

# ARCADY 7

Version: 7.0.0.99 [10 July 2009]

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**File:** P:\Projects\7000-0710-64 Barton Farm, Winchester\ARCADY\October 2009\Three Maids Hill Roundabout\2009 PM Base.arc7

**Report generation date:** 15/10/2009 17:58:38

## « A1 - (Default Analysis Set) - D1 - 2009 PMB, AM

- » Roundabout Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Direct/Resultant Flows
- » Turning Proportions
- » Vehicle Mix
- » Results
- » Overview: Standard Roundabout Geometry
- » Overview: Time Segment Results

## File summary

### File Description

<b>Title</b>	Existing Andover Road North/A272/Down Farm Lane Junction PM Peak Hr Assessments
<b>Location</b>	Winchester
<b>Site Number</b>	
<b>Date</b>	21/05/2009
<b>Version</b>	
<b>Status</b>	TIA
<b>Identifier</b>	
<b>Client</b>	Cala Homes (South) Limited
<b>Jobnumber</b>	0710-64
<b>Enumerator</b>	Mike.fuller
<b>Description</b>	
<b>Results Upto Date</b>	True

## Analysis Options

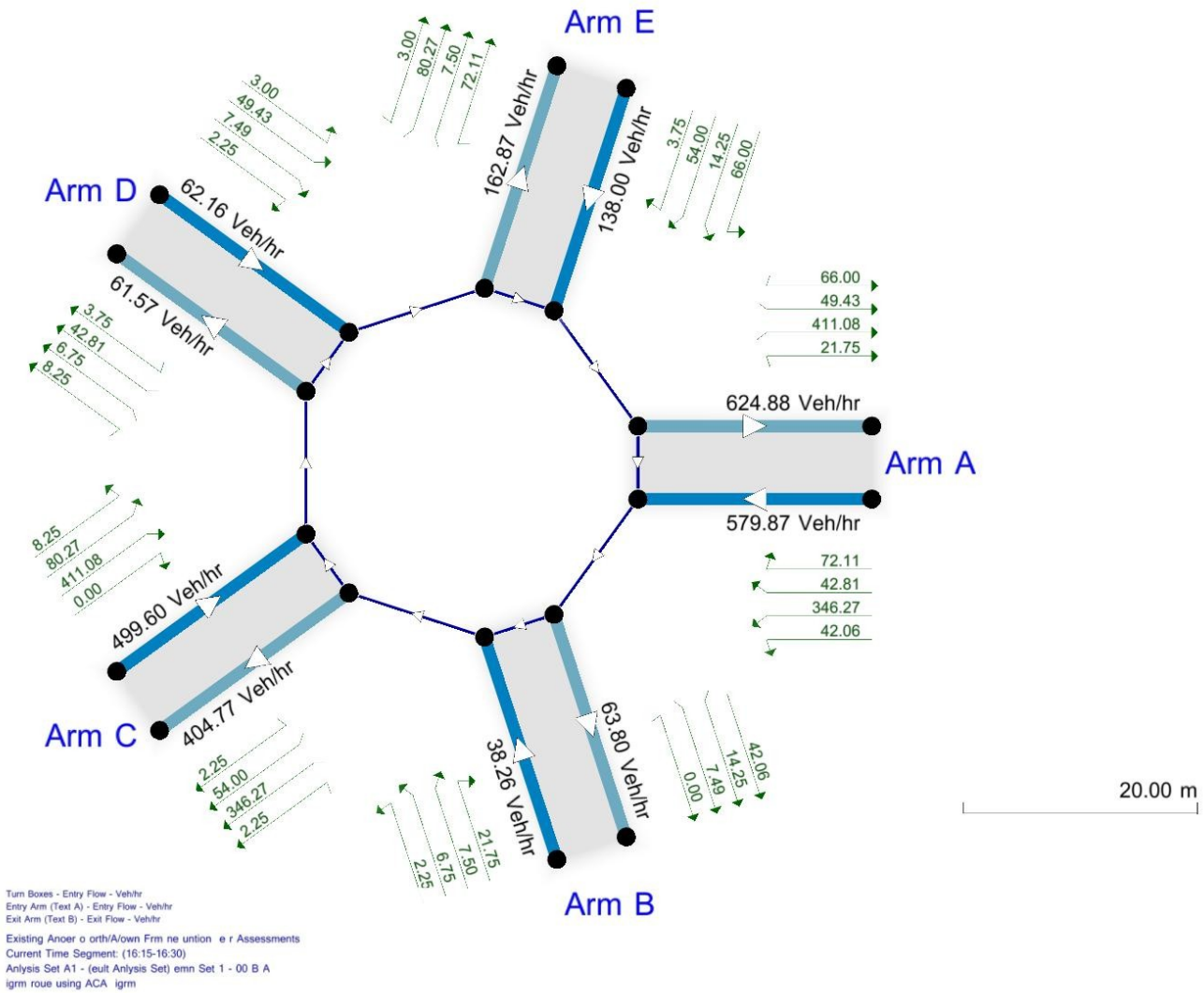
RFC Threshold	Vehicle Length (m)	Do Queue Variations
0.85	5.75	

## Sorting and Display

Show Arm Names	Arm Grouping	Sorting Direction	Sorting Type	Data Matrix Style	Time Style
	Order	Ascending	Numerical	By Destination	Absolute Time

## Units

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



The junction diagram reflects the last run of ARCADY.

## A1 - (Default Analysis Set) - D1 - 2009 PMB, AM

### Data Errors and Warnings

No errors or warnings

### Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

### Demand Set Details

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Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2009 PMB, AM	2009 PMB	AM			Yes			16:15	17:45	90	15	Varies by Arm

## Roundabout Network

### Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C,D,E	Standard			

### Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

## Arms

### Arms

ID	Name	Description
A	A34	
B	Down Farm Lane	
C	B3420	
D	Country Lane	
E	A272 North West	

### Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00
E	0.00	99999.00		0.00

### Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.50	9.00	10.00	25.00	87.00	32.00	
B	3.00	7.50	7.50	20.00	84.00	16.50	
C	3.50	6.00	30.00	35.00	86.50	17.00	
D	2.00	6.50	10.00	12.50	86.00	37.00	
E	3.25	5.00	20.00	25.00	87.00	17.00	

### Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None
D	None
E	None

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		((calculated))	((calculated))	0.587	2586.921
B		((calculated))	((calculated))	0.437	1440.409
C		((calculated))	((calculated))	0.484	1768.100
D		((calculated))	((calculated))	0.364	1102.343
E		((calculated))	((calculated))	0.440	1475.799

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)	PHF
A	ONE HOUR	Yes	772.00	100.000	N/A
B	ONE HOUR	Yes	51.00	100.000	N/A
C	ONE HOUR	Yes	666.00	100.000	N/A
D	ONE HOUR	Yes	83.00	100.000	N/A
E	ONE HOUR	Yes	184.00	100.000	N/A

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	581.20	634.10	N/A	N/A
16:15-16:30	B	38.40	38.40	N/A	N/A
16:15-16:30	C	501.40	514.89	N/A	N/A
16:15-16:30	D	62.49	64.73	N/A	N/A
16:15-16:30	E	138.52	142.30	N/A	N/A
16:30-16:45	A	694.01	757.18	N/A	N/A
16:30-16:45	B	45.85	45.85	N/A	N/A
16:30-16:45	C	598.72	614.83	N/A	N/A
16:30-16:45	D	74.62	77.29	N/A	N/A
16:30-16:45	E	165.41	169.92	N/A	N/A
16:45-17:00	A	849.99	927.35	N/A	N/A
16:45-17:00	B	56.15	56.15	N/A	N/A
16:45-17:00	C	733.28	753.02	N/A	N/A
16:45-17:00	D	91.38	94.67	N/A	N/A
16:45-17:00	E	202.59	208.11	N/A	N/A
17:00-17:15	A	849.99	927.35	N/A	N/A

17:00-17:15	B	56.15	56.15	N/A	N/A
17:00-17:15	C	733.28	753.02	N/A	N/A
17:00-17:15	D	91.38	94.67	N/A	N/A
17:00-17:15	E	202.59	208.11	N/A	N/A
17:15-17:30	A	694.01	757.18	N/A	N/A
17:15-17:30	B	45.85	45.85	N/A	N/A
17:15-17:30	C	598.72	614.83	N/A	N/A
17:15-17:30	D	74.62	77.29	N/A	N/A
17:15-17:30	E	165.41	169.92	N/A	N/A
17:30-17:45	A	581.20	634.10	N/A	N/A
17:30-17:45	B	38.40	38.40	N/A	N/A
17:30-17:45	C	501.40	514.89	N/A	N/A
17:30-17:45	D	62.49	64.73	N/A	N/A
17:30-17:45	E	138.52	142.30	N/A	N/A

## Turning Proportions

### Turning Counts or Proportions (Veh/hr) - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	102.00	56.00	461.00	57.00	96.00
	B	29.00	0.00	3.00	9.00	10.00
	C	548.00	0.00	0.00	11.00	107.00
	D	66.00	10.00	3.00	0.00	4.00
	E	88.00	19.00	72.00	5.00	0.00

### Turning Proportions (Veh) - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	0.13	0.07	0.60	0.07	0.12
	B	0.57	0.00	0.06	0.18	0.20
	C	0.82	0.00	0.00	0.02	0.16
	D	0.80	0.12	0.04	0.00	0.05
	E	0.48	0.10	0.39	0.03	0.00

## Vehicle Mix

### Average PCU Per Vehicle - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	1.07	1.05	1.12	1.02	1.02
	B	1.00	1.00	1.00	1.00	1.00
	C	1.03	1.00	1.00	1.00	1.02
	D	1.03	1.00	1.00	1.00	1.25
	E	1.06	1.00	1.00	1.00	1.00

### Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	6.90	5.40	12.40	1.80	2.10

From	B	0.00	0.00	0.00	0.00	0.00
	C	2.90	0.00	0.00	0.00	1.90
	D	3.00	0.00	0.00	0.00	25.00
	E	5.70	0.00	0.00	0.00	0.00

## Results

### Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Total Demand (Veh/hr)	Total Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Queueing Total Delay (Veh-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
A	0.37	0.04	0.58	A	708.40	1062.60	40.12	0.04	0.45	40.12	0.04	0.587	2586.921
B	0.05	0.06	0.06	A	46.80	70.20	4.05	0.06	0.05	4.05	0.06	0.437	1440.409
C	0.47	0.07	0.89	A	611.14	916.70	57.96	0.06	0.64	57.96	0.06	0.484	1768.100
D	0.13	0.10	0.15	A	76.16	114.24	10.03	0.09	0.11	10.03	0.09	0.364	1102.343
E	0.19	0.07	0.23	A	168.84	253.26	16.01	0.06	0.18	16.01	0.06	0.440	1475.799

## Overview: Standard Roundabout Geometry

### Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
A	7.50	9.00	10.00	25.00	87.00	32.00		0.587	2586.921
B	3.00	7.50	7.50	20.00	84.00	16.50		0.437	1440.409
C	3.50	6.00	30.00	35.00	86.50	17.00		0.484	1768.100
D	2.00	6.50	10.00	12.50	86.00	37.00		0.364	1102.343
E	3.25	5.00	20.00	25.00	87.00	17.00		0.440	1475.799

## Overview: Time Segment Results

### Time Segment Results

Time Segment	Arm	Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (Veh)	End Queue (Veh)	Queueing Total Delay (Veh-min)	Geometric Total Delay (Veh-min)	Average Delay Per Arriving Vehicle (min)
16:15-16:30	A	581.20	2327.12	0.250	0.00	0.00	0.33	4.91	(0.00)	0.034
16:15-16:30	B	38.40	1157.13	0.033	0.00	0.00	0.03	0.50	(0.00)	0.054
16:15-16:30	C	501.40	1609.08	0.312	0.00	0.00	0.45	6.61	(0.00)	0.054
16:15-16:30	D	62.49	822.04	0.076	0.00	0.00	0.08	1.20	(0.00)	0.079
16:15-16:30	E	138.52	1185.36	0.117	0.00	0.00	0.13	1.94	(0.00)	0.057
16:30-16:45	A	694.01	2318.42	0.299	0.00	0.33	0.43	6.31	(0.00)	0.037
16:30-16:45	B	45.85	1101.52	0.042	0.00	0.03	0.04	0.64	(0.00)	0.057
16:30-16:45	C	598.72	1586.95	0.377	0.00	0.45	0.60	8.87	(0.00)	0.061
16:30-16:45	D	74.62	774.35	0.096	0.00	0.08	0.11	1.56	(0.00)	0.086
16:30-16:45	E	165.41	1135.80	0.146	0.00	0.13	0.17	2.51	(0.00)	0.062
16:45-17:00	A	849.99	2306.61	0.369	0.00	0.43	0.58	8.60	(0.00)	0.041
16:45-17:00	B	56.15	1025.44	0.055	0.00	0.04	0.06	0.85	(0.00)	0.062
16:45-17:00	C	733.28	1556.69	0.471	0.00	0.60	0.88	12.92	(0.00)	0.073
16:45-17:00	D	91.39	709.38	0.129	0.00	0.11	0.15	2.16	(0.00)	0.097
16:45-17:00	E	202.59	1068.36	0.190	0.00	0.17	0.23	3.43	(0.00)	0.069
17:00-17:15	A	849.99	2306.52	0.369	0.00	0.58	0.58	8.73	(0.00)	0.041
17:00-17:15	B	56.15	1025.12	0.055	0.00	0.06	0.06	0.87	(0.00)	0.062
17:00-17:15	C	733.28	1556.56	0.471	0.00	0.88	0.89	13.28	(0.00)	0.073

17:00-17:15	D	91.39	708.91	0.129	0.00	0.15	0.15	2.21	(0.00)	0.097
17:00-17:15	E	202.59	1067.84	0.190	0.00	0.23	0.23	3.50	(0.00)	0.069
17:15-17:30	A	694.01	2318.29	0.299	0.00	0.58	0.43	6.51	(0.00)	0.037
17:15-17:30	B	45.85	1101.01	0.042	0.00	0.06	0.04	0.66	(0.00)	0.057
17:15-17:30	C	598.72	1586.75	0.377	0.00	0.89	0.61	9.34	(0.00)	0.061
17:15-17:30	D	74.62	773.63	0.096	0.00	0.15	0.11	1.64	(0.00)	0.086
17:15-17:30	E	165.41	1134.99	0.146	0.00	0.23	0.17	2.61	(0.00)	0.062
17:30-17:45	A	581.20	2326.89	0.250	0.00	0.43	0.33	5.06	(0.00)	0.034
17:30-17:45	B	38.40	1156.25	0.033	0.00	0.04	0.03	0.52	(0.00)	0.054
17:30-17:45	C	501.40	1608.72	0.312	0.00	0.61	0.46	6.94	(0.00)	0.054
17:30-17:45	D	62.49	820.97	0.076	0.00	0.11	0.08	1.26	(0.00)	0.079
17:30-17:45	E	138.52	1184.16	0.117	0.00	0.17	0.13	2.02	(0.00)	0.057