843	0.901	754	685	6.2	7.4	37.465	E
4 - A2 West	1442	361	1227	1856	0.777	1441	1465	3.2	3.4	8.656	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1474	1515	0.726	1099	1196	2.6	2.6	8.649	A
2 - A2 East	1584	396	1039	2082	0.761	1584	1534	3.1	3.1	7.216	A
3 - Will Adams Way	759	190	1938	842	0.901	757	685	7.4	7.9	39.723	E
4 - A2 West	1442	361	1229	1855	0.777	1442	1466	3.4	3.4	8.704	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1099	275	1475	1515	0.726	1099	1197	2.6	2.6	8.657	A
2 - A2 East	1584	396	1039	2082	0.761	1584	1535	3.1	3.1	7.220	A
3 - Will Adams Way	759	190	1938	842	0.901	758	685	7.9	8.1	40.696	E
4 - A2 West	1442	361	1229	1854	0.778	1442	1466	3.4	3.5	8.719	A



# 2029 Base+Dev, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	4 - A2 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
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.

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Will Adams Roundabout	Standard Roundabout		1, 2, 3, 4	16.55	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 period length (min)	Time segment length (min)	Run automatically
D8	2029 Base+Dev	PM	FLAT	17:00	18:00	60	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Ito Way		FLAT	✓	1160	100.000
2 - A2 East		FLAT	✓	1801	100.000
3 - Will Adams Way		FLAT	✓	714	100.000
4 - A2 West		FLAT	✓	1389	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
1 - Ito Way	0	690	152	318
2 - A2 East	828	2	53	918
3 - Will Adams Way	142	274	0	298
4 - A2 West	163	988	237	1

## Vehicle Mix

**HV %s**

		To			
		1 - Ito Way	2 - A2 East	3 - Will Adams Way	4 - A2 West
From	1 - Ito Way	0	0	0	0
	2 - A2 East	0	0	0	0
	3 - Will Adams Way	0	0	0	0
	4 - A2 West	0	0	0	0

## Results

**Results Summary for whole modelled period**

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Ito Way	0.78	10.73	3.4	B	1160	1160
2 - A2 East	0.77	6.60	3.3	A	1801	1801
3 - Will Adams Way	0.94	67.86	12.7	F	714	714
4 - A2 West	0.75	7.92	3.0	A	1389	1389

**Main Results for each time segment**
**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1480	1511	0.768	1147	1119	0.0	3.2	9.598	A
2 - A2 East	1801	450	701	2351	0.766	1788	1926	0.0	3.2	6.260	A
3 - Will Adams Way	714	179	2051	766	0.932	682	438	0.0	8.1	34.777	D
4 - A2 West	1389	347	1221	1861	0.747	1378	1512	0.0	2.9	7.292	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1498	1497	0.775	1159	1131	3.2	3.3	10.612	B
2 - A2 East	1801	450	708	2346	0.768	1801	1949	3.2	3.2	6.592	A
3 - Will Adams Way	714	179	2067	756	0.944	704	442	8.1	10.5	56.251	F
4 - A2 West	1389	347	1240	1846	0.752	1389	1531	2.9	3.0	7.852	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1500	1496	0.776	1160	1132	3.3	3.4	10.698	B
2 - A2 East	1801	450	708	2346	0.768	1801	1952	3.2	3.3	6.600	A
3 - Will Adams Way	714	179	2067	756	0.945	709	442	10.5	11.8	63.648	F
4 - A2 West	1389	347	1243	1844	0.753	1389	1533	3.0	3.0	7.902	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Ito Way	1160	290	1501	1495	0.776	1160	1132	3.4	3.4	10.727	B
2 - A2 East	1801	450	708	2346	0.768	1801	1953	3.3	3.3	6.603	A
3 - Will Adams Way	714	179	2067	756	0.945	711	442	11.8	12.7	67.856	F
4 - A2 West	1389	347	1244	1843	0.754	1389	1534	3.0	3.0	7.920	A



## James Rand

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**From:** Simon Tucker <SJT@dtatransportation.co.uk>  
**Sent:** 28 February 2021 19:47  
**To:** James Rand  
**Cc:** Jarvis, Karl; Papadoulis, Alkis; neave, robert; Duncan Parr; Richard McCulloch  
**Subject:** RE: Pump Lane - Transport - Mitigation  
**Attachments:** Bowaters Roundabout\_RevG - Split Crossing and Flare.lsg3x; A2\_Ito Way\_Will Adams Way\_RevC.j9; Three Mariners Shuttle RevA.lsg3x; Otterham Quay Lane\_A2\_RevA.lsg3x; A2\_Bloors Lane signals Mit\_RevD.lsg3x; 20230-17b.pdf; 20230-10b.pdf; Lower Rainham\_A289\_Mitigation\_20230-10B.j9; 20230-18b.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Blue category

James,  
Thank you for your email.

I will separately forward you a revised version of the meeting note, with track changes, for review, since the first draft received is neither complete nor does it reflect the proposals made to the Council, and questions posed, on behalf of the Appellant.

### Model Flows

During our meeting, I confirmed that DTA holds a LINSIG file for the junction. It is attached, as requested. As discussed, the signal timings in the LINSIG have been optimised for the flows that we have, showing the interaction of the pedestrian crossing to the east. These are based on our own survey and growth assumptions and the 2028 flows provided to us by the Council on 26<sup>th</sup> Feb 2020 (@ 16.53).

Appropriate optimisation of the signal timings *may* change if the revised MAM model runs change the demand flows at the junction. This effect is characterised as an benefit of the Model in Table 1 of Mr Jarvis' evidence. Therefore, it is appropriate that the LINSIG assessment also considers current MAM flows and if appropriate signal timings - for completeness.

During our meeting you declined to confirm how, or indeed, if, the Model has optimised signal timings so far. This information is however critical to understanding the appropriateness of the impacts the Council contends the Model suggests. It would therefore be of particular assistance to the inspector/SoS if those details are made available for all the junctions the Council suggests are affected. Clearly, in the context of the Bowater's Roundabout and signal crossing, this comparison will be essential in presenting our respective positions following the current model run.

### Section 106

During our meeting Mr Neave confirmed that the Council has identified a preliminary improvement scheme for Pier Road as an outcome of initial Local plan modelling. He also confirmed that had been tested through other modelling undertaken by the Council.

In the Appellant's response to the first draft of the S106 (in which the Council included a contribution towards Pier Road) it was reciprocally confirmed that the Appellant would be content to make a reasonable contribution towards those works providing it was modelled. This is recorded in Charlotte Lockwood's (of the Appellant) email of 10<sup>th</sup> February 2021. Therefore, I request that: (a) a copy of that scheme now be provided, and (b) that this be inclusion within the modelling.

### Other Mitigation / Optimisation

As discussed during our meeting, establishing the causality of any of the congestion suggested by the MAM model is unclear, particular given that congestion forecast is in clear conflict with the outputs of our own models.

I therefore attach the junction model files for the following junctions so that you can review the optimisation we consider most appropriate for those given flows. This will allow direct comparison between the models, at junction level:

- Will Adams Way / A2 Junction – Arcady model file and Mitigation Scheme (20230-18b).
- A2 Bowaters – Linsig model file to provide signal timings and mitigation scheme (20230-17b).
- Lower Rainham Road / Yokosako Way roundabout - Arcady model file and Mitigation Scheme (20230-10b).
- Lower Rainham Road Shuttle Working by the Mariners - Linsig model file to provide signal timings
- A2 / Otterham Quay Road - Linsig model file to show signal timings
- A2 / Bloors Lane – Linsig model file to show signal timings.

### Outputs from the modelling

As I stated during our meeting, it is my view that the Inspector/SoS would be assisted generally if we could provide an agreed statement on specific junction operation and causality of any queue, so that the specific issues of impact (if any) can be properly understood. I therefore require that the outputs include turning movement and details on signal optimisation at each junction for appropriate and comparative review against DTA modelling work, and an arrange of screen shots (in the same format as Mr Jarvis’ Figure 3 / 4) across the peak hours. I suggest every 10 minutes would be appropriate intervals.

Kind regards

Simon Tucker  
**David Tucker Associates**  
Transport Planning Consultants



Forester House, Doctors Lane, Henley in Arden, Warwickshire B95 5AW  
Tel: +44(0)1564 793598  
Fax: +44(0)1564 793983

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**From:** James Rand <james@paulbashamassociates.com>  
**Sent:** 25 February 2021 09:23  
**To:** Simon Tucker <SJT@dtatransportation.co.uk>  
**Cc:** Jarvis, Karl <Karl.Jarvis@sweco.co.uk>; Papadoulis, Alkis <alkis.papadoulis@sweco.co.uk>; neave, robert <robert.neave@medway.gov.uk>  
**Subject:** Pump Lane - Transport - Mitigation

Hello Simon,

Please see attached meeting note outlining the agreed items.

I am afraid I do not have Richard’s email address, but I would be grateful if you could please confirm DTA’s agreement to these notes.

We also agreed to come back to you on a few matters as set out below, which I have kept separate because they weren’t agreed during the meeting.

### Model flows



The purpose of the adjournment is so that the council can assess and understand the impact of the mitigation proposed in ID24. I presume that you must have modelled this mitigation before submitting it to the inquiry, so please could you provide your LINSIG model of the Bowater roundabout & crossing with signal timings, as they stand?

You requested MAM turn flows at the Bowaters roundabout for 2028, and if I understood correctly, this is to recalculate the proposed signal timings. We can provide the flows, but it will take us a couple of days to produce these from the model – I presume you will also want the equivalent for 2037. We will have these across by the end of this week.

However, I must sound a note of caution – the MAM turn flows are those that make it through the junction, and are thus at least in part influenced by the signal timings. Therefore although we can provide the 2028 turn flows, if you then want to change the signal timings this will impact the turn flows, and so on. I should also say this information would be provided without prejudice to our position that the modelling assessments cannot be mixed and matched.

Ultimately, we need certainty from yourselves on the additional mitigation proposed. For now, we will presume that you wish to use your LINSIG model timings as they stand. If you wish to change the timings, given the time pressures to get this work completed before the inquiry resumes, we need to know by the end of Tuesday 2<sup>nd</sup> March. Provided this is the case, we will have the revised modelling results ready before Easter to give you and ourselves a chance to consider it in advance of the inquiry resumption on 19<sup>th</sup> April.

### S106

The original draft of the S106 included reference to contributions for local network highway improvement works. This was included in error, and has been removed from the S106. As you will be aware the council is currently developing its local plan, and as part of that work is exploring, at a strategic level, what mitigation options may be required for traffic arising from development sites in the local plan.

For the avoidance of doubt there is no local plan development traffic included in the assessments of the impact of the appeal scheme.

As a result of the adjournment, I am now taking annual leave next week so if you could please ensure all those cc'd are copied into any correspondence, I would be grateful.

Kind regards,

James Rand  
**Principal Transport Planner**  
BSc (Hons) MSc



#### **Oxford Office**

☎ t +44 (0) 1235 425460

☎ dd +44 (0) 1235 425461

☎ m +44 (0) 7391 821278

📍 p Suite 4, Hitching Court, Blacklands Way, Abingdon Business Park, Abingdon, OX14 1RG

🌐 w [www.paulbashamassociates.com](http://www.paulbashamassociates.com)

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